

Kaplan's *A Priori*

Manfred.Kupffer@uni-konstanz.de

Kaplan's *A Priori*

0. Introduction

In recent years, there has been a renewed interest in the use of two-dimensional semantics in epistemology, especially since David Chalmers employed the framework in an attempted proof of dualism that has sparked a lot of debate (Chalmers 1996). Historically, the use of two-dimensional modal logic in epistemology has its roots in formal developments in the semantics of “now” on one hand, see Kamp (1971) and Vlach (1973) and informal considerations on the relation of necessity, apriority, and analyticity like the ones expressed by Kripke’s famous remarks in “Naming and Necessity” on the other. Kaplan’s definition of the *a priori* is perhaps the most detailed combination of these two strands, given that it is embedded in a full-fledged semantics of indexicals. It is also the earliest such attempt.¹ Although Kaplan’s definition of the *a priori* has been very influential (see e.g. Almog 1980, White 1982, Spohn 1997a,b), in recent years it has mainly been regarded with scepticism (e.g. in Stalnaker 2001); and even proponents of a two-dimensional approach to epistemology reject it (cf. Chalmers ms.)

Kaplan’s semantics² derives from the observation that sentences containing indexicals like, e.g. “I”, “now”, “here”, and “actually” receive their truth-values³ relative to the circumstances of their respective utterances. They have, as Kaplan puts it, different truth-values in different *contexts* of use. E.g. “I read” is true if you utter it now, dear reader, but false if whoever utters it does not read. The first utterance takes place in a context where the subject of the context reads,

¹ The paper, Kaplan (1989), was written in 1977, and based on a course given 1971. For similar ideas see Stalnaker (1978), Davies & Humberstone (1980).

² A short introduction to Kaplanian semantics can be found in sec.9, p.25f. below. For a more comprehensive introduction, see e.g. Zimmermann (1991).

³ and even their very truth-*conditions*

the second utterance in a context where she does not read. Now Kaplan defines an *a priori* truth to be a sentence that is true in *every* context. There is something to that; truth in every context seems to be connected to the idea of being inevitably true, come what experiences may. Examples of sentences that are predicted to be *a priori* include (1)-(3) below.

- (1) Everything is as it actually is.
- (2) I exist.
- (3) I am now here.

There is again some intuitive plausibility to the idea that these sentences are *a priori*; often their apriority is simply accepted without argument⁴ (see e.g. Peacocke and Boghossian in the introduction to their recent volume (2000)). I think (1)-(3) are indeed *a priori* in a natural sense of the word. Still one should be able to explain in which sense and why.

Unfortunately, Kaplan's own explanation of their apriority, based on his above definition and his semantics of indexicals, is less than satisfactory. Consider the definition. First, as a purely semantic redefinition of the traditional notion of independence of experience, it simply seems to miss the point. Surely, apriority ought to be defined in terms of *epistemological* notions! Second, Kaplan thinks that the validity of this definition is restricted to a very special range of examples. He explicitly excludes sentences with proper names, cf. Kaplan (1989) pp. 562-63; one may also add natural kind terms. According to Kaplan, e.g.

⁴ David Chalmers (p.c.) denies that "I exist" is *a priori*, because it is something he knows *via* some kind of experience, namely introspection. – While the *cogito* may be a way to infer one's existence from an empirical premise, this does not exclude that one is already ideally committed to believing that one exists before, independently of experience. Now I think the question of the apriority of (2) is a question of what one is ideally committed to believing and that, therefore, Chalmers' objection is not pertinent.

(4) Hesperus is Phosphorus

is true in every context, although it is not *a priori*. This indicates that the alleged definition is rather a characterisation that is supposed to be evaluated in the lights of some background notion of the *a priori*. Characterisations could well come out false; definitions couldn't. Now Kaplan himself seems to admit it is false, since a partially adequate characterisation is a partially inadequate one. Third, the treatment of his core examples (2) and (3) rests on dubious semantic constraints, roughly, that the subject of a context is required to exist at the time and at the place of the context (see below p.27). To adopt these constraints comes down to taking (2) and (3) as meaning postulates. Given Kaplan's conception of logic (roughly, logical truth is equated with apriority), this means that (2) and (3) are decreed to be *a priori* rather than predicted to be so. Therefore the whole two-dimensional apparatus looks rather superfluous.

Additionally, the empirical adequacy of Kaplan's underlying semantics itself is questionable. First, even in the case of paradigm indexicals sometimes reference is not determined by the context of utterance as Kaplan predicts, but rather by some other context, either anaphorically related to the context of utterance (see e.g. Kamp&Reyle 1993 for the case of "now"), or being the result of a contextual shift effected by some intentional operator (see e.g. Cresswell 1990 for "actually"). Fortunately, this problem does not concern our core examples, because these do neither consist of complex discourse, nor of modally embedded indexicals; therefore, I shall ignore it in the following. Second, more importantly, Kaplan's semantics is unable to deal with the phenomenon of occurrence-dependence (multiple occurrences of one and the same indexical

receiving different referents within one and the same sentence).⁵ This problem is more grave, because, unfortunately, those relatives of Kaplan's semantics that can deal with the problem do not go together well with his definition of apriority. E.g. tokenreflexive semantics (e.g. Perry 1997) is committed to saying that „I talk“ is true in every context.⁶ Third, there are utterances of negations of (2) and (3) which look true.⁷ This is indeed serious. It indicates that Kaplan should retract the very semantic constraints that led to the prediction that (2) and (3) are true in every context!

Given all this, it seems we have as yet no satisfactory account of the apriority of (1)-(3). Such an account should be independent of problematic features of Kaplanian semantics and based on an explication of the *a priori* in terms of epistemological notions instead of only semantic ones. Finally it should predict that neither (4) nor “I talk” are *a priori*. In the first part of the paper I will sketch such an account. The core idea is simple to express: (1)-(3) are known in virtue of semantic competence, while (4) is not. It is less easy to fill in the details. E.g. I have to deal with the problem that semantic knowledge is metalinguistic, while e.g. those pieces of knowledge *a priori* I am interested in are not. One can infer non-metalinguistic pieces of knowledge and belief from metalinguistic ones with the help of certain principles of *disquotation*, though; I will propose suitable such principles, especially also one that allows to deal with *perspectivals* (indexicals that introduce a personal perspective, like, e.g. “I”, “here”, and “now”).

The notion of truth in every context does not appear in that first part at all, simply because there, I will try to steer clear of any commitment to Kaplan's theory. Yet, there is at least some plausibility to the idea that truth in every context leads to apriority. If one wants to explore this

⁵ E.g. “this is older than this” (Lewis 1970). Arguably all examples of occurrence-dependence involve a demonstrative or a demonstratively used indexical. Kaplan tries to deal with such examples by way of a strategy of disambiguation that is, nevertheless, not satisfactory, cf. Garcia-Carpintero (1998).

⁶ cf. also occurrence-interpretation (von Stechow 1979)

⁷ cf. p.27 below

idea, the notion of context has to be made precise within a semantic theory, and Kaplan's is the obvious choice. Therefore, in a second part, I will investigate how the account of the first part can be combined with Kaplanian semantics. If we marry that semantics with a fairly standard semantics of belief, we are actually able to show that truth in every context implies apriority for the intended range of applications of Kaplan's characterisation of the *a priori*. Thereby, we obtain a justification of Kaplan's characterisation in epistemological terms. This also serves to show that the appeal to truth in every context in an account of the apriority of Kaplan's core examples (2) and (3) need not be as empty as his use of the abovementioned semantic constraints suggests. Indeed it is an important feature of my account that I do not employ these constraints at all; Kaplanian semantics may well do without them (and it should, given they seem to be wrong).

I The semantic conception of the *a priori*

1. Varieties of the *a priori*

Apriority is independence of experience; that much ought to be uncontroversial. Our task is now to spell this out in a way that suits our examples. Of course, how a vague pre-theoretical notion is made precise is always to a certain extent a matter of choice.⁸

E.g. the predicate "*a priori*" is used to apply to various things. E.g. Kant applied it to pieces or acts of knowledge (*Erkenntnisse*), to judgments, concepts, intuition, and sometimes even to sentences. Kaplan applies it to sentences.

⁸ See Carnap's theory of explication (Carnap 1962, pp.3-8) for a clear statement why and to which extent this is a matter of choice.

I think we should take knowledge as basic, because it seems more natural to me to define the apriority of sentences in terms of *a priori* knowledge instead of doing it the other way round. So let us say

<S> is *a priori* if, and only if, it can be known *a priori* that S.⁹

Now what is *a priori* knowledge? This again can be spelled out in various ways. One may understand independence of experience in a genetic way. In such a sense an item of knowledge of a particular agent is *a priori* if and only if experience did not intervene in its acquisition. The notion is notoriously difficult to apply, because often alleged cases of knowledge *a priori* presuppose the acquisition of certain pieces of linguistic knowledge, and experience is certainly involved in the latter process. Or one can understand independence of experience in terms of whether the item of knowledge *holds true* independently of how the world turns out to be (or independently of what experience may tell us about the world). This second sense tastes of incorrigible knowledge; it has thus become less popular these days.¹⁰

One might also say that *a priori* knowledge is knowledge *in virtue* of things that do not fall into the realm of experience. This is the way we will pursue here. E.g. Kantian knowledge *a priori* may be understood as knowledge that we already possess solely *in virtue of being able to*

⁹ This is really a definitional schema, where you can yield particular instances by filling in appropriate values for “S”. Throughout the paper I will use uppercase letters for schematic variables and <S> to indicate that whatever substitutes “S” is to be put in quotes.

¹⁰ There may be a sense of this proposal that is perfectly o.k. and not even in conflict to what I am going to say in the following. When discussing these matters one has to distinguish the unrevisability of a sentence given a certain meaning from the unrevisability of a sentence understood as linguistic form. The former does not seem so bad to me. It does not preclude that it may be rational to revise your judgement (even if this implies a change of meaning of the sentence), see Grice&Strawson (1965).

experience. We will use a more modest “in virtue”, here. We will use knowledge *in virtue* of semantic competence.¹¹

2. Knowledge in virtue of semantic competence

In the remainder of this part I will elaborate on the following basic idea.

A knows *a priori* that S if, and only if, A knows that S in virtue of A’s semantic competence.

What does “in virtue” mean? Usually this notion is understood in terms of *supervenience*. Supervenience is, as David Lewis has put it, a denial of independent variation (Lewis 1983). Properties P supervene on properties Q if, and only if, there are no two possible individuals that differ wrt. P but not with respect to Q. To take Lewis’s example, the beauty of statues supervenes on their size, shape and colour, i.e. no two possible statues could differ in beauty without differing in size, shape, or colour. This also means that if a possible individual has a certain combination of the Q-properties, then this entails the particular combination of the P-properties of the individual. The particular degree of beauty of a statue is entailed by the particular combination of size, shape and colour of the statue. Supervenient properties enter the world, as Frank Jackson has put it, by entailment (Jackson 1998).

¹¹ I do not claim any originality, here. I rather think that this conception of the *a priori* may well be identified, on rational reconstruction, as the implicit informal conception behind Kaplan’s account. Apriority understood as what ordinary competent speakers know is also conception of the *a priori* used in Soames (2002); on at least on one occasion (p.10) this is even termed “knowledge in virtue of semantic competence”. Likewise, Jackson (2000), treating apriority as a property of sentences, defines an *a priori* true sentence to be “one such that understanding it is sufficient for being able to see that it is true.” (p.324)

So knowledge in virtue of semantic competence should be understood as knowledge supervenient on semantic competence. It is a sort of knowledge you are guaranteed to possess when you possess a certain piece of semantic competence. Now there is hardly ever a guarantee that we know something *explicitly* (we know something explicitly only if we are ready to assent to it). E.g. sometimes we fail to draw the most basic of logical implications from a given piece of knowledge. And sometimes we also fail to hold things true we ought to, given the semantic competence we are ready to display in other cases. It seems unlikely, therefore, that there is any automatism that connects our (implicit) semantic knowledge and items of our explicit knowledge. This means, if explicit knowledge were meant our explication of the *a priori* in terms of supervenience would be never met. The explication would be pretty uninteresting, then. It would also contradict a widespread assumption, namely that there are indeed pieces of *a priori* knowledge. – In order to avoid these difficulties and provide a fruitful explication, I will switch from explicit knowledge to a kind of implicit knowledge, namely ideal rational knowledge.¹² This is the kind of knowledge you ideally rationally possess, or the kind of knowledge you would explicitly possess if you were an ideal rational agent. Make your explicit knowledge coherent with your implicit knowledge. Then draw from your (explicit and implicit) knowledge every conclusion that can be drawn on the basis of your semantic competence. The resulting set of conclusions is, what we will, in the following, consider as your ideal rational knowledge.¹³ Since among items of ideal rational knowledge, there are automatic links, we can now hope that our supervenience *a priori* is an interesting notion after all.

¹² The term “ideal rational knowledge” has been borrowed from Chalmers (2002). For a defence of the notion of implicit knowledge, see Stalnaker (1991).

¹³ Strictly speaking there are many ways to make incoherent knowledge coherent, even if one tries to retain as much, or as much of importance, as possible. Therefore there is a considerable indeterminacy as to what your implicit knowledge consists in. For reasons of simplicity, we are going to ignore this difficulty in the following, though.

Now let's turn to *semantic competence*. Some think of competence in terms of a division of our knowledge into two parts, a semantic and an empirical one. The problem is that such a division is not to be found in reality. E.g. we learn by the method of examples. Small children may learn the concept of a watch by being shown particular watches. But that the thing on the mantelpiece is a watch is certainly not a semantic fact, although it may play a decisive part in the acquisition of the meaning of "watch". It is also a futile enterprise to try to analyse our knowledge into purely semantic and purely empirical pieces. Ask someone to produce the purely semantic facts about watches she knows!

In fact the notion of semantic competence does not presuppose such a neat division of our knowledge. Semantic competence is an ability to use words in a certain way. (This does not rule out it is a kind of knowledge.) This ability may be holistically implemented. It may be an ability we possess in virtue of other things, where the other things may well include specific items of empirical knowledge. Now this is why I don't want to say that A's knowledge *a priori* is knowledge A possesses in virtue of *the specific way* A knows the meanings she does. This would make many things *a priori*, indeed too many, since A's semantic competence may partly be determined by A's empirical knowledge. With that term I'd rather like to refer to *the fact that* A knows the meanings of the words she does.

But what does *semantic competence* mean? – I need not give an explication here, at least in this part¹⁴; we understand that notion fairly well. There are clear-cut cases where people possess certain pieces of semantic competence and clear-cut cases where they don't. E.g. someone who knows that utterances of "I" always refer to the speaker is a competent speaker of "I". And

¹⁴ See sec.11 below for an account of semantic competence in terms of knowledge *de re*. But keep in mind nothing in this first part of the paper depends on the details of that account.

someone who does not know that is not a competent speaker of “I”. With other terms there is much more leeway; Tyler Burge reminds us that very little is required for being a competent speaker of many common nouns, cf. his well-known case of “arthritis” (Burge 1979). Similar things apply to names. You may yourself be involved in an act of baptising. Or you may have never seen the individual and simply hook on to an existing name-using practice. But both cases are clear-cut cases of semantic competence with regard to the name.¹⁵

Given all this, I can finally express summarise my explication. For reasons of simplicity let us confine ourselves to cases where only knowledge of the meaning of the complement sentence of “believe” in the respective belief ascription is relevant.¹⁶

A knows *a priori* that S if, and only if,

- (i) A knows that S;
- (ii) A knows the meaning of <S>;
- (iii) every possible individual who knows the meaning of <S> also knows that S.¹⁷

3. Disquotational beliefs

Are there things that are known *a priori* in the above sense? – Of course there are. E.g. if an individual knows the meaning of (1) she also knows that (1) is true, and hence that everything is as it actually is.

¹⁵ Cases of semantic incompetence with respect to a name are sparse. If you don’t know the name, this is not a case of *semantic* incompetence. But still, if you lack the distinguishing knowledge for several different names of the same form, then you lack semantic competence (e.g. if you know that there is a name of the form “Napoleon” but that name could refer, as far as you know, either to a brandy or an emperor). Some basic knowledge is also required for being a competent user of terms like “arthritis”. I doubt, e.g., that anyone who does not know that it is a name of an illness may count as competent.

¹⁶ This means the explication as it stands cannot deal with cases where the subject speaks a language different from the language used in the ascription, or cases of *de re* ascriptions of knowledge *a priori*.

¹⁷ Again this is a definitional schema, where one yields particular instances by filling in appropriate values for “A” and “S”.

It is another question how to account for cases like this. One has to be careful, here. One has to distinguish between knowing *that* S and knowing things *about* <S>. *Prima facie*, semantic competence only implies knowledge about sentences, e.g. knowledge of the meaning of (1) implies knowledge that (1) is true. Therefore, the problem is how to derive knowledge *that* S from knowledge *about* <S>, e.g. knowledge that everything is as it actually is from knowledge that (1) is true. I do not question the possibility of such an inference; above I have simply made it, and in fact we do it all the time. But in order to develop a general account of why certain sentences are *a priori*, we need to uncover the general principles behind this practice.

Knowledge that a certain sentence is true is not the only case of metalinguistic knowledge we will discuss. Later on we will need further varieties, and it will prove difficult to uncover the principles we need for an account of apriority there. But in this special case the required principle is easy to find. However we will first discuss the perhaps even easier related question how certain *beliefs* about <S> can be sufficient for belief that S. The question whether we can also infer knowledge that S will be discussed in sec.5.

From belief that a certain sentence <S> is true we may indeed derive the belief that S, by the following rule of disquotation in belief contexts, “Disquotation” for short.¹⁸

Disquotation

A believes that <S> is true & A knows the meaning of <S>

A believes that S

¹⁸ The reader should be warned, though, that in the literature about belief, the name “disquotational principle” is usually taken to refer to Kripke’s (1979) principle “[I]f a normal English speaker, on reflection, sincerely assents to ‘p’, then he believes that p” Kripke (1979), p.112f.

This rule can indeed claim intuitive validity. If somebody does not believe that S, he cannot both be a competent user of <S> *and* believe that <S> is true. As an example for the application of the rule take again (1) above. I believe that “everything is as it actually is” is true. I am also a competent user of that sentence. Therefore, by Disquotation, I believe that everything is as it actually is. This finally justifies our intuitive assessment of the example at the beginning of this section.

4. Disquotation and perspectival change

What I have said so far cannot be the whole story. This is so because we are aiming at an account of apriority that encompasses arbitrary sentences, in particular also sentences that contain perspectivals (*perspectival sentences* for short), witness (2) and (3). But, to them, Disquotation does not apply, because it is simply misplaced to predicate truth of these sentences at all. Is the sentence “I am wonderful” true? – The question has no determinate answer, at least without any additional contextual clues. Strictly speaking we can only ask whether a particular utterance of that sentence expresses a true proposition, or whether that sentence expresses a truth *in a certain context*. The problem does not go away if the sentence with the indexical appears inside a belief ascription. Do I *believe* that the sentence “I am wonderful” is true? – The question has no determinate answer. I can believe that a certain utterance of that sentence is true, but this does not help in the present case. Knowledge *a priori* is based on knowledge about sentences, not knowledge about utterances. Remember that we are interested in ideal rational knowledge *a priori*. This kind of knowledge concerns even sentences that may have never been uttered as far as the subject knows.

I conclude that we need further principles like Disquotation in order to be able to treat sentences like (2) and (3). We will first try to find a principle that justifies the transition from a certain kind of belief about a sentence <S> that contains a perspectival to belief that S. Then, after we have also addressed the question how to derive knowledge from such cases of belief, we will turn to the task of generalising our explication.

So what can replace reference to truth in Disquotation? I propose the following. Let us say that <S> *would apply to A's situation* if, and only if it holds that if A had uttered¹⁹ <S> in her situation, the proposition expressed would have been actually true.²⁰ Obviously, this notion can also be applied to perspectival sentences. E.g. sentence (2) above would apply to my situation: if I were to utter (2), I would express a proposition that is actually true. – Interestingly, ‘to apply to A’s situation’ is not a generalisation of the notion of truth. E.g., (1) is a sentence that is true but would not apply to my situation, as I have defined the term. It would not, at least as long as I do not actually utter that sentence. If I were to utter that sentence, it would express a proposition that implies that I utter it (it would express the proposition that everything is just like in the world where I utter the sentence). But this proposition is false in the actual world, where I do not utter (1). – This also means we will not try to replace Disquotation, but rather to add another rule that can deal with those cases that cannot be dealt with by Disquotation.

How will the notion be employed? Can we simply exchange it for the notion of truth in Disquotation? The following would be the result.

¹⁹ Utterances are to be understood as linguistic acts, here. This is meant to exclude cases of utterances (in the sense of mere speech-production events) that are recorded and intended to be used for later utterances (in the sense of linguistic acts).

²⁰ I took this kind of reference to the *actual* truth of what counterfactual utterances would have expressed from Haas-Spohn (1995), p 78. There it is used in an attempt to extend Kaplanian meanings to contexts where no utterance of the relevant expression takes place. I do not think, though, that Kaplanian meanings are thus projected from some core examples, or that they are in need of any justification in terms of counterfactual utterances at all. For further discussion see below fn.30.

Disquotation#

A believes that <S> would apply to her situation & A is competent

A believes that S

Disquotation# can easily be shown to be invalid. If A believes that “I am wonderful” would apply to her situation, we cannot conclude that A believes that I am wonderful.²¹ We should rather infer that A believes that she is wonderful. The problem is of a general nature. It is that in belief ascriptions, you usually have to take *two* perspectives into account, that of the subject and that of the ascriber. The change of indexicals in disquoting beliefs simply marks the transition from the former to the latter.

So, if we want to avoid the problem that made Disquotation# invalid, we should avoid this change of perspective. We should restrict ourselves to a case where such a change does not occur. Let's restrict ourselves to first-person ascriptions.

Egocentric Disquotation

I believe that <S> would apply to my situation & I know the meaning of <S>

I believe that S

²¹ The example is adapted from an example found in Kripke (1979).

Egocentric Disquotation is not troubled by the change of perspective any more. And it is intuitively valid. If I don't believe that S, how can I possibly believe that if I were to utter <S> I would say something that is true of my actual situation, given that I know what <S> means?

Examples of sentences that I believe to apply to my situation are (2) and (3) above. Take (2). I believe that "I exist" applies to my situation, because I believe that, if I were to utter "I exist", I would say something that is actually true. Furthermore I am a competent speaker of (2). Therefore, by Egocentric Disquotation, I believe that I exist.²²

5. From belief to knowledge

I have taken the principle of Disquotation and the principle of Egocentric Disquotation to show that I believe that everything is as it actually is, that I exist, and that I am now here. Do I also *know* these things? Intuitively, I feel fully justified in saying so. But whether one can give a theoretical account that justifies the transition from belief to knowledge in question depends on one's theoretical conception of knowledge. Therefore, let me briefly review some such conceptions. It turns out that we encounter at least no theories that would *deny* the correctness of the transition.

²² Again, the principle of Egocentric Disquotation bears some similarity to a principle discussed in Kripke (1979). It is the principle of strong disquotation, "[a] normal English speaker who is not reticent will be disposed to sincere reflective assent to 'p' if and only if he believes that p." (ibid. p.113). Again this principle links speech (-dispositions) to belief and not one kind of belief to another. The principle is meant to be restricted to sentences that contain no indexicals. The direction from right to left seems to be wrong (e.g. *de re* belief characteristically is not accompanied by a disposition to assent). But even the other direction of the principle seems to be invalid, witness the following counterexample. Jim believes that nobody ever talks; hence he does not believe that sometimes somebody talks. Nevertheless he is still disposed to assent, on reflection, to "Sometimes somebody talks" (because such an utterance constitutes a self-fulfilling prophecy). We can safely assume that a person who reasons that way understands what he would assent to. Therefore we already have a case where the principle predicts belief where there is, in fact, none. – It does not help to point out that Jim is not a normal believer; having strange beliefs does not tell against being a normal speaker. Anyway, an explication of the *a priori* in terms of what *normal* people believe would not be very attractive, so even if the above reply were correct, the principle would be uninteresting for our purposes.

a. Knowledge is true belief. According to some authors, all we can say about knowledge if we are dealing with ideal rational notions is that knowledge equates true belief (see e.g. Sartwell 1992). But then, I also know (1)-(3), because I believe them, and what I believe here is true.

b. + reliable reason. According to Unger 1968 we know that S if and only if it is not at all accidental that our belief that S is right. But if you believe in virtue of your semantic competence, it is not at all accidental that you are right, because the meaning itself suffices to make the belief in question a true one.

c. Realistic theories of knowledge. Current epistemological theories are often not applicable to ideal rational knowledge at all. Instead they are concerned with items of realistic explicit belief and knowledge, and with how we actually come to know the latter. This holds for most current coherentist and reliabilist notions. *Reliable process theories* (See e.g. Goldman 1986), e.g., are concerned with explicit knowledge yielded by real cognitive processes. *Coherentism* is mostly understood in terms of inferences we actually make among our explicit beliefs. Even Keith Lehrer's version of coherentism, which is concerned with belief in the sense of certain functional acceptance states (roughly, dispositions to think, infer, and act, see Lehrer (2000)) is concerned with those acceptance states we are actually in, in contradistinction to dispositions only ideal rational counterparts of ourselves have. That is why his theory knowledge does not lead to logical omniscience (see Lehrer (1989), p.271-72); no *realistic* theory of knowledge should.²³ Now realistic theories of knowledge are simply besides the point for our question whether my ideally rationally believing (1)-(3) suffices for ideal rational knowledge.

In the following I will assume that every application of our principles to (1)-(3) yields not just belief, but also knowledge. Of course not just applications with me as the subject of belief.

²³ Thanks to Erik Olsson for help with Lehrer's theory.

E.g. if you believe that (1) is true, you do not only believe that everything is as it actually is, you also know this. And if you believe that (2) would apply to your situation you are not only entitled to say “I believe that I exist”, you are also entitled to say “I know that I exist”.

6. Apriority and perspectival change

In sec.4, I have shown how to replace the principle of Disquotation in the presence of perspectivals. The replacement is restricted to first-person self-ascriptions of belief. But this can hardly do. First we want to say that $\langle S \rangle$ is *a priori* if, and only if, *some possible individual knows a priori* that S. This is a third-person knowledge ascription. Second, already the third clause of our explication of *a priori* knowledge (p.10) is put in terms of third-person knowledge.

You might think we should look for still more general principles of ascription. Fortunately we can get what we desire cheaper. It turns out that it was a mistake that our explication of *a priori* knowledge and our definition of the apriority of sentences contained an appeal to *ordinary* third-person ascriptions in the first place. Let me explain.

Suppose I know *a priori* that I exist. By the abovementioned third clause this implies that every possible individual who knows the meaning of “I exist” also knows that I exist. But this is nonsense; a lot of possible individuals fail to know of my existence. Hence, our explication predicts that I don’t know (2) *a priori* and that sentence (2) is not *a priori*. Analogous things hold for example (3). But being perspectival does not make (2) and (3) *a posteriori*. Something is wrong with our explication. (But apart from the problem with perspectivals, our above explication of the *a priori* seems to be perfectly alright. Therefore, let us for take it to be restricted to cases without perspectivals.) The source of the problem is again that, when we move from first-person to third-person ascriptions, we exchange pronouns in perspectival sentences in a

way that marks a change of perspective. But when we are interested in which items of my knowledge supervene on my competence, i.e. which items of knowledge I share with arbitrary competent speakers, we are interested in *items of knowledge regarded from the same subjective perspective*.

Let us say that A knows* that S if x is entitled to a first-person knowledge ascription of S, or, in the terminology introduced above, if “I know that S” would apply to A’s situation. Knowledge* is knowledge, regarded from the perspective of the subject.

E.g. Anne knows* that I exist, i.e. “I know that I exist” would apply to her situation, i.e. if she said “I know that I exist”, she would say something that is actually true.

Given knowledge*, we can now define knowledge* *a priori* in terms of knowledge*, in a way perfectly analogous to the definition of knowledge *a priori* in sec.2. Since knowledge* is knowledge, only from a subjective perspective, this still is an explication of knowledge* *a priori* in terms of knowledge in virtue of competence.

A knows* *a priori* that S if, and only if,

- (i) A knows* that S;
- (ii) A knows the meaning of <S>;
- (iii) every possible individual who knows the meaning of <S> also knows* that S.

E.g. every possible individual who knows the meaning of “I exist” also knows that “I know that I exist” would apply to his situation; hence such an individual knows* that I exist. Therefore, Anne, who knows the meaning of “I exist”, also knows* *a priori* that I exist.

One might try to define knowledge ascriptions from knowledge* ascriptions, given the locations in time, space and modal space of both ascriber and knower²⁴; and ascriptions of knowledge *a priori* should in principle be derivable from ascriptions of knowledge* *a priori*, likewise. This should in principle be feasible, unfortunately I am not able to offer a full solution, here. There are some classes of cases, though, where I can already say how to make the transition from one to the other without having to go into messy details. E.g. it holds that I know that S if, and only if, I know* that S. Therefore, I know *a priori* that S if, and only if, I know* *a priori* that S. Furthermore, if S contains no perspectivals, then A knows* that S if, and only if, A knows that S. But then, the explication of the *a priori* given in sec.2, restricted to such sentences, turns out to be a special case of the above definition of knowledge* *a priori*.

Finally we need to redefine what it is for a sentence to be *a priori* in terms of knowledge*.

<S> is *a priori* if, and only if there is a possible individual who knows* *a priori* that S.

E.g. “I exist” is *a priori*, because Anne knows* *a priori* that I exist.

Since knowledge* *a priori* is still knowledge in virtue of semantic competence, only from a subjective perspective, the above is still is a definition of apriority for sentences that conforms to

²⁴ The dependence on the respective location is illustrated by the following example. Jim knows* that Alfred is here, and Jim and I share the same location, then I can infer that Jim knows that Alfred is *here*. However, if Jim’s location differs considerably from mine, I can only infer that Jim knows that Alfred is *there*.

our basic idea (p.7). Furthermore, the definition in sec.2 (restricted to non-perspectivals) turns out to be a special case of the one above. Hence, the explications of apriority and of the sentence-*a priori* in this section reserve the spirit of their predecessors.

7. Applications

With the above definitions in mind, we can finally treat our sample sentences.

(1) can be shown to be *a priori*; most of the ingredients of such an argument were already mentioned above.

First, I know that everything is as it actually is (cf. sections 3,5). Second, I know the meaning of (1). Indeed, third, every possible agent who knows the meaning of (1) believes that (1) is true, and hence, by Disquotation, believes that everything is as it actually is (sec.3). Given what I have said in sec.5 we are able to derive that every possible agent *knows* that everything is as it actually is. Hence, I know *a priori* that everything is as it actually is in the sense of sec.2. It follows that I also know* it and that (1) is *a priori* (sec.6).

As we have seen in the last section, (2) is also *a priori*; and so is (3), for completely analogous reasons.^{25,26} But let us turn to examples that are not *a priori*. Take, e.g.

²⁵ Compare Jackson's different attempt to account for the apriority of "I am here" (Jackson 2000, p.332). (That sentence is essentially identical to (3), only that, in the former, "now" is implicit in the present tense.) Jackson first tries to distinguish ordinary and what are usually called *demonstrative* uses of "here" (he mentions e.g. pointing at a map). According to Jackson "I am here" is not a priori if "here" is used while pointing at a map, but it is if "the conventions of the language and the context are such that 'here' picks out the location of the producer of the sentence" (*ibid.*) Since, moreover "the role of 'I' in such a sentence is to pick out the producer of the sentence", according to Jackson, in the latter kind of context knowing the conventions of the language and of the context suffices for knowing that the proposition expressed by the relevant utterance of the sentence is true, i.e. the sentence (in the context) is *a priori* in Jackson's sense. – I find this account objectionable for the following reasons. First Jackson makes no attempt to analyse apriority of sentences in terms of the more basic notion of *a priori* knowledge. Second the account seems to entail that "I produce a sentence" is *a priori*, too. Third, even in a context without pointing gestures it is not guaranteed by the conventions of language that "I am here" is true; at least I will argue below it is not. Note that, according to Kaplanian semantics, the conventions of the ordinary use are not precisely that "'here' picks out the location of the producer of the sentence". They are rather such that "here" picks out the location parameter of the context. I will argue below (sec. 8) that this parameter does not always agree with the location of the referent of "I" (at the time parameter of the context). Hence, "the conventions of language and of

(5) I talk.

Kaplan says (5) is not *a priori* because (5) is not true in a context where the speaker is silent. My account rests on the fact that not every competent speaker knows* that I talk. She may simply believe that “I talk” does not apply to her situation. – (4) below is likewise not *a priori*.

(4) Hesperus is Phosphorus.

My explication correctly predicts it isn't.

First notice that I don't know(*) *a priori* that Hesperus is Phosphorus. Although I know(*) that Hesperus is Phosphorus and know the meaning of (4), it is simply not true that every possible speaker who does not know(*) that Hesperus is Phosphorus does not know the meaning of (4). In Kripke's (1972) scenario, the inventor of the names fails to know it, and it would be odd to say that, therefore, he is incompetent. Now, given my explication of the *a priori* the following Lemma holds.

(Lemma 1)²⁷ If x knows* that S and fails to know* it *a priori* although knowing the meaning of <S>, then <S> is not *a priori*.

context” do not guarantee that an utterance of “I am here” is true; and knowing them does not entail knowing that the utterance is true, *a fortiori*.

²⁶ It is an interesting question whether every example of a “Kaplanian” *a priori* may be dealt with by the same techniques. The problem is that there are mixed cases like “Everything I do is something I actually do” that defy treatment by the above two principles. (Thanks to Hans Kamp for this observation.) While it is an open question how an *informal* account of the apriority of such cases would look like, the more theory-loaded implementation of this account in the second part of the paper makes it possible to deal with them, too.

²⁷ Lemma 1 may seem strange at first sight, given that we fail to know many mathematical truths that we perfectly understand and that are often regarded as paradigm examples of the *a priori*. But notice that at least the first occurrence of “know” in the last sentence cannot mean ideal rational knowledge, the kind of knowledge we are after, so the apparent oddity dissolves.

(If for x , knowing* that S does not supervene on knowing the meaning of S , it does not supervene for any other possible y , simply because supervenience is not relativised at all.) This proves that it is not knowable* *a priori* that Hesperus is Phosphorus, i.e. (4) is not *a priori*.

Now (4) was one of the cases that Kaplan wanted to be treated as being true in all contexts but not *a priori*, i.e. a case where Kaplan thought his characterisation of the *a priori* did not apply. We are better off than Kaplan; we can actually say where the difference lies. In the next part we will do this in some (formal) detail. But we can already express this informally. The difference lies in the very different demands speakers have to fulfil in order to count as competent in the case of names on the one hand and indexicals on the other.

II The semantic conception and Kaplanian semantics

In this part I will deal with the relation between truth in every context and apriority. Let us first briefly take stock of what we already know about this relation. Kaplan himself tried to characterise *a priori* truth as truth in every context; at least he wanted to do so for his intended range of applications, i.e. sentences without names or similar expressions. But outside this intended range the two things do not coincide, witness example (4) above. Do they coincide inside the intended range? I have already indicated that there are also reasons to doubt this: arguably, even Kaplan's paradigm examples (2) and (3) are not true in every context (for an argument, see sec.8 below). At least, in this part we will undermine the main motivation for saying that they are by showing that an account of their apriority is independent of the question whether they are.

So what is left from Kaplan's characterisation is at most that *truth in every context implies apriority for Kaplan's intended range of applications* (but not *vice versa*). In this part I will try to show that this is indeed the case, given we spell out apriority as in the first part. This amounts to a partial justification of Kaplan's characterisation. A specific theorem to that extent will be proven in section 13. My overall aim in the sections before will be to provide a link between Kaplanian semantics and epistemology, such that predictions about apriority (or rather, predictions about apriority given properties of the relation of semantic competence) can be evaluated in a precise way. For reasons of simplicity, I will treat knowledge in the following as true belief, so it will suffice to find a connection between Kaplanian semantics and belief.

Unfortunately, no semantico-epistemical framework I know of is entirely adequate for this purpose. Kaplan's proposal (based on Perry 1977) was to identify meaning (*character*) and *cognitive significance*. But this theory is inconsistent with the doctrine of direct reference we have accepted here. If the character of names coincides with their reference, then "Hesperus" and "Phosphorus" have identical characters, and so have "Hesperus = Hesperus" and "Hesperus=Phosphorus". But these two sentences (or thoughts) clearly differ in cognitive significance.

The same applies to a popular proposal to define the truth-conditions of belief-ascriptions in terms of characters (see e.g. Haas-Spohn (1995, ch.2) and Schlenker (2003)); according to such a theory "A believes that S" is true if, and only if <S> is true in every context A might be in for all she believes. Now, whatever this means precisely, it predicts that sentences with the same character stand and fall together. But A might not believe that Hesperus is Phosphorus while still thinking that Hesperus is Hesperus.²⁸

²⁸ For similar reasons, in later chapters of Haas-Spohn (1995), the author proposes to define belief not in terms of character but in terms of what she calls "formal character". (Formal character is, essentially, linguistic form.)

Robert Stalnaker suggested another link between semantics and epistemology (cf. Stalnaker 1981, 1987). According to his theory, roughly, A believes that S if, and only if A *thinks* <S> and in all of the worlds w A might be in for all she believes, the thought token in w that represents, for A, A's actual <S>-thought is true in w. The theory is in terms of *Kaplanian* semantics, because the crucial notion of truth in a world is to be understood in Kaplanian terms; a token thought in a world w is true in w, if and only if its character (in w) is true in the context defined by the location of the token in w. Stalnaker's theory is more promising than the abovementioned ones because it allows to deal with the directly referentialist version of Frege's problem (cf. Stalnaker 87). His proposal will be especially important in the following. Nevertheless, as it stands, the proposal is not suitable for our purpose. We are interested in belief in the sense of a speaker's ideal commitments; therefore, we should not presuppose that a subject actually has a related thought (or any thought at all). Now this means that we have to get rid of the reference to thought tokens.²⁹ Furthermore, Stalnaker does not use the notion of semantic competence in his account of belief; but of course this notion is of primary importance for our project of characterising knowledge in virtue of competence. This means we have to add the notion of competence to the picture.

In sec.12 I will give an account of belief ascriptions in virtue of semantic belief, which is a suitable variant of Stalnaker's approach. Now in order to defend my account I will show that it validates the disquotational principles introduced in the first part, given a straightforward account of semantic knowledge (sec.11) and a classical account of belief *de re* (sec.10). Sections 9 and 8

²⁹ This step has important ramifications. Thought tokens play a crucial role in Stalnaker's defence of the idea that the object of belief is a set of possible worlds, see the debate between Lewis and Stalnaker about belief *de se et nunc* (in Lewis (79) and Stalnaker (81)). Lewis argues that the object of belief is a set of possible individuals instead, and, essentially, we will follow him here, cf. sec.9.

are concerned with an introduction to the underlying notion of belief, and to Kaplanian semantics, respectively.

8. Kaplanian semantics

According to Kaplan, the meanings of sentences are (sentential) *characters*, functions from contexts to propositions, where propositions are understood as sets of worlds. Intuitively, for every utterance of a sentence there is some context that is determined by the utterance, such that the sentence has, in that context, exactly the content of the utterance. Formally, contexts are quadruples of the form $\langle a, t, p, w \rangle$, with a being some individual, t a time, p a place and w a world. (Kaplan admits one might be forced to add further sequents.) If c is a context I will use c_A to denote the individual of the context, c_T the time of the context, c_P the place of the context, and c_W the world of the context.

The character of a sentence $\langle S \rangle$ in English is defined as a function $|S|$ from the set of pairs of a context and a world into the set $\{1, 0\}$ of truth-values.³⁰ E.g., for arbitrary contexts c and worlds w ,

³⁰ Kaplanian characters are total, they are defined for any arbitrary context/world-pair. This implies that S has a content also in contexts c where S is not uttered (in c_W by c_A at c_T), e.g. contexts in which something else is uttered or contexts in which nothing is uttered. This feature is sometimes taken to discredit Kaplanian semantics. It is argued then, that the value of $|S|$ in the abovementioned contexts is completely arbitrary (see e.g. Zimmermann 1997). I don't think this is true. Neither do we need a strategy to extend the values of characters from those contexts in which nothing is uttered to other contexts, as it is assumed, e.g., in Haas-Spohn (1995). The source of all these alleged difficulties with "non-utterance" contexts is the mistaken identification of contexts with something else, e.g. situations (Zimmermann) or possible individuals (Haas-Spohn). Contexts *consist* in the specification of contextual parameters; contexts are not entities on their own right that may be taken to specify contextual parameters. E.g. whether, in context c , "I" refers to Fritz, only depends on the value of the parameter c_A , not on the question what counterfactuals about c_A hold in c_W – This answer simply seems to replace one open question by the other; the question what contexts are is replaced by the question what contextual parameters are. The answer for the latter question is, in a nutshell, that 'contextual parameter' is a theoretical notion implicitly interpreted by semantic theory. There's much more to be said about this, but for reasons of space I have to refer the reader to a later occasion. – Anyway, (non-arbitrarily treated) non-utterance contexts are necessary not only for the purposes of this paper, but e.g. also for a proper account of linguistic meaning (cf. Kupffer 2001).

|(1)|(c,w) = 1 if, and only if, $c_w = w$ ³¹

|(2)|(c,w) = 1 if, and only if, c_A exists in w

|(3)|(c,w) = 1 if, and only if, in to w, c_A is located at c_p at time c_T

These definitions are equivalent to what Kaplan's recursive semantics yields for (1)-(3). Following Kaplan's remarks in "Demonstratives" we will also assume that names are not context-dependent, e.g., for arbitrary contexts c and worlds w,

|(4)|(c,w) = 1 if, and only if, Hesperus = Phosphorus.

(This implies that |(4)|(c,w) = 1 for all c and w.)

The following classification of sentences will prove useful later on. Let $|S|(c)$ (the *content* of $\langle S \rangle$ in c) be the set of worlds w such that $|S|(c,w)=1$. We will say that a sentence $\langle S \rangle$ is *indexical* if, and only if there are contexts c and c', such that $|S|(c) \neq |S|(c')$. E.g. (1)-(3) are indexical, while (4) is not. A sentence is called *perspectival*, if there are there are contexts c and c' with $c_w = c'_w$, such that $|S|(c) \neq |S|(c')$. E.g., (2) and (3) are perspectival, while (1) and (4) are not. Obviously, if a sentence is perspectival, it is also indexical. A sentence is *actuality-dependent* if, and only if there are contexts c and c' with $c'_A = c_A$, $c'_T = c_T$, and $c'_p = c_p$, but nevertheless $|S|(c) \neq |S|(c')$. Again, actuality-dependence implies indexicality.

Finally we come to Kaplan's notion of apriority. Let us say a sentence is Kaplan-*a priori* if, and only if it is true in every context. (Sentence $\langle S \rangle$ is *true in a context* c exactly if $|S|(c,c_w)=1$.)

³¹ We make the simplifying assumption that for every two different worlds there is some fact of the matter that distinguishes them.

Are (2)-(3) true in every context? They would be, if the following constraints on contexts c proposed by Kaplan were correct.

- (i) in c_W , c_A exists at c_T
- (ii) in c_W , c_A is located at c_p at c_T

These constraints are mistaken, however; and true negated utterances of (2) and (3) are easily conceivable. E.g. suppose you always answer the phone when you're present. So, without much danger of issuing lies, you may leave the following message on your answer phone. "Presently, I am not here. Please leave a message after the beep!" Every time this message is played back to someone who calls, there is an utterance of the message, and indeed a true utterance of the first sentence of the message. So there is a context in which the first sentence of the message is true. But the first sentence is a negated variant of sentence (3), so (3) cannot be true in every context. – For sentence (2) imagine a will that is read to the family by the deceased himself on a video taped before his death. The video begins with the following words. "Like in the old days, the family has gathered in front of the TV. The difference is you need not restrain your remarks about me this time. I don't exist any more."³²

9. Belief

³² The first example is from Kaplan's (1989) paper itself p.491, fn. 12; the second is based on an example I learnt from Hans Kamp (p.c.) From Kaplan's remarks in the footnote it is quite unclear how he wants to treat such examples. He seems to stop short from adopting an ambiguity analysis mentioned there according to which there are two "now"s, one referring to the time of *utterance*, another to the time of *audition*. In effect, this would imply adding a time-of-audition parameter to contexts. The second example could be dealt with by treating the present tense in quite the same way. While this would work it would mean to save the analysis by introducing an *ad hoc* ambiguity. – Anyway, I think the motivation for the constraints is epistemological rather than semantic; they're no longer needed if one can achieve the epistemological effects of these constraints without having to adopt them. Much of this part is devoted to showing that one can.

In this section, I will briefly introduce the basics of the Hintikka semantics of belief in a version close to Lewis (1979). The most important notion for our treatment of belief is the notion of a *doxastic alternative*. d is a doxastic alternative, if, and only if it is a quadruple of a subject a , a time t , a place p , and a world w and the following two constraints apply (as above, we will refer to the various components of an alternative by d_A , d_T , d_p , and d_w , respectively).

- (i) in d_w , d_A exists at d_T
- (ii) in d_w , d_A is located at d_p at d_T .

Every arbitrary person can be assigned a subset of the set of doxastic alternatives, her belief system. Intuitively, a doxastic alternative of a person is a location³³ in time, space and logical space that the person cannot rule out to be at (and an occupant of that location the person cannot rule out to be), given her beliefs. Given this intuitive rationale, this time it seems justified to adopt the above kind of constraints.³⁴

³³ Alternatively, alternatives may be identified with ways individuals could be, possible individuals (see Lewis 1979) or situations individuals could be in.

³⁴ That, formally, doxastic alternatives look exactly like contexts, has first been noticed by Arnim von Stechow (see e.g. von Stechow 1984), and often since. Often this is also taken to imply that the notion of „truth in a doxastic alternative“ makes sense and that the semantics of belief has to be put in these terms. I think this is at least a *non sequitur*. That models for two different theories can be constructed out of the same domain of objects does not automatically mean that the two theories connect. Real numbers can model real numbers as well as times. But this still does not license saying that 2 is *later* than 1. In the present case, it is at least not clear whether there is a joint understanding of the above n-tuples in semantics on the one hand, and epistemology on the other. If contexts are just lists of contextual parameters, the notion of ‘truth in a *context c*’ becomes ‘truth, given we have fixed certain open variables in way *c*’. Now, as I have argued in fn.30, we are forced to regard contexts as lists of contextual parameters, because of the existence of examples like the ones discussed on p.27.(And there are other empirical reasons for doing so.) So the function of contexts *is* to fix variables and this feature is essential for the notion of ‘truth in’ as we understand it as applied to contexts. Now above we have said doxastic alternatives are occupied locations in space, time and logical space. But locations do not fix variables! This is why we cannot, in the same sense as in “truth in a *context*”, talk of truth in an *alternative*. – This argument does not depend on our special understanding of alternatives, (e.g. it is also odd to talk of truth in a possible individual). But it does depend on our understanding of contexts. – On the other hand the situation is not as bad as in our mathematico-temporal example since both contexts and alternatives determine the same stuff (individuals, times, places, and worlds), and determine the same stuff *understood the same way*. Therefore, even if I am right that contexts and alternatives have to be treated as different, it is completely legitimate to define notions like “the context *determined* by alternative d ” as a

A belief system explains (together with a system of preferences) a person's dispositions to act and form new beliefs. A belief system may largely consist in what we have above called implicit beliefs. It is also well known that beliefs modelled in terms of belief systems are ideal rational ("logical omniscient") beliefs. Of course, belief systems play an important role in belief ascriptions, although there appears to be no single uniform way to get from belief systems to belief ascriptions (cf. Lewis 1986, pp.32-34). That is why we will consider only special cases below.

10. Semantic beliefs

The first special case is semantic belief.³⁵ Suppose you believe that sentence $\langle S \rangle$ has a certain semantic property SP. We will understand this in terms of your having a certain (implicit) belief about $\langle S \rangle$, precisely a belief *de re* about $\langle S \rangle$. According to the classical analysis of *de re* beliefs (Kaplan 1969, Lewis 1979) your beliefs about $\langle S \rangle$ consist in what properties the *representatives* of $\langle S \rangle$ have in your various alternatives. Representation, in turn, is spelled out in terms of relations of acquaintance. To come back to our example of a semantic belief *de re*, according to the classical analysis, A believes *de re* that $\langle S \rangle$ has SP exactly if there is a relation of acquaintance R A bears to $\langle S \rangle$ (and to $\langle S \rangle$ alone) and for all of A's doxastic alternatives d, (i) there is a unique sentence d_A is R-related to at d_T in d_W and (ii) the unique sentence d_A is R-related to at d_T in d_W has the property SP. E.g. if R is 'x knows y and y is a sentence of the same form as $\langle S \rangle$ ' we can say that A believes *de re* that $\langle S \rangle$ has SP if $\langle S \rangle$ is the only sentence of that form

map of alternatives into contexts (due to the contingencies of our modelling this map simply is identity in our case, but this is not necessarily so), we could even *define* "truth in alternative d" to mean exactly that. It is another question whether the latter notion plays any important role in epistemology. Later on I will say it does, see my Rule of Belief* on p.34. But it is the (intuitive validity of the) rule that justifies the use of the notion in question and not the notion that justifies the rule.

³⁵ The account of semantic belief in this section tries to spell out Stalnaker's remarks about the relation between Kaplanian semantics and epistemology in Stalnaker (1987).

known to A and in all of A's doxastic alternatives the unique sentence of the same form as $\langle S \rangle$ known to the subject of that alternative has SP.

To simplify further let us assume in the following that for each sentence there is a fixed such acquaintance relation R. Let $\langle S \rangle^d$ be the unique R-representative of $\langle S \rangle$ in alternative d (if there is none, $\langle S \rangle^d$ is undefined). Then we can put the above scheme for semantic beliefs in the following way.

A believes that $\langle S \rangle$ has SP if, and only if for any of A's doxastic alternatives d,

(i) $\langle S \rangle^d$ is defined, and (ii) $\langle S \rangle^d$ has property SP.

In the remainder of this section I will discuss some applications of this general scheme to specific examples of semantic properties. E.g., A believes that $\langle S \rangle$ has a certain meaning if, and only if for all of A's doxastic alternatives d, $\langle S \rangle^d$ is defined and has the meaning in question. If we want to express this in terms of Kaplanian semantics we may introduce the following piece of notation. If $\langle S \rangle$ is a sentence, $|S|^d$ is defined to denote the *character of* $\langle S \rangle^d$ in world d_w . Plausibly, $|S|^d$ is defined exactly if $\langle S \rangle^d$ is defined. Then we can say that

A believes that $\langle S \rangle$ means χ if, and only if for any of A's doxastic alternatives d, $\langle S \rangle^d$ is defined, and $|S|^d = \chi$.

To take another semantic notion that has been used in the first part; A believes that $\langle S \rangle$ is true if, and only if for all of A's doxastic alternatives d, $\langle S \rangle^d$ is defined, and $\langle S \rangle^d$ is true. Now the truth of sentences is a notion that does not seem to fit easily into the background system of

Kaplanian semantics. In this system sentences have truth-values only relative to contexts. But it is entirely natural to predicate truth of the members of a *certain* class of sentences mentioned above, *viz.* the class of non-perspectival sentences. We call them true (simpliciter) all the time; therefore, even in the present framework, it should be possible to explicate truth as applied to them. And it is. For our purposes it suffices if we enrich our language with the following restricted truth-predicate. We will say that “<S> is true” is defined if, and only if <S> is a non-perspectival sentence of our original language. If it is, then for arbitrary contexts *c* and worlds *w*, $|<S> \text{ is true}|(c,w)=1$ exactly if $|S|(d, w)=1$ for all contexts *d* with $d_w=w$. If we apply our scheme for semantic belief we get

A believes that <S> is true if, and only if for any of A’s doxastic alternatives *d*,

- (i) $<S>^d$ is defined and non-perspectival, and
- (ii) $|S|^d(c,d_w)=1$ for all contexts *c* with $c_w=d_w$.

Finally, what about “sentence <S> would apply to my situation”? To remind you, according to our definition, <S> would apply to A’s situation if, and only if it holds that if A had uttered <S> in her situation, the proposition expressed would have been actually true. Of course this is also a semantic property, so we ought to be able to express it in the same form. Unfortunately, to do so would be quite complicated, since the property is defined in terms of the actual truth of the content of certain counterfactual utterances. For reasons of simplicity I will only consider a special case, namely those sentences that are not actuality-dependent. For such a sentence, the content expressed does not depend on the world of a context. Therefore, we can avoid reference to a counterfactual context and the content of a counterfactual utterance can be computed in a

suitable actual context that is just like the counterfactual context but for the world of the context. E.g., if we want to know the content that had been expressed by $\langle S \rangle$ if A had uttered $\langle S \rangle$ in a counterfactual context c , we can simply take the content $\langle S \rangle$ expresses in a context that is just like c but for the choice of the actual world as its designated world. Likewise, if we want to know whether the subject of a doxastic alternative d would have said something true if she had uttered $\langle S \rangle$ in her situation, we can simply take the content expressed in that context we get when we regard the parameters of d as contextual parameters. Therefore,

if A believes $\langle S \rangle$ to be actuality-independent, then

A believes that $\langle S \rangle$ would apply to her situation if, and only if for any of A's doxastic alternatives d , (i) $\langle S \rangle^d$ is defined, and (ii) $|S|^d(d, d_w) = 1$.

11. ... and competence

Of course the believed semantic properties of $\langle S \rangle$ may differ considerably from those semantic properties $\langle S \rangle$ actually has. We have seen in sec.2 that there are two ways in which they may differ. In some cases the difference counts against being a competent user of $\langle S \rangle$, in other cases not. We get a dramatic example of the amount of variation that is sometimes allowed if we assume the above kind of semantics for sentence (4) and take the standpoint of the inventor of the name, prior to making empirical investigations about the possible identity of Hesperus and Phosphorus. Suppose you mistakenly believe that "Hesperus" and "Phosphorus" refer to different planets. At least then you are entitled to think that (4) is false, indeed that

$|_{(4)}(c,w) = 0$ for all c and w .

We would still say that you are a competent user of (4) then, even though the character (4) you believe (4) to have differs completely from the actual character of (4).

On the other hand sentences like (1)-(3) seem to impose very strict demands on what a competent user may believe about them. Let us say a sentence $\langle S \rangle$ is *demanding* if, and only if it holds that if x is a competent user of $\langle S \rangle$, then for every doxastic alternative d of x , $\langle S \rangle^d$ is defined and $|S|^d = |S|$; in other words, if no possible individual counts as a competent user of $\langle S \rangle$ unless she believes the sentence to have exactly the meaning it actually has. We will assume that (1)-(3) are indeed demanding.

12. From semantic belief to belief

In the last section I have dealt with semantic beliefs about sentences. But, as we have seen in the discussion of the first part, beliefs about $\langle S \rangle$ often transform into beliefs that S . What I have said there will now be captured in a formal way. Let me first provide a certain general rule for this transition. The rule will be justified in terms of its applications.³⁶ The rule will be in terms of belief^* , which relates to belief in a way completely analogous to how knowledge^* relates to knowledge (see sec.6 above). A belief^* ascription is just like a belief-ascription only that the ascriber takes the perspective of the subject of the attitude instead of her own. Above I have said that it should be possible to define knowledge in terms of knowledge^* , although I did not give

³⁶ The rule is inspired by Robert Stalnaker's use of diagonalisation, e.g. in Stalnaker (1981, 1987); there are a few differences, though. First, I only intend to apply the rule to ascriptions in virtue of semantic knowledge, while Stalnaker does not restrict the reach of diagonalisation in the same way. Indeed, second, Stalnaker's semantics for belief does not give the notion of semantic competence any prominent place. Third, Stalnaker's crucial notion of a token (thought) in a world is replaced by that of a doxastic alternative. This has often been proposed before, cf. in von Stechow (1984), Haas-Spohn (1995), and Schlenker (2003); however, these proposals neglect Stalnaker's important insight that the variation of semantic beliefs is an important factor in a semantics of belief ascriptions. Fourth, Stalnaker has a slightly different (non-perspectival) notion of a doxastic alternative.

any such definition; but I pointed out that in some cases knowledge that S is directly implied by knowledge* that S. Completely analogous things go for belief*: it should be possible to define belief in terms of belief*, although I will not do it here in any detail³⁷; and likewise, in some cases belief that S is directly implied by belief* that S, as in the case of first-person ascriptions and ascriptions in terms of non-perspectival sentences.

So here is, finally, the rule that provides the desired connection between semantic belief and ordinary belief.

Rule of Belief*

A believes* that S if A knows the meaning of $\langle S \rangle$ and for any of A's doxastic alternatives d: $\langle S \rangle^d$ is defined and $|S|^d(d, d_w) = 1$.

Let us adopt a simplifying convention. Let us say that $\langle S \rangle$ is true in a doxastic alternative³⁸ d exactly if $|S|(d, d_w) = 1$. Then the rule of belief* can be put in the following simple way. A believes* that S if A is competent and $\langle S \rangle$ is represented to be true in every doxastic alternative of A.

How can this rule be justified? Observe that, given the definitions in sec.10, the rule validates the rule of Disquotation.

³⁷ Roughly, B can say that A believes that S if A believes* a sentence that is equivalent to $\langle S \rangle$, given the change of perspective between A and B. This inspires the following tentative proposal. Let, for any context c, c^w be that context that differs from c only in that $c^w_w = w$. Provided $\langle S \rangle$ contains no *de se* pronouns, we can say that

$|A \text{ believes that } S|(c, w) = 1$ if there is a sentence S^* , such that

$|A \text{ believes* that } S^*|(c, w) = 1$ (i.e. A believes* that S^* in w)

and for every world v, $|S|(c^v) = |S^*|(c^v)$, where c^* is A's context ($\langle A, c_T, A's \text{ location}, w \rangle$).

Of course, much more would have to be said about this proposal. For a recent full-fledged theory of indirect discourse on the background of a different, although Kaplanian, semantics of belief, as well as for a good introduction into the difficulties faced by any such theory, see Schlenker (2003).

³⁸ But keep in mind this term is purely technical, see fn. 34.

Let $\langle S \rangle$ be any non-perspectival sentence. Suppose A knows the meaning of $\langle S \rangle$ and believes that $\langle S \rangle$ is true. Then, by the semantic rule for “believes that $\langle S \rangle$ is true” (p.31), for any of A’s doxastic alternatives d , (i) $\langle S \rangle^d$ is defined and non-perspectival, and (ii) $|S|^d(c, d_w)=1$ for all contexts c with $c_w=d_w$. But if $\langle S \rangle^d$ is non-perspectival, then $|S|^d(c, d_w)=|S|^d(c', d_w)$ for any c' with $c_w=c'_w$. Therefore it holds for any of A’s doxastic alternatives d that $\langle S \rangle^d$ is defined and $|S|^d(d, d_w)=1$. But then, by the Rule of Belief*, A believes* that S. For non-perspectivals belief* directly implies belief, hence A believes that S and Disquotation is valid.

It also validates Egocentric Disquotation, but so far only restricted to those $\langle S \rangle$ I believe to be actuality-independent. (For reasons of simplicity, we did not spell out the key notion “would apply to my situation” in its full generality, here.)

Suppose I believe $\langle S \rangle$ to be actuality-independent, I know the meaning of $\langle S \rangle$, and I believe that $\langle S \rangle$ would apply to my situation. Then, by the relevant semantic rule (p.32), for all of my doxastic alternatives d , (i) $\langle S \rangle^d$ is defined, and (ii) $|S|^d(d, d_w)=1$. But then, by the Rule of Belief*, I believe* that S. First-person belief* directly implies belief, hence I believe that S and Egocentric Disquotation is valid.

I take these facts to provide sufficient justification for the Rule of Belief*.

13. Apriority

As a direct consequence of the definition of “demanding” and the Rule of Belief* we get the following Lemma.

(Lemma 2) If $\langle S \rangle$ is demanding, then for arbitrary x ,

x believes* that S if x knows the meaning of $\langle S \rangle$ and

for all of x ’s doxastic alternatives d : $|S|(d, d_w)=1$.

E.g. (1)-(3) are demanding and true in every doxastic alternative. Therefore they are believed* by any arbitrary competent x.

Now let's turn to those sentences that are Kaplan-*a priori*. It is a special case of Lemma 2 that for any x, if <S> is demanding and Kaplan-*a priori* and x knows the meaning of <S>, then x believes* that S. If we apply the definition of apriority from sec.6 (and treat knowledge as true belief), we can finally derive the following result.

(Result) If <S> is demanding and Kaplan-*a priori*, then <S> is *a priori*.

Now the range of intended applications of Kaplan-apriority consists of demanding sentences. That is why one direction of Kaplan's characterisation is correct, as far as it goes: truth in every context implies apriority for Kaplan's intended range of applications. And that's what I promised to show in this part.

14. Concluding remarks: Kaplan on competence

The present account was anticipated by Kaplan himself. In „Demonstratives“ he gives the following informal characterisation of character. “Because character is what is set by linguistic conventions, it is natural to think of it as *meaning* in the sense of what is known by the competent language user”, Kaplan (1989), p.505. Now this remark can be understood in two ways. First it can be taken to mean that if <S> means χ , then every competent language user knows *that* <S> means χ . Second it can merely be taken to mean that linguistic competence may be understood in terms of characters. If you opt for the first sense, then characters do not always play the role Kaplan terms natural here, at least if Kaplan is right to think that names are not indexical. If the

character of a name is equivalent to the referent and to know the character of a name means to know that the name has the character it actually has, how could a speaker know the characters of “Hesperus” and “Phosphorus” without knowing that they have the same referent? So perhaps it is a preference for the first sense that makes him suggest that “proper names [...] have no meaning in the sense in which indexicals have meaning” p.506, fn.31.

However, other passages in Kaplan suggest that Kaplan is aware that “to know a meaning” might be interpreted differently. Perhaps he is even aware that this might help for his epistemological purposes. In the context of a discussion of the informativity of identity statements he says “[t]he problem is that proper names do not seem to fit into the whole semantical and epistemological scheme as I have developed it. It claimed that a competent speaker knows the character of words. This suggests (*even if it does not imply*) that if two proper names have the same character, the competent speaker knows that. But he doesn’t” (p.562f, emphasis added by me). If knowing the character of “Hesperus” and “Phosphorus” does not imply knowing that these words have the same character, then knowing the character of a name does not imply knowing that the name has the character it actually has. Of course, in the above quote, Kaplan is far from embracing such a position.

But such a weaker sense of knowing a meaning seems to be clearly required. Throughout this paper I have used “to know the meaning of S” and “to be a competent user of S” interchangeably. I think this is completely justified. In ordinary usage, we never mean more with the first term than with the latter. Now, as I have argued above, competence with regard to the names “Hesperus” and “Phosphorus” does not require knowing that “Hesperus=Phosphorus” is true (at least at the early stage of their introduction). Therefore, the first, contentious sense of “knowing the meaning” can’t be correct. The switch to the second sense was perhaps the most

important ingredient in the present paper that was needed to maintain (i) that apriority could be understood as knowability in virtue of knowledge of meaning, and (ii) that such an account might be given in terms of, among other things, Kaplanian characters.

Kaplan's proposal for a link between semantics and epistemology was to regard character as *cognitive significance*; but this proposal failed for names and natural kind terms. The link between the two fields I have offered instead, following Stalnaker, is *semantic belief*, it is that agents have beliefs about which sentences to pair with which characters. The resulting theory satisfies a *desideratum* Kaplan mentions at the end of his paper (p.563); it provides a "general semantical and epistemological scheme comprehending both indexicals and proper names."

References

- Almog, Joseph (1981), "Dthis and Dthat: Indexicality goes beyond that". *Philosophical Studies* 39, 347-381
- Burge, Tyler (1979), "Individualism and the Mental". *Midwest Studies in Philosophy* 4, 73-121
- Boghossian, Paul and Christopher Peacocke (2000), *New Essays on the A priori*, Oxford:Clarendon
- Carnap, Rudolf (1962), *Logical Foundations of Probability*. Chicago: University of Chicago Press (2nd ed.)
- Chalmers, David (1996), *The Consious Mind*. Oxford: OUP
- Chalmers, David (2002), "Does conceivability entail possibility?" In (T. Gendler and J. Hawthorne, eds.),
Imagination, Conceivability, and Possibility. Oxford: OUP
- Chalmers, David (ms.), "The Foundations of Two-Dimensional Semantics". consc.net/papers/foundations.html
- Cresswell, Maxwell J. (1990), *Entities and Indices*, Dordrecht:Kluwer
- Cresswell, Maxwell J.& von Stechow, Arnim (1982), "De re Belief Generalized", *Linguistics and Philosophy* 5, 503-535
- Davies, Martin und Lloyd Humberstone (1980), "Two notions of necessity". *Philosophical Studies* 38, 1-30
- García-Carpintero, Manuel (1998), "Indexicals as Tokenreflexives". *Mind* 107, 527-563
- Goldman, Alvin I. (1986), *Epistemology and Cognition*, Cambridge (MA): Harvard University Press
- Grice, H. Paul; Strawson, Peter F. (1965), "In Defense of a Dogma". *Philosophical Review* 56, 141-158
- Haas-Spohn, Ulrike (1995), *Versteckte Indexikalität und subjektive Bedeutung*. Berlin: Akademie Verlag
- Haas-Spohn, Ulrike (1997), "The context dependence of natural kind terms". In: Kühne, Newen, Andschus: Direct Reference, Indexicality, and Propositional Attitudes. Stanford: CSLI, 333-49
- Hintikka, Jaako (1962), *Knowledge and Belief*. Ithaca: Cornell University. Press.
- Jackson, Frank (1998), *From Metaphysics to Ethics. A Defence of Conceptual Analysis*. Oxford: Clarendon.
- Jackson, Frank (2000), "Representation, scepticism, and the A Priori". In: Boghossian & Peacocke (2000), 320-331
- Kamp, J.A.W. (1971), "Formal properties of 'now'", *Theoria* 37, 227-73

- Kamp, Hans und Uwe Reyle (1993), *From Discourse to Logic*. Dordrecht: Kluwer.
- Kaplan, David (1989), "Demonstratives". In: (Almog et.al. eds.) *Themes from Kaplan*. Oxford:OUP, 481-563
- Kripke, Saul (1972), "Naming and Necessity". In (D. Davidson and G. Harman eds.) *Semantics of Natural Language*, Dordrecht: Reidel, 253-355
- Kripke, Saul (1979), "A Puzzle about Belief". In: Margalit, A. (ed.): *Meaning and Use*. Dordrecht 1979, 239-83
- Kupffer, Manfred (2001), "Learning French from a Dictionary. An Essay in Utterance-Dependent Meaning." In: Féry, Caroline and Wolfgang Sternefeld, *Audiatu Vox Sapientiae*. Festschrift für Arnim von Stechow. Berlin: Akademie Verlag, 320-47
- Lehrer, Keith (1989), "Reply to my critics". In: Bender, John W. (ed.): *The current state of the coherence theory*, Dordrecht: Kluwer
- Lehrer, Keith (2000), *Theory of Knowledge*. 2nd edition
- Lewis, David (1970), "General Semantics". *Synthese* 22: 18-67
- Lewis, David (1979), "Attitudes *de dicto* and *de se*". *Philosophical Review* 88, 513-43
- Lewis, David (1983), "New Work for a Theory of Universals", *Australasian Journal of Philosophy*, 61, 343-77
- Lewis, David (1986), *On the Plurality of Worlds*. Oxford: Blackwell
- Perry, John (1977): "Frege on demonstratives". *The Philosophical Review* 86, 474-97
- Perry, John (1997), "Indexicals and demonstratives". In: Hale and Wright (eds.), *A Companion to the Philosophy of Language*. Oxford: Blackwell, 586-612.
- Sartwell, Crispin (1992), "Why Knowledge is Merely True Belief", *Journal of Philosophy* 89, 167-80
- Schlenker, Philippe (2003): "A plea for monsters". *Linguistics and Philosophy* 26, 29-120
- Soames, Scott (2002), *Beyond rigidity : the unfinished semantic agenda of "Naming and necessity"*. New York Oxford: OUP
- Spohn, Wolfgang (1997a), "Begründungen *a priori* - oder: ein frischer Blick auf Dispositionsprädikate". In: Lenzen(Hrsg.): *Das weite Spektrum der analytischen Philosophie*. Berlin 1997

- Spohn, Wolfgang (1997b): "The Character of Color Terms. A Materialist View". In: Künne, Newen, Andschus(Hrsg.): *Direct Reference, Indexicality, and Propositional Attitudes*. Stanford 1997
- Stalnaker, Robert (1978), "Assertion". In: Cole, P (Hrsg.), *Pragmatics*. [Syntax and Semantics 9]. New York: Academic Press, 315-332, reprinted in Stalnaker (1999)
- Stalnaker, Robert (1981), "Indexical Belief". *Synthese* 49, 129-151, reprinted in Stalnaker (1999)
- Stalnaker, Robert C. (1987), "Semantics for Belief". *Philosophical Topics* 15, 177-190, reprinted in Stalnaker (1999)
- Stalnaker, Robert C. (1991), "The Problem of Logical Omniscience, I". *Synthese* 89 (1991), reprinted in Stalnaker (1999)
- Stalnaker, Robert C. (1999), *Context and Content*. Essays on Intentionality in Speech and Thought. Oxford: OUP
- Stalnaker, Robert C. (2001), "On Considering a Possible World as Actual". *The Aristotelian Society, Supplement* LXXV, 141-156
- Stechow, Arnim von (1979), "Occurrence-Interpretation and Context-Theory". In: Gambarara et al. (eds.), *Linguaggi e formalizzazioni*. Rome: Bulzoni, 307-347
- Stechow, Arnim von 1984, "Structured Propositions and Essential Indexicals". In: Landman and Veltman (eds.), *Varieties of Formal Semantics*, Dordrecht: Foris, 385-403
- Unger, Peter (1968), "An analysis of factual knowledge", *Journal of Philosophy* 65 , 157-70
- Vlach, Frank (1973), "Now" and "Then". *A formal study on the logic of tense anaphora*, PhD thesis, University of California, Los Angeles
- White, Stephen (1982), "Partial character and the language of thought." *Pacific Philosophical Quarterly* 63, 347-65
- Zimmermann, Thomas E. (1991), "Kontextabhängigkeit". In: Stechow/ Wunderlich. *Semantik. Ein internationales Handbuch der zeitgenössischen Forschung*. Berlin: Walter de Gruyter, 156-228
- Zimmermann, Thomas E. (1997), "The Addressing Puzzle". In: Wolfgang Künne, Albert Newen, Martin Anduschus (eds.). *Direct Reference, Indexicality, and Propositional Attitudes*. Stanford: CSLI, 133–153