Kaplan’s thesis: Indexicals are directly referential. That is, in any given context, their content just is the entity denoted.

Today we’ll consider a rich range of natural language data, first focusing on English, which illustrates important characteristics of the class of expressions generally regarded as indexicals. We’ll show how this evidence together poses a number of problems for the Kaplanian account. Next lecture we’ll begin to develop a new, more empirically and conceptually adequate approach to the indexicals.

Referential expressions: These are the types of expressions that can be used to refer to some entity. They include those in the class of expressions often called the definites:\(^2,\(^3\)

\begin{itemize}
  \item a. null arguments
  \item b. 3\textsuperscript{rd} person pronouns: he, she, it, they, etc.
  \item c. definite descriptions: the man, the most ridiculous toupee I ever saw, etc.
  \item d. demonstrative pronouns: this, that, these, those, etc.
  \item e. demonstrative descriptions: this woman, that beautiful installation at the Met, etc.
  \item f. non-demonstrative indexicals: I, you, we, here, now, yesterday, etc.
  \item g. proper names
\end{itemize}

One can refer to a given entity using any of these types of expressions, the optimal choice in a given context determined by features of the context and by the different semantic contents of the types; particularly important are differences in what each presupposes about the context of utterance.

**Thesis: Reference and Familiarity**

All referential expressions, across languages, presuppose weak familiarity in the context of utterance.

The interlocutors’ Common Ground contains a body of information about any entity which is under discussion, but also about those which the interlocutors haven’t mentioned but whose

\(^1\) Throughout the handouts for this short course, many of the examples will be drawn from Roberts (2015). However, there are differences between the account sketched here and that in the earlier ms., and there is new material as well, e.g. from the work of Collins & Postal (2014), Barlew (2016), and other recent work.

\(^2\) Abbott (2010) offers a nice introduction to the classical literature on the semantics and pragmatics of referential expressions (though I disagree with most of her theoretical conclusions there).

\(^3\) One could argue about whether specific indefinites are referential. I think not, but won’t take up that issue here.
existence they’re all aware of and suppose that each other are aware of. Such a body of information is called a **discourse referent**, and is technically modelled with a numerical index (one of the natural numbers), and associated constraints on admissible assignment functions (those which capture the relevant body of information via the values they assign to the coindexed variables).

**Familiarity** (Heim 1982): If an expression triggers a familiarity presupposition, this means that it is felicitous in a given context only if the interlocutors already have information about that entity; i.e. they have a discourse referent for the entity in their Common Ground. The identifying index of the relevant discourse referent is coindexed with the expression that triggers the presupposition.

Two subtypes:

- **Weak familiarity** (Roberts 2003): An entity is weakly familiar in a given context just in case there is a discourse referent for it in the Common Ground of the interlocutors in that context.
- **Strong familiarity** (Roberts 2003): An entity is strongly familiar just in case it has a corresponding discourse referent in the interlocutors’ Common Ground and that discourse referent was introduced by utterance of an overt antecedent DP.

Note: Some definites can serve semantically as bound variables. Intuitively, a bound variable pronoun (type (b)) does not refer; e.g. the pronoun *his* in (1) doesn’t refer to any particular entity, but ranges over the domain of its binding antecedent *no landlord*:

(1) No landlord; raised the rent on all his apartments at the same time.

In a theory like that of Heim (1982), we can talk about two ways in which a presupposition in an embedded context can be satisfied:

(2) Mr. Smith has decided to give **Josiane** a raise. If he has spilled the beans,\(^4\) **she** should be happy.

(3) Mr. Smith doesn’t consider gender equity in determining what to pay his employees. If a **woman** gets any raise at all, **she** should be happy.

In both (2) and (3) **she** occurs in the main clause of a conditional. Call the context prior to utterance of a sentence the **global context**. In (2), the only salient feminine antecedent for **she** is Josiane, available from the global context—here she is mentioned in the prior utterance. But in (3) there is no salient feminine antecedent in the global context. Instead, the global context plus the *if*-clause constitutes the **local context** for interpretation of the main clause of the conditional. The only potential antecedent for **she** is the arbitrary woman introduced by the indefinite *a woman* in the *if*-clause. Thus, the anaphoric presupposition is **merely locally satisfied**. (Such a locally bound pronoun is what is sometimes called a *donkey pronoun* (see below).

Notice that we can replace the pronouns in (2) and (3) with a definite description:

\(^4\) To spill the beans is to convey the contextually relevant news. It is used here to avoid reference to Josiane in the *if*-clause.
(2') Mr. Smith has decided to give Josiane a raise. If he has spilled the beans, the lucky woman should be happy.

(3') Mr. Smith doesn’t consider gender equity in determining what to pay his employees. If a woman gets any raise at all, the lucky dog should be happy.

On pre-1982 theories of anaphora we would have been forced to say that the definite description in (2’) had wide scope over the conditional. But that is not the case in a Heim-style theory. Instead, the apparent scope of the definite is a function of the level at which its familiarity presupposition is satisfied. If it’s satisfied in the global context, as in (2’), it seems to have wide scope; let’s say that on such an account it has wide pseudo-scope—the effect of global presupposition satisfaction.5

Definites are understood to refer if their familiarity presupposition is globally satisfied; otherwise, they receive an arbitrary interpretation. That is, pronouns and other bindable definites are not ambiguous (e.g., see Roberts (2005)); instead, the way that the familiarity presupposition is satisfied—globally (“referring”) vs. merely locally (variable/bound)—determines whether the expression is intuitively referential.

According to the thesis above, reference in natural language discourse is always mediated by the interlocutors’ joint information. What about the purportedly direct referentiality of indexicals?

In what follows, we’ll catalog essential features of indexicals, their distribution and interpretation, as a preliminary to considering a new account.

1. Characteristics of indexicals, Part i: Motivation for direct reference

A. Indexicals always seem to take wide scope

One of Kaplan’s (1977) most powerful arguments for direct reference was his observation that they always seem to take wide scope when embedded in counterfactuals. E.g. consider the following:

(4) [Stalnaker and Chomsky are sitting at opposite ends of a long table on a stage at MIT. One audience member says to another:] If he had changed places with Noam, that guy [pointing to Stalnaker] would be a linguist.

(4), of course, is false, ridiculously so. The demonstratum in the actual context of utterance is Stalnaker, and no matter the counterfactual situation, the denotation in that situation of the NP that guy is still going to be Stalnaker. Just because Stalnaker changes seats on the dais with Noam Chomsky, that doesn’t transform him into a linguist. To account for such behavior, Kaplan argued that demonstratives are directly referential, their meaning given directly by the

5 Pseudo-scope is a term introduced (so far as I know) in Kratzer (1998), who uses it in a slightly different sense. Here I only mean that the apparent wide scope of the definite description is actually a reflection of presupposition satisfaction at a level wider than any other operators in the utterance—so here, wider than the conditional.
context of utterance, via their Character, unmediated by a Fregean sense. Thus their interpretation doesn’t shift under modality.

In this respect, the demonstrative NP that guy displays parallel behavior in counterfactuals to that of the English 1st person singular pronoun: The intended (true) interpretation of (5) is just as silly as that of (4):

(5) [Laura is speaking to Calvin:] If you were speaking now instead of me, I would be a boy.

Kaplan takes the meaning of a conditional like that in (4) to be a singular (structured) proposition, one in which the actual demonstratum Stalnaker is embedded in the structure; he assumes the same kind of interpretation for indexical I in an example like (5). Most linguists have instead modeled the Kaplanian character of a demonstrative as a function from context of utterance to an individual concept, the latter a constant function from worlds to the demonstratum of the accompanying demonstration—e.g. in (4), Stalnaker.

B. The logical truth of statements involving indexicals

(6) [Always true:] I am here now.
   [today: ‘CR is at NYU on 1/24/17’]
(7) [Not true:] Necessarily, I am here now.
   [but she could have been elsewhere]

As uttered, (6) is always true in the context of utterance. This makes it logically true. But it is not necessarily true, as we see in (7): Things might have been other than they are.

2. The Kaplanian approach

Per Kaplan, the meaning of an expression is its Character, which takes a particular context as argument (the context of utterance) to yield the expression’s semantic content in that context:

context c: specification of the linguistically relevant parameters of a context of utterance, in particular yielding values for: Speaker (c), Addressee(s)(c), Location(c), Time(c), Demonstratum(c)

Character: a function from contexts to Content
Content: a function from worlds to values

For example, the Character of I takes the context as argument and returns a Content, which (for any given world) is the value of the speaker at that context.

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6 Things are a bit different, of course, for written or recorded utterances, and this has led to an extended discussion of various prima facie counterexamples to Kaplan’s I am here now. I think this is all the more reason to take the relevant constraint to be pragmatic, and not semantic, as I will do below. But even in these cases, there is a pragmatic assumption of singularity on the part of the speaker or author. It’s typically just that there can be a time- and place-lag which confounds interpretation of now or here.
Character of *I*:
a function from a context $c$ to a Content $C$ (a function from worlds to values) s.t.
for all worlds $w$, $C(w) = \text{speaker}(c)$

This Character yields, at any given context, a rigid function whose value is always the speaker in
that context. Similarly, for *you* and *here*:

Character of *you*:
a function from a context $c$ to a Content $C$ (a function from worlds to values) s.t.
for all worlds $w$, $C(w) = \text{addressee}(c)$

Character of *here*:
a function from a context $c$ to a Content $C$ (a function from worlds to values) s.t.
for all worlds $w$, $C(w) = \text{location}(c)$

A proper context $c$ is one in which speaker($c$) is at location($c$) at time($c$), thus guaranteeing that
for any context of utterance $c$, *I am here now* will always be true at $c$, though certainly things
might have been otherwise. Since the context fixes the value of an indexical for all possible
worlds, this guarantees that their values will not vary even in intensional contexts—they in
which the values of expressions typically *do* vary across possibilities. This explains the
difference between pairs like the following:

(8) I might have been someone else.
(9) The speaker might have been someone else.

(8) and (9) are non-synonymous. (9) tells us that the context of utterance might have featured a
different speaker from the actual one. (8) tell us that someone—who happens to be the actual
speaker—might have been someone other than she is. That is, the semantic content of (8), unlike
(9), isn’t about the context of utterance at all. We just use the context of utterance as an argument
of the Character of *I* to yield the individual who, it is said, might have been otherwise.

Another way of saying this is that the fact that the interpretation of *I* always makes it
coreferential with the actual speaker, while clearly a part of the regular way in which the 1st
person pronoun contributes to meaning, has no local effect— it is not itself part of the
compositionally determined truth conditional content of the clause in which it occurs. Instead,
having led us to the speaker, the use of *I* just contributes that individual as its denotatum. In this
respect, its Character involves something like the anaphoricity of other pronouns. So compare (9)
with (10):

(10) She might have been someone else.

Use of *she* tells the addressee that he should be able to retrieve a uniquely most salient feminine
individual from the context of utterance; this is its anaphoricity. Then that individual is the
denotatum of *she* on the use in that context. The anaphoricity *per se* makes no local contribution.
According to (10), what is possible is only that the relevant individual be someone else; the

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7 Roberts et al. (2009); Tonhauser, Beaver, Roberts & Simons (2013).
proposition that there is a uniquely most salient feminine entity is not part of what is claimed to be possible. The contextual salience is just taken for granted, presupposed.

3. **Characteristics of indexicals, Part ii**

C. **Evidence that indexicals are anaphoric**

English demonstratives share a number of properties with their close etymological cousins the English definite descriptions and the 3rd person pronouns, both of these, in English, etymologically derived from demonstratives.

In all three of these types of DP we find the following types of uses:

**coreferential with a preceding DP:**

(11) A man and a boy were coming down the street. The man looked worried.
(12) A man was walking down the street. He looked worried.
(13) I saw one quilt which was quite abstract, with lots of asymmetric diagonals. Another one was more traditional, worked in an old Amish pattern. This quilt was less busy than the other, but just as bold.

**with a non-linguistically salient referent:**

(14) [Context: looking together at a house:] The roof needs fixing.
(15) [Context: looking together at a house:] It needs a coat of paint.
(16) [Context: looking together at a house:] That roof needs fixing.

The non-linguistic salience of the intended referent illustrated for definite descriptions in (14) is much like that displayed in the canonical use of demonstratives, as in (16). Because the neuter singular pronoun *it*, unlike the 3rd person masculine and feminine or plural pronouns, has no demonstrative uses, its use in (15) cannot be demonstrative.

All three types of DP also have bound variable interpretations, where they have a quantificational antecedent. The presence of examples of this sort was crucial to arguments developed independently by King (2001) and Roberts (2002), against the directly referential analysis of demonstratives.

**quantificationally bound:**

(17) At the boy scout camp, every father and son that built a fire together decided that the boy would gather brush and wood while the man made a clearing and laid the fire.
(18) Every couple that built a fire together decided that she would gather brush and wood while he made a clearing and laid the fire.
(19) Every dog in my neighborhood, even the meanest, has an owner who thinks that that dog is a sweetie.

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8 a claim to be substantiated below.
Each of the underlined definites in (17) – (19) has a bound interpretation. *the boy* and *the man* in (17) are arbitrary instances of the domain of *every* in the main clause. *she* in (18) is the wife in the arbitrary couple bound by *every*. And *that dog* is understood to be the arbitrary dog bound by *every*.

donkey anaphora:

(20) If a cat and a dog have a fight, *the cat* usually wins.
(21) If John sees a car he likes, he should buy it.
(22) If an upwardly mobile yuppie sees that a neighbor has a car, he usually worries that *that car* is cooler than his.

The underlined DPs in (20) – (22) are instances of Geach’s (1962) donkey pronouns, the problems they present for anaphora and semantics admirably explained in the first chapter of Heim (1982). Each takes as its antecedent (the discourse referent corresponding to) an arbitrary instance of an entity introduced by an indefinite DP in the conditional antecedent.

The uses noted above are those used by Partee (1984) to characterize the class of anaphoric expressions. Note that, given (14)-(16), this sense of *anaphora* does not imply that the DPs in question must have a coreferential antecedent DP. Rather, Heim (1982) had argued that in order for an anaphoric presupposition to be satisfied, it sufficed that the interlocutors have common knowledge of the intended referent at the time of utterance, something she reflected in a common discourse referent corresponding to that entity. In other words, the licensing discourse referent may be merely weakly familiar.

I would add two additional types of use involving narrow scope under operators, uses also reflecting anaphoricity in this sense:

Inverse linking:

(23) The political gathering was attended by *the mayor of every city in Indiana*.
(24) S/he who must be obeyed in each family is usually the dog.
(25) *That senator with the most seniority on each committee* is to be consulted. [King 2001:10]

In (23) *every city in Indiana* is understood to take wide scope over *the mayor*; in (24) *each family* takes wide scope over the rest of the subject DP, and in (25), *each committee* does the same.

bridging: (Clark 1977)

(26) Every car had a statue on *the dashboard*.
(27) In every 1960s marriage it was understood that *he* should take out the garbage and she should wash the dishes.
(28) [Pointing to an empty car that’s taking up two parking spaces in a full lot:] *That driver* needs a courtesy lesson.

The definite description in (26) depends for its interpretation on a prior DP, the quantificational *every car*, but it is not coreferential with this antecedent. Rather, any given dashboard is understood to stand in some functional relation with an arbitrary instance of the cars in the
domain of every, the pragmatically retrieved function picking out, for any car, its dashboard. This is also the case with he in (27), which is understood to take as antecedent every marriage and to implicate that the man in question is the husband in a given (traditional heterosexual) marriage, just as she is associated with a function that returns the wife of that same marriage. The demonstrative in (28) also has an “antecedent”, but instead of a DP, it is the demonstratum of the accompanying deictic gesture made by the speaker, a particular car. Moreover, that driver is not coreferential with its “antecedent”; rather it is the value of a function on that entity, the driver who parked the car (the function suggested by the demonstrative’s head driver). This is what Nunberg called deferred ostension, but it seems to closely parallel the bridging exemplified in (26) and (27). Such examples are found under quantification, as well, as in (29), where the demonstratives take as their bridging “antecedent” the quantified DP every table:

(29) [Maitre d’ instructing waiters how to set up a dining room, pointing to one set of chairs among a group of identical sets in the storage room:] Every table should be set up so that this one [pointing to the unique chair with arms] is at the head, looking toward the dais, with these others [sweeping gesture at the remaining chairs in the set] are at the remaining places.

(29) means that for each table, the chair with arms in the set assigned to that table should be placed at the head of that table, while the remaining chairs in the set assigned to that table should be distributed to the remaining places.

Roberts (2002,2003,2005) offers an account of the anaphoricity just illustrated. There I argued that the correct way of understanding what these three types of DPs (and others as well) have in common is that they involve weak familiarity: that is, the interlocutors’ common information in felicitous contexts of use entails the existence of the intended denotatum. This contextual entailment can be the consequence of prior utterance of a coreferential antecedent, but it needn’t be. When the interlocutors jointly see the house in (16) and it is evident to both that that object is the focus of attention, then this joint information satisfies the familiarity presupposition, without the requirement of prior mention. In bridging, typically the salient discourse referent (denotatum of a preceding DP or demonstratum of an accompanying demonstration) denotes some entity which is associated with the existence of a functionally related entity, at least as a default assumption: Cars have unique dashboards (26), marriages in the 1960s US involved a unique husband (27), and parked cars were parked by a unique driver (28). So in all the examples above, weak familiarity and salience are satisfied. Since we also see this under the scope of quantification, we cannot talk about the familiarity of the denotatum per se. So, following Heim (1982), one way of giving a unified description of what’s presupposed in such uses is that they require a familiar discourse referent as antecedent. That is, what satisfies such a presupposition isn’t a coreferential DP or a salient entity in the non-linguistic world, but salient information in the local context of interpretation (perhaps under the scope of an operator, as in the donkey

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9 Again, the “lifespan” of a discourse referent is limited by any operators under whose scope it occurs. So, in donkey sentences, the apparent indefinite antecedent—say a dog or a car in (16) or (21)—occurs under the scope of the conditional, and accordingly can only serve as antecedent to definites under its scope, not in subsequent discourse. See Heim (1982) for an excellent primer, Roberts (2005) for a review of relevant literature to that point.
sentences) which entails the existence of a coreferential entity.

Note that this anaphoricity is, in principle, independent of the question of whether the relevant DPs also have uniqueness implications, as is typically assumed for definite descriptions in the philosophical literature after Russell (1905). This is still quite a controversial question. Some of the most sophisticated contemporary linguistic accounts of definite descriptions argue that they do not involve uniqueness (e.g., Heim 1982, Roberts 2003), while others argue that it is a conventional presupposition (Heim 1992, Elbourne 2005, 2013). But that is beside the point here. Our central interest in these patterns is in the demonstratives. And it seems quite clear that their felicitous use, like that of the pronouns, requires weakly familiarity. Generally they either have an accompanying demonstration, making the intended demonstratum evident and salient, or an antecedent DP in discourse, in either case guaranteeing a weakly familiar discourse referent in the interlocutors’ common information. Even in the case of bridging, if we don’t know that the demonstratum typically stands in the appropriate relation to some entity of the appropriate sort to serve as antecedent for the demonstrative, the bridging just won’t work.

As for 1st person I and 2nd person you, one can argue that the speaker and addressee are always familiar in discourse, hence that they are always anaphoric in the sense just sketched. In fact, any of Kaplan’s pure indexicals, and now and here, are similarly familiar under his account, since the use of each effectively presupposes a denotatum that is weakly familiar to all the interlocutors in the context of utterance. The question, then, is whether these indexicals ever have bound variable or otherwise merely local interpretations, like those we see in the demonstratives above. If not, why not?

The Kaplanian (1977) account of demonstratives is only applicable to the so-called canonical uses accompanied by a demonstrative gesture toward some entity in the local context. But the parallels between those cases and the anaphoric uses outlined here are too strong to ignore, as argued in detail by King (2001), Roberts (2002) and Elbourne (2008). But this raises another question.

Are demonstratives indexical?

The parallels with definite descriptions and pronouns observed in the preceding section might lead one to question whether demonstratives are indexical after all. Basing his account on related evidence, King (2001) argues that the demonstratives are a type of generalized quantifier. Similarly, the theory of demonstratives in Roberts (2002) is very close to that proposed by Elbourne (2008), as the latter concedes. I take the ways in which the last two theories converge to be more important than their relatively minor differences:

- Unlike the directly referential account, which cannot explain non-canonical uses of demonstratives—those not accompanied by demonstrations—these approaches take English demonstratives to be presuppositional and anaphoric, and in this respect like English definite descriptions. Elbourne makes less of the anaphora than I do, but it’s essential to his account of definite descriptions too, since in the latter he cannot distinguish definites from indefinites unless he assumes the former are anaphoric (see the discussion in Elbourne 2005:59ff). The patterns considered above appear to argue that the behavior of demonstratives is parallel in this respect. Once we take demonstratives to be anaphoric, the uses under quantification and
across discourse, as well as other types of examples discussed by King (2001), like the
*paycheck sentences* with demonstratives, are just what we would expect.

- The role of optional deixis (e.g. pointing), as in Nunberg’s (1993) characterization of the
  components of the meaning of an indexical, is more nuanced, just a part of the whole
  conventional content of the demonstrative, and no longer sufficient to determine intended
  reference. This these two theories share with King’s.

But there is reason to think that none of the authors cited above, including Kaplan, have yet
adequately modeled the respect in which demonstratives are indexical. This is not just about
deixis, the sometime-association with a demonstrative gesture, though that is, of course, a
concomitant of their indexicality, which in its particular, 3rd person character is somewhat
different from that reflected in *I, now and here*. In Roberts (2002), I relegated the role of the
demonstration to an associated indicative intention, treating it much like additional descriptive
content. This is also Elbourne’s (2008) view:

> I hope to show that, once pronouns are correctly understood, demonstrative
> [descriptions]. . .are just pronouns provided with some extra descriptive content in the
> form of Noun Phrase [complements]…. [fn20:] More precisely, demonstratives in
> English are pronouns with the addition of DPs and proximal or distal features. But some
demonstratives in other languages, like the French *ce*, do not have proximal or distal
features, and are hence plausibly just pronouns with nouns stuck on them.

But consider this: Why are there three types of 3rd person anaphoric expressions in English?
These nominal elements are very, very old, and their use seems to be built into the deep fabric of
the language. What does it matter whether we use a pronoun or a demonstrative or a definite
description? If we are to believe Elbourne (2008), not much. A definite description is just a
pronoun with its clothes on; a demonstrative description is a definite description plus an
indication of proximity from some salient entity.

I think that is incorrect. Deixis is not so much an optional add-on as a reflection of the deeper
nature of demonstratives. We have the variety of definite DPs that we find in a language because
they divide up the functional space of referential use, each appropriate for somewhat different
purposes. For example, English definite descriptions differ from pronouns in at least two ways,
which Roberts (2003, 2005) argues are closely related: They have potentially richer descriptive
content, and so are able to distinguish familiar discourse referents which could not be
distinguished with person, number and gender alone—the sole descriptive content available to
pronouns. And pronouns can only be used when their intended antecedents are maximally salient
and relevant, whereas definite descriptions, if sufficiently rich in descriptive content, are not so
restricted in their use. What, then, gives demonstratives their distinctive utility?

Consider:

(30) [Butler directing two porters A and B about which parcels c and d to bring:]
> You [nodding at A] get that parcel [pointing at c in the corner] and you [nodding at B] get
> that parcel [pointing at d under the window].

(31) [same situation as (30):]
You [nodding at A] get the parcel [pointing at c in the corner] and you [nodding at B] get
the parcel [pointing at d under the window].

Though (30) with *that* parcel is perfectly felicitous, (31) with *the* parcel is not, a contrast pointed
out (with other examples) by Maclaran (1982). We complete the paradigm by considering
demonstrative *him* in (32) and *it* in (33):

(32) [Relief worker A to another B at a bomb site with numerous victims:] You_{dem-B} help
    him_{dem-c}, and I_{A}'ll get him_{dem-d}.
(33) [same situation as (31):] You [nodding at A] get it [pointing at c] and you [nodding at B]
    get it [pointing at d].

Native speakers agree that the non-coreferential use of two tokens of *it* in (33) is very odd, while
the non-coreferential use of two tokens of demonstrative *him* in (32) is fine; this contrast argues
for the claim made above, that *it* does not have a demonstrative use, as argued in Maclaran
(1982). Additional evidence that *it* and *that* differ in important ways is offered by minimal pairs
of examples like the following:

(34) Hilary has lent me her bicycle. She doesn't need it/#that. (Maclaran 1982)
(35) First square nineteen, then cube it/that. (Isard (1975))

Maclaran (1982,§4) claims that such examples show that “the force of a demonstrative is to
signal that the context is not necessarily the expected one” and that "the speaker thinks he needs
to draw his addressee's attention to something". Putting my spin on it, I think such examples
argue that the intended discourse referent antecedent for a demonstrative is not an entity which is
already the uniquely *most salient* such discourse referent in the context of utterance. This might
occur because the intended denotatum is not familiar and salient prior to utterance, as in the
canonical uses of deixis (and in the topical indefinite use of DPs with *this*, discussed in Prince
(1981) and Ionin (2006)), or because there are already two or more familiar entities which satisfy
the definite’s descriptive content.

Illustrating the second kind of case, note that (36), where the antecedent is explicit and uniquely
salient under its descriptive content, implies that there is more than one relevant dog:

(36) Every dog in my neighborhood, even the meanest, has an owner who thinks that *that dog*
is a sweetie.

Use of *that dog* instead of *the dog* carries the implication that the arbitrary owner might be
contrasting his own sweet dog with those other mean ones. This implication is explicit in (37),
where the neighbor’s car is contrasted with the worried social climber’s own:

(37) If a social climber sees that a neighbor has a car, he usually worries that *that car* is cooler
    than his.

Similarly, in cases like (34), where there is only one salient and relevant non-human antecedent,
non-demonstrative *it* is preferred over *that*. In Isard’s (35), the explicit *nineteen* introduces the
maximally salient antecedent, and, accordingly, it can only be taken to refer to that number (Roberts 2003). If that is unaccented, it’s a bit odd here (implying no contrast, and hence making it odd not to use it). Accented that is felicitous; however it cannot be used to refer to the number nineteen, but only to nineteen-squared (361). Again, the use of the demonstrative, whether accented or not, always implies two or more potential antecedents satisfying its descriptive content (if any). The contrastive accent plus the distal feature of that in (35) together imply that the intended antecedent cannot be the maximally salient 19, so must be the merely weakly familiar 361 (the only other relevant number)—which is metaphorically more “distal” because less salient than the strongly familiar 19.

Then I conclude that use of the demonstrative implies that (a) there is a non-singleton contrast set of entities satisfying the demonstrative’s descriptive content, and (b) that the intended referent was not the uniquely most salient element of that set prior to utterance; the demonstrative then heightens its salience. Roberts (2002) argued that this is a reflex of the distal/proximal distinction evident in the English demonstratives. We see both the explicit contrast set and equivalent salience of its members in (38):

\[(38)\] I saw one quilt which was quite abstract, with lots of asymmetric diagonals. Another one was more traditional, worked in an old Amish pattern. This quilt was less busy than the other, but just as bold. (Roberts 2002)

The use of the demonstrative this quilt more skillfully and unambiguously picks out the most recently mentioned quilt than would use of the quilt. Not only is the contrast implicit in the proximal/distal distinction used to underline a contrast between the denotatum and some other entity of the same sort, but the marked proximal demonstrative is selected to disambiguate between two possible antecedents of the same sort. Even though the demonstrative is not used with a demonstration, the proximal/distal distinction is alive and active pragmatically.

But this implies that the demonstratives are essentially indexical in the sense I would define. For the very notions of proximal and distal presuppose location in space relative to a given origin. In demonstrative uses of demonstratives, the origin is always the location of the speaker in actual space. The demonstration indicates the vector along which the denotatum can be found in that space, and the proximal or distal feature indicates relative distance along that vector from the origin. Roberts (2002) argues that non-demonstrative uses always presuppose some other type of space. For example, the two-dimensional time-line of the discourse (earlier in the preceding discourse for that vs. more recent or immediately following for this), distance from the written location in the actual text (see her discussion of the use of former vs. latter), etc.

Thus all the observed differences between the demonstratives and non-demonstratives like it and definite descriptions—optional accompaniment by a distinguishing deictic gesture, use of the proximal/distal distinction to distinguish potential antecedents, and the underlying implication that there are multiple possible denotata in the context—arise because the interpretation of the demonstrative is essentially anchored to a point of view, which is used by addressees to determine the intended denotation. Thus, while demonstratives, like the English definite article and pronouns, are anaphoric, they are also, like 1st and 2nd person pronouns, essentially indexical. That is, they retain the indexicality which has atrophied in their etymological descendants the
definite descriptions and pronouns. This is not captured in any of the theories of demonstratives considered above.

From here on out, I’ll use the term *indexicals* to include demonstratives, even in their discourse deictic use, as well as Kaplan’s pure indexicals.

### 4. A minimal variant on direct reference: Presupposition and pseudo-scope

In Roberts (2002) I captured the anaphoric behavior of demonstratives by modelling them in a Heim-style theory of anaphora in discourse:

\[(39) \text{Presupposed Content of Demonstrative DP}_i \text{ (informal):} \]

Use of a (non-)proximal demonstrative \(\text{DP}_i\) presupposes that there is an accompanying demonstration \(\delta\) whose unique demonstratum, correlated with a weakly familiar discourse referent \(d_i\) by virtue of being demonstrated, lies in the direction indicated by the speaker at a (non-)proximal distance to the speaker.

**Semantic Content of Demonstrative \(\text{DP}_i\):**

At any given world in the Common Ground, the semantic content of demonstrative \(\text{DP}_i\) is the value assigned to \(d_i, g(d_i)\).

Maclaran (1982:159) argues that the proximity feature of a demonstrative is presupposed, not entailed, since this facet of a demonstrative's meaning can't be "sensibly denied", as argued by the infelicity of B's reply in her example (40):

\[(40) \text{A: I've had three slices of this cake.}\]

\[\text{B: No, you haven't. It's not near you.}\]

In the formal version of (39) in (41), I adopted the dynamic counterpart of a dual indexing system (Kamp 1971), so that interlocutors can keep track both of the global common ground (CG) and the local context of evaluation at any given point in the discourse (the local context C). When the two differ, as under the scope of an operator or in the course of interpretation of a conditional, I will assume that interpretation of a demonstrative is anchored directly to the common ground. This and the directness of demonstrations themselves are the keys to explaining the so-called direct reference effects noted by Kaplan.

\[(41) \text{Presuppositions of Demonstrative Definite \(\text{DP}_i\) (formal, Heim-style):}\]

Given a context of evaluation \(C\), with common ground \(\text{CG}\) s.t. \(\text{Dom}_{\text{CG}} \subseteq \text{Dom}_C\), and discourse referent \(S\) s.t. \(\forall k \in \text{Dom}_{\text{CG}} \forall <w,g> \in \text{Sat}_{\text{CG}} [\text{speaker}(w)(g(k)) \leftrightarrow k=S]\), if a \([+(-)\text{proximal}]\) demonstrative \(\text{DP}_i\) is felicitous in \(C\), then

(i) \(\exists! \delta [\delta \in \text{Dom}_{\text{CG}} \& \forall <w,g> \in \text{Sat}_{\text{CG}} [\text{demonstration}(w)(g(\delta)) \& \text{accompanies}(w)(g(\delta), \text{utterance}(\text{DP}_i))] \&\]

(ii) \(d_i \in \text{Dom}_{\text{CG}} \& \forall <w,g> \in \text{Sat}_{\text{CG}} [+(-)\text{proximal}(w)(g(d_i),g(S)) \& \text{demonstratum}(w)(g(d_i)),g(S),\delta)]\]
where \(+(-)\text{proximal}(w)(g(d_i), g(S)) \& \text{demonstratum}(w)(g(d_i), g(S), \delta)\) is true iff the individual assigned to \(d_i\) by \(g\) is in the set of entities (non-)proximal to the speaker \(g(S)\) and is the demonstratum intended by \(g(S)\) for the demonstration \(g(\delta)\).

Clause (i) tells us that there's a demonstration that is familiar in the CG, that is, whose existence is common information for the interlocutors; the familiar discourse referent is \(\delta\), and hence the demonstration (in any given world) is \(g(\delta)\). Clause (ii) says that there's an appropriately proximal or distal demonstratum of this demonstration, which demonstratum is also familiar in the CG via the discourse reference \(d_i\), the discourse referent for the demonstrative DP, \(i\). Depending on whether the demonstrative is pronominal or descriptive, there are additional presuppositions associated with pronouns (maximal salience) or definite descriptions (Heim’s 1982 descriptive content condition) generally.

Crucially, note that no matter the context in which the demonstrative occurs (e.g., under the scope of a modal, hence irrealis), the demonstratum is always determined with respect to the CG, i.e. the information about actual circumstances of utterance. Hence, following Kaplan, demonstrata cannot be shifted in modal contexts; there are no monsters. Another way of saying this is that the demonstratum must be that of a demonstration undertaken by the speaker. Hence, we might say that the demonstratum itself is anchored to that speaker’s gesture, which makes it a function of the global context of utterance, yielding widest pseudo-scope.

This is pretty clear for the canonical use of demonstratives, which is accompanied by actual demonstrative gestures (pointing with the fingers or hand, eye gaze, etc.). But I argue that it also works well for demonstrations in other types of “spaces”. E.g., the space of discourse licenses what I call \textit{textual deixis}, illustrated by (42), and \textit{discourse deixis}, based on textual deixis and illustrated by (43):

(42) \quad \text{This sentence is short.}

(43) \quad \text{Melanctha has a dog and a cat. The latter is her favorite, but the former is more loyal.}

In a textual or discourse deixis, given the nature of presupposition and the interlocutors' (usual) lack of access to text following the time of utterance, demonstratives tend to lend themselves better to anaphora than to cataphora. For cataphora, we are limited to the use of the proximal demonstratives, and the intended referent must immediately follow, as in the textual deixis in (44) and the discourse deixis in (45):

(44) \quad \text{This is an ugly word: } \textit{hippopotamus}.

(45) \quad \text{Do you know these new rose hybrids, Meidiland and Peace?}

Discourse deixis is closely related to the textual deixis in (42), where \textit{this sentence} was used to refer to the sentence in which the demonstrative itself occurred. In discourse deixis, the relative proximity in question is that of a constituent or constituents in the immediately preceding discourse – in the case of \textit{former} or \textit{latter}, a pair of maximally salient DPs. But reference is not
to those DPs themselves, but to the entities which the DPs denote. In (43), the referent of the latter is the referent of the second member of the ordered (by order of utterance) pair <a dog, a cat>, while the referent of the former is that of the first element of that pair. Relevant here is the fact that we can observe direct reference effects with discourse deixis, as in (46): 11

(46) [Context: The author is writing a letter to a dear friend, a pretty but naïve young woman who’s about to go spend time with her cousin who’s a member of the King’s court.] Watch out for the men you will meet at court. You will find that Don Juan is a suave and flattering, and that Giorgio is a very critical, with a hard face and tough demeanor. But here are their secrets: Giorgio actually has a heart of gold, while Don Juan is quite shallow and self-centered. If I hadn’t written that, you’d think the former was charming and the latter a cad.

The last utterance here is quite odd, and surely false: the latter and the former can only be taken to refer to Don Juan and Giorgio, respectively, on account of their being the referents of the most salient pair of DPs, the denotata of the subject DPs in the third sentence. But the counterfactual antecedent asks us to imagine that that third sentence hadn’t been uttered; and in addition, the properties predicated of the discourse deictic DPs are clearly more appropriate to the entities which the deictic DPs would have referred to if the second sentence hadn't been written. Just as in (4), where Stalnaker's occupation surely wouldn't vary as a function of his changing places with Chomsky in the situation of utterance, in (46) Don Juan couldn't reasonably be expected to become kind and generous because the speaker hadn't written that sentence! What this example shows is that discourse deixis is potentially just as direct as canonical demonstrative use. Please see Roberts (2002) for details of the treatment of discourse deixis, as a specialization of the canonical usage.

In both canonical deixis and textual and discourse deixis, the demonstration is anchored to the speaker in the actual context of utterance, hence guaranteeing the direct reference effects illustrated just above in (46) and in (4) and (5) in section 1.A. But note that the discourse referent corresponding to the DP itself is not necessarily anchored to the global context. In canonical deixis, where the presupposed demonstrative gesture is made in actual space, presupposing that the intended denotation of the demonstrative is the demonstratum will guarantee that the denotation exists in actual space in the context of utterance. But this is not the case with textual or discourse deixis, as in (19) or (22), or King’s inverse linking example (25), where the DP

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10Of course, indefinite DPs arguably do not denote, nor do definites. I use the term loosely here, and in what immediately follows, for simplicity of expression. One might say, more precisely, that in using the former and the latter the speaker intends to pick out the same pair of referents which she intended in uttering the antecedent DPs. See Grice (1957), Kripke (1977) on the notion of a Speaker's referent.

11 In Roberts (2002), I offered a different example:

(i) Melanchta has a dog and a cat, both of whom are getting very old. The cat is her favorite, but the dog is more loyal.
If I hadn't uttered the last sentence, the latter would spit up hairballs and the former would bark.

But Lucas Champollion (p.c.) pointed out that there is a problem with the final conditional, since the if-clause is not relevant to the consequent, which is usually sufficient to make the conditional infelicitous. To avoid this confound, I constructed (46) above, where presumably counterfactual denial of the preceding utterance is relevant to the consequent. I changed the interaction to a letter format, since former and latter have a literary feeling.
which is “demonstrated” by the speaker in the actual text happens to occur under the scope of a quantificational operator and have a quantificational or indefinite DP antecedent. In those cases, the demonstratum itself, may have a bound interpretation.

(19) Every dog in my neighborhood, even the meanest, has an owner who thinks that that dog is a sweetie.

(22) If an upwardly mobile yuppie sees that a neighbor has a car, he usually worries that that car is cooler than his.

(25) That senator with the most seniority on each committee is to be consulted. [King 2001:10]

We can do something similar for 1st and 2nd person indexical pronouns. Instead of a Kaplanian Character, we anchor them presuppositionally to the speaker or addressee:12

(48) Presupposed Content of English Ii (informal):
Use of Ii presupposes that there is a weakly familiar discourse referent di such that in all the worlds in the Common Ground, the value assigned to di, g(di), is the speaker at the time of utterance.

Semantic Content of English Ii:
At any given world in the Common Ground, the semantic content of demonstrative Ii is the value assigned to di, g(di).

We can do something parallel for you, and for both, the result will guarantee widest pseudo-scope in all felicitous uses, i.e. those where the presupposition is satisfied.

But there is evidence that this presuppositional variation on the Kaplanian account does not suffice. First, we have evidence that indexicals can shift across languages. Moreover, and I think more important ultimately, there are aspects of the meanings of indexicals that are not captured by either direct reference or global presuppositional anchoring. Third, there do seem to be bound indexicals—those whose familiarity is merely locally satisfied. We now turn to evidence for these claims.

5. Characteristics of indexicals, Part iii

D. Shifting indexicals across languages

There is now a strong, growing body of evidence arguing that in many languages the anaphoric presupposition of an indexical may in certain contexts be merely locally satisfied. This is the problem of shifted indexicals, where, for example, an Amharic 1st person pronoun embedded under ‘tell’ may refer to the agent of the telling, rather than the actual speaker. Here is a schematic example, comparing the Amharic pronoun to English I:

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12 a move now fairly standard in work influenced by Heim & Kratzer (1998).
(49) Situation to be reported: John says: ‘I am a hero’.
   a. Amharic: Johni says that I am a hero.
   b. English: Johni says that he is a hero/*Johni says that I am a hero.

In the actual Amharic (50), the 1st person embedded pronoun (apparently incorporated into the embedded verb, whose suffix –ññ is glossed as “1s”, i.e. 1st person singular, highlighted below) is clearly evaluated with respect to the context of the reported rather than of the actual speech act, while in (51), the embedded object (highlighted) is 2nd person, again clearly intended to refer to the actual speaker qua addressee in the reported speech act:

(50) Situation reported: John says: ‘I am a hero’ (D. Petros, p.c. to Schlenker)

   jˇon  jˇ_gna  n_-ññ  y_l-all
   John  hero  be.PF-1SO  3M.say-AUX.3M
   ‘John says that he is a hero’

(51) m_n  amt’-ã  _nd-al-_-ññ  al-s_mma-hu-mm
    what  bring.IMPER-2M  COMP-say.PF-3M-1SO  NEG-hear.PF-1S-NEG
    ‘I didn’t hear what he told me to bring.’
    (lit. I didn’t hear that he said to me bring what.) (Leslau 1995, p. 779)

About these and other examples, Schlenker (2003:67-69) convincingly offers both syntactic and semantic arguments against taking the embedded clauses in such examples to be directly quoted. And he points out that “it is only in attitude reports that Amharic 1st and 2nd person pronouns can be shifted.” Without an embedding attitude verb, shifting is not possible. Finally, shifting seems to be optional in Amharic, so that the suffix –ññ embedded under an attitude predicate can either be anchored to the actual speaker or the reported agent. Hence, (50) can also be synonymous with the English John says that I am a hero.

Shifted indexicals are a problem for direct reference accounts like that of Kaplan, because his Character is insensitive to local context, in the sense defined above: For example, for I, no matter how deeply embedded under attitudes, it picks out the speaker in the global context of utterance. Take that speaker to be the agent of a certain attitude: that commitment to truth underlying what it is to assert, so that the Common Ground is the object of the interlocutors’ joint attitude (Yalcin, Stalnaker). Shifted indexicals show that we can shift to the agent of a reported attitude. But such a shift is what Kaplan (1977) called monstrous, and predicted could not occur in direct reference theory.

So far I know of at least fifteen otherwise unrelated languages in which, with minor variations, such shiftability is attested, with new ones reported regularly over the past decade (see §5.2 below), arguing that this is a very robust phenomenon. There are interesting differences between these languages, but all have counterparts of examples like (50) under verbs of saying. Some also shift 2nd person, for example under the language’s equivalent of ‘tell’, and some also shift locatives like here. The languages with documented shifted indexicals include Aghem (Hyman 1979), American Sign Language (ASL: Lillo-Martin 1995, Kouidobrova & Davidson 2014, Schlenker 2014), Amharic (Leslau 1995, Schlenker 2003), Gebärdensprache (DGS, a signed language: Hermann & Steinbach 2012; Hübl 2013), Japanese (Sudo 2012), Llengua de Signes
Lingua dei Segni Italiana (LSI: Zucchi 2004), Navaho (Speas 1999), Nez Perze (Deal 2013),
Most of these languages are unrelated to each other. And there are no doubt other languages with
shifted indexicals in which they have yet to be carefully studied, e.g. Tamil (B. Chandrasekaran,
p.c.). In Lecture V, we’ll return to a detailed investigation of the parameters of variation among
the shifted indexicals in these languages, and how they might be accommodated within the
approach to indexicality that I’ll propose.

Note that in such languages the anchoring of the pronoun to the global or local speaker is still
anaphoric in that the anchoring itself has no local effect. The possibility of such local anchoring
of indexical pronouns argues that we need to recognize the anaphoric, presuppositional nature
of indexical pronouns, and the (limited) way in which that anaphoric presupposition can be
locally, as opposed to globally, satisfied.

E. Evidence that indexicals always give rise to de se interpretations

There is a lively literature not normally associated with indexicality. This is the literature
concerned with what is known as de se interpretation (Casteneda 1966,1967,1968; Morgan 1970;
Lewis 1979b; Richard 1983; Perry 1993; Maier 2009; Ninan 2010, etc.). This phenomenon is
illustrated in the following story, a slight variation on one due to Morgan (1970):

(52) [Context: The baseball player Ernie Banks gets hit on the head and develops total
        amnesia. He doesn’t know his name or remember anything about his past, though he is
        lucid. During his long recuperation, he reads in the newspapers about a baseball player
        named Ernie Banks, and becomes fascinated with the guy’s career. His social worker
        reports to a nurse:]
            Ernie Banks thinks he is one of the greatest shortstops of all time.

Though Ernie Banks and he are coreferential, (52) need not attribute to Ernie Banks awareness
that he himself was a shortstop. In fact, it’s more consistent with the facts about his situation to
assume that he does not so self-attribute. But now suppose that Ernie is prescribed a new drug
and his memory completely returns. In such a case, utterance of the same sentence by the excited
social worker would likely be taken to implicate that Ernie does self-attribute baseball greatness;
this is the de se reading. Notice that the two interpretations are not truth conditionally equivalent:
In the context given in (52), the amnesiac, non-de se version is true, while the de se version is
false. So this ambiguity would appear to motivate a semantic distinction. But it seems clear that
in both interpretations the NPs Ernie Banks and he are coreferential; this shows that coreference
is not sufficient to guarantee the de se reading. Then the question is how that reading arises, and
how to model it in the semantics.

In the classical examples of de se interpretation, the truth conditional distinction we saw in (52)
is only apparent in attitude reports involving third person pronouns. But the problem also arises
with indexicals. Consider whether you think the nurse in (53) speaks truly:
(53) [spoken by the nurse in the context described in (52):] Ernie Banks believes the proposition he would express if he now said “I am one of the greatest shortstops of all time.”

(54) [Bank’s counterfactual utterance:] I am one of the greatest shortstops of all time.

Under reasonable assumptions about the semantics of direct quotation, direct reference predicts (53) to be true. This is because the Kaplanian semantics for *I* makes it denote the actual speaker in the speech situation reported—here, the counterfactual situation where Banks utters (54). All the indexical does on that account is pick out the speaker and make that entity be the denotation across all worlds, including the counterfactual worlds reported by the nurse. So (54) in that situation would mean ‘Ernie Banks is one of the greatest shortstops of all time’, something that the amnesiac does believe. But in the situation in (52), the amnesiac Banks could not truthfully utter (54). Wechsler (2010) (which we’ll discuss next lecture) has a hypothesis about why this should be: (54) involves self-ascription. To be truthful, (54) would have to mean that Banks regarded himself as one of the great shortstops.

Here is the technical explanation of the way this meaning arises in (53) on the Kaplanian account:

**direct speech report** \( \text{say}_q \): (modified from Potts 2007)

an utterance of the form \( \text{say}_q (\alpha, \text{“}[S \varphi]\text{”}) \) has two proffered implications:

- a speech act report: ‘the subject uttered the complement verbatim’
- an attitude report: ‘the subject sincerely proffered the meaning of what she uttered, as determined by its conventional content and the context c of the reported utterance’.

What is it to **sincerely proffer**?:

- S is declarative: proposes addition of the proposition denoted by \( \varphi \) in c to CG
- S is interrogative: poses the question denoted by \( \varphi \) in c for addition to QUD
- S is imperative: suggests the modal property denoted by \( \varphi \) in c, directed at the addressee, for addition to the relevant interlocutor’s ideals (goals for directive, wishes for desiderative, etc.)

Thus, e.g., sincerely proffering a declarative involves a commitment on the part of the speaker to the truth of the proposition denoted.

Spelling this out with the Kaplanian semantics for *I*:

- \( “[S \varphi]” \) denotes the conventional lexical content of \( “[S \varphi]” \), a triple including its phonological content, syntactic structure, and conventional semantic content, E.g.:
  
  \( “[S (54)]” = >\text{a\’em} \text{ do gre\’tas} j\text{gstap} >\text{greatest-shortstop(I)} : \text{t} \)
  
  - **utter**(\( e, \alpha, “[S \varphi]” \)) is true in a context c just in case \( e \) is an event of \( \alpha \) uttering PHON(\( “[S \varphi]” \)) at Time(\( c \)), in such a way (including prosody, gesture, etc.) as to convey SYN(\( “[S \varphi]” \)) and SEM(\( “[S \varphi]” \)).

- \( \text{mean}_n(\( e, \alpha, ||\text{SEM}( “[S \varphi]” )||c \)) \) is true in context c just in case \( e \) is an utterance (Grice 1957) by \( \alpha \) at Time(\( c \)) in which \( \alpha \) sincerely proffers to her interlocutors in c the semantic content of \( \varphi \) as interpreted in c. (See the attitude report associated with **say**, above, for all moods.)

- \( \text{say}_q(\alpha, “[S \varphi]” ) \) is true in a context c just in case there is an event \( e \) occurring in context \( c’ \), s.t. Speaker(\( c’ \)) = \( \alpha \), UtteranceTime(\( c’ \)) = the EventTime of \( e \), and
To determine the proposition Banks would express if he uttered (54) in counterfactual context $c'$:

\[\text{say}_q(EB, \lbrack \text{I am the greatest shortstop} \rbrack)\] is true in context $c'$ iff there is an event $e$ occurring in context $c'$, s.t. $\text{Speaker}(c') = EB$, $\text{Time}(c') = \text{ET}(e)$, &
\[\text{utter}(e, EB, \lbrack \text{I am the greatest shortstop} \rbrack)\] is true in context $c'$ &
\[\text{mean}_{nn}(e, EB, \lbrack \text{greatest-shortstop}(I) \rbrack)\] is true in context $c'$

where (by (54')):
\[\text{mean}_{nn}(e, EB, \lbrack \text{greatest-shortstop}(I) \rbrack)\] is true in context $c'$ iff \[\text{greatest-shortstop}(\text{Speaker}(c')) = \text{greatest-shortstop}(\text{EB})\]

(54') where $\text{Speaker}(c') = EB$: \[\text{greatest-shortstop}(I)\] = \[\text{greatest-shortstop}(\text{EB})\]

the proposition counterfactually expressed: ‘Ernie Banks is the greatest shortstop’

(53) asserts that Banks believes (54'). Even though (54') is interpreted in a counterfactual scenario, since the meaning of I in a direct quotation is determined by the reported context of utterance $c'$, its value will be ‘Ernie Banks’ in all possible worlds. Since we know from the scenario described that Banks does believe (54'), (53) is incorrectly predicted to be true.

What’s wrong?: Direct reference through Kaplanian Character fails to get at the de se character of indexicals. In uttering (54), Banks would self-locate as the great shortstop; and mere coreference does not suffice to capture this self-location.

A pragmatic fix?:

Kaplan (1977) has been aware of the problem for indirect speech reports all along; see extended discussion in his §XVII. I myself don’t know any discussion in the literature of examples like (53), involving direct quotation. But Egan (2009) has sketch an account for direct speech that one might take to be promising here.13

It goes something like this: For direct speech, the subjectivity associated with I can be explained by the pragmatics of what it is to utter I. A competent speaker, who knows the Character of I, in using it knows that it will directly refer to the actual speaker. Moreover, he knows that he is that speaker. Hence, he knows that in using I he self-ascribes whatever properties are predicated of that subject. Call this the Speech Act account of the self-ascriptive properties of I. One might attempt to somehow extend the speech-act based story for direct speech to account for direct quotation, something like this: Though Banks does believe that the singular proposition expressed by his utterance of (54) is true, if he actually uttered it, he would mean more than he said: the pragmatic self-ascription of a competent speaker would enrich that proposition, inappropriately in the case at hand, yielding an implausible counterfactual claim.

In a sense, I think that’s right. But the problem goes deeper.

\[\text{[utter}(e, \alpha, \lbrack S \varphi \rbrack)\][c'] = 1 & \text{[mean}_{nn}(e, \alpha, \lbrack \text{SEM}[S \varphi] \rbrack)[c'] = 1 \]

13 Per Egan (p.c.), this general view is prefigured in Kaplan (1977), Lewis (1975), and in Frank Jackson’s and David Chalmer’s two-dimensionalism, modulo terminological differences.
It seems that the shifted indexicals discussed above are not only a problem for direct reference anchored to the context of utterance; they share another feature that bears on the present discussion: In every one of these languages, shifted indexicals yield a *de se* interpretation, wherein the embedding agent self-ascribes the properties predicated of the indexical. Consider (55):

(55) Ernie Banks, told me that he, is one of the greatest shortstops of all time.

In the Amharic translation of (55) since 3rd person he, is coreferential with the embedding agent it may be replaced with 1st person singular –ññ. If so, this yields the *de se* interpretation (whereas (55) needn’t be *de se*). But in such an example, we cannot appeal to the pragmatics of uttering *I* as an explanation of the *de se* character of the report, for since (55) does not involve direct quotation its truth doesn’t actually entail that Ernie said *I*-ññ. If Ernie indicated to the nurse in any way that he self-ascribed the property of being the greatest shortstop, then this makes the report true. Moreover, in several languages, the embedding verbs are not all verbs of saying, but include the translation counterparts of other attitude predicates; these predicates include ‘think’ (Nez Perze, Slave, Uyghur), ‘want’ (Slave), ‘consider’ (Japanese), and other attitudes (American Sign Language (ASL), Gebärdensprache (DSG), a signed language spoken in Germany), and Llengua de Signes Catalana (LSC, the signed language of Catalonia). In none of those cases is an extended Speech Act account plausible. Nonetheless, the resulting attributions are always *de se*.

All of the researchers working on shifted indexical languages who have inquired into the matter to date have found that shifted indexicals always have a *de se* interpretation, with two minor exceptions to be noted below, neither of which involves the 1st person pronoun.

Of course, *de se* attributions only came to our attention in attitude attributions; it is only when embedded under an attitude predicate that the *de se* interpretation of even third person pronouns emerges. Thus, as we saw above, to bring out the *de se* character of the English indexical it was necessary to embed it as the directly quoted complement of a verb of saying. But the 1st person in that context only licensed the *de se* interpretation, unlike the 3rd person in the classic examples (like (52)) which give rise to a *de se*/non-*de se* ambiguity in the work of Lewis (1979b), Morgan (1970) and Perry (1979). Similarly, I will argue that it is no coincidence that the embedded, shifted indexicals always give rise to a *de se* interpretation. These indexical pronouns only have the *de se* reading because, like their non-shiftable cousins, they are inherently *de se* with respect to the anchoring agent, a feature not captured by the directly referential interpretation.

So, summarizing, there is good reason to think that the meaning of indexical *I* is *de se*, self-ascriptive, in a way that cannot be explained by a Speech Act account. And cross-linguistically it is not always directly referential to the speaker. How are we to capture this? The usual approach to the *de se*, since Quine (1956) and Lewis (1979), has been to model it in terms of centered worlds, and that is what I will propose here, eschewing direct reference for an account of indexicals in which they are anaphoric on a presupposed, self-ascriptive center in the context of utterance.
Next time we’ll consider further evidence that both the directly referential accounts and the simple presuppositional anaphoric accounts of 1st and 2nd person indexicals are not empirically adequate, in particular evidence that these indexicals can be bound. We’ll consider there a variety of examples that have been argued to include so-called “fake indexicals” (Kratzer 2009) and “imposters” (Collins & Postal 2014).

Selected references
[References for literature on shifted indexicals are on the course website.]

Ionin, Tania (2006) This is definitely specific: Specificity and definiteness in article systems. Natural Language Semantics 14:175-234.

Lewis, David (1979b) Attitudes *de dicto* and *de se*. *The Philosophical Review* 88.4:513-543.


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