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## Context and Contract

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### 1 Introduction

The main point of this paper is the claim that a strong notion of cognitive context can answer the needs of a representation of dialogue context, with a higher generality than the "normative" notion suggested by Gauker. I will discuss some well known claims in the literature about communication and context, and I will suggest giving a central role to the notion of contract or semantic bargaining and to the normative constraints of indexicals and anaphora.

In (§2) I will classify different concepts of context and will define a setting for treating discourse context inside a general framework of cognitive context. I will then contrast the claims of Stalnaker and Gauker on the concept of discourse context, showing some aspects of convergence between the two proposals on the idea of normativity (§3). I will then give an account of a discussion in an example given by Gauker to support the idea of normative context (§4).

§2,3,4 are the background for the main discussion in § 5. Here I will try to show some limitations of Gauker's concept of normative context. I will claim that a notion of cognitive context may help us to revise our ideas of where to place normativity in discourse context, when semantic negotiation is at stake\*.

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## 2 Types of context

"I am here now" is different from " $7+1=8$ ", because the meaning of the first sentence is context dependent, while the second is not. The normal way to explain that is the following: to interpret the first sentence you need to know who the speaker is, while to interpret the second one, you do not need to know who is speaking. This is misleading, because we may say that the meaning of " $7+1=8$ " in the theory of natural numbers is different from the meaning " $7+1=8$ " in the theory of integers. We have different rules and different algebraic structures and only in the second case may we infer "therefore  $7-8 = -1$ ", which is not a valid formula in the theory of natural numbers. Hence, the meaning of " $7+1=8$ " is also context dependent.

We have here a basic contrast between two ways of understanding "context" and "context dependence": *objective* context, or the state of affairs (location, time, speaker) in which a sentence is uttered, and *cognitive* context, or the theory in which a sentence is interpreted. Modern formal logic was invented for treating mathematical theories and mathematical reasoning, which is relatively independent from objective context -- from speaker, time and location of the utterance. In the '70s, attention to the *objective* context was developed from the effort to widen the scope of logic, in order also to treat utterances of natural language and to disambiguate different aspects of meaning. Since then it has become common to distinguish different levels of meaning, as widely discussed by Akman (this volume) on the threefold distinction made by Strawson among linguistic meaning, reference and contextual or illocutionary meaning. Recanati 2001 gives the "standard" semantic view as a distinction of (i) linguistic meaning, (ii) what is said, and (iii) what is implicated. In an analogous way, Perry 1998 distinguishes pre-semantic, semantic and post-semantic uses of context, which define linguistic or literal meaning, reference and presupposed meaning.

"Context" is not a natural kind term, but a term for a concept we have invented to understand the workings of our language and knowledge. We have to distinguish, in the relevant literature, different ways to treat the term "context". We will refer here to three different notions of context, to check whether they are independent or reducible to one another at least methodologically.<sup>1</sup> Here are the three main general concepts:

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<sup>1</sup> An *ontological* reduction would mean a choice between realism and antirealism: for instance a reduction of objective context to cognitive context would amount to an extreme anti-realist ontological stance, very near to an idealist position. It would be like to claim that what exists is just reducible to our interpretation of what exists. A *methodological* reduction is a more modest and reasonable strategy, which aims to show that one representation may be preferred to another for certain reasons and purposes.

(1) *Metaphysical or Objective or Semantic Context*: the state of affairs in the actual world, relative to an utterance, or context of the utterance. We might give a formalization of such a concept with a tuple of parameters  $\langle \text{speaker, time, place, ...} \rangle$ . Kaplan 1978, 1989 is one of the best advocates of this kind of concept, which is fit to be embedded in a model-theoretic semantics, and represents the metaphysical state of affairs - what there is. Kaplan's treatment of objective context implies a distinction of at least two levels of meaning<sup>2</sup>, character and content (briefly, linguistic meaning and truth conditional meaning) enlarging the traditional analysis of mathematical logic. Lewis 1980<sup>3</sup> proposes to enrich objective context with other situational elements such as presuppositions and standard of precision. Another way of speaking of objective context is Perry's *semantic context*, to be identified with what is needed to give an evaluation to indexical expressions, after disambiguating the literal or linguistic meaning of the words (Perry 1998). Bach 1996 speaks of "restricted" or narrow context, referring to the variables used to fix the evaluation of indexicals (speaker, time, place), contrasting it with a wider notion of context, related to any contextual information relevant to determining the speaker's intention. An analogous distinction is given by Gauker 1998, who uses a different terminology and distinguishes *situational* aspects (which correspond to what we have here called "objective" context) from *propositions* that should be presupposed in view of the aim of a conversation (which correspond to what *he* calls "objective context"). To avoid misunderstanding, I will use the term "normative context" for the latter concept, and use the term "objective context" to refer to the situational aspects of the context of utterance.

(2) *Cognitive or Subjective or Pragmatic Context*: a point of view of a situation, or a theory in which a situation can be considered or described. This notion is apt for distinguishing the different meaning of some mathematical or logical formula depending on the theory in which the formula is used (think of the difference between a classical or intuitionistic interpretation of a formula). Aspects of cognitive context have often been included in the objective context, which may be thought of as also including

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<sup>2</sup> Kaplan gives some hints regarding aspects of the Fregean theory, which have not been considered in logic, giving his own alternative. Referring to different aspects of the Fregean notion of sense, Perry 1977 makes an analogous bipartite distinction, which will be developed further in his work. These distinctions are compatible with the "standard view" in semantics (as presented by Recanati 2001) as a three-layer distinction of linguistic meaning, what is said, what is implicated.

<sup>3</sup> The technical developments of these ideas are linked to the proposal of using a double indexing, one for context and the other for time and possible world. The idea was originally Kamp's and later developed by Kaplan. Lewis remarks that the need for a double indexing must be kept for features which can be *shifted*, that is time, location, possible world and standard of precision

mental states or beliefs of the speakers. This seems to be consonant with Lewis's definition of context and with Bach's concept of wide context. A cognitive characterization stresses the *theory-laden* aspect of the cognitive context. From this viewpoint, cognitive context can be represented as a local theory consisting of <Language, Axioms, Rules>. Recently this idea has been developed by McCarthy 1993 and Giunchiglia 1993, with the basic motivation that (i) for every axiom we may find, with some ingenuity, a more general context where the precise form of the axiom does not hold (the problem of generality); and (ii) for any situation, we need to use the smallest possible amount of information to reasonably treat any problem avoiding combinatorial explosion (the problem of locality). Any interpretation and evaluation of utterances needs a defined cognitive context in which the utterances receive both meaning and semantic value. Benerecetti and Bouquet (this volume) show how this contextualist stance includes reference to external parameters of a context.

How is this different from objective context? Partly the difference is that objective context aims to give the objective features necessary to evaluate an utterance, while cognitive context, as a theory about a situation, typically aims to give a defeasible point of view (of individuals, groups, institutions, databases...) about a situation. Perry's *post-semantic context* can be considered a kind of cognitive context, because it represents what is needed to interpret a sentence even when the semantic evaluation of the indexicals has already been given. Perry's idea implies that we need to first have the evaluation of indexicals, and eventually, in some peculiar cases, a further evaluation. It has been suggested by Bianchi 1999 that this kind of post-semantic context could be intended as an instance of a more general pragmatic context dependence, valid for *every* utterance, as in the radical contextualism put forward by Travis 1997 and Searle. This point of view is developed by Recanati (this volume) who reverses the order of "standard" explanation of levels of meaning: first the context, then the meaning. Recanati speaks of pragmatic context (stressing the reference to actions or speech acts); however, the direction of his work seems compatible with a treatment of context as characterized as a (local) theory of a situation.

(3) *Discourse or Dialogue or Conversational Context*: to describe a conversation you need to refer to (i) an objective context of utterance, that is speakers, location and time of the conversation, (ii) a representation of the different cognitive points of view or background assumptions of the interlocutors. Therefore, at first sight, it seems that treating discourse context requires both objective and cognitive context. Discourse Representation Theory (DRT) began by developing a theory of discourse context, in a way that made it relative to the processing of discourse from the standpoint of a hearer. In this case, the representational structure of the elements of dis-

course works as the context in which to interpret a new sentence following in the discourse<sup>4</sup>. In his development of DRT, Kamp 1993, even though he focuses strongly on syntactic aspects, accepts the need for providing a model theoretical semantics. Stalnaker 1999 seems to follow the opposite path: he begins with a possible-worlds semantics to recognize the need and the importance of syntactic structure. He gives therefore a double representation of discourse context consisting of shared information about (i) the subject matter of the discourse, represented in a possible-worlds semantics (ii) facts about the discourse, including syntactic aspects, which need to be taken into account (e.g. the specific language in which it is produced). Still, we need to discuss which conceptual tools to use (shared presupposition, metaphysical context, normative context à la Gauker, cognitive contexts, semantic or syntactic representations...), depending on the kind of problem we face in treating discourse context.

In Penco 1999, 2000 I tried to show the plausibility of the reduction of theories about metaphysical context to theories about cognitive context<sup>5</sup>. The reduction is useful to mark the fact that what is "objective" is always described in a perspective, and the idea of objectivity is derived from our disagreement about what we claim is truly so. Any description purports to represent objective reality, and at the same time it is given inside a point of view, which can always be revealed as mistaken or epistemically constrained. Any evaluation of the actual world in which an utterance is made is dependent on the cognitive access of the speakers. We may disagree on the evaluations to be given even regarding speaker, time and location, or even be deprived of access to the evaluation of some instance of either expressed or "unarticulated" indexicals.

This last claim needs clarification; when Perry 1998 claims that there is an unarticulated component in a sentence like "it rains", he seems to imply that to evaluate "it rains" it is mandatory to fill the variable for the place, which is not expressed in the sentence. But we might have a case where it is neither necessary nor welcome to evaluate the place: Recanati<sup>6</sup>

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<sup>4</sup> Some more detailed comments about the DRT are given in Arlo Costa, *this volume*.

<sup>5</sup> Benerecetti et alia, *forthcoming* gives an interesting treatment of formal reduction of Kaplan's logic of demonstratives inside a cognitive-context framework based on a multi-context Logic.

<sup>6</sup> Recanati, *forthcoming*, says: "Can we not imagine a context in which 'It is raining' would be evaluable even if no particular place were contextually singled out? I have no difficulty imagining such a context. I can imagine a situation in which rain has become extremely rare and important, and rain detectors have been disposed all over the territory (whatever the territory — possibly the whole Earth). In the imagined scenario, each detector triggers an alarm bell in the Monitoring Room when it detects rain. There is a single bell; the location of the triggering detector is indicated by a light on a board in the Monitoring Room. After weeks of total drought, the bell eventually rings in the Monitoring Room. Hearing it, the

gives an example of a situation where we have access to information that it rains somewhere, while not having access to the place where it is raining. The example shows that information about the place is not always relevant for the evaluation of an utterance of “it rains”. We may say that from a metaphysical point of view there is a place where it is raining, and from an epistemic point of view we have no way to access it. In fact, even if we assume that a place where it rains exists, the individuation of the place is irrelevant for the evaluation. The point of the example is similar to the above-mentioned point given by McCarthy 1987 about the “generality” constraint: we may always find a (cognitive) context where we cannot evaluate a sentence in the “intended” way. The interpretation depends then on the number of variables or parameters we decide or need to consider. Therefore, we always have to evaluate a sentence inside a theory that expresses what is needed, to make its interpretation relative to the theory (e.g. a theory which asks us *not* to evaluate the parameter “location”, when this is not accessible or relevant, or not to evaluate the parameter “time” when this is irrelevant). We should therefore at least require the following:

1. The evaluation of a sentence depends on pragmatic parameters, including speaker, place and time. However the evaluation of such parameters is not always accessible to the speakers themselves (think of “here” and “now” without explicit or external knowledge of time and place, or uses of “I” in cases of amnesia about personal identity).
2. The value of these parameters must be represented - when possible - as a part of the cognitive state of theory of a particular agent: speaker, hearer, reporter, interpreter. The role of interpreter is so basic as to be assumed without taking notice of it: the interpreter (sometimes identified with the canonical observer) is what is normally called “us” or “we” in philosophical papers. Here it is normally assumed that we (writers and readers) know the truth.
3. Different agents may give different interpretations to these parameters; therefore we need to have representations of (i) the cognitive contexts in which the evaluation of the parameters is made and (ii) the relations among these different points of view.

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weatherman on duty in the adjacent room shouts: ‘It’s raining!’ His utterance is true, iff it is raining (at the time of utterance) in some place or other. The fact that one can imagine an utterance of ‘It’s raining’ that is true iff it is raining (at the time of utterance) in some place or other arguably establishes the pragmatic nature of the felt necessity to single out a particular place, in the contexts in which such a necessity is indeed felt. If that is right, there is no need to posit a lexically specified argument-role for a location in the sub-atomic structure of the verb ‘rain’: ‘Rain’ is like ‘dance’ and other action verbs (...). That raining must take place somewhere or other is a metaphysical fact, not a linguistic fact. That fact does not prevent an utterance like [“It is raining”] from expressing a fully determinate proposition even if no place is contextually provided.”

What is the case when *discourse or conversational context* is at stake? We need to give the right place to cognitive contexts or theories of speakers, hearers and observers. What is mainly relevant for us is a good representation of the interplay of cognitive contexts, which should account for different semantic evaluations among speakers (and sometimes it might be or sometimes it might *not* be possible *for us*, the observers, to give an assessment of these differences).

The claim advanced here is that only this work of representing the interaction of different epistemic or cognitive contexts can provide the ground for a plausible theory of communication that lies behind any analysis of discourse context. This claim has to be compared with other alternative theses; in the next paragraph I will then discuss two alternative claims on communication and context, presented by Stalnaker and Gauker.

### 3 Communication, Normativity, Misunderstandings

Following the ideas of Grice, Stalnaker 1999 criticizes the linguistic turn in philosophy and insists on the priority of intention over language, as if language were only a means by which to express a previously defined intention in our minds. What then is communication? According to the Grice-Stalnaker stance, communication is the successful passage of a proposition a speaker intends to convey to the hearer, and the recognition on the part of the hearer of the proposition uttered by the speaker and of the intention of the speaker, so that the hearer understands the proposition. Given this definition, a definition of context follows. Discourse context (assuming that discourse aims at successful communication) is

*the set of presuppositions a speaker holds to be common assumptions with other interlocutors in the dialogue.*

This definition sounds very similar to what Davidson 1986 calls "prior theory", that is, the theory the speaker believes the hearer has in mind before beginning a dialogue. There are two main differences with Davidson: (i) Stalnaker does not speak in term of a Davidsonian theory of meaning, but of the discourse context as a more abstract representation in term of possible worlds; (ii) he claims that, at least in the "normal" case, we have to posit a set of shared assumptions. A speech act, typically an assertion,

makes a change in this set, making people enlarge it with new information<sup>7</sup>.

These ideas have been contested by Gauker 1997, 1999 who reacts to the above-sketched definitions of context and communication, treating them as examples of the “expressivist theory of communication” (ETC). According to ETC “the primary function of language is to enable speakers to convey propositions to hearers” (1997, p.5). The alternative view claims that communication, which uses language essentially, is a “matter of getting people to do things in the course of mainly cooperative interactions” (Gauker 1994, p.3-4). From this viewpoint communication is not grounded on sharing propositions or on detecting what intentions people have *in mind*, in a language-independent manner. Consequently, discourse context cannot be defined simply as a set of possible worlds presupposed in a dialogue. It would be both irrelevant to the goal of the conversation and computationally intractable<sup>8</sup>. The set of propositions, which constitutes discourse context, is not a set of shared assumptions, but

*the set of propositions, which should be considered for attaining the goals of the conversation.*

In these claims we have an apparent radical alternative. The main contrast appears to be the role given to normativity in describing discourse context. Gauker 1999 suggests that sharing propositions is not a prerequisite of communication. Context is defined by which propositions *should* be taken for granted when the speaker chooses her words and by which propositions an interlocutor *ought* to acknowledge for achieving the goals of the conversation. In short: propositions are normatively shared and descriptively not shared; they are not what is presupposed in conversation, but what *should* be presupposed for the specific goal of the discourse. I am not sure how deep the contrast between Stalnaker and Gauker goes on this point. Actually Stalnaker (1999, p.10) also asserts that the speaker *should* presuppose that the hearers “have whatever information is required to interpret what he is saying”. Therefore, the body of information, which is supposed to be shared, is normally intended as the information that *should* be shared. Assuming - as Stalnaker does - that the speaker should presuppose that the hearers have the information “required” is a normative step which goes in the direction of the “objective” (normative) context as given by Gauker.

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<sup>7</sup> Apparently the updating of beliefs does not follow this simple pattern; but on this see the discussion by Arlo Costa (this volume) on the “persistent theory of belief.”

<sup>8</sup> Arlo Costa (this volume) suggests that a theory of the kind of Stalnaker's is “too big” for a descriptive purpose. See also analogous remarks in Penco 2001, par.3.

Putting aside the problem of the relative priority of language and intentions (where there seems to be a real disagreement between Stalnaker and Gauker), in this paper I will focus on the role of normativity which is explicitly developed in Gauker and just hinted at in Stalnaker. Both theories (but I will discuss mainly Gauker's) have to face the problem of the explanation and clarification of mistakes and misunderstandings in communication. In Stalnaker's framework, the problem is placed in the discussion of "abnormal" cases of communication where there is no shared assumption, but there are different points of view among different speakers. The analysis of abnormal situations implies the analysis of how people arrive at a common interpretation of what is said. A set of shared propositions, which is *not* presupposed in "abnormal" cases, becomes an *aim* of the discourse; it is what speakers *converge* towards in a conversation, from the point of view of Davidson's framework. On the contrary, Gauker's normative assumption implicitly suggests avoiding irrelevant analysis of the problem of convergence of belief sets (problem to be left to empirical or psychological research). From his standpoint, each dialogue has a set of propositions normatively ("objectively") given as presupposition. A central notion in Gauker's framework is the notion of "goal of the conversation," which gives the main motivation for defining normative context. In this setting we should be obliged to consider all misunderstandings as grounded on mistakes regarding the objective context constituted by the "norm" of the conversation given by its goal. But are misunderstandings always to be considered as based on "mistakes"? And if they are derived from mistakes, are these mistakes always relative to an objective norm or set of propositions, or may they be mistakes regarding possible equiprobable interpretations? Up to which point are we bound to assume a context – intended as a set of presuppositions or information – as "normative"?

In order to answer this kind of question, I will present a debate between Gauker and Van Deemter on the value of the expressivist view of communication, and I will analyze the debate with respect to the problem of semantic negotiation or semantic bargaining, as already suggested in Sbisà 1999. Even if I strongly appreciate the idea of normative context à la Gauker, I will try to show some limitations of his normative concept of context when semantic negotiation is concerned. Assuming that – at least in some cases – we cannot properly speak of "normative context", I will try to find other places for normativity to support the idea of semantic bargaining.

Last, but not least, we need to be clear about the notion of sharing. First of all there is a distinction between social sharing and individual sharing. *Social sharing* is sharing among everybody; it is collective and distributed, like sharing different aspects of meaning in a social division of labour. The meaning is shared by the community, but not every individual

belonging to the community possesses all the aspects of meaning, and most people defer relevant aspects to experts. *Individual sharing* is sharing entertained by *each* individual, in a situation in which people are said to have the *same* information or background. In this case we have to distinguish three aspects: subjective sharing, objective sharing, normative sharing. *Subjective* sharing implies awareness, and happens when every participant to the conversation is aware of what the other individuals presuppose. This is highly implausible, and may be stated only as a first approximation at a very general level of stereotypes. *Objective* sharing is a descriptive fact about a dialogue, where we may assert that all participants share the same information, even if they are not aware of that. *Normative* sharing is linked to the information people should have for the correct development of the conversation. Apparently, in an idealized situation, what is descriptively shared (objective sharing) collapses in what is normatively shared (normative sharing). We need to distinguish among these different aspects of sharing, and to clarify which level of information is shared in which ways. I will insist upon the idea of an objective sharing of strategic rules for managing anaphora and indexicals. This sharing of strategic rules is needed for retrieving the different presuppositions of different speakers in a dialogue.

#### 4 Domains of discourse and the Expressive Theory

The example (Gauker 1997): Tommy meets Suzy who has some white and red marbles on the floor in front of her. Tommy says “all the red ones are mine!” and Suzy answers: “no, they are not”<sup>9</sup>. Actually (we know that) Tommy means the red marbles in his room, and Suzy means the red marbles in her room on the floor in front of her. Gauker suggests that, within the expressivist theory of communication (ETC), it is impossible to give a semantic evaluation to what they are saying because it is impossible to decide which proposition they are discussing. ETC cannot use any of the three possibilities open for interpreting the sentence uttered by Tommy (true, false, neutral):

- ETC cannot accept that the proposition uttered by Tommy is false, because, following Grice in giving priority to the speaker's meaning, the hearer's objective should be to recognize the proposition the speaker intends the hearer to recognize.

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<sup>9</sup> Susy could also say: “No, that is not true”. “No they are not” stresses the difference on the domain of discourse; “No, that is not true” stresses the different evaluation of the proposition. The problem in the two cases is: (1) *which* marbles? (2) *which* proposition? I will discuss here the first case, which deals with ambiguity inside restricted quantification. I will discuss more explicitly the second case at the end of the paper.

- ETC - at least in its contextualist version - cannot accept that the proposition is true, because the setting of the situation suggests that the "intended" interpretation should pick up the marbles in front of Suzy.

- ETC cannot accept the neutral interpretation (there is no domain of discourse or there are two domains) because in this case we could not recognize the different attitudes of Tommy and Suzy toward the same utterance.

An attempt to defend the expressive view of communication, and to show that language is used to enable speakers to convey propositions to hearers, is given by Van Deemter, who uses the tools of underspecified logical languages for that purpose. I use his position as an example of one of the different possible tools aimed at giving space to aspects not considered by Gauker. Local model semantics as given in Giunchiglia-Ghidini 2001 might give analogous results; I refer to Van Deemter because of his particularly clear presentation of the example in question. In underspecified logical languages (Van Deemter and Peters 1996) the semantic interpretation attributes a set of semantic values to ambiguous expressions: to give different interpretations to the same expression we may use an interpretive mode  $m_m = \langle D, I \rangle$ , where the interpretation function maps *occurrences* of predicates into subsets of the domain. Skipping details which can be found in Van Deemter's papers, let me come to the point. The context ambiguity is treated as lexical ambiguity, using an ambiguous constant DoD ("Domain of Discourse") which selects the relevant interpretation of the occurrence of Tommy's utterance. Depending on two different modes - Tommy's  $mode_t$  or Suzy's  $mode_s$  - the sentence

$$T = \forall x \in D (\text{RedMarble}(x) \rightarrow \text{Tommy's}(x))$$

receives two different interpretations (the classical interpretation here attributes two different subsets of the domain D to the non-ambiguous constants  $DoD_t$  and  $DoD_s$ ):

$$\begin{aligned} T_t &= \forall x \in DoD_t (\text{RedMarble}(x) \rightarrow \text{Tommy's}(x)) \\ T_s &= \forall x \in DoD_s (\text{RedMarble}(x) \rightarrow \text{Tommy's}(x)) \end{aligned}$$

$T_t$  and  $T_s$  express different propositions, depending on the two different Domains of Discourse. However, the interpretation of the negation of the sentence T (uttered by Suzy) is a function of the interpretation of T. Under  $mode_t$  T is true and its negation false; under the  $mode_s$  T is false and its negation true. In the course of conversation, the interlocutors have to realize the so-called "lexical" ambiguity of the term "red marbles": they have to realize that they are giving different semantic interpretations to the same expression. This is a fairly good example of a neutral perspective, a way to

make explicit the idea of “conveying a proposition” suggested by the expressive theory of communication:

*A speaker  $\alpha$  conveys a proposition  $p$  to the hearer  $\beta$*   
*iff  $\alpha$  utters  $U$ ,  $\beta$  hears  $U$  and  $m_\beta(U) = p$*

Given this framework, Van Deemter discusses the problem of the resolution of the conflict. He resolves it rapidly, considering the follow-up to the dialogue as a prototypical case where eventually the proposition the speaker wanted to convey is recognized and the proposition the hearer erroneously (but with some reason) took him to express becomes obsolete. Here is the first part of the imagined dialogue:

T. All the red ones are mine!  
S. No they are not!  
T. Yes, they are. Mom gave *them* to me.  
S. Dad gave me *those* marbles and Mom doesn't even know it.

At this point the dialogue has a natural break. Gauker (1998, p.27) hints at two possible developments; either Tommy explicitly says that he is not talking about Suzy's marbles, or Suzy might ask *which* marbles Tommy is talking about. For simplicity's sake, let us follow Van Deemter in developing the first suggestion (but Gauker's point that there is a break in conversation here which might be taken either by Tommy or Suzy is relevant, and we will come back to this later). Here is a possible second part of the dialogue:

T. I'm not talking about *those* marbles; I'm talking about the marbles in *my* room.  
S. Oh. I see! You are referring to the marbles in your room; then sure, they belong to you.

Semantic bargaining is used here by Van Deemter to support evidence in favor of an expressivist theory of communication. What is Gauker's answer? Gauker reacts saying that a discourse, if it is to be understandable, should have a unique interpretation, therefore a unique domain of discourse, which is the one (normatively) relevant. In Van Deemter's perspective, on the other hand, if we are expressivists, we should have a unique domain of discourse only when the two domains of the interlocutors coincide. In this way, Gauker answers, to have an opinion on the domain of discourse, expressivists need to go through what the speakers take to be the domain, in an endless recursion of subjective perspectives, perhaps until they find a casual, fortuitous, coincidence. When Suzy says that what

Tommy says is false, we may claim that the circumstances were misleading and Suzy was justified in asserting that. But our claim presupposes that we can give an account of what the domain of discourse *really* is, besides what Tommy and Suzy have “in mind” (Gauker 1998a, p.450).

I am not so sure that I am an expressivist (probably I am, at a certain degree). However my point will not be to decide what an expressivist has to do, but simply to answer the following question: is the only alternative to normative context a theory that has to reduce discourse context to a causal coincidence of subjective domains?

## 5 Normativity, Goals and Negotiation

In what follows, I will discuss Gauker’s criticism of Van Deemter, showing that sometimes we cannot avoid referring to what Gauker thinks is a fortuitous coincidence of subjective perspectives. I will stress, on the contrary, that the coincidence of perspectives is not fortuitous; rather, it is the result of a normatively organized work of convergence. This kind of work follows objective rules (norms) given by making explicit the different justifications interlocutors have for their – sometimes diverging – semantic evaluations. I will give three main steps in my argument:

- (i) we cannot always give a clear definition to the goal of a conversation and to the elements of a situation that are normatively relevant;
- (ii) the argument for the necessity of a normative stance needs a distinction between external and internal norms which is not completely satisfying;
- (iii) if we do not have a normative context, we may find normative clues to follow in order to disambiguate misunderstandings.

### (i) *Normativity and goals*

Certainly a dialogue typically has a theme or a focus around which the dialogue and its domain of discourse develops. Stalnaker speaks of “subject matter” and Gauker of “objective context”, which I have translated as “normative context”. As we have seen in § 3, Gauker defines normative context as what is coherent with the goals of the conversation. Normative context is the set of information relative to the goals of the conversation that speakers should take in choosing their words and hearers should acknowledge in listening to them. In making examples, Gauker refers to specific goals around which to organize such a set of presuppositions, which constitutes the normative context, goals such as - for instance – getting clean water for cook-

ing, and so on. This idea has a certain degree of intuitiveness, and Grice in his “Logic and Conversation” has also used it<sup>10</sup>. An analogous attempt is normally used in other domains of research, like problem-solving or contextual reasoning in artificial intelligence. A good approximation of a normative context is what is sometimes called “working context”, that is, the set of information which is imported in a cognitive space to solve a problem, and which can change depending on new facts. For instance, to solve the problem of a journey from A to B, we import in the working context only the basic information about what is necessary to organize the journey (that is, information about acquiring the tickets, scheduling of flights, and not much more). But if something relevant happens (e.g. a ticket is lost) we have to import new information needed for solving the specific problem (see for instance Bouquet-Giunchiglia 1995). Obviously there are differences between the idea of working context and the idea of normative context. While the working context is the limited set of information needed to solve a problem, the normative context is the set of assumptions needed to understand a dialogue. Both ideas however are linked to individuating some normative means to give boundaries to the set of presuppositions of a discourse or problem-solving situation. They try to give a characterization of what is “needed” with respect to assumed and explicit goals.

The ideas of working context and of normative context are therefore highly welcome in institutional situations, where goals are well-defined. However, a generalization of the idea of normative context to all situations of dialogue runs the risk of giving a misleading picture of what is really going on in communication. Actually, in normal dialogue situations, it is not always easy to decide what the goal of the conversation is. What is the fundamental goal of the dialogue between Tommy and Suzy, which might help us to decide the normative context? Reading the example of Tommy and Suzy, one may think that the example does not properly fit Gauker's theory of *goal-relative* objective context. Gauker's original idea of context (1998, 1999) is a set of propositions that the interlocutors ought to *take* in choosing their words, and ought to acknowledge relative to the goals of the dialogue. Now, we may ask, what Tommy and Suzy *ought* to take the propositions to be? Which is the goal *of the conversation*? Difficult to say, unless we restrict the goal to mutual recognition of intentions and presuppositions. But this does not seem to be Gauker's point, who thinks of specific goals; in the case of Tommy and Suzy he defines “keeping the peace” as the pertinent goal of the conversation (Gauker 1998a, p. 447). But this is quite arbitrary; it is not always easy to decide what the goals of a conversa-

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<sup>10</sup> However Grice himself notes that sometimes conversation does not have a precise goal.

tion are, and this example does not help. Maybe both Tommy and Suzy wanted to fight instead of keeping the peace; or maybe they had as a goal showing off their superiority (in terms of marble ownership). Or they just wanted to find an excuse to quarrel, or to show their preference for red marbles over white marbles, without giving any importance to the actual ownership. Who can *decide* what the relevant goals of a conversation are?

What is the case when we face a conversation without specific goals, or with an indefinite set of goals, or different goals for each participant? Or, think of small talk: what is the goal of small talk, besides just talking? The example of Tommy and Suzy may be a bad example<sup>11</sup> for clarifying the point of the idea of normative context, which – as I said – is a good idea in more defined situations. I find difficult to accept a *generalization* of the idea of normative context for treating discourse context and communication. To make the point more explicit, I will examine about two other examples given by Gauker.

In the first example, I say to Alice "I will meet you in front of the department store at noon". After a while I am waiting at Nordstrom's and she is standing in front of Bloomingdale's. Apparently we had two different presuppositions (and two different interpretations of my words). It is a clear case of the presupposition coordination problem. To avoid recourse to infinite reflexive thinking<sup>12</sup> ("I will go where she thinks I think she will go", and so on), Gauker suggests referring to the objective-normative context: we need to refer to an "objective" context, which is decided by some relevant objective features of the situation. In this way, Gauker explains the lack of coordination referring to a disparity between what the objective-normative context really did contain and the take on the context of one of the two. Simply, one of the two has a *mistaken* presupposition. But what is the objective-normative context here, what should decide the right and wrong presuppositions? My sentence may be honestly capable of different interpretations, and it is easy to imagine a situation in which there is no way to decide which is the "real" objective or normative discourse context. It is possible to imagine cases in which both Alice and I may have *good reasons* to believe that respectively her or my interpretation is the correct one. In this

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<sup>11</sup> We have a short piece of dialogue: what can we do with this piece of text alone? We lack much relevant information possessed by the speakers and we must guess. A piece of text is always cut off from what precedes and what follows. We may speak of Tommy's initial statement as not so correctly assertable in the context only if we abstract from previous linguistic exchanges of the two speakers. We may always consider a possible larger context to make more rationale the assertions of the speakers and their goals.

<sup>12</sup> On the presupposition coordination problem see also Arlo Costa, this volume. There are psychological restrictions about the number of reflections possible for humans. The possibility of an infinite regress is a logical possibility, not a psychological one. We should therefore be very cautious on giving too much stress on this criticism.

case, it appears difficult to decide which is the “real” or “objective” or “normative” context, except by referring to some inner intentions (probably of the person who has a stronger social status). Arlo Costa (this volume) develops this point further, and I will not pursue it here.

Gauker’s second example is different and more refined: referring to C getting in a rather beat-up car, A says to B “Her car was stolen”. What is the intended presupposition? Two possibilities are at stake:

- (i) C is getting in her car, which is now damaged after having been stolen.
- (ii) C is getting in a used car, because her own car has been stolen and lost.

Let us assume that (ii) holds. How can B decide which of the two possibilities is the right one? Simple enough, if the situation is (ii) B *should* presuppose (ii). Given the general theory, the contents of the normative context cannot by definition be confined to what is only “contingently” subsumed under the speaker’s assumptions. The speaker too may be mistaken. A might have forgotten which car C was using and erroneously he may believe (i). So B, if he has reasons to think that A presupposes (i), also ought to recognize that A does not presuppose what belongs to the normative context. Therefore B has, in this peculiar case, two “oughts” and not only one: he should presuppose (ii) and he should recognize that A is mistaken in his presupposing (i). Poor B! How heavy normative responsibility is in order to explain the lack of presupposition coordination with A!

Here it seems to me that Gauker puts the cart before the horse. Explaining the misunderstandings through the reference to the real situation is an unnecessary step. We may do much work on understanding communication and its misunderstandings even *before* considering either objective reality or what objective reality might be. In fact, in order to understand what is going on in the dialogue, we are not interested in what is really going on with the ownership of the car. On the contrary, we need to understand what is going on in the relative presuppositions of the two interlocutors, even without knowing the real state of affairs. Actual reality here is a matter independent of the dialogue, and needs further evidence (which can be provided by some other step in the conversation, maybe asking the relevant girl, who is the most reliable subject in this case, to tell which assumption is the right one). The information that (i) or (ii) is the real case, is irrelevant for assessing the relative misunderstandings of the two participants in the dialogue, in the case that A believed (i) and B believed (ii). When we try to understand a dialogue of this kind, we are not necessarily interested in the correctness of what the speakers believe, but in the source of their misunderstanding. We may push the case further by imagining a situation in which it is not possible to decide which is the real state of affairs. Simply imagine

that C, the girl, abandons the scene and never comes back. Still, we may understand the misunderstanding which is going on in the dialogue and find a means by which to extract the different presuppositions of the two speakers (for instance, they make different inferences).

Certainly B should look for what the case is; he should not look just for what A thinks the case is; but misunderstandings among the two concern their beliefs, not the real state of affairs. We may easily assert that B *should* presuppose what is really the case. However this assertion is empty unless it is possible to have access to the real situation. If it isn't, the wheel is idling.

(ii) *External and internal norms*

These short remarks on the examples bring us to discuss where and how Gauker makes the trick that permits him to put the cart before the horse. I think that we need to analyze the first step in his argument for normative context, that is the distinction between external and internal norms given in Gauker 1998. *External* norms tell us what a speaker should think, given that the world works in a certain way; *internal* norms tell us what a speaker should think, given that he or she has certain beliefs. If the norms are external, discourse context is given by shared assumptions; if norms are internal, discourse context is given by what the interlocutors suppose to be shared assumptions. But internal norms are “merely subjective reflections of external norms”; therefore, in treating context dialogue, we should take external norms into account. Gauker puts forward an example: it would be inappropriate to say “Matt knows that his paper is late” unless the interlocutors share the assumption that Matt's paper is late. The example should give support to the idea of an external norm, and something in it is certainly convincing. Given that “to know” is a factive verb, which is the most typical presupposition trigger, it is inappropriate to say “Matt knows that his paper is late” unless the speaker presupposes that (i) Matt's paper is late and (ii) his hearer assumes it too. Until now it is very difficult not to agree. But there is a further step I would not take: the step is to claim also that, for an assertion to be appropriate, we need to require that speaker and hearer *share* the same presupposition. It seems to me that in making this delicate step we begin to put the cart before the horse. I will try to explain my worries related the defeasible status of our assertions.

Our assertions are made with some ground or justification, but they are always defeasible. It is appropriate to say that Matt knows that his paper is late if there is enough evidence that his paper is late. The speaker might know the deadline, therefore he infers that Matt's paper is late, and - having asked Matt about the matter - has received the answer that he knows that. Shall this scenario be enough to ascertain the appropriateness of the

speaker's speech act? I suppose we cannot avoid it. However it is easy to imagine a further scenario, where a hearer knows that the deadline has been delayed, and therefore she does not share the presupposition that Matt's paper is late. She understands the sentence uttered by the speaker and understands his presuppositions. However she has the right to correct the sentence, which is appropriate under certain conditions, but not appropriate in the new situation of the change of deadline. We, observers, cannot know in advance how a situation may change and cannot ask the appropriateness of an assertion to rely on the "real situation", given the intrinsic limitation of our epistemic access to the world. We may still require that what we *mean* by saying "x knows that *p*" depends also on *p* being true. There is a difference in saying that *x* knows that *p* only if *p* is true, and saying that my assertion of "x knows that *p*" is *appropriate* only if *p* is true. We cannot ask that the *appropriateness* of our assertion about *x*'s knowing something depends on the objective state of affairs, beyond our means of recognizing it. The appropriateness (not the truth) of an assertion is always relative to a certain set of justification conditions we normally take for granted. But we may find *always* cases where these conditions are no longer fulfilled. Given this general situation we have an alternative: either reject *any* assertion as appropriate because always prone to fallibility, or to accept all our assertions as appropriate under certain conditions of justification. In this case, to judge the appropriateness of an assertion in a dialogue we need to know the set of presuppositions held true by the speaker. These are the presuppositions that the speaker *thinks, with good reason*, hold true also for the hearer. However these presuppositions do not necessarily have to be shared by the hearers for an utterance of the speaker to be appropriate. The hearers are supposed to share the presupposition, but they may not, in case they have further unexpected information. To impose that an utterance is appropriate only in case its presuppositions are shared by speaker *and* whatever hearers is to make a too strong demand, as if the appropriateness of an utterance depended on its objective truth, regardless of time and accessibility conditions. If this were the case, probably no utterance might ever be considered appropriate, given that there might always be, in principle, some interpretation - given by further information or by new cognitive settings - which falsifies the utterance.

Correctly for Gauker "it is vacuous to say that speakers have responsibility to make sure the assumptions that they suppose to be shared really are assumptions they suppose to be shared". But it is not vacuous at all to say that speakers have responsibility to *give reasons* for the assumptions they suppose to be shared, reasons which explain why the assumptions are the *right* ones, and why the other interlocutors *should* accept them. But, once given that, they are responsible to be ready to recognize that the grounds for their assumptions are mistaken when offered evidence. I mean

with this conclusion to stress that the normative aspect does not depend on a previous assumption of an objective state of affairs, but on the honest and rational search for this objectivity.

Gauker sees no way to define internal norms which are not “mere subjective reflections of external norms”. I will answer that internal norms are an expression of a fundamental aspect of the limits of human reason or are an expression of the intrinsic defeasibility of our descriptions. Internal norms deal with the defeasibility of cognitive contexts regarding the objective state of affairs. To attain the “objective” state of affairs, we need a description of it. But every description is an expression of a defeasible point of view. We have to enclose this defeasibility into our theory and leave conversational context to be the interaction of points of view, through which we might eventually converge toward what we consider the right one, given its grounds, its reliability and its justifications.

Normativity is a conditional constraint: “*if* the real situation is so and so, *then* the speaker should say so and so.” But there is no warrant for thinking that we always have access to the real situation, or we may find unexpected doubts about a previous description of it. Therefore, even if we do not deny the existence of external norms, we cannot take them to be the foundation of discourse context; contrary to the standard view, they are dependent on internal norms when proper attention is given to the defeasibility of our access to what is the case. This does not mean that what is the case depends on what people think the case is. It means that our *descriptions* of what the case is rely always on a background of practices and beliefs. Therefore this internalist attitude does not mean that what is right is reducible to what is considered right, but just that what is right is always postulated or decided on the background of the open discussion among different points of view about what is right.

### (iii) *Normativity and anaphora*

How to deal with a discourse with no definite normative setting, with no clearly definite goal? Let us take again the dialogue between Tommy and Suzy, where eventually Tommy realizes that Suzy is giving an interpretation different from his. How is this convergence realized? What is relevant here appears to be the negotiation about the use of anaphora and demonstratives, given a basic agreement on the use of pure indexicals and proper names. Let us check the final part of the dialogue:

- (1) T. Yes, *they* are [mine]. Mom gave *them* to me.
- (2) S. Dad gave me *those* marbles and Mom doesn't even know I have them.
- (3) T. I'm not talking about *those* marbles; I'm talking about the marbles in *my* room.

The anaphoric chain, which has been used by Tommy and Suzy as if it referred to the same objects, breaks at the third sentence in the above piece of dialogue, when Tommy reacts to Suzy's claiming that "Dad gave me those marbles." Realizing the different connection of marbles with Dad and Mom, Tommy makes it explicit that the anaphoric use of "they", "them" and "those" is ambiguous. He then begins to bargain over the interpretation of the anaphora and *accepts Suzy's use* of "those" in order to make *his* point. The problem is: how and when did he detect the different use of "those"? On the one hand, Suzy probably accompanied "those" with a gesture, linking "those" to a pure indexical "here" (unarticulated constituent?). On the other hand, Suzy made explicit reference to a different (causal) origin of the intended reference of the term "those": Dad and not Mom. Recognizing the contrasting use of "those" made by Suzy, Tommy makes explicit the different domain of quantification of the relative uses of "they/those" and clarifies that his use was not directed to the domain of quantification chosen by Suzy. In order to do that, Tommy has to take a step backwards and become an external observer of the dialogue. Making this step he begins to bargain the domain of "those" and "they".

We have given the case in which he accepts Suzy's use of "those". However he might also have pretended that his use was the only correct one and that Suzy is mistaken. In this case his payoff in the bargaining would be a psychological superiority over Suzy, and the outcome would be that his interpretation, or the domain or the proposition, would be unique, the one *he* intended. In our example, on the contrary, he chooses the most efficient way, which reaches an efficient result with the least effort: he accepts Suzy's interpretation showing that his intended referent of the domain of quantification is different from Suzy's. He reaches a fair solution (we refer to two different domains) from incompatible premises (what I say is true and what you say is false).

In this case semantic bargaining<sup>13</sup> employs basic features like demonstratives ("*those* marbles"), and works on the control about the interpretation of anaphoric chains ("they"...*"those"*). To disambiguate demonstratives and anaphoric chains the speakers use proper names ("Dad", "Mom") and pure indexicals ("I", "me", and an implicit "here"). Through the concordance and discordance on the use of these devices, the interlocutors realize that their two anaphoric chains, where they both use the term "they", have different anaphoric intended initiators and need to be recognized as two differ-

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<sup>13</sup> This analysis and the terminology used has been influenced by Massimo Warglien, who analyzes with more detail the requirements necessary to speak properly of "meaning negotiation".

ent chains. In such a way they realize that there are two interpretations of the “red ones”, neither of which is the “right” one.

In using and comparing the different uses of demonstratives and indexicals they are *compelled* to recognize the existence of different domains of quantification. As I have suggested in (i), if a dialogue has no precise goal then there is no particular proposition or set of propositions people *should* share, besides certain agreement on personal identity and the use of indexicals. We cannot say that Tommy and Suzy should share the proposition given by Tommy’s interpretation, because the proposition given by Suzy’s interpretation is perfectly coherent with the actual situation. But there is also no reason why Tommy should share Suzy’s interpretation, having begun the dialogue with his own interpretation. Therefore the problem is not *which proposition* should be shared, but *which means* the interlocutors have to recognize the different propositions at stake.

Let us suppose that Suzy said: “*It* is not true” - as her first reaction to Tommy’s utterance (“all the red ones are mine”). To this Tommy could easily reply: “No, it is certainly true.”. What does “it” refer to in the two cases? A normal anaphoric analysis requires that there is a *unique* referent for “it”, which - in an expressivist view - should be a proposition. *Which* proposition? If *we* have to describe it, we should make the proper embedding, making it explicit that Suzy refers to what she thinks Tommy has in mind; therefore “it” is ambiguous between “what Suzy believes Tommy believes” and “what Tommy believes”. But we know that Suzy believes that Tommy believes that all Suzy’s red marbles are Tommy’s, or, using our old way of expressing:

Suzy believes that Tommy believes that  $\forall x \in \text{DoD}_s (\text{RedMarble}(x) \rightarrow \text{Tommy's}(x))$

In this case the ambiguity is given by the anaphoric use of “it”, where two tokens of the same type (the pronoun “it”) are used by Suzy and Tommy to refer to two different propositions, or different interpretations of the same utterance. Here the “it” is like a name “Cicero” used ambiguously both for the Roman orator and for another historical character, like the case in which two different persons - in front of an utterance of “he is coming”, interpret “he” as referring to two different individuals in the scene. We need to clarify the strategy people use to point out where the use of two different anaphoric chains starts from, as basic tool for disambiguation. The relevant point is therefore to analyze the basic steps needed to disambiguate misunderstandings when propositions are the referents of indexicals and pronouns.

## 5. Conclusion

When no definite goal is at stake, we have no means by which to decide which is the intended interpretation (the domain of discourse), but we have to study the structure of semantic negotiation, where speakers are forced to understand different relevant interpretations. Checking the concordance and discordance in the use of anaphoric chains is a basic means which compels us to realize the possibly different interpretations, or different local domains.<sup>14</sup> Speakers do not need to converge towards *one* interpretation, but recognize the different interpretations as just different, and not necessarily competing. The rules which govern the admitted substitutions in an anaphoric chain are ways to compel people to find agreement and disagreement. These rules compel people to make explicit the different commitments they have on the content of their assertions, which may impinge upon different tokens of the same type. When two tokens of the same type are referring to different domains, misunderstanding is easy to discover after some step in the conversation. However, the normativity that permits communication to be successful cannot always be given in advance, in a theory of what should be shared. Other norms may help, and they are laid down in the rules which compel the interlocutors to recognize the different commitments (e.g. different inferences) on the expressions used.

This does *not* mean that we must accept an expressivist picture of communication as devoted uniquely to transmitting something mental from one mind to another mind. Considerable effort is devoted to inferential work, checking the differences in the use of tokens of the same type, looking for the point where the divergence of anaphoric chain becomes explicit. The inferential work arrives, eventually, at the construction - step by step - of a linguistic setting which compels interlocutors to get at the recognition of different interpretations given by the different theories at stake.

Maybe that is why Gauker does not give so much attention to the supposed difficulty of the expressivist facing the neutral position where *both* interpretations are right. Actually, this is the easiest result of the dialogue, where - as a result of a negotiation - Tommy and Suzy recognize the point of view of the other, saving in this way the truth of the apparent contrasting assertions: “[It is true that] they are mine” vs. “No. It is not true”. They are both true, but two tokens of the term “it” have different referents. The solution of the puzzle is very simple<sup>15</sup>, but the strategy to arrive at the solution

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<sup>14</sup> I am suggesting that underspecified logical languages and local model semantics (e.g. Giunchiglia-Ghidini 1999) might be expressively equivalent.

<sup>15</sup> The example under consideration is a typical case of confusion about identity. Here two tokens of the same expression (“they”) have two different referents (two different sets of marbles). The case might be more complex if we build up a case where the intended do-

impinges upon a very sophisticated level of linguistic and contractual abilities, which compel speakers to recognize that their own points of view are not the unique ones on the market.

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main is the same, but the epistemic access to it is different. In this case, the disagreement would seem (erroneously) a disagreement about the facts, because the assertions are interpreted on the same class of marbles. To solve the problem, we might speak of difference of *intensions*; but also we may say that the same class of red marbles is considered under two different points of view, which can be expressed in two *theories* or local contexts. The negotiation needs just a further step.

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