

Intention-sensitive semantics

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Abstract A number of authors have argued that the fact that certain indexicals depend for their reference-determination on the speaker's referential intentions demonstrates the inadequacy of associating such expressions with functions from contexts to referents (characters). By distinguishing between different uses to which the notion of context is put in these argument, I show that this line of argument fails. In the course of doing so, I develop a way of incorporating the role played by intentions into a character-based semantics for indexicals and I argue that the framework I prefer is superior to an alternative which has been proposed by others.

Keywords Indexicals · Speaker intentions · Context-sensitivity · Semantics vs pragmatics

1 Introduction

Many indexical expressions have their reference determined, on a particular occasion of use, at least in part as a result of the speaker's *referential intentions*. Examples include *he*, *we*, *you*, *here*, *now*, *that*, *this*, etc. What is characteristic of these expressions is that figuring out what they refer to on an occasion necessarily requires figuring out what the speaker's referential intentions were making the utterance. I call this phenomenon *intention-sensitivity* and expressions which exhibit it *intention-sensitive*.

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To illustrate, consider the following few simple cases:

- (1) *Looking at Tom and Jerry*: He is a nice man.
- (2) *Reporter on the news, Monday, July 6 2008, 1 pm*: The President is now considering further reinforcements in Iraq.
- (3) *Sitting in a reading room on the 6th floor of a library*: It's warm here.
- (4) *In a helicopter flying over a street of houses*: That's my house.

Intention-sensitivity presents a problem for a familiar picture according to which meanings of indexical expressions are functions from contexts to referents—what Kaplan (1977) called *characters*.¹ Contexts are thought of as tuples of a relatively restricted list of parameters, namely the speaker, the time of utterance, the place of utterance and a possible world.

But if this is all there is to a context, then nothing about a context will settle the reference of the intention-sensitive expressions in examples like those above.² Confronted with the fact that many indexicals are intention-sensitive, the proponent of the character-based picture is therefore presented with a dilemma: Either she must take referential intentions as themselves parameters of contexts providing arguments for characters, or she must concede that these expressions do not have their referents determined as a function of context. Clearly, the second horn of this dilemma is anathema to this type of semanticist. So the question really boils down to the viability of the first horn. That is, is there a coherent and theoretically attractive way of construing speaker intentions as parameters of the kind of contexts that provide arguments for characters?

This paper answers this question in the affirmative. It thereby opposes several arguments found in the literature according to which intentions cannot be parameters of context. Further, it is often claimed that, for this reason, the phenomenon of intention-sensitivity diminishes the hope of a semantic approach to context-sensitivity, or at least indexicality.³ The question of whether intention-sensitivity can be integrated into standard character-based semantics thus bears directly on the central issues in the debate over the semantics–pragmatics distinction.

One way of looking at this debate is as one concerning to what extent, if any, contents of utterances (what is said) are underdetermined by the linguistic meanings of the sentences used to express them. Those who believe that intention-sensitivity cannot be handled semantically usually employ this claim in a wider defense of such theses of underdetermination. In other words, given that my argument to the effect that intentions can be thought of as parameters of the kind of context which characters operate on is successful, it immediately has wider implications for this more general

¹ Pioneers of this tradition include Montague (1968), Lewis (1970, 1980), Kaplan (1977).

² To be sure, these Kaplanian aspects of context help determine the reference even of intention-sensitive terms. In particular, the personal pronouns encode person and number features, which constrain their reference. For example, *we* is 1st person plural requiring that its referent be a plurality that includes the speaker. I confine myself to discussing the role played by intentions, and will not be concerned with these other issues.

³ This has been argued by, among others, Bach (1994, 2005, 2007), Carston (2002), Neale (2005), Recanati (2004), Schiffer (2005). Among the opponents of these arguments are Cappelen and Lepore (2004), Borg (2004), King and Stanley (2005). I consider some of these theorists below.

debate concerning the semantics–pragmatics distinction. The prospects for semantic approaches to context-sensitivity in general will be brightened by showing that intention-sensitivity can be subsumed under the traditional, character-based, approach to indexicality.

The arguments to the effect that intentions cannot be parameters of context that I will consider are championed by Bach (1994, 2005, 2007) and Recanati (2004) and rely on a distinction between two types of context, or two roles played by context, named *wide* and *narrow* context. The conclusion is that intentions cannot be part of either type of context. I accept that referential intentions are not part of wide context, but I will argue that they are part of narrow context.

Before proceeding, I want to flag a disclaimer already at this point. Some maintain that the reference of expressions such as *he* or *that* is settled not by intentions but by demonstrations.⁴ Although this paper assumes the intention-based view, it must be stressed that none of my arguments *turn on* taking intentions to be the relevant reference-fixers rather than demonstrations. Everything I will have to say can be reformulated in terms of demonstrations playing the reference-fixing role if one so desires.

I begin in Sect. 2 by reviewing the arguments presented by Bach and Recanati involving the distinction between wide and narrow context, and I show that, although they are right to claim that intentions cannot be part of wide context, they fail to give good reasons against seeing them as part of narrow context. Section 3 presents a concrete proposal for how to develop a character-based semantics which treats intentions as parameters of (narrow) contexts. I call this an *intention-sensitive semantics* (ISS). Section 4 contrasts this framework with another type of ISS that has been suggested by Gauker (2007) and Predelli (2005), and shows that the one I favor is superior. In Sect. 5, I defend my view against a potential problem. Finally, Sect. 6 closes by relating the preceding to the aforementioned debate over the relation between semantics and pragmatics.

2 The case against intentions as parameters

2.1 Wide and narrow context

The distinction between wide and narrow context is a distinction between those aspects of context that determine reference (narrow context) and those aspects that the audience uses in reasoning about the speaker's intentions (wide context). Here is how Bach describes the distinction:⁵

There are two quite different sorts of context, and each plays quite a different role. Wide context concerns any contextual information relevant to determining the speaker's intention and to the successful and felicitous performance of a

⁴ See for instance Kaplan (1977), McGinn (1981), Reimer (1991).

⁵ This quote is taken from a handout of a 1996 talk by Bach, cited by Recanati (2004, p. 56). The same distinction is appealed to by many other writers including Carston (2002), Perry (2001), Recanati (2004).

speech act [...]. Narrow context concerns information specifically relevant to determining the semantic values of [indexicals] [...].

Note that ‘determining’ in ‘determining the speaker’s intention’ is to be understood as *ascertaining*. As this suggests, the distinction is one between an *epistemic*, or evidential, and a *metaphysical*, or constitutive, role of context.

When it comes to intention-sensitive expressions, the metaphysical work is done by the speaker’s intention. The speaker’s intention determines reference. On the other hand, the epistemic work is done by a host of factors, some linguistic and some not. Neale (2007) writes:

The important metaphysical question is: what *determines* what a speaker said on a given occasion? And the Gricean answer I subscribe to is this: certain specific *intentions* the speaker had in producing his utterance. [...] The important epistemological question is: What knowledge or information does a hearer use in *identifying* what the speaker said? And the Gricean answer I subscribe to is this: his tacit grasp of syntax, of the meanings of the words used, and of the way rational co-operative beings function, his beliefs about the speaker, about the context, and about the topic of conversation, and just about anything else he can get his hands on. (p. 359, n. 7)

So, we have a distinction between a metaphysical and an epistemic role of context. The former consists of those features of the utterance situation which determine reference; the latter comprises the full range of information which the audience will use in order to ascertain the speaker’s intentions.

2.2 Why intentions are not part of wide context

The argument that intentions are not part of wide context is simple. In its briefest form it can be put as follows. By definition, wide context consists of the information that the audience will use in order to ascertain what the speaker’s intentions were on a particular occasion. But if the fact that a speaker has so-and-so intentions automatically becomes part of the contextual information available to the audience, then the audience should be expected to always get it right. But they do not! Hence, what the speaker’s referential intentions were in making a particular utterance is not a piece of information which is part of the collection of information that the audience uses in order to ascertain those intentions.

This, in effect, is Bach’s (1994) main argument against ISS:

The view that meaning does determine reference as a function of context [...] misrepresents the role of context in determining reference. What context does, together with the meaning of the expression, is to provide the hearer with the information, in the form of mutual contextual beliefs [...] needed for determining what the speaker intends him, in that context, to identify as the referent. Since the speaker’s referential intention is part of his communicative intention, what he can reasonably intend to be referring to in the context is what he can reasonably be taken, in that context, as referring to. Thus, the role of context is

not to provide the parameters on which an alleged meaning function operates but to provide information on the basis of which the speaker can reasonably form a referential intention and on which the hearer can reasonably identify that intention. (p. 179)

I call this argument *The Argument from Inaccessibility* because it starts from the observation that the speaker's intentions, just by their very nature, are not directly accessible to her audience. Instead, the audience are required to use a host of clues and pieces of information—that is, wide context—in order to work out what those intentions are.

I accept this argument. But it will be important to make explicit some of the background assumptions that it relies on. In particular, as Bach suggests, by playing the role of the evidence that the audience uses, the wide context also plays another role in that it *constrains* the range of intentions that a speaker can 'reasonably' have in the first place. Seeing in some detail what this involves will be of value later on.

2.3 A general constraint on intention-formation

It is a widespread observation that, in general, intention-formation is constrained by *beliefs*. For instance, Neale (2005) writes:

the formation of genuine intentions is severely constrained by beliefs. I cannot intend to become a prime number, intend to digest my food through my lungs on alternate Tuesdays, or swim from New York to Sydney because (roughly) I cannot intend *what I believe to be impossible*. (p. 181)

The idea has intuitive backing. Suppose we are standing on the Brooklyn Bridge looking in on the city. If I ask you, 'How are you going to get in there?', it will be odd for you to reply, 'I intend to fly by flapping my arms.' Given that reply, I seem to have only two options available to me: Either you have clearly false beliefs about what you can do by means of flapping your arms, or you are not speaking sincerely. Similarly, if you know that you will not be able to attend a meeting at 1 pm because you have other engagements, you will be speaking insincerely if you nevertheless tell people that you intend to be there at that time.⁶

A principle such as (C1) stating a general constraint on intention-formation therefore seems highly plausible:⁷

(C1) *a* intends to ϕ only if *a* believes that she can succeed in ϕ 'ing.

Transposing this to referential intentions is seamless in that an instance of (C1) is (C2):

(C2) *a* intends to refer to *x* by uttering referential expression *e* in context *c* only if *a* believes that she can succeed in referring to *x* by uttering *e* in *c*.

⁶ To be sure, these two examples intuitively involve two different modalities. I follow Neale (2005, p. 181) in remaining neutral on the exact force of the modality.

⁷ Grice (1973) endorsed the stronger thesis that *a* intends to ϕ only if *a* believes she will ϕ . It is interesting to note that in arguing against this thesis, Davidson (1974) explicitly assumes the weaker (C1): "For if an agent cannot intend what he believes to be impossible, then he asserts neither more nor less by saying, 'I intend to do it if I can' than he would by saying, 'I intend to do it'" (p. 93).

The right hand side of (C2) prompts two questions, namely what is to be understood by successful reference, and what it means to believe that one can succeed in referring by uttering a particular expression.

2.4 Weak and strong intentionalism

To begin with the first question, many theorists who endorse the Argument from Inaccessibility typically also endorse a principle like (C3).

(C3) *a* succeeds in referring to *x* by uttering referential expression *e* in context *c* only if, partly as a result of their recognizing *a*'s intention, *a*'s audience in *c* are in a position to interpret *a* as referring to *x* with *e*.⁸

Now, (C3) is hardly uncontroversial. In fact, the principle is the main point of contention between what I will call *Weak* and *Strong Intentionalism*. The Weak Intentionalist accepts (C3); the Strong Intentionalist rejects it. In other words, the Weak Intentionalist holds that in order for a speaker to refer by using an intention-sensitive expression, it is a necessary condition that her audience grasp her intention and (at least partly) as a result hereof is able to figure out what the speaker wants to refer to. By contrast, the Strong Intentionalist maintains that all that is required is that the speaker has a certain intention.

Like most of the theorists in this area, I accept the view on successful reference encapsulated by (C3), and hence I am a Weak Intentionalist. Accepting (C3) means accepting what I will call an *Uptake Constraint* on referring.⁹ It requires that, in order for a speaker to refer, her audience must be 'in a position to' recognize her intentions. The phrase 'in a position to' is of course deliberately vague. Spelling out the idea behind the Uptake Constraint in detail will no doubt be exceedingly difficult, but I take it to have sufficient intuitive substance to justify leaving it unexplained in detail.

The Uptake Constraint accords with a larger, broadly Gricean, approach to communication. As we saw, Neale (2007) explicitly proclaims himself a Gricean; and he also seems to endorse something like (C3):

There is nothing to be gained by looking for a notion of "reference" that transcends the two notions that actually play a role in a theory of interpretation: (i) what the speaker intends to refer to and (ii) what a reasonably well-informed

⁸ One might wonder, as one anonymous referee did, why this principle is not formulated as a biconditional. After all, given that we are only interested in intention-sensitive expression, is it not safe to endorse the stronger thesis according to which the audience's grasp of the speaker's referential intention is both necessary and sufficient for the speaker to refer? I think it wise to stick with the weaker thesis, which leaves room for cases in which the audience correctly grasps the speaker's intention and yet there is no reference. My chief reason for this is that it might turn out that there are non-denoting, intention-sensitive expressions. One example might be the complex demonstrative *that King of France*, leaving it up to the speaker's intentions to determine *which* King of France. And if the speaker intends to refer to the present King of France, then plausibly she will not be referring, even if the audience perceives her intention. Such cases, however, lie beyond the scope of the present discussion.

⁹ I am borrowing the term 'uptake' from Austin (1962) who used it to describe what he took to be a constraint on a broad range of illocutionary acts.

rational interpreter of the speaker's remark takes the speaker to be referring to. (pp. 359–360, n. 7)

Similarly, Bach (1994) writes:

A referential intention is part of a communicative intention intended to be recognized by one's audience. [...] You do not say something and then, as though by inner decree (an intention), determine what you are using it to refer to. [...] Rather, you decide to refer to something and try to select an expression whose utterance will enable your audience, under the circumstances, to identify that object. Referential intentions, if they are to be fulfilled, must satisfy the rational constraints on communicative intentions generally. (p. 314)

This passage also suggests an answer to our second question from above, i.e., the question of what it means to believe that one can succeed in referring. For note that if one accepts both (C2) and (C3), one must also accept that:

(C4) *a* intends to refer to *x* by uttering referential expression *e* in context *c* only if *a* believes that, partly as a result of their recognizing *a*'s intention, *a*'s audience in *c* are in a position to interpret *a* as referring to *x* with *e*.

(C4) is simply *entailed* by the conjunction of (C2) and (C3). To see this, suppose—in accordance with the general belief-constraint on intentions—that one cannot intend to refer to something unless one believes that one can succeed in doing so. Further, suppose that what it means to succeed in referring is that one's audience is in a position to recognize one's intention. Then it simply follows that one cannot intend to refer to something unless one believes just that.

2.5 Failure to refer

Consequently, these three principles form a package. Further, this package engenders a take on failure to refer. On the view advocated here, for a speaker to succeed in referring by using an intention-sensitive expression, two things must be in place: The speaker must have a genuine intention to refer, and the audience must be in a position to grasp this intention. This means that there are two broad types of situations in which reference does not succeed.¹⁰ First, reference can fail if the speaker has a referential intention, but the audience is nevertheless not in a position to recognize it. Secondly, reference can fail if the speaker does not have a genuine referential intention (although, perhaps, she pretends to have one). In the first kind of situation, the speaker has what I will call a *misfiring intention*. I return to the issue of misfiring intentions in Sect. 5. Here I want to comment briefly on the other kind of situation.

Consider the following example.¹¹ A U.S. Customs Officer says to a woman who speaks no English and whom the Customs Officer knows speaks no English:

¹⁰ In addition to these two, there is also the possibility of non-denoting, intention-sensitive expressions mentioned in footnote 8 above.

¹¹ I am grateful to an anonymous referee for suggesting this case.

- (5) Now I'm going to explain to you why you are in violation of your visa so that you can't say that you haven't heard it.

The pronoun *you* is an intention-sensitive referential expression. To refer to her interlocutor with *you*, therefore, the Officer must have an intention to do so. And, given the view I subscribe to, to have such an intention, the Officer must believe that the woman is in a position to recognize that intention. But since the Officer knows the woman speaks no English, she cannot have such a belief. Hence, she does not have a genuine intention to refer. And therefore, she does not succeed in referring to the woman with *you*. In my view, this description of the above example is intuitively compelling. There is a strong sense in which the Officer is not engaged in what we take to be earnest communicative practice.¹²

Finally, it is worth pointing out that, on my view, situations in which the audience could recognize the speaker's intention—and hence the speaker's belief in their abilities is true—but nevertheless fail to do so, for whatever reason, count as cases of reference. It is crucial, that is, to note that the Uptake Constraint (C3) does not require that the audience *in fact* recognizes the speaker's intention. All that is required is that their epistemic situation is such that they could reasonably be expected to do so. Intuitively, a speaker succeeds in referring if she has arranged things in such a way that the audience can reasonably be expected to recognize her intention. If for some abnormal reason they do not, the speaker still counts as having referred.

2.6 Three arguments against intentions as part of narrow context

Since intentions do the metaphysical-constitutive work of reference determination in the case of intention-sensitive expressions, and since narrow context is that aspect of context comprising such metaphysical-constitutive factors, the proposal that intentions are part of narrow context seems natural. So, what could be the reasons for rejecting it? I will go through three types of considerations found in many places in the literature.

The first kind is exemplified by Recanati (2004) who writes:

One can say that the character of a demonstrative is the rule that it refers to what the speaker intends to refer to. [...] Formally that is fine, but philosophically it is clear that one is cheating. We pretend that we can manage with a limited, narrow notion of context of the sort we needed for handling indexicals, while in fact we can only determine the speaker's intended referent [...] by resorting to pragmatic interpretation and relying on the *wide* context. (p. 57)

This objection should not worry the proponent of ISS, though.¹³ She *agrees* that audiences cannot ascertain what the speaker intended without recourse to wide context.

¹² To be sure, it might be that the Officer regards herself as her audience. In that case, of course, she could be successful in referring. Examples of soliloquy, however, are irregular and engender other complexities than the ones under discussion here.

¹³ Cappelen and Lepore (2004, pp. 148–149) argue that this objection relegates the dispute to a merely terminological issue. Cappelen (2007) expresses a similar attitude to the semantics–pragmatics distinction *per se*.

However, there is nothing in this objection as such directed against the proposal to let intentions figure as part of narrow context.

Secondly, many commentators hold that the distinction between wide and narrow context works in tandem with the one between intention-sensitive and non-intention-sensitive indexicals (e.g., Perry 2001, p. 59; Recanati 2004, pp. 56–57; Bach 2007, p. 405). On this picture, narrow context is *defined* as comprising just those facts—like who the speaker is—relevant for determining the reference of the latter. But since we have already established that intentions cannot be part of wide context, the implication will be that intentions are not to be seen as part of either narrow or wide context. Bach (2005) makes this explicit:¹⁴

The communicative context (context broadly construed) enables the audience to determine (in the sense of ascertain) what [the speaker] is referring to, but it does not literally determine (in the sense of constitute) the reference. [...] So neither sort of context, narrow or broad, determines the reference of demonstratives and discretionary [i.e. intention-sensitive] indexicals. Unlike pure indexicals, they do not refer as a function of the contextual variables, the narrow context, given by their meanings. Nor does the broad, communicative context determine the reference, in the sense of making it the case that the expression has a certain reference. That merely enables the audience to figure out the reference. (pp. 39–40)

But there is no *argument* here to show that we cannot think of intentions themselves as part of narrow context, that is as simply another of those facts which determine reference. It is no good just to *stipulate* that narrow contextual facts are those relevant for determining reference of non-intention-sensitive expressions. This simply begs the question against the proponent of ISS.

This brings us to the third and final objection I wish to consider. I find this to be the most powerful objection, and I will therefore dwell on it longer than the two preceding ones. I call it *The Argument from Open-Endedness*.

According to this objection, speaker intentions are fundamentally dissimilar from the things that are normally assumed to be part of narrow context. The thought is that, for example, the question of who the speaker is radically diverges from the question of what the speaker's intention is. The way they differ, so the thought goes, is that answering the latter but not the former requires recourse to a range of evidence which is potentially *open-ended*.¹⁵

I suspect that this kind of consideration underlies large parts of the motivation for the claim that speaker intentions cannot be part of narrow context. Recanati (2004), for instance, takes this to be the most important difference between the interpretation of intention-sensitive expressions versus that of non-intention-sensitive expressions.

Recanati distinguishes between *semantic interpretation* and *pragmatic interpretation*. The former “is the process whereby an interpreter exploits his or her knowledge of a language, say L, to assign to an arbitrary sentence of L its truth-conditions”

¹⁴ Similar considerations are found in Bach (1999, 2002, 2007).

¹⁵ Cf. Neale (2005, p. 166) who provides references to others expressing the same sentiment.

(p. 54). On the other hand, Recanati describes pragmatic interpretation as the process of recovering the speaker's intentions.

An integral part of Recanati's position on the semantics–pragmatics distinction is precisely the claim that this kind of pragmatic interpretation process is essentially open-ended:

any piece of evidence may turn out to be relevant for the interpretation of an action. In other words, there is no limit to the amount of contextual information that can affect pragmatic interpretation. (p. 54)

And furthermore Recanati holds that this difference parallels the one between intention-sensitive expression and the rest (see [Recanati 2004](#), pp. 56–57).

What I want to claim is the following. Supposing that what Recanati means by 'semantic interpretation' is something like the computation of truth conditions from compositional rules, syntactic structure and lexical entries, it is no doubt true that the difference he is describing is very real. However, what is *not* true is that there is a difference in this sense between discovering, say, who the speaker is and what the speaker's intentions were.

Suppose, for instance, that John Perry utters (6) with the intention of referring to Saul Kripke with *he*.

(6) I think he is a great philosopher.

The critic of ISS, like Recanati, will agree that two facts are relevant for determining the reference of the pronouns, namely F1 and F2.

F1 Perry is the speaker of (6).

F2 The speaker of (6) intended to refer to Kripke with *he*.

In normal cases, discovering facts like the one in F1 is easy. We simply hear the person speaking and thereby know that she is the referent of *I*. But the same is really true for facts like F2. Normally, that is, finding out who the speaker intended to refer to with a pronoun like *he* is effortless. Indeed, the speaker will strive to make it so.

It is true that, in more unusual cases, we will require more information to be able to ascertain what the speaker intended. But the same is really true for facts like F1. Cases in which it takes some effort to find out who the speaker is are not so uncommon that they can be justifiably set aside as anomalous. In fact, we often encounter tokens of *I*, both written and spoken, that we are not able to immediately resolve.¹⁶

Consequently, this third objection will not stand to scrutiny either. There is no principled difference between the evidential work an interpreter has to undergo in order to ascertain who the speaker is compared to ascertaining what the speaker intended. The only difference is one of degree in normal cases.

Let me sum up what we have seen in this section. First, we noted that intentions cannot be part of wide context, which the audience uses as evidence in the attempt to recover the speaker's intentions. Secondly, we saw that intention-formation is constrained by beliefs, and that given Weak Intentionalism, the formation of referential intentions is constrained by beliefs about what the audience is able to grasp. Finally,

¹⁶ See [Perry \(2001, p. 73\)](#) for an example.

I argued that there are no good reasons against taking up the natural suggestion that intentions are part of narrow context.

In the next two sections, I will outline a framework which treats referential intentions as parameters of narrow context and compare it to another framework for ISS.

3 Intentions as parameters

I will now outline how intention-sensitivity can be incorporated into standard, character-based semantics, and in particular, how we can do so while thinking of intentions as parameters of (narrow) context.

To implement the idea of referential intentions as parameters of context we will let the tuples that represent contexts contain intentions as components. A context will now be represented as a tuple of an agent, a time, a location, a world and a collection of referential intentions (and perhaps other things). The referential intentions will be specified as pertaining to particular syntactic occurrences marked in the usual way by subscripts called *indices*. These tuples will provide arguments for characters. In the case of an intention-sensitive expression, the value of its characters will align with the intention that is part of the context at hand.

I present a rough outline of this proposal below. My aim is not to develop a complete semantics for intention-sensitive indexicals, but merely to show how such a semantics can be developed. The way I present the proposal is modeled on the way Kaplan defines characters in Section XIX of ‘Demonstratives’. But the same proposal could be framed in other semantic systems.¹⁷

The main idea is that a referential intention can be modeled as a *function from indices to referents*. In particular, let $\iota(i)$ be a referential intention pertaining to an occurrence of an intention-sensitive term α with the index i . Then the character of α can be defined as follows. (The ‘. . .’ here are meant to indicate that the tuple will very plausibly contain other parameters such as time, place, agent and world, and perhaps more.)

The character of α is that function ξ such that for any i such that i is an index of an occurrence of α and for any context $c = \langle \iota(i), \dots \rangle$: $\xi(c) = \iota(i)$.

By way of explaining what this proposal involves, let me mention three points.

First, I assume that the inputs to semantic interpretation are different from phonetic forms (PFs). Representing these inputs probably involves many things such as various operations of movement, making elided material available, specifying phonetically

¹⁷ For instance, the proposal can be implemented in the framework of Heim and Kratzer (1998) where (referential) pronouns are analyzed as free variables with the context providing assignments, and features such as gender are treated as syntactically triggered presuppositions on the values of the variables. In accordance with their interest—that of providing a formal semantics for English—Heim and Kratzer do not discuss intention-sensitivity, but remain neutral on the philosophical issues we are interested in and simply assume that “The physical and psychological circumstances that prevail when an LF is processed will (if the utterance is felicitous) determine an assignment to all the free variables occurring in this LF” (p. 243).

null components, etc. As is commonly done, we make the minimal assumption that pronouns are disambiguated by indices at this level of representation.¹⁸

Secondly, I follow [Stanley and Szabó \(2000\)](#) in understanding this difference as one between, as they say, *what is articulated* (phonetic form) and *what is uttered* (disambiguated forms). This means that there cannot be an *utterance* of a pronoun such that the pronoun does not have an index. The semantically relevant representation must contain indexed pronouns. Although I do not wish to make any heavy-weight theoretical investments in doing so, I will follow common practice in calling these entities—what is uttered—*Logical Forms* (LFs).

Thirdly, I assume that every utterance has an associated context. No utterance could be performed outside a context. I take this to be uncontroversial, and will not argue for it.

These points together entail that for every occurrence of a term α in an utterance u , there will be a suitable index for α . Moreover, *if* the speaker of u has a referential intention pertaining to that occurrence of α , then the context of u will contain a function ι which takes the index as argument and returns the intended referent as value.

Whether or not this intended referent will be contributed to the interpretation depends on the character of α . If α is an intention-sensitive term, then its character will behave in the way described above, and the intended referent will be contributed to the interpretation. If α is not intention-sensitive, then the character will pick up on some other parameter, if such a parameter is provided by the context.

To take an example, suppose we have an LF with the following indexing:

(7) He_1 and he_2 are both logicians.

Suppose someone utters this LF in a context c_1 with the intention of saying something about two individuals, John and Mike. The tuple we will use to represent this context will look like this:

$$c_1 = \langle \iota(1) = \text{John}, \iota(2) = \text{Mike}, \dots \rangle$$

We then apply the character of *he* twice to this context and get the two intended referents, respectively, as values. In turn the character of the whole sentence, given c_1 as argument, returns a proposition namely the proposition that John and Mike are both logicians. This proposition is therefore true if and only if John and Mike are both logicians.

What happens when the intention-sensitive term in question is a plural pronoun, as in (8)?

(8) We_1 are logicians.

Intuitively, what happens in cases like this is that the speaker intends to refer with *we* to a set of individuals which includes herself. To illustrate, suppose the setting of the utterance in (8) is as follows. The two logicians, Phil and Chris, are being introduced for the first time to the two phonologists, Bill and Patrick. When asked what they do,

¹⁸ See for instance, [Heim and Kratzer \(1998, p. 242\)](#).

Phil utters (8), intending to refer to himself and Chris with the pronoun. The context, call it c_2 , for this utterance will look like this:

$$c_2 = \langle \iota(1) = \{\text{Phil, Chris}, \dots\} \rangle$$

Given the obvious definition of the character of *we*, we get the proposition that Phil and Chris are logicians, which is the intuitively correct result.

I will refrain from going through other examples, since it should be obvious how this proposal extends to cases like (2) and (3) involving the adverbs *now* and *here* as well as cases involving *that* such as (4). In each instance, the intention-function will pick out the intended referent of the expression, and given the suitable definitions of character, that intended referent will be contributed to the interpretation of the utterance.

This completes my outline of the framework for ISS that I believe to be most promising.

4 Getting the facts right

In this section, I want to compare the framework I have just presented to an alternative that, as mentioned earlier, have been considered by [Predelli \(2005\)](#) and [Gauker \(2007\)](#).¹⁹ Doing so is interesting for at least two reasons. First, we will see that the view I favor is superior to the other one. Secondly, seeing this will require noting certain distinctions, which are crucial in their own right, and which shed light on the different aspects of context we looked at in Sect. 2.

4.1 An alternative framework

In the framework I have presented above, intention-sensitivity is accommodated by letting intentions figure as parameters of context. By contrast, in the alternative to be considered here, intention-sensitivity is accommodated by letting *intended referents* be parameters of context. As [Predelli \(2005\)](#) writes:²⁰

The intuitively correct interpretation of these examples may easily be obtained [...] if the index taken into consideration by the system contains co-ordinates intended by the speaker as semantically relevant, even if distinct from the obvious items within the context of utterance/inscription [...]. (p. 44)

To have some terminology, let us call the first proposal, the one I favor, the *I-theory* and the other one the *R-theory*. Focusing on our example of (7), I will sketch what I

¹⁹ Ultimately [Gauker \(2007\)](#) argues that *no* expressions are intention-sensitive and merely presents the view in question as what he takes to be the most plausible way for the semanticist to implement intention-sensitivity.

²⁰ Predelli's main examples are cases of what is often called *context-shifts*, i.e. cases where indexicals refer to other objects than the ones which are the values of their relevant parameters in the context of utterance. Predelli's position is that these cases are cases of what I have called intention-sensitivity. See [Perry \(2006\)](#), [Corazza et al. \(2002\)](#) some alternative views on the cases.

take to be the most viable way of developing the R-theory. I should note, though, that the way I present the R-theory here is my own.

Since we cannot do without somehow monitoring which referents are assigned to which pronouns, we cannot do with just positing referents in the tuples, like this:

$$c_3 = \langle \text{John, Mike, } \dots \rangle$$

There is nothing here to decide which referent will be assigned to which occurrence of *he*, nor in fact to which pronoun in the first place.

The minimal fix here would seem to be to index the components of the tuple with indices corresponding to the indices on the occurrences of the pronoun. So, the tuple would instead look like this:

$$c_3 = \langle \text{John}_1, \text{Mike}_2, \dots \rangle$$

It bears emphasizing, however, that this formalism is *not* meant to suggest that *John*, the person, is indexed with a number; indeed, it is hard to see what such a claim could amount to. The subscripts are there simply to remind us which ‘slot’ in the tuple, so to speak, an object occupies.²¹

Once generalized, this suggests the following definition of character:

The character of α is that function ξ such that for any i such that i is an index of an occurrence of α and for any context $c = \langle x_i, \dots \rangle$: $\xi(c) = x_i$.

As on the I-theory, the character of *he* returns the intended referent. Only the character of an intention-sensitive expression will pick up on the relevant values, i.e., intended referents. So, if the speaker intends to refer to John with he_1 , for instance, the character of *he* will deliver John as the referent of he_1 .

Clearly, the R-theory delivers the right result. Once the character of *he* is applied twice to c_3 , and other compositional operations have been performed, we will get the desired proposition, i.e., a proposition that is true if and only if John and Mike are both logicians. As this suggests, the I-theory and the R-theory are *equivalent* when it comes to making predictions about the truth conditions of utterances.

This in itself is an interesting result: For the purpose of simply calculating the truth conditions of utterances containing intention-sensitive expressions it does not matter whether we think that these intentions are themselves part of contexts or just determine the relevant aspects of contexts. However, there is an important sense in which the frameworks do nevertheless differ, and in fact, as we shall see, this difference is stark enough that it should prompt us to reject the R-theory.

²¹ Equally, it is no objection that there is a way of avoiding these subscripts altogether by letting the n -th occurrence of an intention-sensitive pronoun refer to the n -th member of a sequence of objects. (For a worked-out proposal along these lines, see Larson and Segal 1995, Chap. 6.) Even if this is what one prefers, one will still need to keep track of what place, say, John occupies in the sequence. Furthermore, it is not clear in the first place whether theories which invoke such sequences of objects take themselves as representing contexts in the way we are interested in.

4.2 Four kinds of facts and how reference works

We have seen that the I-theory and the R-theory are equivalent in terms of predicting truth conditions of utterances. Yet, obviously, the frameworks differ—at least they appear to do so. How should we describe the way in which they differ? It turns out that answering that question requires noticing some distinctions between different kinds of *facts* surrounding utterances and their interpretation. Furthermore, as we shall see, the difference between the metaphysical question concerning what constitutes or decides reference and the epistemic question of the evidence used by audiences in a given case can only properly be understood once we have distinguished between these different kinds of facts.

For illustrative purposes I will use our example of Perry's utterance of (6).

(6) I think he is a great philosopher.

We already noted one type of fact associated with utterances of this kind, exemplified by F1 and F2.

F1 Perry is the speaker of (6).

F2 The speaker of (6) intended to refer to Kripke with *he*.

Facts of this type, so I argued, are what narrow context comprises. Let us therefore call them *narrow-contextual facts*. Narrow-contextual facts are relevant for reference-determination.

Further, that a given expression refers to a particular object on a particular occasion of use is itself a fact. Let us call such a fact a *referential fact*. In the case at hand, there are two relevant referential facts, namely F3 and F4.

F3 Perry is the referent of *I*.

F4 Kripke is the referent of *he*.

There is a dependence here. F1 determines F3, F2 determines F4. But they do so only because *I* and *he* have the meanings (i.e., characters) they have. Let us call a fact like, for instance, the fact that *I* has the character it has a *semantic fact*.

This allows us to state precisely a fundamental view of how reference works, which both the proponent and critics of ISS adhere to. I call it *Combinatorial Reference*.

Combinatorial Reference. Referential facts depend on (a) narrow-contextual facts and (b) semantic facts.

Combinatorial Reference proposes an answer to the metaphysical question of what determines reference on a particular occasion. For instance, the referential fact that Perry is the referent of *I* (F3) depends on the narrow-contextual fact that Perry is the speaker (F1) and the semantic fact that *I* has the character it does. I argued that what the speaker's intention is in making an utterance is as fit to be a narrow-contextual fact as is a fact like who the speaker is. So, my claim can be rephrased as the claim that Combinatorial Reference is right for both intention-sensitive expressions and non-intention-sensitive expressions.

4.3 Discovering narrow-contextual facts

What about the epistemic question? Neale and Bach, among others, focused on one particular kind of epistemic question, namely how do audiences go about ascertaining what the speaker's intentions are. But, as I argued, there is no difference when it comes to ascertaining, for instance, who the speaker is. That is, the epistemic question pertains not only to intention-sensitive expressions, but to both categories. What it asks, in its general form, is how audiences go about ascertaining what the narrow-contextual facts are in order to interpret correctly, that is, in order to interpret in accordance with what the referential facts are.

I accepted the picture, originally proposed by the opponent of ISS, on which the collection of facts which the audience uses as evidence in order to discover narrow-contextual facts make up what we call 'wide context'. But what kinds of facts *do* make up wide context? In terms of our example, how *would* Perry's audience go about finding out that he intended to refer to Kripke with *he*?

There are many ways this could go depending on the situation. Let us suppose, for simplicity, that Perry is simply pointing at Kripke when he utters (6). Then the relevant fact, which the audience will use as evidence in order to discover his intention is F5.

F5 Perry was pointing at Kripke when he uttered (6).

A fact such as F5, then, is a *wide-contextual fact*. Of course, we are often confronted with much more complicated cases in which the relevant wide-contextual facts are more complex. A wide-contextual fact, for instance, may be that Kripke has made himself 'salient' by acting conspicuously in some way or other and so no gesture like pointing is needed.²² Perhaps even facts about what the speaker's intentions are for other expressions may be part of the evidence that an audience will use to recover other intentions.

I argued that there is no principled difference between how *I* and *he* is interpreted. The only difference is, I claimed, that in the normal case, we simply realize that the sounds we are hearing are coming from a particular source, in this case Perry, and we painlessly infer that source is the speaker. So too in this case. In other words, the wide-contextual fact which is relevant for *I* is something like F6.

F6 The sound of (6) came from Perry.

So, F5 and F6 are wide-contextual facts in the sense that they are the kind of facts which audiences will use in order to solve the epistemic-evidential problem of how to discover the narrow-contextual facts which will, together with semantic facts that are shared among competent language users, determine reference.

Does treating intentions as narrow-contextual facts reinstate The Argument from Inaccessibility? This argument, which I accepted, showed that intentions cannot be part of wide context since audiences do not have direct access to them. But the same complaint cannot be made against the proposal to let intentions be part of narrow context. Modeling intentions in narrow context is not supposed to solve any problems regarding how speakers form their assumptions about what audiences will or will not

²² Cf. Kaplan (1977, p. 409, n. 9).

be able to grasp. The speaker has access to the wide context, which the audience also has access to. In good cases, the speaker will believe that the wide context contains some clue E (e.g., a demonstration). If this belief is correct, i.e., the wide context does contain E , and everything else goes well, the audience will use E to ascertain the speaker's intention. The speaker will know in advance that the audience will do so, and she can therefore form the intention. Narrow context does not play any epistemological role. It merely determines reference, along with meaning, in accordance with Combinatorial Reference.

To sum up, then, we have a four-way distinction between referential facts, semantic facts, narrow-contextual facts and wide-contextual facts. All of these are important for a proper description of how utterances are produced and interpreted.

I want to make one more remark along these lines before returning to the difference between the I-theory and the R-theory. Some writers sometimes use the term 'context' such that it would seem to describe neither narrow nor wide context. Instead, they sometimes think of the context of an utterance as a concrete location. For instance, David Lewis writes:

Whenever a sentence is said, it is said at some particular time, place and world. The production of a token is located both in physical space-time and in logical space. I call such a location a *context*. (Lewis 1980, p. 85)

Of course, it is true that an utterance always takes place in such a concrete location. To have a term for it, let us call such a location a *setting*. A setting contains a myriad of facts. For instance, a fact about the setting I am in right now is the angle my knees are bent, how many hairs I have on my scalp, or the precise amount of water in my water bottle. But only some of these facts will qualify as wide-contextual facts and even less will qualify as narrow-contextual facts. For instance, Perry might have felt a strong pain in his left index finger at the moment he uttered (6). But this fact is of course irrelevant both epistemically and metaphysically to the interpretation of the utterance.

The danger in conceiving of contexts as settings is that one risks blurring the distinction between facts which merely belong to the setting and facts that belong either to narrow or wide context, and are as such relevant for interpretation.

4.4 What is wrong with the R-theory

The problem with the R-theory can now be seen clearly. The problem is that the R-theory falls foul of Combinatorial Reference because it ends up treating referential facts as themselves narrow-contextual facts. To see why, let us begin by focusing only on the case of I in Perry's utterance. Suppose for convenience that the LF Perry utters has the following indices:

(9) I_1 think he_2 is a great philosopher.

One proposal for modeling those aspects of the narrow context of Perry's utterance relevant for I is the following:

$$c_4 = \langle \text{Perry}_1, \dots \rangle$$

This tuple is supposed to represent the narrow context of the utterance. However, it does so by representing that narrow context as comprising the fact that Perry is the referent of the pronoun indexed with 1. That fact, however, is a referential fact, not a narrow-contextual fact.

What we want instead is to model the narrow context of Perry's utterance as

$$c_5 = \langle \text{Speaker} = \text{Perry}, \dots \rangle$$

This adequately represents the relevant narrow-contextual fact, namely that Perry is the speaker. The *further* referential fact is not included in the narrow context. Rather this proposal correctly models that referential fact will be determined partly by a combination of the narrow-contextual facts (the tuple) and semantic facts (the character taking the tuple as argument).

This example of course mirrors the difference between the I-theory and the R-theory. On the latter, the narrow context is represented as comprising the referential fact that, to stay with the current example, Kripke is the referent of *he*, whereas on the former the narrow context is represented as comprising the narrow-contextual fact that the speaker intends to refer to Kripke with *he*. So, the narrow context of Perry's utterance will be represented like this:

$$c_5 = \langle \text{Speaker} = \text{Perry}, \iota(2) = \text{Kripke}, \dots \rangle$$

In other words, the problem with the R-theory is that it treats reference-determination as *circular*. If we ask why Kripke is the referent of *he*, the answer we get is (a) because Kripke is the referent of *he* and (b) because *he* has the meaning it does. Surely an unsatisfactory explanation. By contrast, letting some contextual facts be facts about what the speaker intends preserves the spirit of Combinatorial Reference. On the I-theory, if we ask why Kripke is the referent of *he*, the answer we get is (a) because Kripke is intended to be referred to by *he* and (b) because *he* has the character it does. And this is just what we want.

5 Unwanted intentions?

In this section, I return to the issue of misfiring intentions that I left behind earlier and respond to a potential problem they raise for my proposal to let referential intentions figure as parameters of narrow context.

A misfiring intention is a genuine referential intention, but one which the audience is not in a position to recognize. Recall that, in accordance with the general belief-constraint on intention-formation, it is required for a speaker to have an intention to refer that she believes that she can succeed in doing so. So a situation in which a speaker has a misfiring intention will be one in which the speaker's belief that she will succeed is false. This can happen either if the speaker is mistaken about what wide-contextual clues are available to the audience or if the speaker misjudges what the audience is able to work out from the clues that she correctly takes to be available to them. Let me illustrate these two situations with two examples.

To illustrate the first, simpler kind of situation, consider again Perry's utterance of (6). A natural situation in which the audience does not have enough information is one where Perry did not make his pointing gesture sufficiently visible, although he himself believes that he did (for example, his gesture might be vague, quick or inconspicuous). In that case, although Perry believes that the wide context contains the information that he was pointing to Kripke, it does not. The intention to refer misfires due to a mistake about what the wide context contains.

To illustrate the second, more complex kind of situation, we need a slightly more elaborate example. For instance, suppose Holmes knows that Porter is the murderer, but Watson is embarrassed to find himself clueless. Holmes and Watson have access to the same body of evidence, and Holmes charitably thinks that his friend has been clever enough to deduce who the culprit is. When they see Porter standing together with McCord, both laughing at a joke that McCord just told, Holmes snorts:

(10) Look how he's smiling! Well, not for long.

Holmes's intention to refer to Porter with *he* was formed on the basis of his believing that Watson is able to ascertain that intention by looking at the evidence which has lead himself, Holmes, to the conclusion that Porter is the murderer. But Watson's deductive powers are not as good as Holmes's, and the former is therefore not able to ascertain the detective's referential intention. So Holmes's intention misfires due to a misjudgment about what his audience is able to figure out based on the wide-contextual clues that he, correctly, believes to be available.

These two kinds of cases are not mutually exclusive. We can imagine—and in fact we often encounter—complicated cases, where the speaker's belief that her audience will be able to recognize what she intended is falsified by intricate relations between the audience, the speaker and the context. However, the objection I want to consider here does not require us to look into such complex cases.

The alleged problem for the I-theory emerges in the following way.²³ Take a context in which the speaker has formed a misfiring intention. Surely, it is a fact about that context that the speaker has the misfiring intention. But then, the objection proceeds, that fact will be represented in our tuple representing the context. So, the misfiring intention *will* determine reference contrary to our intuitions. How, that is, is the I-theorist to rule out misfiring intentions becoming part of the tuples which characters operate on?

The problem with this objection is that it does not take into account that tuples represent narrow context, and narrow context comprises just those facts that determine reference. A misfiring intention does not determine reference. But since narrow-contextual facts just are those facts that do determine reference, it cannot be a narrow-contextual fact that a speaker has a misfiring intention. Hence, there will be no tuples representing misfiring intentions.²⁴

²³ I am grateful to Kent Bach for pressing this point.

²⁴ One might worry about a vicious circularity here. To be sure one might think that since we have assumed that narrow context only comprises facts that determine reference, the argument that misfiring intentions are not part of narrow context assumes that which it aims to show. However, the claim that misfiring intentions do not determine reference does not rely on the distinction between wide and narrow context, but on the

What kind of fact is it then when a speaker has a misfiring intention? Could it be a wide-contextual fact? No, because then it *would* be possible for the audience to recognize the intention in question; and so it would not misfire. Rather, it will be a fact belonging to what I called the setting of the utterance. It will be a fact on a par with our example of Perry feeling pain in his finger while making the utterance.

In other words, the Weak Intentionalist *cum* I-theorist can accept that speakers may have misfiring intentions (i.e., such intentions are not impossible). She can also accept that a speaker's having such a misfiring intention is a fact. However, such a fact is neither part of wide nor of narrow context.

This points to a more general consequences of Weak Intentionalism. The picture it engenders is one according to which wide context *comes first*. What the wide context is like will constrain what the narrow context could be like. The only intentions we allow into narrow context are successful intentions. An intention is successful only if the audience is in a position to recognize it. What the audience is and is not able to recognize is constrained by wide context. Therefore, which intentions are allowed into narrow context is constrained by wide context.

6 Concluding remarks on semantics and pragmatics

My primary goal in this paper has been to show that first, the direct arguments against letting referential intentions figure as parameters of the kind of context which is semantically relevant are ineffective. There were mainly two arguments, namely the Argument from Inaccessibility and the Argument from Open-Endedness. I accepted the first, but rejected the second.

Before finishing, I want to briefly return to the broader setting concerning the semantics–pragmatics distinction, mentioned in the Introduction. As I noted, many writers who endorse these arguments against ISS do so with a more general purpose in mind. Their chief concern is usually not the particular workings of intention-sensitive indexicals but rather a broader debate about the relation between semantics and pragmatics.

One of the central things at stake in this debate is a thesis of *semantic underdeterminacy*. In Carston's (2002) words,

the linguistic semantics of the utterance, that is, the meaning encoded in the linguistic expressions used, the relatively stable meanings in a linguistic system, meaning which are widely shared across a community of users of the system, underdetermines the proposition expressed (what is said). The hearer has to undertake processes of pragmatic inference in order to work out not only what the speaker is implicating but also what proposition she is directly expressing. (pp. 19–20)

Footnote 24 continued

general view about reference determination explicated in (C3). Therefore, the claim that misfiring intentions are not part of narrow context does not constitute a *petitio principii*.

When it comes to indexicals—i.e., mainly pronouns and adverbs of place and time—theorists of this bent usually claim the fact that most indexicals (perhaps *I* is the only exception) are intention-sensitive provides evidence for taking even these expressions to be semantically underdeterminate.

For example, as we saw, Recanati (2004) clearly thinks that there is a stark difference between, say, *he* and *I*.²⁵ He accepts that *I* can be given a purely semantic treatment since its reference is determined purely as a function of narrow context; but on the other hand, he argues that cases like *he* do not lend themselves to the same approach. This claim figures into Recanati's overall defense of semantic underdeterminacy:

Even if we restrict our attention to expressions traditionally classified as indexicals, we see that they involve a good deal of semantic underdeterminacy. [...] We encounter the same sort of problem even with expressions like 'here' and 'now' which are traditionally considered as *pure* indexicals (rather than demonstratives). [Their interpretation] depends on what the speaker means, hence, again on wide context. [...] Again, we reach the conclusion that pragmatic interpretation has a role to play in determining the content of the utterance, in such a case. (pp. 57–58)

With respect to this more general level of issues concerning the relation between semantics and pragmatics, my arguments can be seen as imbued by an attitude quite different from that of those who endorse semantic underdeterminacy, and more akin to the one advocated by King and Stanley (2005):

speaker intentions are relevant for fixing the referential content of a lexical item in a context only when they are determined to be so by the standing meaning of a lexical item. So, the role played by speaker intentions in semantics remains significantly constrained, even on this conception of the semantics–pragmatics distinction, by the standing meaning of the lexical items. (p. 139)

In the framework I presented in Sect. 3, the hallmark of intention-sensitive expressions is that their meanings (i.e., characters) operate on intention-parameters of context. Figuratively speaking, the meanings of expressions like *he*, *that*, or *now* are 'looking for' an intention which will fix their reference. Thus, in a sense of course, they are incomplete; there is no way of reading off from their lexical entries what particular object they refer to (in a particular context). However, the way they depend on context for their 'completion' is controlled by their meanings. And it is fair to say that this kind of incompleteness is far from what is usually meant by semantic underdeterminacy.

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²⁵ Carston (2002) goes further and argues that even though "the only strong case" for non-intention-sensitivity "is 'I' [...] nothing at all will be lost by including its reference assignment with the rest, even if pragmatic principles are seldom required for the purpose" (p. 180).

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