Integrated Speech Acts

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1. Classical speech act theory

The paper takes the classical views of Austin, Searle, Searle and Vanderveken, Bach and Harnish as its starting point. Even though these differ in detail or even broadly, they all agree that the following terms, or near-equivalents thereof are instrumental in investigating the nature of speech acts:

locution, illocution, perlocution
felicity conditions, sincerity conditions
classification systems

Moreover, all authors have expressed more or less elaborate views on how *the coming-about of the act* has to be understood.

They likewise share a further feature: None of the named approaches defines a link to ordinary semantic theories in the tradition of Montague. This is noticeable, particularly as Bach and Harnish (1972) still list a wide and sophisticated range of open questions in semantics at the time as “issues that should be settled before a fully elaborated theory of speech acts can be given”, including a general compositional semantics, a treatment of de re/ de dicto, opacity, and other problems in semantic analysis. Many of these issues have received theoretical treatments since. However, as there is no established link between compositional truth conditional semantics and speech act theory, these advances to date have no influence on speech act analysis at all. While I would agree with most authors that our understanding of speech acts does not crucially hinge on an elaborate analysis of definite NPs, I maintain that the complete disconnectedness of speech act analysis and truth conditional semantics should be relieved. This criticism explicitely excludes a few recent attempts to expand semantic analysis beyond the range of assertions, notably to include illocutionary acts that can be expressed by sentences in imperative mood (Schwager 2005, Portner 2007) and to explicit performatives (Truckenbrodt, 2009). In this paper, I will attempt to develop an integrated analysis of assertions and performative utterances with other illocutionary forces. The proposal rests on the assumption that performative utterances state the existence of a social contract between the interlocutors. By acknowledging this social contract, and updating the common ground (Stalnaker, 2002) with this propositional content, the contract actually comes about: Under certain circumstances, speech acts are self-verifying. Truckenbrodt (2009) contains a closely related analysis, and in certain senses, the present paper builds on his proposal.

The paper is organised as follows: In the first part, I will list some open issues and questions raised by speech act theories in the above strand of research. I will then recapitulate a version of Stalnaker's common ground and introduce some of the terminology that is needed for common ground updates. In section three, I will offer a slightly simplified first analysis of performative sentences which illustrates the link between propositional content, update and act. Section four points out and discusses some differences to Truckenbrodt (2009). In section five, I will focus on aspectual restrictions on performative utterances, and their analysis in the given framework. This will force us to refine the original simplified analysis by an event argument of the performative verb. This move not only allows to understand and model the restriction to simple aspect (exceptions to be discussed), but also offers a tie to utterance time, and insights in the self-referentiality of speech acts as a side result. In a final section, I will give a short and preliminary survey over the links between classical speech act theory, and the approach advocated here.

1.1 Classification and hybrid acts

Ever since Austin, researchers have proposed classificatory systems for speech acts. Most systems are shaped by the following rationale: First, there are acts which inform the hearer about facts in the world. Next, there are acts by which the speaker commits herself to something. Third, the same for the hearer. Fourth, all other kinds of plans and joint actions in the future. Fifth, acts by which the speaker expresses her emotions in a more or less differentiated way. While authors may draw the lines slightly differently, nobody has ever challenged the feasability of such classificatory systems.

Many speech act theories hinge on a classificatory system. I will use the theory by (Searle + Vanderveken 1985) to demonstrate this link, but the main criticisms carry over to other systems. Searle and Vanderveken propose the following five classes on which they build an elaborate axiomatic theory of speech acts:

i. assertives (*assert,...*)
ii. commissives (*commit, promise, bet...*)
iii. directives (*direct, request,...*)
iv. declaratives (*declare, resign,...*)
v. expressives (*apologize, thank, condole,...*)

Each class corresponds to an illocutionary *point* which functions as an unanalysed simple in the theory. Each actual kind of act, in turn, is defined by a specification of seven parameters, among which the illocutionary point is one. (Searle distinguishes *illocutionary point* and *force*; the latter is used for *point with a specific degree of social commitment/pressure*. E.g. *assert* and *swear* share their ill.

point but are different ill. forces.) If these five basic points count as unanalysed simples in a theory, the theory runs into problems as soon as there are real examples where we have difficulties in assigning them to a single point. Such examples are easy to find. I list some for illustration. The reader may find characteristics of even more classes sometimes, which would just strengthen my point.

(1) *"I hereby reward you with a golden watch"*
(expressive + commissive)

(2) *"I hereby sell you my car for 400 €."*
(bilateral commitment; commissive/directive hybrid?)

(3) *"I bet that Black Beauty will win!"—"Ok."*
(Searle: *bet* classed as a commissive
in prose acknowledges hybrid of conditional commitments of hearer and speaker)

(4) *"I guarantee that this watch will work for 5 years"*
(assertive-commissive hybrid)

(5) *"I testify that Bob was with me all night"*
(assertive; but also puts legal commitments on speaker)

(6) *"I hereby invite you to our house tonight"*
(Bach + Harnish, p.51: *S* requests (directive) *H's* presence and promises acceptance of his presence.)

Searle, and likewise Bach + Harnish (1979) acknowledge the existence of mixed hybrids without commenting on the consequences for their overall theories. Searle and Vanderveken (1985) actually attempt to develop a system where logical connectives (negation, conditional) could interact with speech acts. However, they never move to a system where acts are consistently build by combining elementary acts of assertion, expressiveness, and mutual commitment. It is not hard to guess why. Clearly, such a move would contradict their initial decision that the five *points* are unanalysed simples, and are defining features for any actual speech act. Bach and Harnish (1979, 1989) likewise avoid an extensive discussion of hybrids, even though they officially use the term hybrid for some mixed cases. What seems revealing is that they sort out interactional speech acts (*buy, sell, lend, borrow, bequest, ...*) as "conventional acts". Conventional acts are, as they say, generally uninteresting because they are interactions defined by societal convention, not acts of communication. Whatever one may say about this position (Austin certainly would not have subscribed to it), it clearly allows the authors to ignore a large class of speech acts that pose severe classificatory problems.

Is this lack of classifications a problem? I think that it is not a problem as long as we possess an independent way to define and characterize the more fine-grained kinds of speech acts. We could study them as long as needed and eventually would come up with some classification, if possible. However, it is a problem as soon as the fine-grained kinds of speech acts (*swear, promise, bet, command, lend, bequest, ...*) are defined in terms of their affiliation in a classification system. Returning to Searle and Vanderveken: If *bet* is classed as a commissive, but also acknowledged to be a combination of conditional commissives by hearer and speaker, it remains unclear whether it is a single commissive, whether a single commissive can yet be a combination of commissives, whether *bet* is one act or several, whether one act may be described in terms of a dialogue with changing speakers and hearers ("*commitments by hearer and speaker*" suggests that the hearer may also talk sometimes), etc.

In summary, as helpful as the classifying characteristics may be, they do not offer a sound basis to define an ontology of speech acts. It would be desirable to host speech acts in an ontology which does not rest on illocutionary points/forces and reconstruct point/force on basis of better-understood, elementary properties of utterances.

1.2. Compositional semantics (mostly) independent of speech act level

From the viewpoint of formal semantics, we already possess a very elaborate framework to model the meaning of utterances (including performative utterances) in terms of propositions and more complex propositional objects (e.g. question semantics, focus semantics). This level of semantic modelling is, however, rarely ever explored in the investigation of speech acts. This section simply serves to elaborate this insight.

1.2.1.The propositional content of a speech act is not the propositional denotation of the utterance.

I will use the following abbreviations:

> prop.cont. = "propositional content in the sense of Searle"
> propositional denotation of S = [[S]]

Searle proposes that illocutionary acts should generally be of the form F(P) with F = force, P = prop.cont. Even simple examples show that prop.cont is not the same as the "meaning of a sentence" in terms of truth conditional semantics.

(7) *I order you to leave.*
Searle: F = *ORDER*, p = *‚you leave'*
Truth conditional semantics: [[*I order you to leave*]]
≈ q = *‚speaker orders hearer at utterance time to leave'*
$p \neq q$

Does Searle's meaning of *order* (= Force) and a Montagovian notion of the meaning of *order* ($\approx \lambda p \lambda y \lambda x \lambda w(\ \mathrm{ORDER}_w(x, y, p)\ )\ )$ have anything to do with each other? Ideally, we'd hope that the Montagovian meaning, together with an understanding of the contextual features that turn an utterance into an illocutionary act, would allow us to see how FORCE comes about from more elementary facts. However, this link is largely unexplored.

Some passages suggest that Searle and Vanderveken's view of different levels of propositional entities in a speech act was sometimes blurred. They write on questions: "*ask*. (…) Questions are always directives, for they are attempts to get the hearer to perform a speech act. In the simple directive sense, *ask* names the same illocutionary force as *request.* In the sense of "ask a question", it means request that the hearer perform a speech act to the speaker, the form of which is already determined by *the propositional content of the question*." (S+V 1985: 199). Restating this in brief:

Searle: The prop.cont. of a request is generally of the form p = *H does A in the future*

Applying this to the case of prop.cont. p for question Q:

p = <u>*Hearer utters u, where* [[*u*]] ∈ [[Q]] *and hearer believes* [[*u*]] *to be true.*</u>

I have added the propositional object [[Q]] here. The reader is free to fill in a Hamblin-type semantics, a Groendijk-Stokhof type of propositional object, structured sets of propositional objects of the kind proposed by Krifka, or other similar entities. Clearly, we have to deal with two levels of propositions here: The semantic content of the question Q on one side, and the prop.cont. of the request on the other side. The prop.cont is the argument of the REQUEST posed by the question. The semantics of the question Q feeds that argument but is not identical to it. Once again, the example shows that the propositional objects involved in speech acts are unclear. Even more unclear is the way that leads from the compositional interpretation of an utterance to anything at the speech act level. Or, to put it the other way round, what speech act theories need is so far remote from semantic theory that these theories largely ignore the input that truth conditional semantics is able to offer. In

view of the unsound ontological basis of speech act theories themselves, it seems worth to explore the link between semantic basis and the level of acts.

1.2.2. The coming about of the act

Most classical theories attempt to spell out what parts of the meaning of an utterance bring about the act. We review some proposals. Searle's vote, in brief, is that there is just something about the meaning that makes it happen. The illocutionary act in (8.a) below is explained as follows:

Searle (1989)

- The literary meaning of the sentence is such that by very utterance, the speaker intends to make it the case that he … (bequests me his watch)

Formal semantics has busied itself for decades with investigating the literary meaning of sentences. Yet, our [[S]] seems distinct from the philosophical "meaning" of these sentences. This becomes tangible in the *perlocution puzzle:*

(8) a. *I hereby bequest you my watch.*
b. *I hereby annoy you.*

What is in the literary meaning of (8.a) such that it fulfills Searle's condition, but (8.b) does not have, and hence does not bring about an act?

Likewise, we face the *progressive puzzle:*

(9) a. *I bequest you my watch.*
b. *#I am just*$_{temp}$ *bequesting you my watch.*

The difference between (9.a) and (9.b) in terms of literal meaning is one in aspect. In pragmatic terms, however, (9.a) is suited to issue a speech act, whereas (9.b) is not. (9.b) is at best suited to comment on an act that happens elsewhere, at the same time. I use # to signal this difference. (So, 9.b is neither ungrammatical nor incoherent, of course.) Aspectual differences have received sophisticated analyses in truth conditional semantics. However, nothing in these analyses so far would predict that a difference in temporal perspective can undermine the speaker's intention to make it the case that he … (bequests watches). Returning to Searle's optimistic vote that there is something in the meaning of utterances that turns them into performative utterances, we can but state that nothing in the investigation of literal meanings so far

has equipped us to explain the contrast in (9).

Moving on to a more recent, and alternative approach to speech acts, let me show that the same puzzles arise for Bach + Harnish (1982). Let us first inspect the *perlocution puzzle.* (10) shows how Bach + Harnish would explain the coming-about of the act of congratulating:

(10) *I hereby congratulate you.*

1. He is saying "I hereby congratulate you".
2. He is stating that he is congratulating me.
3. If his statement is true, then he must be congratulatingme.
4. If he is congratulating me, then it must be his utterance that constitutes the congratulation (what else could be ?)
5. Presumably, he is speaking the truth.
6. Therefore, in stating that he is congratulating me, he is congratulating me.

(10) shows Bach + Harnish's (1982) scheme quoted after Jary (2007:221). The same scheme can also be instantiated by a different verb, like e.g. *insult.*

(11) *I hereby insult you.*

1. He is saying "I hereby insult you".
2. He is stating that he is insulting me.
3. If his statement is true, then he must be insulting me.
4. If he is insulting me, then it must be his utterance that constitutes the insult (what else could be ?)
5. Presumably, he is speaking the truth.
6. Therefore, in stating that he is insulting me, he is insulting me.

In briedf, their theory offers no clue why the reasoning in (10) is valid but the one in (11) is not. The crucial step is, of course, the one in 4. Why is the listener willing to accept the utterance as the constituting event in (10) but not in (11)?

The *progressive puzzle* unfolds similarly.

(12) *I am just beqesting you my watch.*

1. He is saying "I am just bequesting you my watch".
2. He is stating that he is just bequesting me his watch.
3. If his statement is true, then he must be just bequesting me his watch.
4. If he is just bequesting me his watch, then it must be his utterance that constitutes the bequest (what else could be ?)

5. Presumably, he is speaking the truth.
6. Therefore, in stating that he is just bequesting me his watch, he is bequesting me his watch.

The theory offers no clue why the reasoning in (12) is invalid, and progressive aspect is not allowed in performative utterances. Crucially, the step in 4. again does not offer any insight in why the hearer would be willing to accept an utterance in the simple tense as "it must be that utterance which constitutes the bequest", whereas the hearer is not willing to reason along the same lines if the utterance carries the wrong grammatical aspect.

In sum, we seem to face the following situation:

- undefined gap between [[S]] meaning and philosophical meaning
- gap = where the act arises
- gap function affected by nature of (attempted) act
- gap function affected by grammatical aspect
- … and maybe other things (2nd person addressee?)

Most speech act theories are independent of semantic interpretation [[S]]. Laudable exceptions exist, notably a very vivid recent strand of semantic theories of imperatives (Schwager, 2006; Portner 2005), as well as the likewise recent draft on social acts as agreements (Truckenbrodt 2009). I will not in this paper discuss theories of expressive meanings that may be suited to fill in the picture for expressives.

Against this background, it is desirable to have an integrated theory which allows us to better understand the link from truth conditional meanings [[S]] to speech acts.

2. Communication as Common Ground Update

Truth conditional semantics is actually linked to an elementary theory of information exchange. It is standardly assumed that an assertion is used to convey information from the speaker to the hearer. The joint information is modelled in the *common ground* of the interlocutors. We will follow Stalnaker (2002) in the specific spell out of common ground, though other formats could be used instead, as far as I can see. Stalnaker offers a global model of individual and shared beliefs of speakers c in worlds w by accessibility relations between possible worlds. At each turn in a conversation, each speaker c has access by R_c to those worlds that are compatible with c's beliefs.

$$B_{c,w}(\phi) \text{ iff } \forall w'(w R_c w' \rightarrow w' \in \phi)$$

where R is transitive, serial and euclidean (for a motivation of these properties, consult Stalnaker 2002)

An update of the individual beliefs of c, formally $B_{c,w} \oplus p$, happens by cutting down accessibility relations in such a way that all belief worlds of c support p.

$$R_{new,c} := \{ <w,w'> \mid <w,w'> \in R_{old,c} \text{ and } w' \in p \}$$

Remark: The resulting relations R_{new} will always be transitive and euclidean. Seriality can only fail to hold if the subject c believed not-p before. I will leave the issue of true belief revision aside here.[1] The common ground is defined in terms of individual beliefs as follows (Stalnaker, 2002).

Definition: $CB_{C,w}(\phi)$ iff $\forall w'(w R_C w' \rightarrow w' \in \phi)$ where R_C is the transitive closure over the union of all individual doxastic accessibility relations R_c for c in C.

The update of CG by p primarily comes about if each individual speaker performs an individual update of his or her belief worlds: $CB_{C,w} \oplus p := CB_{C,w}$ of all beliefs of subects c in C, updated by p: $B_{c,w} \oplus p$. This can be short-cut as follows:

Observation: $CB_{C,w} \oplus p$ iff $\forall w'(w R_{C,new} w' \rightarrow w' \in p)$ where
$R_{C,new} := \{ <w,w'> \mid <w,w'> \in R_C \text{ and } w' \in p \}$

In the long run, it may be useful to be able to define a common update independently of individual beliefs. We may see later that sometimes, the officially jointly accepted propositions might diverge from the true and honest individual beliefs of speakers. This may particularly happen when officially declared positions are not necessarily indentical to the speakers' private opinions. Such constellations can be treated by distinguishing between "official common ground" and "mutually joint beliefs". The present paper, however, will leave such intricacies largely unexplored.

Truckenbrodt (2009) suggests that the common ground can serve to model social agreements. It seems to be a fact about the nature of social agreements that *If everyone believes so, then it is so* (fully

[1] This very broad notion of doxastic alternatives comprises any world as possible which is not logically excluded by c. Notably, the doxastic alternatives include very alien possibilities which will never motivate c's actions. For instance, it is a logical possibility that I find a gold treasure in my closet tomorrow but I should not let my plans be directed by this option. Sometimes, it is assumed that the overall doxastic alternatives come with a subjective probability weight and that only the more likely alternatives drive the subject's behaviour. An update can reassess such weights. I have nothing to say about such re-assessments of subjective likelihoods. Likewise, I have to delegate all cases of belief revision to update theories that are designed to deal with it. I maintain that the main insights of the current analysis can be transported into belief revision models and probability weighted models.

explored: Searle, 1995). For instance, if a group of three persons *Alma, Bertha, Clara* agrees that *Bertha* is their boss, then Bertha is the boss by social agreement in the relevant group *C*. The following is a viable generalization of this sample case: For all propositions ϕ that count as social agreements among the persons in *C*:

$$CB_{C,w}(\ \phi\ )\ \rightarrow w \in \phi$$

Clearly, this is not so for other beliefs. Consider the proposition *p*:

p = 'Matterhorn is the highest mountain of the Alpes'

Let us assume that $CB_{C,wo}(\ p\ )$ for the real world w_o for some group *C*. *C* may even by very comprehensive, like "all geographers of the world" or the like. Given the facts about the topography of Europe, we'd still say that

$$w_o \notin p$$

In other words, the persons in *C* are simply wrong. In that sense, propositions that aim to describe the world are not essentially a matter of mutual agreement but a matter of facts. Propositions that correspond to social agreement, in contrast, are true if everyone believes they are. This leads to the following

Hypothesis: A sentence S can be used to perform a direct speech act if the content of the sentence (plus presuppositions) denotes a social agreement between the speaker and further relevant persons.

The reverse need not be true: A social agreement may hold true without everyone knowing. Specifically, protocolled agreements of different persons at different places can jointly bring about a social fact. For instance, a valid testament can make me the owner of a castle on the Rhine at *t* without anyone knowing at *t*. Hence, it is compatible with this view that persons may be ignorant about social facts and agreements, and that questions like *Is this my castle or yours?* make sense even though the question is about a social agreement.[2] Finally, I adopt the *Thing* scenario simplification: Utterances in the presence of all those that need to agree. We will not discuss delegated votes, approval in retrospect, the status of written votes, etc.

In the remainder of the paper, I will elaborate the following vision for an integrated theory of speech acts:

[2] This observation is due to Magda Schwager (p.c.). Generally, I have taken care not to claim anything about common ground updates that would turn CG into a concept that is restricted to the analysis of speech acts alone.

- Speaker makes an utterance S
- S denotes a proposition [[S]] = *p* which is a social agreement
- The utterance may cause an update of common ground by *p*
- If everyone believes *p*, this will cause *p* to be true in the real world
- The act is constituted by utterance plus update.

In the next sections, I will explore the following issues: Which propositions, i.e. sets of possible worlds, are denoted by social agreements? Where does the utterance act become part of the performative utterance (self referentiality)? How can the emerging theory host an answer to the questions that were raised in section 1? I will start by taking a look at worlds where a speech act has successfully come about.

3. What performatives denote: Examples

I will follow the general strategy that proposition denoted ≠ "prop.cont" of the speech act. The update of common ground concerns social agreements; and we will see that what is at stake are mainly mutually joint plans for the future. There is something like the "indended" type of futures—from the perspective of speaker—but also the "otherwise" type of futures.

I assume that these mutually agreed future prospects indirectly serve to change utilities, probabilities, modal orderings of worlds and the like. However, I think that the performative utterances that I will discuss here should have a meaning independent of these secondary issues, specifically as we will see that the addressee can react in different manners to (successful) speech acts and the ensuing strategies for action can be quite different for one and the same performative utterance.

In the present section, I will discuss the future courses of events that are embraced by some example speech acts. In section 5, this picture will be substantially refined to an analysis where the speech act *e* causes such a change of future prospects.

order
Schematically, the explicit performative is expressed by speaker *a* in an utterance of sentence *S* at time t_o towards addressee *b*.

(13) *a:"S" to b*

In the first step, the addressee *b* will compute the sentence denotation [[S]]. The denotation will typically be *about* the speaker *a*, *about* the addressee *b*, and *about* the time t_o. Hence, the sentence will denote an untensed proposition like the following.

(14) *a: „I order you to give me 10$“ to b.*
$\lambda w.ORDER(a,b, p, t_o)(w)$
where $p = \lambda w'(\text{GIVE}(b, a, 10\$, w'))$

Next, there will be a presupposition check. I will provisionally assume the following:

- we treat preparatory and propositional content conditions as presuppositions of ORDER
- these presuppositions can't always be accommodated
- psp. test: update can be refused with *Wait a minute* refusal (von Fintel) typical for presupposition failure.

If all presuppositions are met, the interlocutors make a common ground update:

$$CG_{\{a,b\}, t+1} = CG_{\{a,b\},t} \oplus \lambda w.ORDER(a,b, p, t_o)(w)$$

The set of worlds denoted by the utterance can be described in some more detail. I assume that worlds in $\lambda w.ORDER(a,b, p, t_o)(w)$ are

- worlds where at some time after t_o, *b* brings it about that *p* is true or
- worlds where *b* fails to bring about *p* in due time, and *a* or community in general reacts in some way or
- worlds where *b* fails to bring about *p*, because something really different happened.

The latter two kinds of worlds/futures will be dubbed as sth.wrong(*w*) worlds in the following, taking up the term in Truckenbrodt (2009). It may be important to stress that I do *not* pursue the project to lexically decompose the meaning of *order*. The exact range of order-worlds may look different in different cases. The above rough list of worlds is indented to show how the future prospects of the interlocutors might explain their subsequent actions. The social agreement is distinct from further action.

social agreement: interlocutors agree about a specific range of future courses of events (possibly ranked into likely and unlikely ones).
perlocutionary effect interlocutors will take action corresponding to their beliefs about future. Specifically, if all interlocutors commit themselves to these future plans, *b* will be inclined to bring about *p* depending on how severely he gets sanctioned in worlds where something goes wrong.

promise
Speaker utters "*I promise you to stop smoking*" at t_o
Literal content: $\lambda w.PROMISE(a,b,\ p,\ t_o)(w)$ with $p = \lambda w'$(NOT-SMOKE(a, w'))
Presuppositions: felicity and propositional content conditions

If all presuppositions are met, we achieve a common ground update:

$$CG_{\{a,b\},\ t+1} = CG_{\{a,b\},t} \oplus \lambda w.PROMISE(a,b,\ p,\ t_o)(w)$$

Worlds in $\lambda w.PROMISE(a,b,\ p,\ t_o)(w)$ are

- worlds where at some time after t_o, a brings it about that p is true or
- worlds where a fails to bring about p in due time, and b or community in general reacts in some way or
- worlds where a fails to bring about p, because something really different happened.

social agreement: interlocutors agree that these are the commonly known most likely future courses of events.
perlocutionary effect: interlocutors take action in accordance with these beliefs.
Note in this case that one type of sth.wrong world will be worlds where b reacts by saying: "*No, you need not.*" In this case, the offer has been up but b expresses his inclination *not* to sanction a. Likewise, the order in (14) can be answered by "*No, I will not do so.*" This does not mean that the speech act as such did not succeed, or the update needs to be undone. It simply means that a and b know very soon that their world is one of the sth.wrong worlds.

permission
Speaker utters "*I allow you to take a cooky*" at t_o
Literal content:
$\lambda w.ALLOW(a,b,\ p,\ t_o)(w)$ with $p = \lambda w'.\exists x(\text{COOKY}(x,\ w') \wedge \text{TAKE}(b,x\ w')$
Presuppositions: felicity and propositional content conditions of permission: p is agreeable and desired by b and b might think that a sanctions b's doing p.

Under the usual circumstances, we get the common ground update:

$$CG_{\{a,b\},\ t+1} = CG_{\{a,b\},t} \oplus \lambda w.ALLOW(a,b,\ p,\ t_o)(w)$$

Worlds in $\lambda w.ALLOW(a,b,\ p,\ t_o)(w)$ are

- worlds where at some time after t_o, b brings it about that p is true and a does not sanction this, or

- worlds where *b* doesn't bring about *p*.

social agreement: interlocutors agree that these are the mutually accepted future courses of events.
perlocutionary effect: interlocutors take action in accordance with these beliefs. Specifically, *b* will eat a cooky or not, depending on how badly he wants these cookies.

marriage
a, b, and *z* (= the priest) come together in church under the right kind of circumstances. They go through the prescribed procedure, which consists, say, on the following exchange:

(15) *z* to *a*: *Do you want to marry this man, b, and be his true wife for ever?*
a: Yes, I will.
z to *b*: *Do you want to marry this woman, a, and be her true husband for ever?*
b: Yes, I will.
z: I hereby declare you husband and wife.

For the sake of dramaturgy, imagine that we still live in a society where no additional acts at town halls are necessary. I will use the notation $a \oplus b$ to refer to the group individual of *a* and *b*. I do not want to claim that a plural based analysis of performative *declare husband and wife* is ultimatively the best, though it conforms nicely with individual declarations like *I declare you ruler of the universe*.

Literal content: $\lambda w.DECLARE(z, a \oplus b, P, t_o)(w)$ with
P = the pluralic property that holds of two persons $a \oplus b$ who are husband and wife of one another.
Presupposition: felicity conditions, parts of the ritual that need to be observed.

$$CG_{\{a,b,z\},\, t+1} = CG_{\{a,b,z\},t} + \lambda w.DECLARE(z, a \oplus b, P, t_o)(w)$$

Social agreement: Society as a whole will accept $a \oplus b$ as husband and wife, or sth.wrong(w).
It is part of the content of DECLARE that a successful declaration entails that the declared property holds of the patient after the declaration P($a \oplus b$, w).
I chose not to lexically decompose *declare* into P($a \oplus b$,w) and a "speaker says so" component.

Note that in this case, the audience has no possibility to refuse an update, or to refuse to act according to the social contract. Declaratives are particularly clear instances of social acts where an agreement holds true if everyone agrees that it holds true (given

that the ceremony is executed in the proper manner; this in turn is a matter of facts in part, not a matter of agreements).

We will finally turn to some performative utterances which are uttered to establish agreement about complex mutually shared plans for the future.

bet
a. fully specified bet
Speaker *a* utters *"I bet 10 $ that Black Beauty will win the race"* to *b* at t_o
Literal content:
$\lambda w.BET(a,b, p, 10\$, t_o)(w)$ with $p = \lambda w'.(\mathrm{WIN}(bb, w'))$
Presuppositions: felicity and propositional content conditions

Common ground update:

$$\mathrm{CG}_{\{a,b\},\, t+1} = \mathrm{CG}_{\{a,b\},t} + \lambda w.BET(a,b, p, 10\$, t_o)(w)$$

Worlds in $\lambda w.BET(a,b, p, 10\$, t_o)(w)$ instantiate the future courses of events that may ensue after this bet. These include

- worlds where *b* accepts the bet versus
- worlds where *b* rejects the bet.

The former worlds include

- worlds where Black Beauty wins and *b* has the obligation to give 10$ to *a*.
- worlds where Black Beauty loses and *a* has the obligation to give 10$ to *b*.

Obligations, finally, can be rephrased here as *b* is obliged to pay *a* 10$:

- worlds where *b* offers *a* 10$, or
- worlds where sth.wrong for *b*

and similarly for *a* being obliged to pay *b* 10$.

social agreement: interlocutors agree that these are the mutually accepted future courses of events.
perlocutionary effect: interlocutors take action in accordance with these beliefs. Specifically, *b* has to react in some sense to the utterance. *b* can accept the bet, or reject it, thereby making it clear early on that the actual world will be an "otherwise" world.

b. partially specified *bets* require
— an event based verb semantics (some roles need to be filled later)
— a fully dynamic semantics (anaphoric reference to the introduced bet)
It remains to be worked out how different dynamic aspects of meaning interact. Yet, unlike other theories we have couched

speech acts in a framework which is also compatible with anaphor resolution and reference to events.

invitation (fully specified)
Speaker *a* utters "*I invite you to my place on Saturday*" to *b* at t_o
Literal content:
$\lambda w.INVITE(a,b,\ p,\ t_o)(w)$ with $p = \lambda w'.\exists e(\mathrm{VISIT}(b,\ a,\ e,\ w') \wedge \tau(e) \subset \mathrm{SATURDAY})$
Presuppositions: felicity and propositional content conditions of *invite*.

Common ground update:

$$\mathrm{CG}_{\{a,b\},\ t+1} = \mathrm{CG}_{\{a,b\},t} + \lambda w.INVITE(a,b,\ p,\ t_o)(w)$$

Worlds in $\lambda w.INVITE(a,b,\ p,\ t_o)(w)$ include

- worlds where *b* accepts and the visit takes place.
- worlds where *b* accepts, tries to visit *a* but *a* fails to act appropriately; sanctions for *a* are part of these.
- worlds where *b* accepts but fails to visit; (mild?) sanctions for *b* follow.
- worlds where *b* accepts and something really different happens (thunderstorms, ...)
- worlds where *b* rejects the invitation after t_o.

I refrain from spelling out all possible ways of *a* and *b* to act after rejection.

Social agreement: Interlocutors agree that these are the shared future courses of events.
Perlocutionary effect: Interlocutors take action accordingly; e.g. *a* will strive to be at home and hospitable on Saturday, *b* will go to *a*'s place, etc.

In the present section, I have attempted to offer a wide range of examples that illustrate how performative utterances might denote propositions which define mutually agreed, mutually understood plans for future courses of events. Unlike assertions, such utterances are not made with the primary intention to *inform* the addressee(s) about future plans but in order to elicit *reactions* to such plans, and eventually reach *agreement* about the future plans to be followed. Updates of the common ground serve a double function: They can reflect an increase in joint beliefs about facts outside, but they can likewise reflect an increase or change in those future courses of events that the interlocutors will jointly pursue.

Jointly pursued future plans are not, typically, the responsibility of a single speaker or hearer. In this respect, the

present analysis differs dramatically from the mono-causal dichotomy of *commissives* and *directives* (with *declaratives* to cover all other cases). We can view the plans expressed by one performative utterance as a combination of plans that could be expressed by several performative utterances, even an exchange of utterances. We could likewise investigate the interaction of performative utterances with logical connectives like conditional, conjunction, disjunction etc. I anticipate that no fully compositional system will emerge (e.g. the restrictions proposed in Krifka, 2001). What I find a relief is that performatives are no longer un-analysed acts in an ontology of actions, nor are they composed from an un-anaysed *force* and some prop.cont. without reference to the semantic meaning of the sentence.

The picture presented so far is over-simplified in one point that I will address later. The performative verbs so far were represented without a Davidsonian event argument. In the present section, they are modeled as relations between interlocutors, a proposition, the utterance time, and worlds. They refer indexically to the time of utterance. In section 5, we will refine this analysis and explicate the event argument of the performative verb. This will buy us three things at least. First, the indexical reference to utterance time will be revealed as a straightforward case of tense and aspeect interpretation in a Reichenbachian format. Second, we will be able to model aspect, and tackle the progressive puzzle. Third, it will be possible to spell out the *self referentiality* of performative utterances and see how the utterance *u* is just the event that makes an existential statement true. This refinement can be added straighforwardly to the vision for an integrated theory, as elaborated in the present section. Before we turn to such next steps, however, I want to compare the present proposal to a very closely related one.

4. A precursor: Truckenbrodt, 2009

(see full paper, added in class materials.)
Truckenbrodt, to my knowledge, is the first source to analyse performatives as social agreements in a truth conditional semantic framework. The analysis rests on non-semantic precursors in philosophy, notably Searle (1995), and Jary (2007) on assertions. Like the present model, Truckenbrodt uses Stalnaker's common ground CG to model commonly known (= agreed) propositions

Truckenbordt assumes that performative sentences rest on a specific form of lexical knowledge. Specifically, he assumes tha the content of the performative can be paraphrased as a fact about mutually joint agreement. Schematically, the content of the sentence is equivalent to common knowledge of some proposition *p* which is determined by the lexical semantics of *S*.

[[S]] $\Leftrightarrow$ CG(p) for some lexical paraphrase p of S

As soon as an update by the content of S occurs, the following subsequent steps are warranted:

update CG([[S]])
$\Leftrightarrow$ CG (CG(p)) (lexical equivalence)
$\Leftrightarrow$ CG(p) (theorem, see Stalnakter 2002, ftn. 7)
$\Leftrightarrow$ [[S]] is true. (lexical equivalence, backward direction)

In order to see this type of reasoning at work, I copy Truckenbrodt's example *bequest.* The lexical paraphrase rests on the idea that if anyone x owns a good y then whenever someone else z wants to use y, the owner x must allow z to do so. This is mirrored in the second condition:

$CG_C(w)(\lambda w'.OWN(w')(x,y))$

iff $CG_C(w)(\ \forall w' \in CG_C(w)\ \forall z\ in\ C(\ USE(w')(z,y) \rightarrow$
[$AUTHORIZE(w')(x, \lambda w''.\ USE(w'')(z,y)) \vee STHWRONG(w'')]\ ))$

iff $(\ \forall w' \in CG_C(w)\ \forall z\ in\ C(\ USE(w')(z,y) \rightarrow$
[$AUTHORIZE(w')(x, \lambda w''.\ USE(w'')(z,y)) \vee STHWRONG(w'')]\ ))$
(due to $CG(CG(\phi)) = CG(\phi)$)

iff $OWN(w)(x,y)$

It can be seen that Truckenbrodt's lexical paraphrase allows him to reduce CG(CG(p)) to CG(p) and, with this intermediate step, achieves the same as our stipulation about social facts in section 2, namely that common agreement about ownership entails ownership. The Truckenbrodt account is even stronger in that it predicts that a owns x if, and only if everyone agrees that this be so. The biconditional is necessary because the lexical replacements occur in both directions (step ii. and iv.).

4.1. *A logical worry*

Truckenbrodt's account leads to the following prediction: You can only own something if everyone knows (and agrees) that you own it. This prediction seems to be too strong.

CG([[S]]) $\Rightarrow$ [[S]] is a sufficient but not a necessary condition for a social agreement to come about.

For instance, consider a complex economic transaction like a car changing owners. If *a* buys a car from some other person *b*, *a* and *b* may agree that the money transfer is handled by *a* and that *b* simultanoeously arranges the legal paperwork that is involved in changing car ownership. Hence, there might be a point where the car in fact has changed possessor, because all the paperwork was accomplished, without either *a* or *b* knowing. It will be possible for any time point to reconstruct the legal situation. Hence, ownership is not undefined but simply not (yet) reflected in the doxastic states of *a* and *b*. Given that we would certainly claim that *a* and *b* should be members of the relevant group *C* in charge of ownership of that car, it would be inappropriate to assume that joint common knowledge in the relevant group is *necessary* to establish ownership (and other social agreements).

Systematically, a social fact can be established by shattered knowledge sources (documents signed, variuos speech acts at different occasions, etc.) CG reports mutually shared knowledge. Social facts can also be established by distributed, though not mutually shared knowledge. Very roughly:

common ground ≈ the intersection of what every single party knows
distributed knowledge ≈ the union of what every single party knows
intersection ⊆ union

Common ground knowledge is sufficient, but not necessary for distributed knowledge.

4.2. *A lexical worry*

How plausible is it to find a commonly accepted simpler lexical paraphrase *p*

$$[[\ S\ ]] \Leftrightarrow CG(\ p\ )$$

for all performative sentences S? For instance: We seem to understand what it means to say *I hereby declare you dean of the philosophical faculty.* However, there is no commonly accepted paraphrase *p* which explicates the mutually agreed lexical content of *declare dean* in terms of jointly agreed new tasks and privileges of that person. What we'd understand is that the person has just been defined "*the dean*", whatever that may amount to. This is not a case of linguistic ignorance. It makes sense to assume that there are ways to find out whether some specific course of the world still fits the agreed plan *you are the dean of the philosophical faculty*. This may be a matter of experts that we need to consult in order to

find out about the details. This, however, is fully analogous to the task to decide wether an animal is still in the extension of *hedgehog*. We likewise might have to consult experts even though we all believe that we know how to use the word *hedgehog,* and we would not seriously propose that the truth conditional meaning of *hedgehog* hinges on our ability to spell out a full list of defining biological features of hedgehogs.

I therefore prefer a more shallow semantic analysis of performative verbs which does not hinge on our ability to offer a full paraphrase in terms of mutually accepted facts. My own proposal can be viewed as the shortcut version of Truckenbrodt's proposal:

p = [[S]]: there is no paraphrase of the content of S. S itself denotes a social agreement.

Note that, in the present account, Truckenbrodt's bi-equivalence between social agreement and mutually shared believes has changed into a one-way entailment. If something of the appropriate kind is mutually known and agreed on, then a social agreement counts as established. However, the same verbal predicate can also cover other cases of social agreements which have been established *not* by common update, but perhaps by shattered legal documents, secret contracts, testaments, etc. Hence, it is consistent to use the respective verbs in questions (*did he bequest you the watch?*) or to be ignorant in matters of social agreement (*I did not know you were married*.).

5. Events, Tense and Aspect: Filling in the details

In this section, I will extend the analysis in section 3 by a classical Reichenbachian analysis of simple and progressive tense, plus an event argument for the performative verb. A warming-up:

(16) *u: I* (= *Anna*) *order you* (= Bertha) *to give me 1$.*
λw[$\exists e$(ORDER(a,b, $\lambda w'$.GIVE(b, a, 1$, w') , e)(w) $\wedge$ R=S $\wedge$ τ (e) $\subseteq$ R]

I use the canonical notational conventions:
R = indexical reference time of the utterance u
S = speech time
$\tau(e)$ = running time of event e

Likewise canonically, we have R=S $\approx$ present tense, $\tau(e) \subseteq$ R $\approx$ simple aspect , R $\subset \tau(e) \approx$ progressive aspect. I will not spell out in detail here how and at what syntactic positions tense and aspects are interpreted.

The interpretation of tense frees us from the earlier *ad hoc* assumption that performatives are statements about the utterance time t_o.
Note that I do not assume that the semantic content of the utterance refers deictically to the utterance event itself. It states the existentence of an event like any other action sentence. The utterance *u* counts as an order *only* if the utterance succeeded in successfully issueing an order. It is *not* sufficient to utter a sentence that contains a verb *order*. We will investigate the circumstances under which the utterance event can instantiate its own existential content and make it true. I leave it open whether there can be *ORDER* states in addition to *ORDER* events.

The Progressive
I will base the theory on the following judgements.

(17) *I hereby declare the meeting closed.*
#I am declaring the meeting closed.
(18) *I hereby fire you from the company.*
#I am firing you from the company.

As before, I use # = can not be used as a performative utterance.

Compare:

(17') *#I am just declaring the meeting closed.*
(18') *#I am just firing you from the company.*

Compare German *bin-am* progressive

(19) *#Ich bin am das Meeting eröffnen.*
#Ich bin am Sie begrüßen.
#Ich bin am Sie feuern.

Compare German tense adverbial *gerade* (= 'just')

(20) *#Ich eröffne gerade das Meeting.*
#ich begrüße Sie gerade.
#Ich feure Sie gerade.

All examples can be uttered justly and truthfully if the speaker intends to comment on something that is just happening *aside* from the utterance and that consitutes the opening, the greeting, the firing. These data strongly suggest that the progressive aspect is not suitable in a performative utterance. Occasional occurences of performatives in the *be+participle* form, along with rare future uses are commented on in the appendix. I argue that they do not offer evidence that performatives in the progressive aspect are possible. Let us return to our initial example.

(21) *I* (= *Anna*) *order you* (= Bertha) *to give me 1$.*
λw[$\exists e$(ORDER(a,b, $\lambda w'$GIVE(b, a, 1$, w') , e)(w) $\wedge$ R=S $\wedge$ $\tau(e)$ $\subseteq$ R]

Why is simple present allowed?— Performative utterances use speech time parameter in the literal sense of "time span which lasts as long as the utterance takes". S starts when the utterance event *e* starts and ends when it ends. Therefore, R=S=$\tau(e)$. As a consequence, performatives are predicted to allow extended speech time S. Most other sentences in English show aspect patterns which suggest that S is a non-extended point; notably even episodic sentences that report very short accomplishments can normally only be used in the present progressive, not in the simple present. The only exception to this rule are episodic sentences in the reporter's present which suggest that the reported event takes as long as the reporter's utterance. If you wish, present tense in performative utterances is something similar to the so-called reporter's present.

Why isn't the progressive allowed?

(22) *I* (= *Anna*) *am ordering you* (= Bertha) *to give me 1$.*
λw[$\exists e$(ORDER(a,b, $\lambda w'$GIVE(b, a, 1$, w') , e)(w) $\wedge$ R=S $\wedge$ R $\subset$ $\tau(e)$]

R $\subset$ $\tau(e)$ $\Leftrightarrow$ speaker is an observer of *e*
mentally focussed on inner part of an ongoing event *e*.

The semantic representation of (22) includes information about the speaker's focus of attention. Temporal reference points tell us something about the view that a speaker takes on the reported events, which is his or her personal "window" on the event; in fact, the S,E,R-system is often seen as the most logically explicit form to make sense of perspectival metaphors in the grammar of tense. R $\subset$ $\tau(e)$ holds true if the speaker is an observer of *e*, mentally focussed on some inner part of an ongoing event *e*. This seems incompatible with the speaker attitude of a performative utterance. Whatever the speaker's perspective in bringing about an act by making a statement may be, an inspection of the ongoing utterance event in its parts is unsuited. A non-theoretical paraphrase of the effect could look like this: "How can the speaker be focussed on addressing me, the addressee, the one who is supposed to update her belief state and hence make a social agreement true? The speaker does not seem to be focussed on me. The speaker instead invites me to observe something *e* that is going on *from an inner temporal region*; the thing *e* supposedly going on is the speaker

putting an order, somehow. But the utterance expresses the intention to present an internal view on something going on, it can not itself *be* the thing going on." Our so far purely descriptive diagnosis is this: The semantics of sentence aspect indicates the intentions of a speaker. Specifically, progressive aspect indicates the speaker's intention to describe something. The intention to describe something is incompatible with an intention to perform an act. Hence, the utterance in (22) will be understood as describing some order; the utterance can not itself be the entity that verifies the existential statement.

Hypothesis:

- *sentence aspect has to match the intentions of a speaker*
- *progressive aspect indicates the speaker's intention to describe something*
- *intention to describe an act is incompatible with an intention to perform an act.*

Self referentiality implemented: formal proposal

(23) *Let u be an actual utterance with real duration $\tau(u)$. Being an utterance, u has also a reference time R_u. For any social agreement property ϕ:*

$$\tau(u) \not\subset R_u \rightarrow \neg\phi(u).$$

***paraphrase**: If an utterance **u** is intended to cause an update of common ground which establishes a new social agreement, then its sentence aspect must be such that the duration of the utterance **u** is fully included in the reference time of that utterance R.*

This allows us to predict that utterances *u* in the progressive aspect can never count as acts of social agreement. We'll illustrate the effect by getting back to the representation of the progressive utterance *u* above. We use R_u to make it explicit that the reference time index is the one of that very utterance.

(24) $\lambda w[\ \exists e(\ \mathrm{ORDER}(a,b,\ \lambda w'\mathrm{GIVE}(b,\ a,\ 1\$,\ w')\ ,\ e)(w) \wedge R_u{=}S \wedge R_u \subset \tau(e)]$

Assume that in some world *wo*, the actual utterance *u* was the element in the individual domain that makes the existential statement true. (Our plan is to lead this assumtion to a contradiction.)

$$[(\ \mathrm{ORDER}(a,b,\ \lambda w'\mathrm{GIVE}(b,\ a,\ 1\$,\ w')\ ,\ e)(wo) \wedge R_u{=}S \wedge R_u \subset \tau(e)]^{g(e/u)} = 1$$

Hence

$$[R_u \subset \tau(e)]^{g(e/u)} = 1, \text{ thus } R_u \subset \tau(u), \text{ thus } \tau(u) \not\subset R_u$$

If that is so, we know that *u* can not be an act of social agreement, due to (23). Hence:

$$[(\ \mathrm{ORDER}(a,b,\ \lambda w'\mathrm{GIVE}(b,\ a,\ 1\$,\ w')\ ,\ e)(w)]^{g(e/u,\ w/wo)} = 0$$

in contradiction to the assumption that the whole conjunction is true. Therefore, if the sentence is supposed to be true then there must be a different event in that world which constitutes the order. Keep clear that (23) does not forbid that an act of social agreement is talked about in the progressive aspect. (This would exclude all TV reports on Royal weddings and similar ceremonies.) (23) also allows to derive that utterances in the past tense are never speech acts.

Causal force of utterance:
Let me finally explicate the connection between the propositional content of a speech act as described in section 3, and the existential statements that were used in the present section. It is part of the lexical meaning of acts of social agreement that their existence determines the future courses of events, as agreed on by the interlocutors. For instance, whenever there exists an event *e* that counts as a *bequesting of the watch* by *a* to *b*, this entails that the future courses of the world all are of one of the types that can follow a *bequesting* (essentially, *b* has authority over the watch, or something went wrong). It is moreover a lexical requirement that the act of social agreement *e* in fact *causes* any changes of future prospect. For instance, imagine that *Cookie Monster* orders *Ernie* to give him more cookies, and simultaneously, we see *Bert* passing a note to *Ernie* that says "*Give Cookie Monser more cookies*". Imagine that *Ernie* indeed passes the cookies to *Cookie Monster*. In such a situation, we'd want to be able to distinguish whether Ernie acted in response to Cookie Monster's verbal order, or in response to Bert's note, or perhaps even on his own account. This leads to meaning postulate schemas of the following kind:[3]

(Future Courses):
$\forall w[\mathrm{ORDER}(a,b,\ \lambda w'\textsc{Give}(b,\ a,\ 1\$,\ w')\ ,\ e)(w) \rightarrow$
$\forall w'(\ w'$ Future branch for w at $\tau(e) \rightarrow [\ \textsc{Give}(b,\ a,\ 1\$,\ w') \vee \textsc{Sth.Wrong}(w')\ ]\ )\ ]$

(Caused Future Courses):
$\forall w[\mathrm{ORDER}(a,b,\ \lambda w'\textsc{Give}(b,\ a,\ 1\$,\ w')\ ,\ e)(w) \rightarrow$
$\textsc{Cause}(\ e,\ \lambda u \forall w'(\ w'$ Future branch for u at $\tau(e) \rightarrow [\ \textsc{Give}(b,\ a,\ 1\$,\ w') \vee \textsc{Sth.Wrong}(w')\ ]\ )\ ]$

[3] I am indebted to Magdalena Schwager for important parts of this analysis, notably the causal link between speech act and future plans.

I assume a notion of causation where single events can cause propositions to become true; i.e. in all nearest worlds where the event does not take place, the proposition would not have turned out true, either.
In sum, a speech act is an act of social agreement which comes about as soon as everyone believes that it comes about. When it occurs, it shapes the possible future courses of the world (including courses where some party fails to comply to the plan). When it occurs, it causes a change in the possible future courses of the world; i.e. if it had not occured, then the world would have looked different. This part is needed in order to single out which one of several actions is the true act of social agreement.

6. Classical and integrated speech act theory: A comparison

In the final section, I will relate the parts of the present analysis to traditional terms in speech act theory. First, we gain a correlate of the traditional three steps in speech acts in the present framework:

i. locution	*ii. illocution*	*iii. perlocution*
[[S]]	update by [[S]]	reactions to update

Act-based analyses of speech acts encompass a shallow version of i. and ii. and focus the modelling mainly at the level of iii. The present, information exchange based analysis of speech acts, in contrast, offers a detailed analysis of i. and ii. and takes the level of acts supervening on these. I propose that Portner's (2005) To-Do list is an extra-semantical planning unit beyond the level of information exchange whereas Schwager's (2005) update plus re-computation of modal ordering is still at level ii.

The proposed theory allows for a differentiated range of possible reactions to utterances "S":

- the addressees can refuse an update of CG, and hence ii. does not come about. This might happen, for instance, when presuppositions of an act are not met
- Else, an update will take place, but can have various consequences.
    - We can have an update and interlocutors act in the intended way towards prop.cont, i.e. the intended reactions are achieved
    - We can have an update where the addressee objects, pushing the world into a "sth.wrong" branch
    - We can also have an update and other unforseen things happen

Notably, updates of common ground are not limited to the assertion case, and "*no*" is not restricted to metalinguistic refusals to update. Negative reactions can express refusal to update, or objection to act according to the speaker's intentions.

The present analysis can characterize the case of *perlocutions without illocutions*
as reactions that can not come about by social agreement. Notably, the emotions of being *bored*, *pleased*, *annoyed* etc. can be caused by an utterance, but do not come about as social agreements:

(25) *I am not bored because we hereby agree for me to be so*
(26) *I am not pleased because we hereby agree for me to be so*
(27) *I am not annoyed because we agree for me to be so*

On the basis of this extralinguistic fact about causation and emotions, we can now explain why it is hard to imagine that a performative verb expresses the act of boring, annoying or pleasing. I do not want to claim that such explanations were completely absent in the analyses of "how the act comes about" by earlier authors (see section 1). However, while their lists of reactions to performative utterances leave it largely to the reader to fill in the details of the ill-formed performative *bore*, the present analysis endorses insights about the nature of social facts (Searle, 1995) that allow us to understand the non-existence of performative uses of *bore, entertain, amuse, annoy* and similar verbs.

Sincerity conditions: Violations of *sincerity* are classed with other cases where speakers make an utterance and invite update in conflict with their own belief. The speaker initiates an update of common ground to which she does not commit herself. She may act independently of the social agreement, but has to face all social sanctions that are normally associated with insincere behaviour. The group *C* which is relevant for the given social agreement will act as if the speaker *a* (= part of *C*) sincerely shared the proposition that is expressed by the utterance. A general theory of lying should capture such violations.

Felicity conditions: These conditions can in principle be modelled as presuppositions or as part of the literal meaning. I can but illustrate what either way would look like without being able to forsee the full consequences of either modelling at present. Consider once more an utterance like *"I order you to give me 1000$"* (this time being about significant sums of money) uttered in a situation where the speaker has neither the right nor the means to reinforce the order.

The question that we'll have to settle is: What objects *u* are such

that

$$[(\text{ ORDER}(a,b, \lambda w'\text{GIVE}(b, a, 1000\$, w') , e)(w)]^{g(e/u), w} = 1$$

I can see two possible answers:

i. The felicity conditions are <u>part of the meaning</u> of *order*: Specifically, if *u* is uttered by a speaker *a* who is not entitled to order *b* anything, then the event *u*, instantiating variable *e*, will yield a false statement (= 0). The utterance *u* does not constitute an order, because it is part of the meaning of *order* that an *order* respects conditions where the speaker is entitled to *order*.
The main evidence in favour of this position is this: The utterance is not meaningless, it simply fails to achieve what it claims to (= does not match its own description). It's *false* in the same way as *"this sentence contains two verbs"* is simply false.
ii. The felicity conditions are <u>presuppositions</u> of the utterance: if *u* was uttered by *a* who is not entitled to order *b* anything, then the utterance fails to mean something in this situation. Evidence in favour of this position is that the *wait a minute* test is applicable to performative utterances that violate felicity conditions. ("*Wait a minute. You can't oder me nothing!"*).

Felicity conditions are, in any case, *facts* not *joint beliefs*. This is nicely illustrated by a case posed in the movie '*It's a gift*' (Curt Goetz). In the movie, there is an marriage which does not succeed because the ceremony was executed on a vessel that was too short to count as a "ship" in the legal sense. Even though all participants believed at the time that there was a marriage, in retrospect it turned out not to be. (Of course, the gap was settled quickly and unanimously by all involved parties.)

The *propositional content* prop.cont (= in the sense of Searle) is modelled as an argument of the social agreement predicate. It has to enter in the compositional meaning of [[S]] but will not replace it. I assume that prop.cont. conditions are sortal restrictions of social agreement predicates. Violations can have *different* effects where regularities have to be explored. Note, however, that Searle's account of indirect speech acts predicts that the propositional content will often lead to an interpretation of the locutionary act as a specific indirect speech act though something different is expressed literally. Some examples seem to confirm the importance of the prop.content argument when the hearer decides on the communicative intentions of the speaker. Consider (28).

(28) *I promise to kill you (if you sell the car.)*

$\lambda w[\exists e($ PROMISE$(a,b, \underline{\lambda w' \text{KILL}(a, b, w')}, e)(w) \wedge R_u = S \wedge R_u \subset \tau(e)]]$

The utterance, though not a classical *promise*, still expresses speaker's intentions to act. However, it would be standardly expressed by the performative *threat* and hence, the utterance conveys an indirect speech act.

(29) *I beg you to make a big mess in my room.*

$\lambda w[\exists e($ PLEA$(a,b, \underline{\lambda w' \text{MESS-UP}(b, w')}, e)(w) \wedge R_u = S \wedge R_u \subset \tau(e)]]$

In this case, we wittness an irony effect: prop.cont is not agreeable for the speaker. Rather than eliciting a reinterpretation, the overall effect seems to be that the speaker is "not being serious". Possibly, we could hypothesize an indirect speech act of the type Assertion *I hate you messing up my room*, but in the present case, it seems more like a "rescue" to postulate this indirect act.

(30) *I order the weather to be good tomorrow.*

$\lambda w[\exists e($ ORDER$(a,b,\underline{\lambda w' \text{GOOD-WEATHER}(w')}, e)(w) \wedge R_u = S \wedge R_u \subset \tau(e)]]$

Once more, we understand an indirect speech act. First and foremost, the order can not be of the classical type. Specifically, the sanction worlds where *b* does not bring it about that the weather is good and *a* takes action are worlds where *a* would be irrational. Perhaps, *a* is indeed irrational (*Nero* cases). But in other cases, *a* can indirectly convey that he strongly desires that the weather be good tomorrow (however that comes about in detail...).

While the details remain to be investigated, the present theory is close enough to the speech act classics to suggest that viable analyses of mismatch between performative verb (operator) and prop.cont that were devised elsewhere should translate into the present account.

Saying so makes it so

One nice features of the present analysis is that the self-referential nature of speech acts can eventually be explicated. The utterance states the existence of a social agreement and specifies a social agreement. If the update of common ground succeeds, then the utterance *u* itself can successfully instantiate the existential statement that it expresses. If the social agreement becomes part of the common ground, it counts as accepted and mutually agreed.

Saying so makes it so exactly if the utterance *u* of S is the object that fits the description of its own sentence content.

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Data Appendix:

Cross-linguistically, data strongly suggest that the progressive aspect is not suitable in a performative utterance. Yet, any serious attempt to explain this will have to deal with the fact that English speakers do indeed use the *be+participle* verb form in performative utterances. In the times of internet, it is easy to harvest examples, and even a superficial exploration shows that

such uses are by no means stylistically degraded, informal style, low register, sloppy talk, non-native usage, or suffer any other kind of defect. Passages like the following can easily be multiplied.

(31) *So I **am hereby promising** to the world this: I WILL BECOME A MULTI-MILLIONAIRE IN LESS THAN 5 YEARS!*

(32) *I **am hereby promising** my friends here that I will not eat chips at the Mexican restaurant today.*

A very dirty statistics also shows that progressive performative utterances on the internet are rare in comparison to the much more frequent simple tense performatives. Just to give some numbers: "*am/are hereby declaring*" elicits ≈ 2000 hits, in contrast to 706.000 hits for "*hereby declare*"; the numbers for *resign, announce, promise, order, recommend* and *warn* were similar. (date: 2.6.2009; Google). We also checked for possible future tense performatives, and found rare hits for both *will* and *going to* future. Again, we offer examples.

(33) *This is America and **I will hereby** offer to smooch whosoever needs smooching out front of whatever tattoo parlor they want.*

(34) *I heard not so long ago that MP3's actually disrupted brain patterns because of the digital signal created - as in the peaks and troughs in sound are square as opposed to analogue which is spiked and linear. I **am going to hereby** coin this as the Corey syndrome!*

Attested performatives in the *be+participle*, and performatives in future tense forms, defy all simple generalizations like "progressive aspect is disallowed because the speaker has to be certain that the full act/utterance will happen before he can believe to make a speech act". Speakers *can* announce and thereby make a speech act, as all above examples confirm. And yet, there is a stable intuition about English progressive "in a certain sense", mirrored by an equally stable intuition about German quasi-progressive sentences, that progressive aspect is semantically inadequate for performative utterances.

In the discussion of English data, we carefully distinguished 'sentences with the *be+participle* verb form' from 'sentences in the progressive aspect'. The former is a morpho-syntactic property, the latter is semantic. It is well-known that English *be+participle* can be used in a number of ways which are derived from the semantic progressive, but are clearly distinct in meaning. (German quasi-progressives are not as firmly rooted in grammar yet, and always convey the semantics of progressive aspect.) Specifically, the *be+participle* form can serve to make statements about future events where the speaker wants to convey that these future events

are “certain to happen” in that all preparations and arrangements have been settled already. Grammars comment on the following type of example:

(35) *We are playing tennis on Sunday.*

“Such uses of the progressive are allowed if the speaker wants to convey that the tennis match is already arranged, that the court has been booked, that the players have been invited etc.” (see e.g. Leech, 1971)

I maintain the following larger picture of tense and aspect in performatives.

1. In English, the simple present tense is allowed and even preferred in performative utterances. Performatives differ from descriptive episodic sentences; the latter usually require the use of present progressive. This needs to be explained.
2. Performative utterances do not tolerate the semantics of progressive aspect. This is confirmed by German quasi-progressives, and English progressives without *hereby,* and with additional *just*.
3. In English, performative utterances can show verbs in the *be+participle* form. These verbs do not denote progressive aspect, however. Most likely, they are used in the ‘imminent future’ sense which is also available to this verb form. We will not consider such performatives as evidence against (2).