The Syntax Semantics Interface of Speech Act Markers

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Abstract

The paper proposes a semantics for speech acts as a generalisation of update semantics and an account of the meaning of speech act markers where they are default resetting devices. The speech act marker works on specific parameters of a given speech act and defines new valus for them.

The update semantics of (Veltman, 1996) and (Heim, 1983) runs into its limits if it tries to handle non-monotonic phenomena and non-assertions like requests, exclamations or —it can be argued contra (Jäger, 1996), (Zeevat, 1994) or (Groenendijk, 1999)— questions.

This would be a minor problem only if it would be the case that these phenomena can be isolated from the syntactic/semantic system of natural language. But that does not appear to be the case in the least. Discourse particles, intonation and aspectual markers can have the kind of pragmatic contribution to the utterance in which or on which they appear that is best understood as a modification of the speech act performed by the utterance. This is not normally derivable from the semantic content, from the anaphoric properties of the marker, or from the kinds of operators that can be handled in update semantics.

This paper makes the case in point using a number of such particles and some recent proposals for a meaning of intonation.

The generalisation of update semantics that appears to be required is to extend the coverage from just plain updates (the case of standard assertions) to the full range of possible speech acts and the effects they have on the context. This includes next to updates downdates. But it is also necessary to be able to recover topics, pass over the authority to the other speaker, to make links to previous utterances, to have a range of evidential and modal operators and to recover various forms of bias. The proposal I am making here is no doubt not sufficiently general.

I assume that speech acts have at least three dimensions. The first dimension is the set of preconditions for the speech act: what must be the case with the context of the utterance that makes it possible to carry out the speech act. This includes the presence of a pivot for the discourse relations or of a topic that is to be addressed (often the relation to the pivot is given by the topic, so arguably these are not separate cases). The second dimension is the aim that the speaker wants to achieve with her speech act. This aim may be of various kinds and it does not depend on the speaker alone whether she is going to reach it. It is therefore necessary to distinguish carefully between her goal with the utterance on the one hand to be achieved together with the hearer and the effect that the utterance will achieve without any further action from the hearer, if the utterance as such is successful (i.e. it is perceived and recognised as such). I call this last aspect the minimal effect.

The first dimension can be called context marking. It is concerned with the preconditions of the speech act and changes to the defaults assumed there. Too and $instead$ are both additive markers in the sense that they presuppose an old topic that has been addressed before. But their contribution differs in the second and third dimension. With too, we intend to bind an old topic to the new value that is obtained by adding the value specified in the sentence to the old value. With $instead$, we intend to replace the old binding by the new value specified in the utterance. This also affects the third dimension: in the case of too the speaker endorses

the old value of the topic in addition to the value specified in the sentence, whereas, in the case of $instead$, she disagrees with the old value and expresses her belief to know that the value expressed in the utterance is the value that should have been given in the first place.
The second dimension, the intention, is a proposal for bringing about a new common ground. The intention can only be reached if the hearer in some sense cooperates and takes over the goal of the speaker. This cooperation can be minimal, in the sense of not speaking out against it, as with proper assertions and promises (the speaker is the authority in such speech acts, even if her authority can be challenged). But in a question (a proposal to create a common ground which contains the answer to the question), it is the hearer who has to create (part of) the content of the proposal.
Updates belong to the context change effects. They are most clearly exemplified by assertions but also play a role in requests, promises and questions. These other speech acts give updates with respect to the knowledge of the speaker and with respect to the courses of action that the speaker wants to be pursued. They do this even if the goal of the speaker is not achieved. The full semantics for speech acts is composed of conditions on the common ground, the proposed change to the common ground and the updates about the speakers beliefs and desires. It allows inferences about the common ground before the speech act, about the choices facing the hearer and about the information the hearer and third parties have gained if the speech act was successful. When the hearer acts as the speaker had planned and the speaker does not challenge her authority, the intended effect is reached. This characterises what is expected of the hearer in response to a speech act.
Assertions have the following preconditions, intentions and minimal effects. Affirmatives are the least marked form in natural language and all other speech acts require more marked forms. I pursue here the view that all other marking devices (intonation, particles, special syntactic forms, etc.) are there to override some of the parameter settings of the assertion. A speech act marker must in this view be seen not as something that marks a speech act by itself, but as something that together with other devices constructs the speech act from the default speech act.
Formalising our speech act theory requires some choices. The simplest representation of a speech act is as a set of parameters with default settings. Let's give them some names and give the settings for the speech of an assertion of $\varphi(c)$ (these are the default settings).

POSITIVE BIAS	none
NEGATIVE BIAS	none
TOPIC BIAS	none
TOPIC	$?x\varphi(x)$
CONTENT	$\varphi(c)$
OPERATOR	nil
INTENTION	OPERATOR(CONTENT)
AUTHORITY	speaker
MINIMAL EFFECT	$B_sK_s\varphi(c)$

POSITIVE BIAS is the presence in the common ground of $\varphi(c)$ or a commitment to $\varphi(c)$ or evidence for $\varphi(c)$. The value $none$ for the assertion indicates that it is assumed that there is no positive bias. Assertions fail if there is positive bias or rather they change into confirmations of different kinds: of information earlier incorporated in the common ground (it is a reminder then), of an opinion of the hearer or a third party or of the evidence for $\varphi(c)$. NEGATIVE BIAS is the opposite: it is constituted by the presence in the common ground of $\neg\varphi(c)$ or a commitment to it or evidence for it. An assertion comes with the implicature that there is no NEGATIVE BIAS and is incorrect if there is such. With negative bias, it gives way to corrections of various kinds: corrections of the common grounds, of parties involved in the conversation and others, and of the evidence (roughly, the concessive relationship).
TOPIC BIAS is the assumption that the topic has been addressed before, i.e. that there is information about the topic already in the common ground, possibly again only as commitment of the conversation partners or others. In assertions, there is no TOPIC BIAS: the topic is assumed to be unaddressed, though it normally has been raised.
The TOPIC parameter is a suitable topic that the current assertion asserts. I assume that it is given

as a question. The assertion supplies an answer for this topic in its focus.

CONTENT contains the propositional content of the speech act and is one of the parameters that together with AUTHORITY and OPERATOR determines the proposal: to make OPERATOR(CONTENT) common ground on AUTHORITY.

AUTHORITY contains the person who is assigned the role of the decision maker and the OPERATOR is the operator under which the assertion is to be entered into the common ground. Evidentiality is the main target of this parameter, distinction between hearsay, direct evidence, belief and possibilities should be made here.

The last parameter, the MINIMAL EFFECT records the propositional attitude of the speaker towards CONTENT that she makes manifest with her utterance. The minimal effect is what makes the proposal rational.

The parameters making up the speech act define it: under the circumstances indicated by the bias-parameters, the speech act indicates a proposal for a new entry in the common ground, possibly correcting earlier information, the proposal to be decided by the speaker or the hearer.

Chains of speech acts form conversations and there is one aspect that I am neglecting here: the fact that speech acts license other speech acts both by the same agent and by the other agent. Licensing can be described to some extent by restrictions on the TOPIC parameter. The TOPIC must then be set to one of the available topics, with a mechanism describing which ones are available. Ginzburg e.g. describes a mechanism of this kind. The use of speech acts however brings with it the idea of expected responses of other people. Asking a question is expecting the other to do one of range of things: answering the question, possibly overanswering it or underanswering it, refusing to answer the question, asking a counterquestion or an elucidation question. The range of these reactions is part of our understanding of the question speech act. We can only say that expected reactions are what is necessary to effect the proposal (or a related one) or ways of declining it.

Speech acts can be modelled by a system of changes common grounds. The best choice is here to model common grounds by their basis, a set of propositions σ. φ is common ground iff it is a logical consequence of σ and the common ground inference rules (Zeevat, 1997). The downdates that we need to assume can all be given as removal of specifically targeted propositions in σ. Some special predicates and operators. W for a shared desire, entailing W_s (the speaker wants) and W_h (the hearer wants), common ground belief B entailing B_s and B_h (speaker and hearer belief) and possibly a similar operator for knowledge. Further ways of recovering raised topics, addressed topics and an operator for proposals. A speech act is only defined on σ if its preconditions are common ground. The change is that its minimal effect and the speaker's proposal become common ground.

Speech acts change a number of things in the common ground: the facts, the goals, the beliefs and goals of the speaker and the hearer. It is thereby not purely about information, and consequently, speech act semantics is not a semantics for a logical formalism. It contains however the semantics for a number of logical formalisms, like e.g. update semantics for the content, and for operators like may or the definedness operator for presupposition.

A full speech act semantics would be able to take a common ground and predict for a given speech act whether it is allow given the preceding discourse, what changes it brings to the common ground before the hearer's intervention, what choices it gives to the hearer and what the effects are of the hearer's intervention.

1 Speech Act Markers

Speech act markers come in many shapes and flavours. Syntactic form is perhaps the most basic. Many languages have special forms for imperatives, interrogatives and affirmatives. E.g. in German, fronted WH-XPs mark WH-questions, V2 affirmatives, V1 without a subject imperatives and V1 interrogatives.

Performative verbs and modal verbs form a second category of markers. Intonation is important in speech act marking, in dimensions like bias, topic and authority. And a final group is particles, possibly appearing as clitics or morphs.

The reason for calling them speech act markers is that they can change the values of one or more of the parameters defining the speech act. The other parameter values are inherited from the speech act to which it applies. There is no evidence here for full operators: the parameters can be affected only once. There can be no conflict. It also does not seem necessary to assume an order in which the markers apply. The markers seem to provide a set of instructions to reset the default parameter values in a particular way. What is possible though is that some markers behave differently given other markers that apply at the same time. This is similar to normal contextual disambiguisation and does not change the concept of a speech act marker.

In principle and in practice it is possible that a marker both contributes to the content and acts as a speech act marker. We can use content operators (e.g. embedding verbs) to limit the interpretation of the utterance as a speech act. (1) is in principle ambiguous between a description of what I am doing and carrying out the promise to be good,

(1) I promise to be good.

in a way another way (2) of carrying out the same speech act is not.

(2) I will be good.

"I promise" is thereby not a pure speech act marker. In (3), for example, it does not carry out a promise at all.

(3) If I promise to be good, will you not be angry?

Mixed speech act markers give an interesting way of thinking about the grammaticalisation processes underlying the pure speech act markers which —by the principle that all markers derive from lexical words— must have come into being by such processes operating on mixed speech act markers. Assuming this process allows some insight into the fact why the less central speech act markers —and the speech acts they mark— are so different even in closely related languages. The explanation is that new markers grammaticalise not just in response to general communicative needs but also in response to the available inventory of speech acts markers and the frequency with which they are used and that aspects of its earlier history of the speech act marker may still be encoded in its distribution. Much more work is necessary to gain further insight in the reasons for the diversity of speech act marking as well as the universal patterns.

Speech act markers —like other markers— come in two flavours: obligatory markers and optional markers. Optional markers typically compete with a range of similar markers and the unmarked form. It is typical that what they mark can also be assumed without the marker in question. Our last example can be interpreted as a promise (but also as a prediction about the speaker's future behaviour) and there is competition for the explicit marker with other markers.

Obligatory markers are markers that cannot fail to be there if the speech act has the property that is marked. Obligatory markers can be replaced by another equivalent marker perhaps, but it is not possible to use the unmarked form. This seems to arise from the default interpretation of the unmarked form. If the form is unmarked, the interpretation includes that the marked interpretation does not obtain. This gives the reason why the marker is necessary and may the most important reason for the genesis of grammaticalised speech act markers. The lexical markers are turned into functional ones and lose their additional meaning by semantic epenthesis (Fong, 2001).

The most important claims here are the following two. Speech act markers can be described as mapping speech acts into other speech acts by resetting the value of one or more speech act parameters. And: if the parameter is not reset by an obligatory marker, the speech act retains the default value.

2 Some Markers

Syntactic patterns seem to play only a minor role in marking speech acts. Affirmative sentence can have many functions, as can interrogatives. Imperatives and constituent questions —by the restrictions inherent in their form— seem more on target. But affirmatives and interrogatives conspire with auxiliaries, particles and intonation to define a wide range of speech acts. Typical of the interrogatives is the transfer of authority from speaker to hearer. But there are exceptions to that. In a suggestion like (4) or in rhetorical questions, the transfer is basically a fiction.

(4) Isn't there a pub near here?

Proper questions can be defined by syntactic form, intonation, particle, morphs and tags. They vary considerably in properties though all transfer authority to the hearer.

(5) a. John is in Berlin,isn't he?
b. Ni hao ma? (Are you doing well?)
c. John is in Berlin?
d. Is John in Berlin?
e. Isn't John in Berlin?
f. John is doch in Berlin? (I thought John was in Berlin?)

(5b,d) are unbiased questions that are inditinguishable form assertions except in the authority parameter. (5a) expresses (in the minimal effect parameter) the speaker's opinion that John is in Berlin and allows positive bias. (5c) requires $B_hK_h\varphi$ as positive bias, while (5d) has B_hK_h*John not in Berlin* as positive bias and as part of the minimal effect B_sK_s*John is in Berlin* and as possible value of negative bias. (5f) inverts these values, the speaker indicates that she believes to know John to be in Berlin (minimal effect which can be possible value of positive bias), while the hearer believes to know that John is elsewhere as part of negative bias.

Auxiliary-pronoun combinations like $can\ you$, $you\ can$, $you\ may$, $may\ I$, $will\ you$, $you\ will$ and $I\ will$ and embedding verbs + pronouns like $I\ promise$ or $I\ request$ can be added to affirmatives and interrogatives to form requests, permissions, requests for permission, offers and promises in the obvious way.

I am taking the naive view here that we can believe to know on the authority of one of the speakers that one of them will do something, is permitted to do something or can do something. That seems to be the fiction underlying promises, request and orders.

Let us go through a promise in our representation scheme for speech acts.

POSITIVE BIAS	$W_h\varphi$
NEGATIVE BIAS	none
TOPIC BIAS	none
TOPIC	$?\varphi$
CONTENT	φ
OPERATOR	nil
INTENTION	OPERATOR(CONTENT)
AUTHORITY	speaker
MINIMAL EFFECT	$B_sK_s\varphi$

Threats are made by inverting the bias, offers to do φ by shifting the authority to the hearer and changing the minimal effect to $W_h\varphi \rightarrow \varphi$. Requests shift the authority and have as minimal effect that $W_s\varphi$.

It is generally assumed that intonation can mark transfer of authority by itself, in the so-called sentence final rising. It also serves to indicate surprise and can thereby be used to mark both reminders that contradict what the other just said or implied and confirmation questions where the surprise indicates that the speaker assumes that there is a conflict with what assumed before. Within our interpretational scheme we could also accommodate the case where there is an intonational marking of the fact that a weaker topic is addressed than the one given in the context (the so-called "twiddle"). It seems a good deal easier to address the semantic/pragmatic contribution of intonation as setting parameters in speech act concepts than in a framework like modal logic as in (Steedman, 2003).

My personal motivation for looking at speech act marking is to make some progress with the semantic/pragmatic properties of particles. Following the presupposition literature, (Kripke, ms)'s observation on the particle *too* and the ideas of (Blutner and Jäger, 2000) on optimality theoretic versions of presupposition resolution and accommodation, it seemed that progress could be made (Zeevat, 2002). But as I indicated, already too and its cousin $instead$ suffice for making it quit dubious that this will work. Both particles have the same presupposition (or mark the same contextual property) that the current topic has been addressed before. But that does not clear up their difference. We need to talk about the different context change that they define: one adds to the old information on the topic, the other replaces it. This cannot be coded in the informational content of the utterance or in its contextual marking properties, but needs the difference between an assertion and a correction.

In the current framework, too and $instead$ both have a topic bias: they assume that the topic has been addressed before. But they make a different proposal: too proposes the content of the clause that it marks, $instead$ also proposes to eliminate the earlier information (and has it as minimal effect that the speaker believes to know that the earlier information was not correct.

Another old problem is the Dutch particle wel having both an emphatic use, which seems to mark negative bias in the common ground and correction, and various hard to describe nonemphatic uses like:

(6) Het komt wel goed.
Don't worry.

Like its English translation, wel seems to refer to the worry, i.e. the thought that things will not be allright and corrects it. But it is not a proper correction: the speaker has no proper evidence and the main effect of the particle is to tone down BK to B or even weaker. Negative bias is what the two uses share. It can perhaps be described as a way of refusing to make the hearer's belief that it will go wrong common ground. The intonational difference seems due to to the fact that the emphatic wel requires an overt negative antecedent with which it stands in a contrast relationship. Where the antecedent is merely supposed, contrastive intonation is unnecessary. There are however uses of wel which seem to lack any relation to a negative opinion of the hearer like (7).

(7) We gaan wel wat eten in de stad.
(??)We can go and eat something in town

The same picture arises with Dutch/German $toch/doch$. Most share negative bias, but within that they do different things.

(8) a. Laten we hem vrijdag opzoeken. Hij is dan toch in Amsterdam.
a'. Let us visit him on Friday. He is then in Amsterdam anyway.
b. Hij is toch in AmStErDaM?
b'. He is in Amsterdam, isn't he.
c. Hij is TOCH in Amsterdam.
c'. He is in Amsterdam after all.
d. Is hij TOCH in Amsterdam?
d'. Is he in Amsterdam after all? (We thought he would not be)
e. Kom toch naar Amsterdam. (exhortation)
e'. Come to Amsterdam. (you know you'll like it).
f. Kom TOCH naar Amsterdam.
f'. Come to Amsterdam, (although I see why you do not want it).

The most curious thing about $toch$ is that the nonemphatic uses decay into markers of reminders (like (a) and (e)). Again the emphatic uses require proper antecedents. The development of a use as a reminder particle probably derives from its use as the marker of a reconfirmation question for an element of the common ground in the face of conflicting evidence (b).

Reconfirmation is also the typical function of $indeed$. Here we have positive bias like in reminders, but there is a crucial difference. Where unemphatic $doch$ calls on the hearer's memory for the reconfirmation, $indeed$ brings the idea of new and proper evidence. We can capture this in our representation by instantiating the positive bias parameter with a weaker antecedent.

3 Conclusion

I have given the outline of a theory of speech act marking. Syntactic form, content, intonation and particles combine in setting a number of parameters that together determine the speech act. The parameters are set by overriding a default and the default itself has a strong content that gives rise to a range of unexpressed implicatures. inferences. The semantics of the representation is given by possible developments of the common ground under the speech act. This needs a generalisation of update semantics that incorporates corrections and the notion of authority, as well as a series of quasimodal operators.

Speech act semantics is the proper place to study particles and marked syntactic forms. In a pure update semantics, characterisations remain partial only and the connections between the different uses of particles remains unclearer than they need to be.

In a theory of speech acts in which there are default settings for various parameters, it is possible to understand better why the use of particles is governed by marking principles. If the particle is not there to override the default setting, the default is assumed. This means that the speaker will be misunderstood if she omits the particle when she intends a speech act with a property expressed by the particle. Obligatory marking can therefore arise from the zero situation with an ambiguous speech act form. If marking has become possible, if there is a statistically based preference for one of the readings (possibly resulting from optional marking) and if there are sufficiently many misunderstandings, the optionality of the marking will decrease and the bias for misunderstanding the unmarked form as expressing the standard case will increase. This promotes further marking and stronger bias towards misinterpretation of the standard form. Under the appropriate statistical conditions this leads to obligatory marking.

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