Conversational Score, Assertion and Testimony

Abstract: In this paper I first clarify the notion of conversational score, then characterize the speech-act of assertion within this framework and finally I explain how, on this model, people can come to acquire beliefs and justification for them through linguistic exchange.

1. Introduction

Linguistic exchanges or "conversations", as I shall call them, can be long or short, written or spoken, can involve many or few participants and be serious, humorous or frivolous. They can serve a wide variety of different purposes. One of these purposes, no doubt, is the exchange of information, but there are many other purposes, such as joking, telling tales, flattery, quarrelling, deceiving, persuading, or killing time. This diversity of purposes can seem an obstacle to an otherwise plausible view of linguistic communication, namely the view that each linguistic expression has a certain stable meaning, that each sentence has a certain canonical purpose which results from the stable meanings of its constituent expressions, and that speakers exploit these facts when they engage in conversations. There does not seem to be, for each sentence, a constant extra-linguistic purpose for which it canonically serves as a matter of its meaning. Each sentence seems potentially to serve a huge number of widely diverging purposes. One way to avoid the defeatist conclusion that semantics is impossible is to focus only on one central type of conversation, e.g. on "serious" or "proper" conversations, and then try again to say what the linguistically anticipated purpose of a sentence is in such central cases. Another way to deal with the diversity of purposes is to find a level of abstraction at which all conversations are similar, so that the same sentence may, after all, have the same abstract purpose in all the various contexts of use, even though its use may serve a variety of different ulterior purposes.

An analogy: people play football for all sorts of purposes, and in all sorts of ways: seriously, frivolously, to make money, to kill time, to impress someone, etc. Is it nevertheless useful to think of shots at the goal as being purposeful in the same uniform way in all these cases? Clearly yes. But what is the uniform element? Each shot at the goal serves the objective of altering the score of the game. Players know the rules, and a fortiori they know that certain sorts of action will have certain effects on the score. That's why they take shots at the goal. Whatever their ultimate purposes, they all have an immediate objective: changing the score. This would be the required level of abstraction in the case of playing football.

Robert Stalnaker's pragmatic theory of presupposition and linguistic context[1] seems to provide the required level of abstraction in the case of engaging in conversation. He says:

> One may think of a nondefective conversation as a game where the common context set is the playing field and the moves are either attempts to reduce the size of the set in certain ways or rejections of such moves by others. The participants have a common interest in reducing the size of the set, but their interests may diverge when it comes to the question of how it should be reduced. The overall point of the game will of course depend on what kind of conversation it is—for example, whether it is an exchange of information, an argument, or a briefing. (1978, p. 88)

According to Stalnaker's theory, at each point in a (nondefective) conversation, some propositions are *presupposed* by the participants. These presupposed propositions define the *context set*, i.e. the set of possible worlds in which all presuppositions are

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[1] (See Stalnaker 1970, 1973, 1974, 1975, 1978, 1998, 2002; see also Lewis 1979.

true. What all conversations have in common, whatever their ultimate purpose (or "overall point"), is the participants' objective of changing the context set.[2] As in a game of football, the context set has a dual role: on the one hand, participants can alter the context set, or prevent others from altering it, by making one of a range of defined moves. On the other hand, the context set influences what participants do: which moves are allowed or appropriate at any point depends on the state of the context set at that point. Moreover, if the objective is to change the context set in a certain way then participants have to take into account the status quo of the context set.

The analogy between games (or sports) and language has its limits. Thus, many games involve the objective of *winning* (though not all games do), and there is no clear analogue of this notion in linguistic activity. However, I believe that the analogy is nevertheless illuminating, especially in two respects: first, language use as well as game playing, are essentially rule-governed activities (though in the case of natural languages, these rules are not laid down or agreed explicitly). Secondly, there is in language a distinction analogous to the distinction between the *immediate objective* of a game, i.e. changing the score, and the *ultimate aim* of that game, e.g. having fun, entertaining, making money, impressing someone, etc. This distinction, I believe, is crucial in understanding a number of aspects of language, and this is the reason why I am invoking the game-language analogy here.

Many people believe that the key to understanding language is that its central aim is the exchange of information. In my view, however, the exchange of information is only one among many ultimate purposes that linguistic exchanges can have. When we converse in pursuit of the aim of information exchange, we do so *by* pursuing the language-internal objective of changing the conversational score, an objective that can serve many other aims too. We will gain a better understanding both of conversation and of information exchange if we keep this in mind. This general attitude to language can be applied directly to one specific form of linguistic action, namely assertion: unlike many I believe that the transmission of information is only one among many possible ultimate aims of assertion. What is characteristic of assertion is the effect it has on the conversational score, and it is *through* this language-internal effect that we, sometimes, effect the transmission of information.

My agenda is as follows. In the first part, I shall try to clarify the notion of conversational score. This will involve discussing a problem, formulated by David Lewis (1979), in defining a notion of conversational score (§2), examining how Stalnaker's changing accounts of score-like notions solve Lewis's problem (§§ 3-4), and proposing a modified account myself (§5). In the second part, I shall consider the characteristic role assertion has is a conversation (§6), and finally tackle the question of how, on this view, assertion can help transmit information (§7).

2. Lewis's problem

What is the score of a conversation? Different authors have employed a variety of different notions of score. But it is clear that there is a certain very general theoretical role that all these notions play. So the best way of approaching the question "What is a conversational score?" may be to ask: "Which notion can play the theoretical role of a conversational score?".

What is the theoretical role of the notion of conversational score, then? I will discuss a few aspects of the role the notion seems to play, and which can ultimately serve as constraints on any adequate notion of conversational score. Perforce, these constraints will be rather schematic. I shall be using the term "conversational score" (introduced by Lewis 1979), but of course I mean to capture also the intentions of

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[2] Stalnaker, in the quote, says that the objective is a *reduction* of the context set. I believe the objective is, less specific: it's just to *change* the context set. This may in some cases involve widening the context set, i.e. adding possibilities that had previously been discarded.

authors who use terminology like "presupposition set", "context set", "common ground", etc.

First, the conversational score is usually introduced by saying that it corresponds roughly to the propositions that are taken for granted by the participants in a conversation as the background of that conversation. Sometimes this is expressed by saying that the score contains what is accepted or assumed by participants for the purposes of the conversation. Yet another way of getting at roughly the same idea is to say that the conversational score corresponds to the set of possibilities that participants treat as "live" possibilities, possibilities among which they intend to distinguish (Stalnaker 1978, pp. 84–5).

Now, it is not clear what exactly is involved in *accepting or taking for granted a proposition for the purposes of a conversation*, and any account will need to elucidate this. One way to go is to identify some propositional attitude, ϕ, which individual participants can take towards a proposition, and then say, for example, that the conversational score comprises all the propositions that are ϕ-ed by all participants.

Let's summarise the first constraint as follows: The score of a conversation corresponds roughly to what participants take for granted as background of that conversation (whatever that means precisely and whatever we say about divergences in what different participants take for granted).

A second constraint is related. The score at a particular time during a conversation partly determines, and thus explains, what utterances would be appropriate at that time. For example it will often be inappropriate to assert a proposition that is already in the score, or entailed by what is in the score (in Stalnaker's picture: given that we want to distinguish among the possibilities that are live, it is of no help to assert a proposition that is true in all live possibilities).

Thirdly, the conversational score generally has a function related to that of a context: it helps determine the contents or referents of context-sensitive expressions (whatever these might be: some will include, e.g., "the" or "knows" or "every" or "John", others will not). Thus certain things may be salient as a result of the state of the score, therefore helping to determine what participants refer to when they use demonstratives like "that" or anaphoric pronouns like "she" or "her". For example, when someone utters "She's a linguist, and that's her dog.", then the context needs to render one person and one object salient as, respectively, the most suitable referents of "she" and "that".

It is important to point out that this role of the score as context can be taken in semantic or pragmatic ways. In a semantic way: when someone utters a context-sensitive expression then the score determines the *semantic* content or referent of that expression. Secondly, it could be taken in a purely *pragmatic* way: while certain objective facts about the utterance determine the content or reference of context-sensitive expressions, the conversational score is a representation of these objective facts and thus makes that information available to participants (when everything goes well) and thus helps communication. A Donnellan case can illustrate the difference. Suppose the participants in a conversation are all granting that Lance is the winner. More accurately, all participants are ϕ-ing that Lance is the winner, so that the score contains the proposition that Lance is the winner. But in fact Lance is not the winner. Now someone utters: "The winner is happy". One way to view the role of score (assuming a referential treatment of definite descriptions) is to say that the semantics of "the winner" says that tokens of it refer to whoever the score says is the winner. In that case the utterance is true just if Lance is happy. However, the semantics of "the winner" may make no reference to the score. It may say just that tokens of it refer to whoever is the winner. In that case, the utterance's truth depends not on Lance's state of happiness, but on the actual winner's. On the second, pragmatic view of score, the role of the context in "helping determine reference" will not be that of determining the *semantic* referent. But it will at best be that of helping determine what participants take to be the referent (speaker's referent, audience's referent, whatever). This issue

can be decided case by case: one might give a semantic role to the score in some cases but not in others. For example one might give no semantic role to the score in the case of "the winner", but do give it a semantic role in fixing the referent of "she". I shall try to leave these issues untouched as far as possible.

We can then summarise the third constraint as follows: The conversational score helps determine the referents of all manner of context-sensitive expressions (leaving open whether, and in which cases, this is semantic reference or some form of user reference).

Fourthly, the score is dynamic in tightly regulated ways. It changes in response to what happens during the conversation. For example, if a proposition is asserted and remains unchallenged, then it is added to the score. Or if someone utters a sentence that requires a presupposition, then again, if there is no challenge, the proposition required as presupposition is added to the score. Some additions to the score cannot (or not easily) be prevented by a challenge: information about anything conspicuous that happens during the conversation is added to the score, including all the contributions made by participants. For example, if I assert that O'Leary is a fool and O'Leary prevents this from being added to the score by protesting violently, the proposition that *I said that* O'Leary is a fool nevertheless is added to the score.[3] Thus if someone says: "that was a rude thing to say", then their demonstrative "that" refers to what I've said, namely that O'Leary is a fool, because my saying so has brought it about that it is part of the score that I just said so, thus making it salient and the best candidate for referent of "that".

Let's summarise this last constraint: changes in the conversational score occur in response to events that take place in the course of the conversation and in accordance with the rules of score change (whatever exactly they are).

This is just a very rough characterisation of the theoretical role theorists commonly assign to the conversational score, which is compatible with many different elaborations of the basic idea. In other words, the constraints fall far short of defining the notion of "conversational score". For one thing, the constraints need to be made more precise: we need a clearer notion of "taking for granted as the background", for instance, and we need to settle on a precise set of rules of score change as roughly indicated above. Moreover, we need to make precise the role of the score in helping determine the contents of context-sensitive expressions. Finally, we need to make more precise the notion of appropriateness mentioned, e.g. delimit a range of intuitions of appropriateness that are the target explananda of the theory of score.

In trying to define a notion that meets these constraints, we face one difficulty in particular (pointed out by David Lewis 1979, p. 239). The difficulty concerns simultaneously doing justice to the first and last constraint mentioned, here summarized as C1 and C2:

C1   The score of a conversation corresponds roughly to what participants take for granted as background of this conversation (whatever that means precisely and whatever we say about divergences in what different participants take for granted).

C2   The conversational score changes in accordance with the rules of score change (in response to events that take place in the course of the conversation, and along the lines outlined).

C1, once made precise, constitutes (or at least allows) a theoretical reduction of the conversational score in terms of the attitudes of participants: The score of c at time t

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[3] Though, if the conversation goes on long enough for participants to forget, then it may be possible to remove this information eventually. Those who use the conversational score framework in a contextualist theory of knowledge (see DeRose 2004) may have to tread more carefully at this point. A sceptic may try to disallow even the proposition that I have said that O'Leary is a fool from the score, as she is trying to treat as "live" the possibility that this very conversation is just an illusion. Whether this is a way in which the score can be changed is an interesting question.

is the set of propositions p such that participants of c are R-related to p at t, where R roughly corresponds to the relation of taking for granted. Suppose R is an independently identifiable psychological state (a propositional attitude in the usual sense). Presumably, then, the R-relation will be a relation that is governed by psychological laws, and it will then be these laws that dictate how the score develops. However, C2 specifies that the score changes acording to the rules of score change, rules that are roughly as indicated above. This means that we can't give both C1 and C2 (or rather their final versions) the status of definitions. For we can't stipulate that the R-relation (a psychological relation, independently identifiable) is governed by the rules of score change. If we give definitional status to C1, C2 will be an empirical generalisation, and if we give definitional status to C2, C1 will be an empirical generalisation. In other words, if we give definitional status to one of the two, the definition has to be such that the other constraint comes out at least approximately true.

This difficulty is not insurmountable. One strategy is to keep looking for candidate psychological R-relations, no matter how complex, until one finds one that conforms reasonably well to (a reasonable version of) the rules of score change. This makes the success of a theory of conversational score depend on whether we can find a suitable R, and I do not think this is very promising. A second strategy is to continue to treat R as a mental state of individuals, but to pick out that state in a way that ensures it conforms to the rules of score change. This is Lewis's strategy:

> Conversational score is, by definition, whatever the mental scoreboards say it is; but we refrain from trying to say just what the conversationalists' mental scoreboards are. We assume that some or other mental representations are present that play the role of a scoreboard, in the following sense: what they register depends on the history of the conversation in the way that score should according to the rules. The rules specifying the kinematics of score thereby specify the role of a scoreboard: the scoreboard is whatever best fills this role; and the score is whatever this scoreboard registers. (1979, p. 239).

In other words, the score of a conversation comprises the propositions R-ed by the participants, where R is defined as the propositional attitude that best ensures that the score changes according to the rules of score change (C2).

The disadvantage of Lewis's solution is that now the theory of conversational score depends on the substantial psychological asssumption that there is a propositional attitude that plays the role well. Moreover, the attraction, surely, of assuming the reducibility of the score to individual psychological states of participants is to make possible further explanations of linguistic behaviour making use of what we know independently about those psychological states. But on Lewis's approach no such explanation is possible because we don't know enough about the attitude in question, in particular we know nothing *independently* of the theory of conversational score.

A third strategy is to choose a relation R that is not governed by psychological laws, but rather conforms, by definition, to the rules of score change. In other words, one way out is to drop the project of reducing the score to the individual propositional attitudes of participants.[4] In the next section, I will argue that Stalnaker's early account of presupposition uses this strategy. In the following section I shall examine Stalnaker's later account which is similar but reintroduces some psychological elements.

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[4] Gauker 1998 seems to pursue this type of strategy.

3. Stalnaker's Early Account of Speaker Presupposition

In Stalnaker's early papers on pragmatic presupposition[5] the notion of *speaker-presupposition* takes central place. The conversational score is defined as what is presupposed by all participants (where the presuppositions of participants do not coincide, the context is defective and no score is defined). Stalnaker wants to show that his notion of pragmatic speaker presupposition can do everything more traditional semantic accounts of presupposition can do and more.[6] Now, Stalnaker usually introduces the idea of speaker presupposition by saying that to presuppose a proposition "is to take its truth for granted and to assume that others involved in the context do the same"[7] or that to presuppose is to "assume or believe" it and to assume or believe that the audience assumes or believes it.[8] He often calls presupposition a "propositional attitude"[9].

All this suggests that for Stalnaker, speaker presupposition is a complex psychological state of individuals. However, something reminiscent of Lewis's difficulty leads Stalnaker to propose "tentative definitions" of presupposition that depart from the above characterisation:

(S1)   A speaker presupposes that *p* in a given moment in a conversation just in case he is disposed to act, in his linguistic behaviour, as if he takes the truth of *p* for granted, and as if he assumes that his audience recognizes that he is doing so. (1973, p. 448)

(S2)   A proposition is presupposed if the speaker is disposed to act as if he assumes or believes that the proposition is true, and as if he assumes or believes that his audience assumes or believes that it is true as well. (1978, p. 84)[10]

The reasons he cites for defining presupposition in this way are mainly two: first, he observes that participants in a conversation can presuppose even propositions they do not assume or believe or take for granted, or that they do not assume or believe their audience to assume or believe. In other words, the linguistic phenomena involving presupposition[11] seem to arise independently of whether or not participants really assume or believe what they presuppose.[12] Secondly, Stalnaker cites cases of informative presupposition. In these cases, the speaker does not assume or believe that the audience assumes or believe what he presupposes. Rather, the speaker acts as if he assumes or believes this (uttering the sentence in question would be inappropriate if he or she didn't) and thus may achieve that the audience make the same assumptions. Here, clearly, independent constraints on the rules of score change (C2) are guiding Stalnaker's choice of the *R*-relation: the phenomena of

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[5] 1970, 1973, 1974, possibly 1975, 1978.

[6] The advantage Stalnaker claims for such a pragmatic treatment is that it would impose fewer restrictions on semantics. For example, on a semantic account of presupposition, "even" would unduly complicate the semantics, whereas on Stalnaker's pragmatic acccount, "even" could be a particle that has no semantic impact (no impact on truth conditions) but merely imposes constraints on speaker presuppositions (1973, p. 453–4).

[7] 1970, p. 38, see also 1973, p. 448.

[8] 1974, p. 49.

[9] E.g. 1970, p. 38; 1973, pp. 448, 450.

[10] See also 1970, 38; 1973, p. 450; 1974, pp 49,. 52; 1978, p. 85. Mandy Simons (2003) claims that Stalnaker 1973 and Stalnaker 1974 defend quite different views of presupposition, the first dispositional, the second a "common ground view". However, I can't find a textual basis for this claim of discontinuity. It is true, though, that there is tension between the dispositional definition just cited and Stalnaker's repeated claim that speaker presupposition involves making assumptions or having beliefs about what other participants presuppose (see especially 1974, p. 49; 1975, p. 67; 1978, p. 85). This is in accordance with the "first approximation" he usually uses to introduce his notion (e.g. "take it for granted and assume that the others do"), but is clearly in tension with the more refined dispositional definition proposed in each of the earlier papers.

[11] E.g. the inappropriateness of asserting what is presupposed, of using sentences that require for their interpretation information that is not presupposed etc.

[12] See 1970, pp. 39–40; 1973, p. 449; 1974, p. 51.

appropriateness that are to be explained by a conversational score and the pretheoretical phenomenon of informative presupposition.

However, it is a consequence of the new tentative definitions that speaker presupposition is not a propositional attitude in the usual sense. If presupposition is just a disposition to exhibit a certain kind of behaviour (utter a certain pattern of sounds), then presupposition is independent of a person's beliefs, assumptions, and even intentions. Stalnaker clearly recognises this:

> This does not imply that the person need have any particular mental attitude toward the proposition, or that he need assume anything about the mental attitudes of others in the context. (1970, p. 38)

> Thus the act of *making* a presupposition; … , is not a mental act which can be separated by an act of will from overt linguistic behavior. (1973, p. 451)

> Presupposing is thus not a mental attitude like believing, but is rather a linguistic disposition to behave in one's use of language as if one had certain beliefs or were making certain assumptions. (1974, p. 52)

What exactly is it to act in one's linguistic behaviour as if one took certain things for granted and made certain assumptions? Consider this proposal:[13]

(D1)   Behaving in one's use of language as if one φ-d $=_{\text{def}}$ using a sentence the use of which is inappropriate unless one ϕ-s .

> [Fully: Behaving in one's use of language as if one assumes or believes that *p* and as if one assumes or believes that others are assuming or believing that *p* $=_{\text{def}}$ using a sentence the use of which is inappropriate unless one assumes or believes that *p* and that others are assuming or believing that *p*.]

Stalnaker cannot say this because he wants to allow, precisely, that one *can* quite appropriately presuppose without making the assumptions (or having the beliefs) in question, namely by just acting *as if* one made those assumptions.

One way of dealing with this difficulty is to modify (D1) by making reference to "normal" contexts:

(D2)   Behaving in one's use of language as if one ϕ-d $=_{\text{def}}$ using a sentence the use of which is inappropriate *in normal contexts* unless one ϕ-s .

Some of Stalnaker's remarks suggest this reading—he speaks of "normal, straightforward serious conversational contexts where the overriding purpose … is to exchange information, or conduct a rational argument" (1974, 51).[14]

In any case, it seems clear that the propositional attitude of presupposing, in Stalnaker's early work, is not identifiable independently of the linguistic properties of sentences, i.e. under what conditions it is or is not appropriate to utter them. This definitional link, I suggest, is what is supposed to solve Lewis's difficulty. It is because presupposing is using (or being disposed to use) sentences whose linguistic

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[13] Stalnaker usually uses talk of "transparent pretense" to explain what he means by "acting as if" (e.g. 1973, 449; 1974, 51–2), But this doesn't help with the question on what other notions the notion of "acting as if" depends.

[14] Another way is to deny that "acting as if" has any explanatory role here, and to use knowledge of the target phenomena directly to identify the propositional attitude that constitutes presupposition. Suppose we have a range of paradigm examples of sentences *s* whose use in context *c* would be inappropriate (in the relevant sense) unless one presupposed that *p*. Then presupposing can be defined as follows:

(DP)   Presupposition is the propositional attitude that in each of the cases one must (must not) have to *p* in context *c* if one's use of *s* in *c* is to be appropriate.

properties make certain demands on speakers that speakers' presuppositions conform to the rules of score change. *R* is definitionally or conceptually linked to the rules of score change.

4. Stalnaker's 2002 account

In a more recent paper, "Common Ground" (2002), Stalnaker develops a new and more detailed account of the notion of speaker presupposition. The account rests on a notion of "common ground": a speaker presupposes that *p* just if he or she believes that *p* is common ground. Thus, whatever common ground is (more on this in a moment), speaker presupposition is a kind of belief. This is a significant change, beause now speaker presupposition is defined as a mental attitude, governed by the psychological laws of the beliefs of individuals (compare the three quotes on the previous page). The question thus arises how Stalnaker ensures that constraint C2 (now an empirical generalisation) is met.

Presupposing *p* is believing that *p* is common ground. But what is common ground? Stalnaker defines it as what is commonly believed to be *accepted*:

> It is common ground that *p* in a group if all members *accept* (for the purpose of the conversation) that *p*, and all *believe* that all accept that *p*, and all *believe* that all believe that all accept that *p*, etc. (2002, p. 22)

Thus all participants not only accept common ground propositions, they also mutually recognise that they accept them. It is possible that a common ground proposition is disbelieved by everyone, for acceptance does not entail belief. However, the definition makes it impossible for participants to fail to recognise that a common ground proposition is generally accepted and mutually believed to be accepted. It is also possible that participants in a conversation mistakenly presuppose something, in the sense of falsely believing it to be common ground. In such a case Stalnaker calls the context "defective".

Obviously, the definition of common ground further relies on a notion of acceptance that needs to be explained. Stalnaker offers the following:

> To accept a proposition is to treat it as true for some reason. One ignores, at least temporarily, and perhaps in a limited context, the possibility that it is false. (2002, p. 716)

This talk of "treating as true" and "ignoring possibilities temporarily" can be read in various different ways. Stalnaker refers his readers to the account of acceptance he gave in his 1984 book *Inquiry*, thus it will be useful to have a quick look at the acccount of acceptance offered there.

In *Inquiry*, Stalnaker says a number of things about acceptance. On the one hand, he characterises acceptance as a generic propositional attitude concept, of which the belief concept is the most fundamental instance. Other acceptance concepts include presupposition[15], presumption, postulation, assumption and supposition. This suggests that the attitude of accepting a proposition could be explicated disjunctively as the attitude of either believing or supposing or assuming or postulating, or … it.

On the other hand, Stalnaker says things about acceptance that suggest that what he has in mind is not at all a propositional attitude in the usual sense: "To accept a proposition is to act, in certain respects, as if one believed it" (1984, p. 80). This is reminiscent of the earlier account of speaker presupposition. Other things he says lead

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[15] I doubt that mentioning presupposition as one of the acceptance attitudes would make this characterisation of presupposition (which is partly in terms of acceptance) unacceptably circular. I suspect that one could characterise acceptance independently of presupposition, then define presupposition partly in terms of acceptance and "discover" afterwards that presupposition is also an acceptance concept.

in the same direction. One difference Stalnaker mentions between (mere) acceptance and belief is that "what a person [merely] accepts can be compartmentalized in a way in which what he believes cannot be" (p. 80). Mere acceptance can be deliberately temporary or limited to a certain context, belief can't.[16] He also mentions that acceptance may have a social or co-operative dimension, and that this is the rationale for accepting propositions one does not believe, or for not accepting propositions one does believe. All this suggests that mere acceptance is a matter of public commitment or publicly acting in a certain way that *counts*, according to certain linguistic rules or conventions, as committing oneself to it.[17]

If acceptance, in the relevant cases, is a public or social attitude, i.e. an attitude that is essentially governed by the rules or conventions of some social practice, then Stalnaker has a neat solution to Lewis's difficulty. For suppose that competent participants are familiar with the linguistic and conversational rules and conventions that determine under what conditions one counts as accepting a proposition—e.g. asserting it or not objecting to someone else's assertion of it, etc—and are also familiar with the rules that say under what conditions participants count as having asserted a proposition, not having objected to an assertion of it etc, and finally, that usually participants in a conversation believe of one another that they are competent with these rules and conventions. Then there is good reason to expect that competent participants concur in their beliefs about what is commonly believed to be accepted. This would explain why contexts are usually nondefective. Moreover, it would explain why participants update their beliefs about what is accepted and commonly believed to be accepted in accordance with the rules of score change (for these rules are part of what they are competent with).

I do not know whether this interpretation agrees with Stalnaker's intentions. However, I believe it makes good sense of his text. Whatever the actual authorial intentions, I shall now propose a simplified account that preserves, I hope, the advantages of Stalnaker's account.

5. Conventional score

In this section, I propose simplified notions of speaker presupposition and conversational score, which are inspired by Stalnaker's accounts.

One lesson one can learn from Stalnaker's two different characterisations of speaker presupposition is this: it is difficult to define the propositional attitude of speaker presupposition (and indirectly the conversational score) as an independently identifiable mental state of individuals, such as believing and believing that others believe, i.e. mental states that exist independently of a system of linguistic norms or rules. It is easier, and in the light of Lewis's problem more promising, to define speaker presupposition in such a way that it is conceptually tied to certain rules and conventions. Thus a *social* or *conventional* notion of acceptance, rather than a psychological one, seems to be needed. In Stalnaker's earlier account the notion of speaker presupposition was itself such a notion. In his later account, the notion of acceptance, which is used in the definitions of "common ground" and "presupposition", played this part. The key idea is each time that making certain linguistic moves, or behaving in a certain way in response to one's interlocutors' linguistic moves, conventionally counts as accepting or not accepting certain propositions, where this has certain consequences for what linguistic moves are appropriate.

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[16] Or shouldn't, as he explains on the following page.

[17] This is in tension with the above-mentioned idea that acceptance is a generic attitude of which belief is a special case. This suggests that rather than acceptance being a generic attitude of which belief is an instance, the *concept* of acceptance is a genus of which *the concept of* belief is a special case (see *Inquiry*, p. 79. Another problematic feature of Stalnaker's notion of acceptance is that acceptance is closed under deduction. This is just one aspect of a basic problem of Stalnaker's account of propositions as sets of worlds (what he calls the "deduction problem").

In the light of this lesson, however, it seems more economical to define the score of a conversation at a time directly as what is accepted at that time, or so I shall argue. This has the simplifying effect that the score no longer depends on the mutual or common belief of participants. However, we will still have to invoke the propositional attitudes of participants elsewhere, for their linguistic moves need to be explained, and some norms of appropriateness impose constraints on what speakers believe. I propose that belief about what is accepted is well-suited to play, roughly, the role of Stalnaker's speaker-presupposition. This, again, is a simplification of Stalnaker's later notion of speaker-presupposition: conversationalists are no longer required to have indefinitely iterated mutual beliefs but rather have simple beliefs about a conventional entity: the score (=what is accepted). Conversationalists arrive at these beliefs by applying their competence with the rules of score change to their knowledge of what has gone on during the conversation. I shall develop this proposal in a little more detail and show that it can do everything a theory of conversational score needs to do.

The conversational score, then, is defined entirely in terms of certain conversational norms or conventions. On the one hand, there are the rules of score change, which say how the score changes in the course of a conversation. These rules will state the conditions under which new propositions are added to the score (accepted), and the conditions under which propositions are removed. On the other hand, there are rules that specify the normative significance of the score, i.e. they say what utterances would be appropriate or inappropriate given the state of the score. This means that the notion of a conversational score might be, strictly speaking, eliminable. It might be possible to formulate the norms of appropriateness directly in terms of the events during a conversation.[18] However, introducing the notion of a score helps organise these rules in a better and more systematic way. It would be cumbersome, in the long run, to try to eliminate talk of the score, for it would obscure some regularities that have explanatory value.[19]

I will not be able here to present a complete theory of conversational score. But a tentative indication of the sorts of rules that govern score change will be useful, and in particular will allow me to show how a notion governed by these rules can fulfil the theoretical role of conversational score. I shall say that the score (at any time) is what participants accept (at that time). In general, all participants will accept the same propositions, because what they accept is a function of the rules of score change, and these rules do not allow individual variation. Here are some suggested rules governing acceptance:

(SC1) If, in the course of a conversation, it becomes obviously manifest to all participants that p, then the proposition that p becomes accepted (paradigm example: a participant audibly says something, so the proposition that he or she said it is subsequently accepted).[20]

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[18] E.g., if the rules of score change say that a proposition p is added to the score if conditions C hold, and the rules of appropriateness involve the claim that such and such a move is inappropriate if p is a member of the score, then we could, strictly speaking, have formulated just one complex rule that states that such and such a move is inappropriate if conditions C hold. Lewis makes essentially this point in his 1979, p. 237.

[19] The notion of score might be ineliminable in the following way: even if the score is the set of propositions that fulfil conditions C (for some C), speakers could believe that p is accepted/part of the score without believing that p fulfils conditions C. In other words a notion like acceptance or score might be ineliminable from the reasoning of speakers. I cannot explore this line of argument here.

[20] I call a proposition "obviously manifest" when pursuasive justification for believing p is objectively available and difficult to ignore, and this is itself open to view. This rule may come into conflict with later rules, e.g. (SC2), when, for example, propositions inconsistent with what is obviously manifest are introduced into the score via assertion. Presumably the rules of score change must therefore be ranked. A more complicated case occurs when, for example, one bona fide participant in a conversation loudly protests that he rejects the assertions made by the others, and they ignore the protests, saying things like "Did you hear anyone protest?"—"No, did you?" and go on to act as if the proposition protested against was accepted. In such a case we can say that the conversation of which the protester is a participant is defective, because beliefs about what is accepted diverge. We can also say that there is

(SC2) If a participant asserts that *p* and the assertion is not rejected by any participant, then *p* becomes accepted. (If not-*p* was accepted at the time of assertion, then not-*p* is removed from the score together with propositions that obviously require not-*p*.)

(SC3) If there is a sentence *s* and a proposition *p* such that using *s* would be inappropriate unless *p* was accepted, and *s* is used, then, absent challenges, *p* becomes accepted by all participants.[21]

(SC4) If the propositions that *p*1, *p*2, … are accepted, then any easily recognizable consequence of *p*1, *p*2, … is accepted too.[22]

These rules employ notions like "asserting that *p*", "rejecting an assertion" and "rejecting a presupposition". It will be the job of the semantics of any language to specify sentences utterances of which count as assertions, and to specify which proposition is asserted in each case. Similarly, the semantics will have to specify which expressions can be used to reject assertions and presuppositions.[23] Let us say that any expression of refusal to accept a proposition counts as a rejection. In the simplest case, this will *only* be a refusal. A less simple case would be a request for justification. The most drastic possibility will be an assertion of the negation of the proposition in question. In all three cases, the proposition will be blocked from becoming accepted (more on what can happen after a refusal in the next section).

The rules of score change are explanatorily useful only in conjunction with certain *normative* principles concerning the score, for ultimately the explananda of the theory of score will be facts about which utterances are appropriate. Here is one very general normative principle concerning acceptance. It captures the idea that it is the objective of any conversation to change the conversational score:

(NC1) It is appropriate to make a linguistic move only if it is likely to change the score in ways that further the aim of the conversation.

(NC1) generates some further derivative normative principles. For example, if a proposition *p* has recently been, and remains, accepted, then it is typically inappropriate to assert *p*, except e.g. in the process of justifying another assertion. For if *p* has recently been accepted, asserting it cannot bring about an interesting change through addition of *p* to the score. However, if asserting it again helps justify another proposition under discussion, then it does potentially have an interesting effect on the score.[24]

If we suppose that the content of some context-sensitive expressions is a function of information contained in the score, then another derivative principle is that one ought to use these context-sensitive expressions only when the score does contain the propositions needed to determine a definite content. Thus, if anaphoric pronouns are expressions of this sort, then using anaphoric pronouns is inappropriate unless the

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another, non-defective conversation, of which the protester is not a participant. Only in the latter case do we have a conflict between (SC1) and (SC2).

[21] (SC3) is what one might call an "accommodation rule" in the style of Lewis 1979. (SC3) clearly depends on certain normative rules of conversation, i.e. the rules that say which moves are appropriate. I shall say a little more about this below. For illustration: one way in which a sentence *s* can require that some proposition *p* is accepted would be that *s* (conventionally) presupposes *p*, another may be that *s* expresses a proposition only if *p*. See von Fintel 2008 for detailed discussion of presupposition accommodation.

[22] For the time being, I prefer (SC4) to a stronger closure condition, and to no closure condition at all. Alternnatively, the normative rules below could be re-formulated in terms of "accepted propositions and their easily recognizable consequences" rather than in terms of accepted propositions.

[23] See Segal 1990, García-Carpintero 2004 and Kölbel 2009 for compatible recent accounts of force-indication.

[24] And, as we shall see in the next section, asserters incur certain obligations, so that asserting a proposition which is already accepted may have the important effect of bringing into existence these obligations.

score contains the information that there was an utterance that can figure as the antecedent of that pronoun. In other words, anaphoric pronouns "require presuppositions".

But not all presupposition requirements of expression types need be a consequence of (NC1). It may be part of the conventional meaning of an expression that it creates the constraints on score mentioned in the antecedent of (SC3). An example suggested by Stalnaker (1973, p. 453) is "even". The best account of the meaning of "even" may be one that does not treat it as a contributor to truth-conditional content, but as merely a device that creates contraints on the score. Thus, the truth conditional content expressed by "Even George can swim." is just that George can swim. However, an utterance of the sentence "Even George can swim" (unlike an utterance of the sentence "George can swim."), is appropriate only if the score contains the proposition that George is among the least likely (from a contextually salient group) to be able to swim.[25]

Presuppositions raise some tricky questions for this account, particularly when presupposition failure is held to lead to failure to express a proposition. This is too large a topic to treat properly here, but perhaps it will suffice to discuss the trickiest possible case and show how the account would handle it. The case hardest to accommodate would seem to be that of an "expressive" presupposition, i.e. a presupposition whose failure leads to failure to express a proposition, as for example when an empty name is used in a singular predication, where the background theory of names is of the "direct-reference" variety.

If an assertoric sentence s has the expressive presupposition that p, i.e. if p is a precondition for s's expressing a proposition at all, then an utterance of s seems to lead to trouble. For even though according to rule (SC3), p will come to be accepted, this still does not guarantee that s expresses a proposition, because p may be false. So how should the score be updated? Let's take an example:

(H)   Homer was born before Hesiod.

(H) only expresses a proposition if "Homer" refers to anyone (which is controversial). Then what effect does an utterance of (H) have on the score, when the audience does not reject it?

First, given the supposition that (H) expressively presupposes that "Homer" refers to someone, the utterance would not be an assertion, thus (SC2) does not apply. But secondly, the utterance need not therefore be conversationally inappropriate according to (NC1). For there are other effects on the score. First, it becomes accepted that the utterance has been made (from (SC1)). An utterance of (H) is inappropriate unless it is accepted that "Homer" has a referent, for otherwise its utterance would not constitute an assertion and therefore would not change the score in the anticipated way. It therefore becomes accepted that Homer exists (SC3). Consequently, it also becomes accepted that the utterance of (H) was an assertion, the assertion of some proposition. Thus it will be accepted that there is such a proposition and that it is now accepted.

If we are to maintain the thesis of expressive presupposition and say that utterances of (H) and similar sentences can be perfectly appropriate, we have to read (NC1) in such a way as to render the score changes just outlined as furthering the ends of the conversation. This might be a reason to make (NC1) more precise. What kind of change in the score furthers the aim of the conversation? It is useful to distinguish changes in score that take place merely on the basis of (SC1) from other changes that are based on the contents of utterances. Let's call the former "changes in the conversational record", i.e. in the record of what utterances have been made during

[25] Barker 2003 discusses "even" among other cases of conventional implicatures. He maintains that conventional implicatures are a threat to truth-conditional semantics. The suggestion just made would deny Barker's "Common Ground principle" Disq2 (2003, p. 2), i.e. deny that assertability entails truth and that truth entails assertability.

the conversation. Among the changes that are not mere changes to the record, some are "topical" changes, i.e. a proposition concerning the topic of conversation is added to the score. In the above case, for example, the addition of the proposition that Santa exists was a topical change. Finally, there are "meta-changes", i.e. changes in the representation the score has of itself. In other words, conversationalists not only come to accept certain propositions that have been expressed or presupposed (topical changes), they also come to accept that certain things have been said (changes in the record) and that they accept certain propositions (meta-changes). One way to make (NC1) more precise would be to say that usually a mere change in the record of what has been said does not further the aims of the conversation—though in some cases it may do so indirectly. Topical changes, though, are not the only changes that can further the aims of a conversation, as our case shows.

The above constraints on score change and (NC1) are merely an incomplete first approximation. For a complete account, there would clearly need to be further principles concerning questions, commands etc. However, this approximation provides a notion of score that can do the job such notions have been employed to do. In fact, I have already shown for almost all the types of cases adduced by Stalnaker in his original article (1973), how the account deals with them. The one kind of phenomenon I have not mentioned is that of presupposition projection, but it es easy to see that Stalnaker's original explanation carries over in this case too.[26]

Why should these modifications represent an improvement of Stalnaker's account? There is a moderate advantage of greater simplicity, and there do not seem to be disadvantages. In my conception of score as what is accepted (instead of common ground as what is mutually believed to be accepted), being part of the score does not require the mutual belief of participants. Correspondingly, speakers' beliefs about the score do not require infinitely iterated belief ascriptions. This makes my account simpler, even though typically speakers will in any case at least tacitly have mutual beliefs of what is accepted, given that they mutually believe one another to be competent speakers who are (tacitly) aware of the rules of score change. This does mean that my account of presupposition accommodation is driven purely by (SC3), and not, as in Stalnaker's account, by general principles of belief change (Stalnaker 2002, pp. 708–11). However, as I have argued earlier, even Stalnaker needs a notion of acceptance that is conventional, i.e. not an independently identifiable mental state. Thus a principle like (SC3) will be needed in any case.[27]

6. Assertion

In "Assertion", Stalnaker says that something along the lines of my (SC2) above should be regarded as an "essential effect" of assertion:

> The essential effect of an assertion is to change the presuppositions of the participants in the conversation by adding the content of what is asserted to what is presupposed. This effect is avoided only if the assertion is rejected. (1978, p. 86)

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[26] The phenomenon involves cases like this: "I have a car and my car is rusty." can be appropriate while "My car is rusty and I have a car." is never. The explanation is that the first conjunct expresses a proposition (I have a car) that is presupposed by the second. Thus if the order is reversed, by the time an utterer begins to pronounce the second conjunct, she has already brought it about via (SC3) that that proposition is accepted. See Stalnaker 1973, pp. 454–6; 1974, p. 59. But asserting something already accepted is usually inappropriate, for the reasons already rehearsed. Strictly speaking, though, (SC2) and (SC3) need to be more precise in order for an assertion of p and q to have an effect on score already the moment it becomes clear that the first conjunct is a conjunct of an asserted conjunction.

[27] Another advantage may be that my scheme allows the possibility of participants who are ignorant of the score. If the score plays a role in determining the semantic referents of some expressions (such as "she"), then this would allow one to say that a token of "she" refers to some individual who is salient according to the score, even though some participants are ignorant of this.

Stalnaker is careful to point out that this essential effect does not provide a definition of assertion, but he leaves open the possibility that it might form one component of such a definition. In this section, I shall take up the project of supplying the remaining components.

Stalnaker seems content, and I agree, that the essential effect is indeed necessary for assertion, at least when properly understood, namely as a *conditional* effect: the effect of asserting that *p* is that *p* is added to the score *if no participant rejects the assertion*. But he explains why the essential effect is not sufficient for assertion. Other linguistic moves have the same effect. For example, the act of supposing something (e.g. saying: "Let's suppose that … ") may have exactly the same effect, without being an assertion. Another example, not from Stalnaker, is that one can use a sentence that requires a presupposition in order to add a proposition to the score, (conditionally upon absence of rejection), i.e. exploit (SC3).[28]

For a definition of assertion with the essential effect as a component, one must therefore add further conditions or effects which, together with the essential effect, form a necessary and sufficient condition for assertion. I believe that making an assertion has further, normative consequences, such as the obligation to provide a justification if asked to give one. Spelling out these further normative constraints will allow a unique characterisation of assertion's role in conversation.

I said at the very beginning that I was hoping to describe the aims of communicators at a level that abstracts away from the diverse extra-linguistic aims we pursue in language use, thus arriving at an abstract language-internal objective, namely the manipulation of the conversational score. Just as the objective of a football game is changing the score in favourable ways, the objective of a conversation is changing the conversational score in favourable ways. (NC1) is a consequence of this: if every conversationalist has this objective, then moves that do not promote relevant changes of the conversational score must be inappropriate. However, in addition to this very general normative constraint, there must be further constraints spelling out the rules of engagement between conversationalists. Thus, participants in conversations, just by being participants, have certain rights and undertake certain obligations. In other words openly refusing to comply with these obligations, or to grant these rights, counts as an attempt to opt out of the conversation. However, as I am operating at a level that abstracts away from the differences in extra-linguistic point between actual conversations, these norms will be highly context-sensitive. For example, if I say that asserting that *p* implies certain obligations of the asserter, then I want to allow for a good deal of variation in whether and how these obligations are enforced in different kinds of conversation.

In trying to spell out these norms, I want to draw on work by Brandom (1983, 1994).[29] According to Brandom, asserting that *p* has two effects: firstly the asserter incurs a justificatory responsibility, i.e. the obligation to justify his or her assertion if

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[28] One can also add a proposition to the score via a rule like (SC1), but this will not be conditional upon it not being rejected, thus here the effect is different. Stalnaker says that "there may be various indirect, even non-linguistic, means of accomplishing the same effect which I would not want to call assertions" (1978, p. 87). However, reproducing the exact *conditional* effect indirectly or even non-linguistically will require some ingenuity.

He also mentions that the essential effect makes reference to the speech act of rejection (in my formulation to "challenge"), thus using it for a definition would require an independent account of this speech act. I believe this problem can be solved. The notions of asserting and challenging an assertion are interdependent, one can only be understood in terms of the other. Each has a certain function in the kinematics of score. In any concrete language, there will be expressions utterances of which count, by virtue of their meaning, as assertions or challenges of assertions. For example: "How do you know?", "What makes you think that?", "Why should we accept that?" are examples of sentences uttering which counts as a challenge of an assertion that has just been made.

[29] Brandom also uses the term "score" but in a significantly different sense: according to him the score records the commitments and endorsements of individual participants (1983, pp. 646–7), whereas my score records what is accepted (in the sense outlined) by everyone. As we shall see, the score in my sense records the individual obligations of participants in an indirect way, by recording what moves they have made.

challenged, and secondly other participants obtain the license to rely on the assertion as a premiss—in particular the license to defer to it when themselves justifying assertions. I want to adopt these rules in a simplified form. But some more stagesetting is required to explain the simplification.

Let us return to the three ways of rejecting an assertion or presupposition mentioned in the previous section. I said that the simplest rejection was just a refusal to accept what has been asserted. In this case the proposition that has been asserted is simply blocked from entering the score, but the rejector is not invoking the asserter's obligation to justify. If the asserter has sufficient interest in the matter, he or she may make further assertions, which are harder to reject, and which, if accepted may bring it about that the proposition originally asserted becomes accepted. The person who rejected the initial assertion may continue to reject it. However, depending on the point of the conversation, he or she may thereby show herself to be un-cooperative, thus there are certain extra-linguistic norms that will prevent conversations from degenerating in this way too frequently.

The second way in which an assertion can be rejected is by requesting justification. At this point the asserter's obligation to justify upon request is activated. In this case the asserted proposition is not only blocked from entering the score, but the asserter must also provide justification. She can do this in a number of ways. For example, suppose the proposition originally asserted was p. Then she might assert another proposition q and also assert that p if q. Or she might assert q when the score contains the proposition that p if q. Or she might assert q and assert that q justifies p. In all these cases, justification involves taking on new justificatory obligations, which can again be called upon, and must then be discharged in the same way.

The asserter could discharge the justificatory obligation by deferring to someone else's assertion that p, i.e. asserting that that other person has asserted p. In Brandom's account, this seems to be a new case in which the asserter simply makes use of the license she has been given through the other asserter's assertion. But one might also reduce it to the cases already mentioned by saying that in this case too, we have an assertion that so-and-so asserted that p and a background assumption (or explicit assertion) that p is justified by the fact that so-and-so has asserted that p (or if so-and-so has asserted that p then p). It seems to me that it is better to take this reductive route. For even a deferral to another asserter in justification of one's own assertion can be challenged by either challenging the assertion that the other person has also asserted it or challenging the assumption that the other person's assertion constitutes a justification.

On the reductive view I am proposing, the license to rely on someone else's assertion is just an aspect of the asserter's obligation to justify. Let me illustrate this with an example. Suppose Sally has told Peter that the shop is open. In what sense does this "license" Peter to rely on Sally's assertion for justification? If Peter himself asserts that the shop is open and is asked for justification Peter can say: "Sally said so.". If Sally has a decent reputation as an informant, this will usually be good enough. For suppose someone where to challenge Peter's justification by uttering "So? What if Sally said it?". In that case Peter can say that Sally usually has good reasons for what she asserts or that she is reliable in these matters and doesn't lie etc. The only way for the challenger to carry on challenging is either to refuse to accept that she usually has good reasons etc (which may be difficult for him), or she'll have to refuse to accept that Sally's good reasons etc are sufficiently good reason for accepting that the shop is open. In the latter case, the challenger will, in many ordinary contexts, appear un-cooperative, unless she has some special reason for denying that Sally's reasons are good enough in this case (in which case it is now the challenger who is taking on new justificatory responsibilities).

It might be objected that this story depends on the assumption that Sally "has a decent reputation as an informant". It is of course true that the story depended on this, and that the amount of weight Peter should be prepared to put on Sally's testimony should depend precisely on her reputation as an informant. But of course if Sally

didn't have a good reputation then it is hard to see what license would result from her asserting that the shop is open. If the village looney asserts that the shop is open, no-one will defer to him for justification, for everyone knows that the village looney frequently fails to discharge his justificatory responsibilities. In that case the response "So?" to a deferral will likely effect a withdrawal of the assertion.

I therefore propose to capture Brandom's two effects in the following single constraint:

(NC2) If a participant asserts that *p* then he or she thereby undertakes the obligation to justify *p* upon request.

My project in this section is to distinguish assertion from other ways of bringing about Stalnaker's essential effect. The examples considered above were supposing and presupposing (i.e. adding a proposition to the score through exploitation of (SC3)). Each of them also has the conditional effect of adding the proposition in question to the score if it remains unchallenged. Let's consider each case in turn. In order to distinguish supposing from asserting we first need to characterise supposing. The effect of supposing on the conversational score seems to be that a proposition is *temporarily* added to he score, for the purpose of exploring what would follow if the supposition were acepted. Once the exploration has been concluded, the supposition will be dropped again. Again, interlocutors may refuse a proposal to suppose something. Perhaps they do not regard as useful or instructive to make the supposition in question. In this case the proposition is not added temporarily to the score as proposed. Thus, a rule of score change concerning supposition might look like this:

(SC5) If a participant proposes to suppose that *p* then, if no-one objects, *p* is accepted temporarily. When the supposition is dropped again, all changes in the score that depend on the suposition that *p* will be reversed.

Asserting then differs from supposing in at least two ways. First, supposition has an expiry date: at the time of adding the supposed proposition to the score, participants are already agreeing to drop the supposition once they have concluded their exploration. Assertion, on the contrary, has no expiry date. Until and unless an assertion is challenged the asserted proposition remains in the score. Secondly, supposing does not involve the justificatory responsibilities involved in asserting. There may be an issue as to whether it is useful to suppose something. But the person proposing a supposition does not have the obligation to provide any justification.

Distinguishing asserting from presupposing is harder. By presupposing I mean the act of adding, or attempting to add, a proposition to the score by using a sentence that requires a presupposition. By uttering such a sentence, i.e. a sentence the utterance of which would not be appropriate unless some proposition *p* were accepted, one activates constraint (SC3) and brings it about that *p* is added to the score—unless, of course, someone challenges the presupposition. Challenges here will function in the same way as with assertions: one can just refuse to accept the proposition, or ask for justification, or assert something incompatible. If I say "Even Ambròs can climb that mountain.", I am attempting to get it accepted that Ambròs is among the least likely to be able to climb a mountain. If Ambròs, or anyone else, does not want this to be accepted, they can refuse to do so and thereby prevent it. They also seem to have a right to ask for some justification: "What makes you think Ambròs is among the least likely to make it?". And it seems that I have an obligation to provide an answer. Finally, my presupposition might be contradicted directly: "What do you mean? Any hill you can climb Ambròs can climb twice as fast.". Thus presupposing is very much like asserting: it seems that presupposing that Ambròs is among the least likely to make it to the top has just the same consequences for the score and the normative situation as has asserting it. The same conditional effect of adding the presupposed proposition to the score (as in Stalnaker's essential effect), the same conditional obligation to justify what's been presupposed upon request (as in (NC2)).

The differences may not be obvious, but there nevertheless are clear differences. First, there are contexts where presupposing that *p* is appropriate, while asserting that *p* is not. Thus for example, if it had recently been asserted that Ambròs is the least likely to reach the top and whether this is so were not currently relevant for the purposes of justifying some other claim, then it would be inappropriate to assert it, while it might be okay to presuppose it. For in presupposing something one will always also perform a distinct speech act, such as an assertion or a question. Thus, If I say "Even Ambròs can do it." am asserting that Ambròs can do it in addition to presupposing that he is among the least likely. The point of the move can therefore be that of adding the distinct, asserted proposition to the score.

Secondly, the nature of the obligation one seems to have to justify a presupposition upon request is different from the nature of the obligation one has in the case of assertion. Asserters, according to (NC2) are personally responsible for having justification. When someone successfully asserts a proposition *p*, *p* is not the only proposition that gets added to the score. It is accompanied by, for example, the proposition that that person asserted that *p* and that that person is responsible for its justification (for (NC2) is tacitly known by everyone). In other words, *p* remains in the score with a record of its origin and guarantor attached. Nothing of the sort occurs when someone makes an utterance that requires the presupposition that *p*, even if *p* was not already accepted at the time of utterance. Even though a record of the utterance remains, there is no personal responsibility as in the case of assertion. There is some responsibility, no doubt, but it derives not from (NC2) or any similar principle concerning presupposing, but rather from the general principle that participants have to promote, in their linguistic moves, score changes that serve the aim of the conversation (NC1).[30] This general obligation requires participants to intervene when unfavourable score changes are about to occur. Thus the responsibility for propositions that have entered the score through presupposition accommodation lies with all the participants collectively—even though there may be a special responsibility on the presupposer for having initiated the process. If everyone aquiesces, the responsibility is ultimately shared. Also, if a presupposer is challenged, she may just say something like: "Oh, I thought this was uncontroversial." (for an asserter such a response would be feeble).

A brief remark about yet another kind of linguistic move may be useful. Conversational implicature is another form of indirect communication, and one might ask how it differs from assertion and presupposition. In my view, implicating that *p* does not have the effect of adding *p* to the score. It may have this effect indirectly, as for example when the implicated information is made explicit at a later point, for example through assertion or presupposition. But in general, the point of implicatures is precisely to avoid any official commitment to the implicated information.

There are some apparent counterexamples to my proposal, which I shall discuss briefly. Consider the following two pairs of sentences:

(1a)   That is a poor perfomance.
(1b)   What a poor performance!

(2a)   I am amazed.
(2b)   Wow!

Utterances of (1a) or (2a) are assertions and will bring about the characteristic changes on the score as well as certain justificatory responsibilities on the part of the utterer. However, utterances of (1b) and (2b) would seem to effect exactly the same changes respectively. Thus my account seems to predict that utterances of (1b) and

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[30] (NC1) does not immediately lend itself to this reading, because this requires allowing silence as a conversational "move". However, what follows could equally well be formulated as a separate normative constraint, e.g. "participants are obliged to attempt to prevent score changes that do not further the aims of the conversation".

(2b) are assertions of the same proposition as utterances of (1a) and (2a). However, so the objections goes, utterances of the b-versions are not assertions but exclamations. So the account makes false predictions.[31]

In reply, I would distinguish between the two cases. It does not strike me as an obviously unwelcome prediction that uttering (1b) is an alternative way of asserting the same proposition as that asserted by (1a).[32] By contrast, uttering (2b) does not seem to me to bring about the same score change and justificatory responsibilities as an utterance of (2a).

Peter Pagin (2004), however, provides a recipe for constructing a potentially more threatening kind of counterexample. If the speech act of asserting that p is characterized by describing its social significance, e.g. in this case the effect on the score and its effect on the obligations and rights of participants, then there should in principle be the possibility of bringing about the very same effects by utterance of a tailor-made performative. Thus, if asserting that p is performing a speech act with the effect that the proposition that p is added to the score unless it is challenged, and that the asserter has the obligation to justify the assertion upon request, then utterance of the following sentence should count as an assertion:

(PP)   Let's add the proposition that p to the score (unless someone has objections) and I hereby assume the obligation to justify p upon request.

However, no utterance of (PP) counts as an assertion that p, so again, the account I proposed makes false predictions.

Reply: it is not clear that we can create any social fact we like by simply making up suitable performatives on the spare of the moment. For (PP) to work as a counterexample, the first subclause ("Let's add the proposition that p to the score (unless someone has objections)") needs to have exactly the same effect on the score as mere utterance of an assertoric sentence with the content that p. It is not clear that this is so. The conversationalists would need at the very least to have a word "score" which expresses exactly the concept of a conversational score, and there would need to be conventions that allow them to manipulate the score by means of sentences like (PP). Perhaps in a community of researchers who are au fait with the notion of conversational score, and who explicitly agree that the first subclause of (PP) should have this effect, this would be the case. Similarly with the performative that forms the second subclause ("I hereby assume the obligation to justify p upon request"): it is not clear that utterance of such a sentence can indeed bring about *the same* normative facts as utterance of an assertoric sentence with the content that p. Again, given the right circumstances, perhaps again among researchers competent with the notion of a conversational norm etc, this might be possible. In such an unusual situation it does not seem to me to be obviously wrong to say that an assertion that p can be effected both by using an assertoric sentence with content p, and also by performing two special performative speech-acts in succession, in the style of (PP). The special situation would seem to be one where we have introduced by stipulation two illocutionary devices that, when used in concert, can be used to make assertions.[33]

It does seem, then, that the speech act of assertion can be identified uniquely through (SC2) and (NC2). One asserts that p just if one performs a speech act that has

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[32] Some may claim that only complete *sentences* can have assertoric force. One reply is to deny this. Another is to say that (1b) is a sentence despite surface appearances. For some related discussion see Stainton 1997, 2006 and Kölbel 2009.

[33] A different strategy for answering Pagin's objection would be to weaken or modify the account of assertion. This could be done in two ways: either to abandon the view that the conversational effects in question are *sufficient* for assertion, or to add further conditions that rule out the counterexamples (for example, one might add the condition that an assertion that p is the speech-acts that brings about the conversational effects in question through utterance of just one sentence with one illocutionary force). Pegan 2009 pursues the second type of strategy, see also Pagin 2009.

the essential effect of adding *p* to the score unless it's rejected, and which counts as undertaking the obligation to provide justification for *p* upon request.

7. Testimony

I have now outlined a conversational score model of conversation, according to which all conversations have a common normative structure. Every conversation is pursued with the immediate objective of changing the conversational score. But this model abstracts away from the diversity of different extra-linguistic purposes for which linguistic exchanges are conducted. It is thus important to show how pursuing the objective of score change can be a means to achieving those diverse extra-linguistic aims. One of the more important extra-linguistic purposes people pursue through the use of language is the exchange of information. In this section, I will try to show how the score model explains this. Among the many ways in which conversation can effect information transfer, I shall pay special attention to assertion.

The intuitive idea of the common ground or score of a conversation, which changes as the conversation proceeds, suggests that there is a very straightforward connection between changing the score and changing the beliefs of participants: as new information is added to the score, participants acquire just that information. Propositions that are newly accepted by participants are propositions they come to believe (and propositions they cease to accept are propositions they cease to believe). But, as sections 2–4 will have made amply clear, there is no such simple connection. While participants will gain beliefs about what is accepted, and will do so due to their competence with the rules of score change, they will not generally come to believe what they come to accept. They will often come to accept things that they do not believe, or even disbelieve, typically when their predominant aim is not the exchange of information. Thus, when someone is telling a story, many propositions will come to be newly accepted, but clearly the point is not to come to believe any of these things. Similarly, when we engage in gossip or chit-chat or teasing other people, the aim of producing surprising or entertaining score changes can outweigh any imperative to tell the truth. It is important for the model to include these cases because the linguistic and conversational rules and norms are quite uniform.

The exchange of information can thus not be explained solely on the basis of the conversational norms outlined above. Rather, these strictly linguistic conversational norms interact with more general social norms governing human interaction. This interaction takes at least two different forms. On the one hand, some norms of conversation outlined above are context-sensitive. (NC1) makes reference to changes of the score that further the aim of the conversation. The aim of an exchange in which someone is telling a fairy tale is clearly different from an exchange in which important information is sought or communicated. (NC2) makes reference to justification. What will count as appropriate justification will again depend on the aim of the conversation. On the other hand, the sanctions used to enforce compliance with the norms of conversation will vary radically with the context. If I cannot produce a witty justification for a joke assertion I have made, the sanction might consist in people regarding me as less entertaining than they would otherwise do. But if I cannot produce an acceptable justification for an assertion I make when being interrogated in the course of a crime investigation, I might end up being accused of aiding a criminal. Thus, not only does it depend on the context what counts as furthering the aim of the conversation or as justifying a claim, it also depends on the context how seriously participants treat violations of conversational norms.

It may help once again to illustrate this through the game analogy. Scoring a goal is, in some sense, the same kind of action in all football games. The same rules determine what counts as a goal and how this alters the score. However, there will be additional, social norms concerning this action. In one context scoring the goal will bring about cheering, in another disdain. In yet another it will cause the player to receive a bonus payment or help him secure a regular place in the team. The actions defined within the game can acquire this or that significance outside the game.

Similarly, the moves one makes or the rules one breaks in a conversational game can acquire a range of different significances outside the conversation and its narrowly linguistic rules.

The social norms regulating the use of language are of course enormously complex and vary not only over time but also from culture to culture.[34] Nevertheless it is possible to give at least a very schematic indication of how such norms can promote the use of language for the transmission of information. If a group of language users did not have such norms it would at least be possible to introduce them.

The norms of a group regarding the conduct of the group's members in conversations might include norms of the following form:

(SN1) In conversations of type T, if an asserter is not able to defend his or her assertion (i.e. does not manage, after some challenge, to get the asserted proposition to be accepted), then the asserter shall suffer sanction $S1$ from the group.

(SN2) In conversations of type T, if in some conversation it comes to be accepted that p, but later p turns out to be unjustified, then the participants of that conversation shall suffer sanction $S2$ from the group.

The type of conversation in question might, for example, be "conversations in which all participants show a straight face", and the sanction $S1$ might be "frowning and telling off". If some such norms were enforced in a group and the sanctions in question were sufficiently odious to members (and everyone knew these things), then conversations of type T could easily be used to transmit information. For everyone would want to avoid the sanctions, and the best strategy for avoiding sanction is to assert only justified propositions and prevent unjustified propositions from being accepted. This would be known by everyone. Thus it would be known by everyone that if, in the course of a conversation a proposition is added to the score, then that proposition is likely to be justifiable, especially if it has become accepted through someone's assertion. In that case the asserter is likely to have some appropriate justification because he wants to avoid the sanction $S1$ and knows that if others have reason to doubt he has justification, they'll ask for it (aiming to avoid sanction $S2$).

Now, one way of making sure one avoids all sanction would be to avoid conversations altogether. However, participation in conversations can be beneficial. Thus, as long as the risk of incurring sanction is worth taking given the benefits the conversation promises to bring, participants will be willing to start a conversation. Thus the sanctions should be odious enough but not too odious.

The mechanism just outlined does not yet exhaust the benefits of the system. One further benefit consists in the fact that conversations of type T, held under these conditions, will have a tendency to spread relevant information that is only in the possession of some participants. Thus, suppose Jordi asserts that it's three hours to he peak, because he believes he has good justification and hopes to benefit himself and his climbing companions by making this information available. But suppose that Jordi's justification consists in the fact that he has climbed the peak three months ago. Now, someone in his audience, say Mar, believes she has some reasons to doubt what Jordi has said, because she has read in the guide that it's 5 hours. So she might ask Jordi for his reasons and also volunteer her reasons against. Jordi will now discharge his justificatory obligation. At this point, Pep, the third climber, might assert that three

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[34] Ideally, the purely conversational norms and rules outlined in §§5 and 6 should be constant across cultures. If they are, another advantage of the score framework as outlined here emerges: it allows characterizing the speech acts of assertion, presupposition, question etc in ways that will be useful in many languages, despite cross-cultural variation in their extra-linguistic significance. My hope that the scheme here outlined will have application across a range of different languages is not just based on speculation, for there is empirical work that suggests that all natural languages have illocutionary force markers ("moods") corresponding to assertion, question and command. See Sadock and Zwicky 1985.

months ago there was a lot of snow, thus making the ascent considerably easier and faster than it usually is. And so on. Everyone's interest in preventing unjustified propositions from entering the score has, ceteris paribus, a tendency to cause participants to assert all the relevant information they have.

Thus, when a thinker *t* acquires a new belief that *p* as the result of a conversation, there can be various different reasons for the belief. One simple reason would be that some participant has asserted *p*, and this provides reasons for thinking that that participant has good justification for *p*. This might be because *t* believes that the asserter is averse to the risk of asserting propositions for which she has no appropriate justification, that the asserter is competent and reliable, and that she believes the other participants to be sufficiently well informed and watchful. A more complex reason might be that *p* has been added to the score after some debate of its merits etc.

It is an interesting question whether this picture of belief acquisition confirms or disconfirms any of the views in recent debates about testimony. Strictly, this debate is about the acquisition of knowledge, whereas I have been talking about the acquisition of justified beliefs. However, at least some aspects of the tesimony debate can be transposed to the acquisition of justification. One position in the debate, then, is the view that being told constitutes a reason for believing what one has been told in the absence of any empirical information, on the basis of an a priori entitlement to believe what one is told. Let's call this the Reidian position. Another position, let's call it the Humean view, holds that there is no such a priori entitlement and that the justification for believing what one is told always derives from empirical information about the testifyer.

The preceding discussion permits a new perspective on this debate. On the one hand, it is possible to make sense of what might be meant by the Reidian principle of entitlement. In the absence of any specific empirical information about a testimonial source, except for the information that the source has asserted that *p*, a thinker still has available, *qua* competent thinker, tacit knowledge of the rules of conversation, and the social norms complementing them. This knowledge together with knowledge that the assertion has been made, would lend support to the asserted proposition in the following way: the asserter risks sanction if she is unable to provide justification upon request. This, by itself, may already provide some reason to believe what has been asserted. Thus, if we count the tacit knowledge a speaker has *qua* competent speaker as *a priori* knowledge, then one might indeed speak of an a priori entitlement to believe what one is told. This is not quite the a priori entitlement Coady, Burge and others have had in mind, but it is clearly not an entitlement that arises from the sort of empirical information on which Hume wished to base testimonial justification.

It is of course true (here I agree with Fricker, 2002, p. 380), that no-one is ever in a situation in which they witness an assertion and have no empirical information whatsoever about the asserter. Clearly, the mere fact that the asserter is using a certain language, speaks with a voice that sounds a certain way (writes in a certain way in a certain medium) will always provide some empirical information about the asserter. Thus even if we had an a priori entitlement to believe what we are told in the absence of information about the source, we would never be in a position to make use of this entitlement.

Both parties to the dispute ignore the complex structure of the *a priori* information available to a recipient of testimony, namely competence with the rules and norms of conversation and complementary social rules concerning different types of conversation. They also ignore that the empirical information available to recipients of testimony does not just comprise their observation of an assertion, but also the conversational context, in particular the kind of conversation, the participants involved, etc. On the picture I have been sketching, all these are as relevant as any previous experiences concerning the testifier.[35]

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