A Speculation about Certain Presupposition Triggers

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Abstract

The function of presupposition triggers is not uniform and is entirely mysterious in certain cases. *Too* and *also* are prime examples. Two attempts at a possible psychological explanation are briefly discussed.

One way of describing anaphoric elements and presupposition triggers[1] is as imposing an obligation on the interpreter. In order to carry out her interpretation of an anaphoric element (a third person pronoun, a tense morfeme, an ellipsed element, a definite description, etc.) or a presupposition trigger (*regret*, a cleft, a presuppositional noun like *bachelor*), she is obliged to seek an appropriate antecedent (when the seach is unsuccesful, this may sometimes be replaced by the construction of the antecedent), to identify the referent of the antecedent with that of the anaphoric element or to construct a conceptual link between the anaphoric element and the antecedent. Examples of the last process are the bridging definites, partial matches and subsection anaphora.

A natural question is why there is such an obligation and further why such obligations arise at all. A first explanation is that the obligation arises by the purpose of the communication. The speaker has the purpose of conveying some particular information. Failure to find or create antecedents and appropriate identifications or linkings will lead to an incomplete grasp of the information that is conveyed by the speaker on the part of the interpreter and depending on the actual purpose of the communication to the speaker's failure in his purpose of informing the interpreter. This explanation is successful in the case of simple anaphoric pronouns. Compare (1)

> (1)   He slept

which can be used by the speaker to convey that yesterday at 4 p.m. Harry Jones slept. Failure on the part of the interpreter to find and identify the referent of "he" with Harry Jones and to find and identify the "event-time" with 4 p.m. yesterday will make the conveyed information either wrong or much weaker. It will be (when no identifications are made) like (2)

> (2)   At some time in the past some male person slept

which will be insufficient for many purposes, like e.g. answering the questions in (3).

(3)   Who slept yesterday at 4 p.m?
        What was Harry doing at 4 p.m. yesterday?
        When did Harry sleep?

A brief inspection reveals that this explanation can be extended to most cases of anaphora. The anaphor occupies a position in the sentence that defines an argument of a verb or a preposition and without the identification a weak statement remains that is only suitable for a subset of the purposes for which the statement can in fact be used. The only case that may worry us are certain uses of definite descriptions, as in (4b) . These may sometimes introduce objects that have not been mentioned before without specifying a link. This exception need not worry us more than is necessary, as definite descriptions have been treated as presupposition triggers, and accommodation of antecedents is a standard assumption for presupposition triggers.

(4)   a. John saw a jogger. The man was singing.
        b. The smallest number such that φ

For many presupposition triggers also, the same explanation holds: their purpose seems to be to identify referents of NPs, facts, times, places and circumstances whose identification is directly relevant to the communicative purposes of the exchange. Such triggers include apart from definite descriptions, factives, locative PPs with a sentential or VP argument (in as far as they are presupposition triggers).

(5)   a. John was glad that Mary had gone.
        b. Where the party had been, everything was quiet now.
        c. Mary ran away, while clutching her book.

But there are some triggers missing from this list. These are the presuppositions connected with words like *too*, *also*, *as well* and with words like *another*, *a different* and the presuppositions connected with clefts, pseudoclefts and intonational sentence contours, such as the ones involved in the topic-focus distinction. To see that the explanation we have so far used does not work, consider (6)

(6)   It was John who ate the cake

presupposing (7)

(7)   Somebody ate the cake

The identification of the presupposition does not add to the content of the (6) . It remains just the same: John ate the cake. So even if we do not carry out our obligation to identify the presupposition in the context, the sentence will continue to convey that John ate the cake.

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When an antecedent is found, it is always possible that information is transferred from the antecedent to the content of the anaphoric element, in the sense that the referent of the anaphoric element acquires more properties. These are the properties of the referent of the antecedent element that are not marked as such on the anaphoric element, but that are known as properties of the referent of the antecedent. These can be further details present at the antecedent, e.g. that the cake had a cream topping, that who ate it spilled some of it on the floor etc. It follows through the identification that John ate a cake with cream, that he spilled some of it etc. But this information transfer is a side effect. Nothing goes wrong if the antecedent is just as marked as the anaphoric element. The obligation of finding the antecedent is not there because of this side-effect and in many instances of the phenomenon, the side-effect does not occur.

Another explanation is therefore necessary.

To see that our earlier explanation does not work for cases like *too* either consider a simple sentence like

(8)   John had a cake too.

The presupposition in this case is that somebody other than John had a cake. Now what does the obligation of resolving contribute in this case? That e.g. Bill had a cake? But this was already established. That John was not the only one to have a cake? But this can be inferred from the context together with the earlier information. The only case where it adds information is where the context does not contain another person having a cake and where the sentence may be a tacit admission that the speaker herself had a cake. Again, it is possible that we find out more about the cakes or the manner of their eating from the resolution. But again this is just a side-effect.

But to add this information is certainly not the primary function of such particles. What the sentence normally expresses is equally well expressed by the sentence (9).

(9)   John had a cake

A peculiarity of this kind of triggers is that they are not optional. One can in principle precisely define the conditions on the context that make the occurrence of one of these particles necessary. E.g.

(10)   A man walked in.
        An*other* man left.

(11)   A man walked in.
        A girl walked in *too*.

(12)   Bill did not go to Berlin.
        John did not go *either*.

If these elements are missing, the most likely interpretation is a correction: instead of the element on which the particle missing is interpreted as the same object as before and the remainder of the sentence has to be replaced for the original remainder.

Perhaps, the same can be said for other presupposition triggers and anaphora. If a text contains already (13),

> (13)   A man ate a cake

it is decidedly strange to continue with (14),

> (14)   A man wiped his mouth

—meaning the same man— even though (14) is true when its counterpart with *he* or *the man* is. It seems we must indicate whether we mean the same man or a different one. If it is the same man, this will be indicated by choosing a presuppositional or anaphoric construction. Also, when their is a choice between presupposing and non-presupposing lexical items as in e.g. *it seems to X that* versus *X notice that*, we find that (15) is fine,

> (15)   Mary entered the garden. John noticed that she did.

while (16) is problemeatic.

> (16)   Mary entered the garden. It seemed to Bill that she did.

Too would similarly have the function of signalling that its focus is not the only element that is reported to be as indicated in the topic of the expression and is obligatory when this obtains.

The contrast between elements like *too* and the other triggers is that they appear to lack an expressive function. They do not help to specify the message and therefore our earlier explanation cannot be correct in these cases.

Where can we look for better explanations for the obligation?

The perspective on communication that we need to develop for these cases will have to transcend the basic logical perspective where information is understood as expressing constraints on the set of models. From this perspective it is hard —if not completely impossible— to see what function can be attributed to topic-focus distinctions and to the markers.

A psychological explanation would be possible if we take into account the obvious fact that the data that is received need not only give information but must give the information in a way that allows the information to be stored in an effective way, both in short-term memory and in long-term memory.

In the case of topic-focus, there is a considerable scope for the parallels with visual information (see Stenning, elsewhere in this volume). We can maintain that for humans, the basic way in which we acquire information from our direct environment is by the visual channel. All

the information we need for carrying out movement in our environment and most of the information we need for orienting our actions towards some goal comes from direct observation. Other channels are far less articulated. The information acquired through verbal communication is so late an appearance in the evolutionary order that it can hardly be credited with information structures of its own.

The structure of our visual system, with the eye moving from focal point to focal point can well be a basis of an explanation. We need to instruct our representational system to insert information at one particular place in the scene that has already been built up. The topic can be seen as the description of the path that need to be followed in order to reach this point, the focus as the material that needs to be added there. Giving the information in one single step would result in a lack of connection with existing information.

Concerning the class of triggers we are considering, there seem to be two shapes which the explanation could take. The first is related to a descriptive principle which has some plausibility:

> (17)   Two referential terms referring to different referents in the
>   same world must be linguistically different.

This principle could perhaps be grounded in a property of memory, if we assume that the linguistic label plays a role in keeping the referents apart in representation. The function of our particles is then to make the labels different that would otherwise be the same and to make it thereby possible for us to keep the referents of the labels apart. The principle would identify the referents of two occurrences of *eat the cake, John* or *an elephant*, unless one of them has a particle, morpheme or perhaps an intonational marking which the other lacks. An explanation of this kind can in principle be confirmed or refuted by further psychological and linguistic research.

The other explanation that could apply takes its starting point in the "Swiss bishop" paradigm in the investigation of short-term memory retention. In these experiments subjects are presented with a list of simple natural language sentences (e.g. The Swiss bishop is bald. A Polish barber is rich) after which retention is measured at different times after the exposure to the list. One of the conclusions of this experiment is that the order in which the material is presented in the list is an important factor in predicting retention. Giving all the statements about the Swiss bishop next to each other, presenting all the bald persons next to each other enhances retention. The absence of any order leads to a dramatic fall in performance. The behaviour over time shows a collapse after a period of nearly optimal performance. Stenning et al. explain these observations by the assumption that a maximally redundant representation of incoming information is constructed. This explains the behaviour over time: noise has no effect until the redundancy is so far destroyed that damage cannot be compensated anymore. Redundancy functions as a defence mechanism against noise. Orderly presentation of the information facilitates the construction of such a representation.

Taking the theory of the Stenning & al. (1988) as our starting point, we can attempt the following explanation. Particles like *also, too* and *another* force us to recover material which will help in the construction of a maximally redundant representation. If the material is not recovered, it has to be represented in isolation and will consequently not last. It can also be

argued that the integrated redundant representation helps us to keep different instances of the same property or inversely different properties of the same instance apart, but this is just another way of defining correct retention.

The processing of an expression with *too, also* and *another* would then consist in first identifying the part of the current utterance that is the scope of the particle, second identifying in the context (the linguistic context, the non-linguistic context or the inferred non-linguistic context) the corresponding utterance (it must be possible to identify the scope with a part of the corresponding utterance) and third to process the current element in conjunction with the corresponding element. This does not change the content of the current utterance or that of the corresponding utterance and consequently not the content of the complete discourse, but solely its representation, which becomes more integrated and thereby more robust.

This speculation about the function of the presupposition triggers discussed above makes them similar to theories of topic and focus that see the primary function of the topic as indicating the place where the information in focus must be added (cf. Vallduvi, Stenning (this volume)). These are also purely representational aspects and there is —apart from the identification, which rules out models of the integrated text where the intended place and the described place are distinct— no logical content to the distinction.

Notes

1. The identification of at least some presupposition triggers as containing an anaphoric element is due to Kripke. The proposal to deal with presupposition as a special case of anaphora is due to Van der Sandt (1989)

References

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