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THE MULTIPLE USES OF INDEXICALS

1. INTRODUCTION: SOME CONTEMPORARY ASSUMPTIONS ABOUT INDEXICALS

Contemporary theories of indexicals assume that each indexical is used to refer to items of only one sort, e.g., that “now” is used to refer to the time of its utterance, “here” to the place of its utterance, and “I” to the person who utters it. Current theories also assume that each indexical always refers to different items (of the relevant sort) in relevantly different contexts of use; for example, it is assumed that “I” always refers to a different item when I use it than when you use it. These two assumptions, which I believe to be false, are based on a more fundamental assumption, that the rule governing the reference of an indexical remains constant from use to use. Contemporary theories hold that the reference of an indexical varies from use to (relevantly different) use, but that the reference-fixing rule of use is invariable. Let me adopt some current terminology to express this basic assumption. In David Kaplan’s terminology, the assumption is that the *content* of an indexical varies from use to (relevantly different) use, but that the *character* of the indexical is fixed. In John Perry’s terminology, the assumption is that the *object* of the indexical varies among uses but that the *role* of the indexical remains the same. In John Pollock’s terminology, the idea is that the *statemental designator* (sense) expressed by an indexical varies among uses, but the *meaning* of the indexical does not. My basic disagreement with these and other current theories concerns the character/role/meaning of an indexical; I hold that the character/role/meaning of an indexical *changes from use to (relevantly different) use*. Due to this variation, I will show, each indexical refers on relevantly different occasions to items of different sorts and refers on other relevantly different occasions to one and the same item.

The linguistic data I shall present in this paper to support my thesis that the reference-fixing rule of use of an indexical is variable also support the further thesis that indexicals are not only governed by

reference-fixing rules of use (characters/roles/meanings) but also by higher-order rules of use. The reference-fixing rule of use is a first-order rule of use in the sense that it directly determines *which referent* an indexical possesses on a given occasion of use. These first-order rules are themselves governed by a second-order rule of use, a rule that determines *which reference-fixing rule* governs the indexical on the occasion of use. I shall call this second-order rule of use a *rule-fixing rule of use* or a *metarule*. It is not the reference-fixing rule of use that remains constant from use to use, but the metarule. By remaining constant from context to context, the metarule (or “metacharacter”) is able to determine which reference-fixing rule (character) governs the indexical in each context.

These ideas will obtain clarification and substantiation in terms of the linguistic data presented in the following sections. In Section 2–4 I apply these ideas to the uses of “now”, “here” and “I”, and in Section 5 I show the rule/metarule distinction has implications for some current controversies about the reference of indexicals (e.g., the controversy about whether they refer “directly” or “indirectly” via a sense).

But first a word is needed about the range of data I shall present in Sections 2–4. The data shall consist only of instances in which words like “now”, “here”, and “I” are used indexically, and will exclude such uses as the following four:

- (a) The use of words like “now” and “here” as pure nouns rather than as pronouns or adverbs and the use of words like “I” as pure nouns rather than as pronouns. Examples are “Nature contains an objective now but not an objective here”, and “The later Fichte believed that the I is God”.
- (b) The use of indexical words in quotes, as in the sentence “‘Now’ in its adverbial use frequently refers to an item of a nontemporal sort”.
- (c) The use of indexical words as links in an anaphoric chain, as in “The regiment arrived at the banks of the river, and here it will make its stand”.
- (d) The use of these words as variables of quantification, as in “each here is related to a yonder”.

Conditions (a)–(d) provide a negative means of distinguishing indexical from nonindexical uses of “now”, “here” and “I”. In Section 5

I will be in a position to offer a positive definition of an indexical use of these words.

2. THE MULTIPLE USES OF THE SO-CALLED "TEMPORAL INDEXICALS"

The so-called "temporal indexicals" include tensed copulae (e.g., "is", "was", "will be") and temporal adverbs and pronouns (e.g., "formerly", "at present", "now").¹ It is standardly assumed that present tensed sentences (e.g., "He is running", "He is running now") are determined by their tense to refer to present events on each occasion of their use, that past tensed sentences are determined by their tense to refer to past events on each occasion of their use, and likewise for future tensed sentences. But I do not want to phrase this assumption in a way that might seem to apply only to tenses (philosophers who believe that events have monadic properties of presentness, pastness or futurity). Let me say more broadly that the assumption is that present tensed sentences are governed invariably by the rule (character/role/meaning) that they refer to *events that are present* or to *events that are simultaneous with the utterance of the sentences* or to *events that occur on the date of the sentences' utterance*; the same holds *mutatis mutandis* for past and future tensed sentences.

It is also maintained by writers on "temporal indexicals" that present tensed sentences refer to a different time on each successive occasion of their use; for example, it is assumed that "he is running" as uttered at t_0 refers to t_0 and that "he is running" as uttered at t_1 refers to t_1 .

The following quotations serve to indicate the different forms these two assumptions have taken in contemporary theories. I shall quote for the most part statements to the effect that present tensed locutions refer to the time of their use, since it immediately and obviously follows from this that each present tensed locution refers to a different time at each different time it is used. Analogous theses about future and past tensed locutions are also clearly implicit in these quotations.²

Steven Boer and William Lycan: "... a token of 'now' always refers to the moment of its utterance".

Donald Davidson: "'I am tired' is true as (potentially) spoken by p at t if and only if p is tired at t ."

David Lewis: "... 'present' refers at any time t to the time t ."

John Perry: "When we understand a word like 'today', what we seem to know is a rule taking us from an occasion of utterance to a certain object. 'Today' takes us to the very day of utterance, 'yesterday' to the day before the day of utterance."

A. N. Prior: "The essential point about the idiomatic 'now' is that however oblique the context in which it occurs, the time it indicates is the time of utterance of the whole sentence."

These and other writers on "temporal indexicals" are mistaken for the same reason: present tensed locutions are not only used to refer to the time at which they are used but also (on different use-occasions) to times earlier than their time of use, times later than their time of use, imaginary times, and nontemporal items.

I will in the following pages present four sorts of examples to buttress these claims, but first it is necessary to say something about my use of the phrase "present tensed locutions". I am not of course using this phrase to denote sentences or indexicals all the tokens of which refer to the time of their use, for if I were the thesis I am advocating would be self-contradictory. If "present tensed locutions" had this denotation my thesis would instead have to be formulated as the claim that *no* sentences or indexicals are present tensed. I am instead using "present tensed locutions" to refer to the copulae "is", "am", "are" and the like and the adverbs or pronouns "now", "presently", "together" and the like in their indexical uses. I am also using the phrase "present tensed locutions" to refer to the sentences containing these indexically functioning copulae, adverbs and pronouns, such as "it is happening now", "the sun is setting", "I am leaving", "Today is Saturday", and "The births are presently taking place". It is characteristic of such indexicals and sentences that they are frequently used to refer to the time of their utterance; indeed, there are no indexicals or sentences that are more often used to refer to the present time than these. My thesis is that they also have four other established uses. After describing these four other uses, I will make a distinction between the varying reference-fixing rules that govern these indexicals and the constant metarule that governs their reference-fixing rules.

(i) *The Use of Present Tensed Locutions to Refer to Past Times*

Suppose a lecture is being given about Napoleon's invasion of Russia and the lecturer narrates in an emphatic tone the sequence of events:

“Napoleon’s troops are now advancing. The border populations are fleeing, and the Czar hurriedly calls in his ministers. What will happen next? Do you know?” These present and future tensed sentences are used to refer to a past time, a time over 173 years earlier than the time of utterance of the sentences.

It might be objected that the sequences make sense only if “now” in the first sentence is a link in an anaphoric chain that extends before this sentence. The lecturer must have said, the objection goes, something like “it is May, 1812” just before he uttered “Napoleon’s troops are now advancing”, and “now” acquires its reference from being linked to this earlier sentence.

There are two responses to this objection. First, there is no need to assume that his utterance is preceded by some utterance describing the date of the advance. The students might be familiar with the date of the advance from their assigned readings or from preceding lectures, or they might have only a vague understanding that it is at some time in the past. The lecturer presupposes some background knowledge of the time of the advance, but this presupposition does not require this knowledge to be stated or expressed in an anaphoric chain including his utterance. Indeed, one can easily imagine the lecturer beginning his lecture with “Napoleon’s troops are now advancing”.

Second, even if the lecturer did precede his utterance by an utterance of “It is May, 1812”, that would still count as a confirmation of my thesis, for the latter sentence is itself a present tensed sentence that is used to refer to a past time. (He could not have uttered “It was May, 1812”, for “Napoleon’s troops are now advancing” does not follow from *that* sentence.)

Is the lecturer using “now” to refer to a past time and *pretending* it to be the time of utterance? Sometimes “now” is used to refer to the past in such “make-believe” sentences but there is no compelling reason to think this is the lecturer’s intention. Perhaps if the lecturer were dramatically excited by his topic and did more to imaginatively recreate the original scenes for the students it would be plausible to ascribe this intention to him. It is more plausible to think the lecturer is using “now” in the *historically emphatic* sense, i.e. to pick out (without describing) a historical time that he believes especially important and to which he wishes to call attention. He is using “now” to refer to the historical time that he wishes his audience to take as their chronological point of reference and in relation to which they should

situate the historical events to which he refers. The chronological *description* of this past time (“May, 1812”) is not what is important for his present purpose; rather, it is the temporal relations (of simultaneity, earlier or later) of this past time to the indicated events that is important. Napoleon’s troops are advancing *at this time*, and *simultaneously* the border populations are fleeing and the Czar calls in his ministers. What will happen next – immediately *later* than this time? This example illustrates a use of “now” that is not governed by the character or reference-fixing rule that it refers to the time of its utterance, but is instead governed by the rule that it refers to the historical time the speaker wishes to emphasize and take as his chronological point of reference.

(ii) *The Use of Present Tensed Locutions to Refer to Future Times*

A radio program is taped on January 26 and is intended to be broadcast on January 27. On January 26 the radio announcer says “Today is January 27”, and thereby performs a true utterance. But how could he, if Perry’s rule that “today” takes us to the day of its utterance invariably governs the usage of this word? In fact, Perry’s rule governs only some uses of this word. The announcer’s utterance is true because in the context of his utterance Perry’s rule is inapplicable and instead another rule is applicable, viz., that “today” takes us to the day *the reproductions of the utterance are heard by the audience*.

Consider an analogous example. John wishes to tape a phone message for the people who will call him that night. He tapes the message, “I am not at home now, but will be back in the morning”. If A. N. Prior is right that “now” always refers to “the time of utterance of the whole sentence” then John’s utterance has the truth-value of false, for John is at home when he tapes the message. But in fact John’s utterance is true, since he is not at home when the reproductions of his utterance are heard by his callers. His utterance of “now” refers to a future time, a time that is several hours later than “the time of utterance of the whole sentence”.³

It might be objected that although the reproductions of the original tokens of “Today is January 27” and “I am not at home now” are true, the original tokens themselves are false, and therefore are not examples of tokens of present tensed locutions that refer to future times. I reply that a consideration of the context of utterance, which

includes the speaker's intentions, show that the original tokens do refer to future times and are true. When John taped his message, he did not *mean* by "I am not at home now" that he was not at home then, when he was taping the message. Rather he meant that he will not be at home at the future time when the reproductions of his token are heard by his callers. We might say that he uttered the sentence "I am not at home now" to express the proposition *that I am not at home at the times when the reproductions of this token are heard*. If this proposition has the truth value of true (and it does if and only if he is not at home at these times), then his original utterance has the value of true, for utterances are true if and only if the propositions they express are true.

The example of the radio announcer also supports my claim, which can be clearly seen if we elaborate upon it a bit. Suppose the radio program has originally been scheduled to be broadcast on February 1st, but at the last minute had been rescheduled for January 27. The announcer, David, is unaware of this change, and begins the first taping (on January 26) by saying, "Today is February 1". The director jumps up: "Stop! David, what you just said is wrong; the broadcast is on *the 27th*, not the 1st". The director is here pointing out that David's utterance is in error since it does not refer to the correct *future* time. The taping begins again and David utters, "Today is January 27". "*That's right*" the director says to his assistant, meaning that what David said correctly referred to the future day of the broadcast. If somebody insisted that David's second utterance was nevertheless mistaken since the day of his utterance is not January 27, the director and everybody else present would look at him dumbfounded. "But David didn't mean that the day of his utterance is January 27", they might reply; "what he meant was that the day of the broadcast of his utterance is January 27". The correct paraphrase of David's utterance is "Today – the day the reproductions of this utterance are being heard – is January 27".

It is worthwhile pausing at this juncture to observe that our results so far make it evident that the second assumption I am concerned to criticize is false; this second assumption is that if I utter "now" or some other present tensed locution to denote a certain time, then (in Richard Gale's words) "my next utterance of 'now' will denote a different time".⁴ But imagine that David tapes one version of the April 1 program on March 12 and a second version on March 13, and

that at each taping he begins by saying “Today is April 1”. Each of his successive utterances of this sentence refer to the same time, the day the broadcast is to be heard. The same applies if we suppose John erased his first utterance of “I am not at home now” and taped a second utterance of this sentence a few minutes later – both utterances refer to the same future time, the time he expects his message to be heard. And our history professor utters “Napoleon’s troops are now advancing” on two successive days to his two different classes, and refers to the same time with each utterance – to May, 1812. The idea that “now” can refer to the same time at two different times of utterance also follows from the fact that “now” can obey different reference-fixing rules of use at these different times of utterance. An observer of Napoleon’s advancing troops in May, 1812 may utter “Napoleon’s troops are now advancing”, using “now” to refer to the time of his utterance, May, 1812; the history professor’s use of “now” in this same sentence over 173 years later refers to the same time because his use obeys a different rule, the historically emphatic rule.

(iii) *The Use of Present Tensed Locutions to Refer to Imaginary Times*

Castañeda has noted⁵ that “now” is sometimes used in dreams to refer to an unreal time. “Now” and other present tensed locutions are also used by characters in fiction to refer to imaginary times, and by real people who are playing these characters. But these are not the uses I have in mind here. I am thinking of actual utterances by actual people in their waking life, utterances by people who are not playing the role of some imaginary character. That is, I have in mind utterances of the sort that contemporary writers believe always refer to actual present times. Suppose I am watching a ballet about events that are treated as present in the imaginary time of the ballet. But at one point there is a “flashback episode” to a past time. I become confused and ask my companion, “Is this happening now?” “No, several years ago” she replies. In this instance, “now” and “ago” are actually uttered by actual people who are not playing a fictional role – and yet they refer to imaginary times nonetheless. And they are not used anaphorically rather than indexically; they are not links in an anaphoric chain that stems from the ballet since no words are spoken in the ballet.

(iv) *The Use of Present Tensed Locutions to Refer to Nontemporal Items*

Adverbs like “now” and “at present” are frequently used to refer to items that are not times, real or imaginary. In the course of writing an article I inscribe the sentence “Now I am going to prove the bundle theory of objects is false”. “Now” is used as an adverb of “going to prove” but it is not used to indicate the time at which I am going to prove the theory false. Rather, it is used to indicate the point in my argument at which I am going to undertake the proof. That “now” means in this use “at this point in my argument” and not “at this time” is evinced by the fact that after inscribing this sentence I could put down my pen and return to writing out the proof a week later, without falsifying the inscription. *When* I write out the proof is irrelevant to whether the inscription is true or false. It is false only if I do not offer this proof *at this place in my argument*; suppose that immediately after writing this sentence I *do* write out the proof, but at a different place in my argument, say at a place three sections earlier. The inscription then is false despite the fact that I am writing out the proof (approximately) at the time the inscription is made.

Tensed copulae also have nontemporal uses, e.g., in “Theorem 1 has been proved, I will prove Theorem 3, and I am in the middle of proving Theorem 2”. Observe that such nontemporal uses of tensed copulae are to be distinguished from the nontemporal uses of *tenseless* copulae, as in “Red is a color”. Tenseless copulae are not indexicals, but function merely as signs of predication, identity or class-inclusion. But the “is” in “My thesis is now going to be proved” or the “am” in “I am in the middle of proving Theorem 2” is not a tenseless sign of predication; these copulae function predicatively but *also* in a present tensed indexical manner to refer to *the logical place in the argument at which these assertions occur*. If I inscribe either one of these sentences at a different place in my argument, the “is” or “am” would indexically refer to this different place. This shows that the “is” and “am” have the indexical property of being dependent for their reference upon the context of their use.

Consider in addition that these same sentences can be used in a different context to refer to a time. For example, suppose a scholar Edwards is at a meeting and is patiently waiting for a more proficient scholar Jones to take the floor and prove Edwards’ thesis. Finally,

Jones is ready to take the floor and Edwards announces to the audience, "The moment I have been waiting for has finally arrived. My thesis is now going to be proved". The context determines this utterance to refer to the (approximate) time of utterance rather than to a logical place in an argument.

Examples of nontemporal uses of tensed copulae and adverbs like "now" are plentiful, and explain why I talk of *the so-called "temporal indexicals"*, rather than simply of the temporal indexicals. These words are frequently indexically used to refer to items of a nontemporal sort and therefore it is misleading to call them *temporal indexicals*.

The data regarding these present tense indexicals exhibited in Subsections (i)–(iv) show these indexicals do not have an invariable character, role or meaning. In some instances they are governed by the reference-fixing rule that they refer to the time of their tokening, in other instances they obey the reference-fixing rule that they refer to an earlier time, in still others that they refer to a later time, in others to an imaginary time, and in still others to a nontemporal item such as the point in the argument at which they are tokened. This variation of the reference-fixing rules of present tense indexicals suggests that these rules are themselves governed by a second order rule of use, a rule that determines which of these reference-fixing rules the indexical obeys on a given occasion of use. This second order rule or metarule remains constant from use to use. The metarule in schematic form is that present tense indexicals are governed by the reference-fixing rule R_1 in contexts of the sort S_1 , by the reference-fixing rule R_2 in contexts of the sort S_2 , by R_3 in S_3 , and so on. This schema is filled in by specifying the sorts of contexts and the reference-fixing rules. A context consists of two main aspects, (a) the publically discernible features of the communication situation and (b) the speaker's/writer's intentional reference. The publically discernible features include stress and intonation (or italics, exclamation marks, etc.), whom the speaker is looking at or pointing to, which item is salient (in Lewis's and Wettstein's sense⁶), the time and place of the communication, the speaker or writer, the audience, the segment of discourse that precedes the tokening, and the like. The speaker's/writer's reference is a psychological rather than a semantic phenomenon and should be distinguished from the semantic reference of the locution the speaker/writer is tokening. The speaker's/writer's referent (what she

has in mind or is intentionally referring to in connection with her tokening of the locution) usually is the same item as the semantic referent of her token of the locution but in exceptional cases may be different. In these exceptional cases the publically accessible features of the communication situation override the speaker's/writer's reference in the determination of the semantic reference of the token.⁷ The publically accessible features of the communication situation and the speaker's/writer's reference together form the context of the tokening of an indexical, such that this context along with the relevant reference-fixing rule determine the token's semantic reference. The metarule does not delimit contexts but sorts of contexts, such that for each sort of context delimited a corresponding reference-fixing rule is also delimited. One sort of context is a *historical context*, exemplified by the professor's lecture on Napoleon's invasion of Russia. The metarule pertinent to "now" specifies that if "now" is tokened in a historical context, it is governed by the reference-fixing rule R₁:

- (R₁) "Now" refers to the historical time the context indicates the speaker/writer wishes to emphasize and take as the chronological point of reference of the events reported in the other relevant portions of the discourse.

The metarule specifying the reference-fixing rules of "now" also specifies that in contexts involving the relevant sort of *time-lag communication* "now" is governed by the reference-fixing rule R₂:

- (R₂) "Now" refers to the time(s) later than the time of tokening that the context indicates the speaker/writer intends the communication to be heard or read.

In *theatrical audience contexts*, where the tokener is a member of the audience of a play, ballet or opera and is referring to the play, etc., that is being performed, his token of "now" obeys the rule R₃:

- (R₃) "Now" refers to the imaginary time that is treated as the present time in the story.

A nontemporal context is a very general sort of context and includes several subsorts. One of these subsorts is a *theoretical context* in which an argument is being presented. In such contexts, "now" is governed by R₄:

- (R₄) “Now” refers to the point in the argument at which it is tokened.

An example of another sort of nontemporal context is a *musical context*; if I utter while rehearsing a symphony “Now is when the tubas come in”, my utterance is governed by the reference-fixing rule.

- (R₅) “Now” refers to the point in the musical composition at which it is tokened.

Rules R₁–R₅ are among the reference-fixing rules possessed by “now” in addition to its standardly recognized rule of referring to the time of its tokening. The fact that each of these rules and the corresponding sort of context are delimited by the metarule implies that the metarule is considerably complex. This need not daunt us, however, for the mastery of this metarule by a language-user does not require the user to be able to explicitly formulate or verbalize this metarule. Clearly we do not “run through in our minds” this metarule on each occasion that “now” is used. Rather, this metarule is implicitly comprehended and its comprehension is normally evinced by our ability to determine correctly which reference-fixing rule governs “now” on any particular occasion of use, a determination that is itself evinced by our grasp of the referent of “now” on that occasion.

The metarule pertinent to “now” does not involve an arbitrary collection of reference-fixing rules and sorts of contexts. Rather, there is a common theme running through the sorts of contexts and reference-fixing rules; each sort of context essentially involves a *sequence of items* and each reference-fixing rule is a rule for picking out *an item in the sequence*. The contexts involving historical time, future time, present time or imaginary time involve real or imaginary *temporal sequences* (times ordered by earlier/later relations); the contexts involving theoretical arguments involve *logical sequences* (propositions ordered by inferential relations); musical contexts involve *musical sequences* (notes ordered by the relation *played after*). Each such sequence is ordered by asymmetrical and transitive relations and possesses “connectivity” in Russell’s sense.⁸ But the “now”-contexts cannot involve just any sort of sequence. The sequence must be one in which the writer/speaker is *situated* in a pertinent sense. He is situated in a real temporal sequence in the sense that he himself or his states are terms of temporal relations; he is situated in an imaginary temporal sequence of the relevant sort in the sense that he is part of

the audience that is witnessing the theatrical depiction of this sequence; he is situated in a logical sequence in the sense that he is in the process of expressing it orally or in writing; and he is situated in a musical sequence in the sense that he is performing it or reading it from the score. Each of the reference-fixing rules is a rule for picking out a certain item in the sequence in which the speaker/writer is situated. Some of the rules (e.g., R_3 , R_4 , and R_5) specify that the item picked out is the one *at which* the speaker/writer is situated on the occasion of tokening, but other of the rules (e.g., R_1 and R_2) specify that the item is *elsewhere* in the sequence, and is picked out primarily by contextual features other than the current situational location of the speaker/writer.

Further analyses of the sorts of contexts, reference-fixing rules and metarule pertinent to “now” are possible, but at this point the general theses I am advancing can best be further illuminated and substantiated by parallel examinations of the so-called “spatial indexicals” and “personal indexicals”.

3. THE MULTIPLE USES OF THE SO-CALLED “SPATIAL INDEXICALS”

The so-called “spatial indexicals” include “here”, “there”, “over yonder”, and the like. The most widely discussed one is “here”, which is held to refer to a place occupied by and/or perceptually apparent to the speaker. A few quotes will illustrate the semantic rules believed to govern its use:⁹

Roderick Chisholm: “‘Here’ and ‘the place where I am’ have the same speaker’s meaning”.

Nelson Goodman: “Some spatial indicators like the ‘here’ name the regions they lie in”.

David Mellor: “. . . for any place X tokens of ‘ X is here’ are true if and only if they are at X ”.

Bertrand Russell: “‘Here’ is where my body is”.

John Searle: “. . . ‘here’ refers to the place of the utterance of the expression”.

Analogous positions are adopted by other writers on the “spatial indexicals”.

It is true that in some instances “here” is governed by the rule that it refers to a perceived space or the place where my body is or a spatial region in which the token of “here” lies. But “here” is also governed by other reference-fixing rules.

(i) *The Use of "Here" to Denote an Unperceived Place Where the Speaker is not Located*

"They are here" I say while pointing at New York City on the map. But I do not mean that they are where I am, or that they are in a spatial field I am perceiving or in which my utterance of "They are here" lies. For I am now in Charleston.

Examples of this sort call into question two further theses about 'here'. Russell shares with others the maxim that "what I call 'here' is of necessity different from what anybody else calls 'here'".¹⁰ However, my companion simultaneously with my utterance points at New York City on the same map I am using and says "they are here". What he calls "here" is exactly what I call "here". It cannot be said that our utterances of "They are here" denote the same place because we occupy (approximately) the same place. Imagine that my companion is in Miami and points at New York City on his map and says "They are here". His utterance denotes the same place that my utterance denotes, viz., New York City, despite the fact that we are hundreds of miles apart.

A second commonly accepted thesis about 'here' is stated by Gale, that "my next utterance of 'here' will not denote a different place unless I move about".¹¹ But I can stand still and successively point to different places on a map, and say "Alan is here". "Jane is here". "Bertha is here". In each case "here" will denote a different place. It might be objected that my acts of pointing or even the shifting of my eyeballs counts as "moving about". Suppose then that somebody is successively placing photos of different cities before me; I utter (without pointing) "Alan is here" when New York is shown, "Jane is here" when Detroit is shown, and so on, while keeping my eyes fixed on the same spot before me where the photos are successively placed.

(ii) *The Use of "Here" to Refer to Imaginary Places*

We are listening to Jane reading a novel about an imaginary place that is the homeland of the characters. At one point you become confused about whether the protagonist is still living in his homeland or whether he has gone overseas to a foreign land. "Has he gone there yet?" you ask. "No, he is still here" I answer, referring to the imaginary homeland. In this instance, "here" not only fails to refer to the place

where I am or that I am perceiving; it also fails to refer to a real place anywhere. But I am not pretending to be a fictional character who is using “here” to denote an imaginary place where he is located. It is not even the case that I am pretending to be located at the place to which my utterance of “here” refers. My usage of “here” is an actual and sincere indexical usage, a usage the context of which determines the referent to be an imaginary place.

(iii) *The Use of “Here” to Refer to Nonspatial Items*

“I will stop here” is sometimes used to indicate that I will cease my motion at the place I am presently occupying. But on other occasions it is used to indicate that I will cease my lecture with these words, or that I will stop reading my book at this passage, or that I will stop playing the music at these bars. (This latter example shows that “here” and “now” in some uses can refer to the very same item – a point in a musical composition.) In none of the above described instances does “here” refer to a spatial region, and consequently the semantic rule that underlies the various definitions quoted above, the rule that “here” refers to a place or region of space, is violated in each of these instances. For this reason, the “spatial indexicals” are merely so-called “spatial indexicals”.

The metarule governing the reference-fixing rules of “here” specifies that “here” is governed by a certain reference-fixing rule R in a context of the sort S. For instance, it specifies in part that if “here” is uttered in a *map-reading context*, it is governed by the reference-fixing rule

- (R₆) “Here” refers to the place represented in the map at which the speaker is pointing.

And it specifies that if “here” is uttered in a *musical context*, it is governed by the rule

- (R₇) “Here” refers to the point in the musical composition at which it is uttered.

Formulations of this kind are easily extended to the other sorts of contexts and reference-fixing rules pertinent to “here”.

The sorts of contexts need not involve sequences; certainly a map or the whole of real space are not sequences of items ordered by

asymmetrical and transitive spatial relations. Space does not have an intrinsic direction. But each sort of context does essentially involve a *concatenation of items* that are related by symmetrical relations of *being next to* and in which the speaker/writer is situated in a relevant sense. The *being next to* relation need not be a spatial relation; for example, in a musical composition one note is next to another if it is played immediately before or after the other. And some concatenations, such as musical compositions, are also sequences, but others, such as the concatenation of volumes that comprise the whole of real space, are not. "Here" is used to pick out a certain item in the concatenation, an item at which the speaker/writer is situated in a relevant sense or at which she is pointing.

4. THE MULTIPLE USES OF THE SO-CALLED "PERSONAL INDEXICALS"

These indexicals include "I", "me", "myself", "he", "she", "they", "you", and others. These words allegedly refer to the speaker ("I"), the addressee ("you"), a male ("he"), etc., on each occasion of their indexical use. The following quotes indicate the commonly accepted beliefs about the reference of "I".¹²

Jon Barwise and John Perry: "Let us begin with the word 'I'. A reasonable thing to say about this expression is that, when it is used by a speaker of English, it stands for, or designates, that person. We think that this is all there is to know about the meaning of 'I' in English".

David Kaplan: "In each of its utterances, 'I' refers to the person who utters it".

John Pollock: "One can only use 'I' to knowingly refer to oneself".

Hans Reichenbach: "... the word 'I' means the same as 'the person who utters this token'".

Howard Wettstein: "... 'I' always refers to the utterer".

But the use of "I" to refer to the speaker is only one of the many indexical uses of this word.

(i) *The Use of "I" to Refer to Someone Other than the Speaker*

"I am in last place" is often used to indicate that the speaker is in last place. But this sentence is also used on a number of occasions to indicate that somebody else is in last place. I am watching a race and the person upon whom I have bet, No. 10, drops to the last place. "I

am in last place!" I exclaim in anguish to my companion. My companion knows perfectly well what I mean – that *the person upon whom I have bet* is in last place. Indeed, she replies in kind, disagreeing with my statement. "No you aren't! Look!" she exclaims, pointing at No. 10, "You are passing No. 3!"

This example also shows how two people can use "I" indexically to refer to the same person. Suppose you also have bet on No. 10, and you also exclaim "I am in last place!" as No. 10 drops into last place. In this instance, both of us are referring to the same person by uttering "I am in last place!" Examples like this show that David Kaplan (and others) cannot be right that it is a semantic rule that "if you and I both say 'I' we refer to different persons".¹³ They support my claim, in the Introduction, that it is false that "I" always refers to a different item when I use it than when you use it.

These examples also cast doubt on two theses about "I" enunciated by Castaneda: "A correct use of 'I' cannot fail to refer to the entity it purports to refer; moreover, a correct use of 'I' cannot fail to pick up the category of the entity to which it is meant to refer".¹⁴ But suppose that I see a runner drop into last place and, thinking it is No. 10, exclaim "I am in last place!". In fact, it is No. 12 that has dropped into last place. Moreover, unbeknownst to me, there is no runner No. 10; I was swindled when I placed my bet. Consequently, when I utter "I am in last place!" I intend to refer to No. 10 by using "I", but I fail to refer to him since there is no No. 10.

"I" also can fail to relate to the category of the item to which the speaker intends it to relate. Imagine that No. 10 is running the race and drops into last place, but that he is not a person but a cleverly disguised robot. In this case, I intend to refer to an item in the category of persons by uttering "I am in last place!" but fail to do so.

(ii) *The Use of "I" to Refer to a Group of People*

Logically implicit in the assumption that "I" always refers to the speaker is the assumption that "I" always refers to *one* person. However, there are many I-sentences that are used on some occasions to refer to a group of people. Suppose General Longstreet asks General Jackson where Jackson's army is. Jackson points to West Wood on the map and says, "I am right here". But when he says this, Jackson is not in West Wood but in East Wood. Nevertheless, his

utterance is true since he was not using "I" to refer to himself but to his army. He meant: *my army is right here*.

For another example, imagine that an owner of a baseball team that is located in Chicago lives in California, and is introduced to another owner at a meeting in California. "Where are you located?" the second owner asks, meaning *where is your team located?* "I am located in Chicago", the first responds. His answer is truthful since he is not using "I" to refer to himself but to his baseball team.

Such examples deflate not only dogmas about "I" but also theories that rest on dogmas about "I". Perhaps the most widely accepted philosophical thesis about the semantic rules governing some particular sentence is the thesis about the rules governing "I exist" or "I do not exist". It is taken to be self-evident that "I exist" *is true whenever uttered* and that "I do not exist" *is false whenever uttered*. But this thesis succumbs to several counterexamples. Regiment commander Wilson has just learned that his regiment has been decimated in battle. His superior, Bernstein, has heard rumors to this effect and asks Wilson, "Are you still operational?" Wilson replies, "No. I do not exist". His utterance is true, for it is used to convey the information that his regiment does not exist. Now imagine that Wilson is immediately handed a telegram saying that the former reports were inaccurate and that a surviving segment of his regiment has been discovered. "I still exist!" he exclaims when he reads it, but unbeknownst to him the telegram is mistaken and his utterance false.

(iii) *The Use of "I" to Refer to an Imaginary Person*

"She looks just like you" Bob informs Jane as a picturesquely drawn character representing an imaginary person appears on the television screen. Jane laughs and the interchange continues. "Hey, where did you go?" Bob asks as the character disappears from the screen. "I left for a moment, but I will be back" Jane replies.

Note that it is not necessary to understand Jane's usage of "I" as a *fictional* use. She need not be pretending to be the imaginary person in order to refer to this person by uttering "I". Instead, she can be using "I" to mean *the imaginary person whom you think I look like*. Indeed, this seems to be the intended meaning, given the context of usage. Accordingly, we have a nonfictional use of "I" whose referent is determined by the context to be an imaginary person.

(iv) *The Use of "I" to Refer to Impersonal Items*

This usage of "I" was first noted by William F. Vallicella,¹⁵ who seems to have been the first philosopher to have recognized that the dogma that "I" always refers to the speaker is unsound. Vallicella's examples are "I am out of gas" and "I am out of ammunition", which refer respectively to a car and gun. The first sentence means *my car is out of gas* and the second *my gun is out of ammunition*.

It is instructive to compare sentences of this sort with the I-sentences discussed in the preceding three subsections. Whereas the I-sentences previously discussed can be used either to refer to the speaker or to refer to something else, I-sentences like "I am out of gas" can only be used (literally¹⁶) to refer to something other than the speaker. This is because the predicates of these sentences are applicable only to items of an impersonal sort; only machines can be literally out of gas and only guns can be literally out of ammunition. The truth conditions of first person sentences with impersonal predicates include the condition that these sentences are true *only if* the first person pronoun refers to something other than a person.

It might be objected that "I" is being used metaphorically to refer to the car in "I am out of gas" and therefore does not count as a distinct literal use of this word. But this objection is counterintuitive. If "I" were being used metaphorically it would have roughly the same import as a simile that literally refers to the car. But "This car, which is like myself (in some respect R), is out of gas" clearly does not capture the import of "I am out of gas". The speaker has no intention of drawing attention to a similarity between himself and his car and the gas station attendant certainly does not understand him in this way. The speaker draws attention to himself only as *the driver* of the car; he is intending to convey merely that *his* car – the one he is driving – is out of gas. He is using "I" literally to refer to *his car*.

The metarule pertinent to "I" specifies in schematic form that "I" obeys the reference-fixing rule R in a context of the sort S. In *impersonal contexts*, where (among other relevant factors) the predicate of "I" is an impersonal predicate, "I" obeys the rule

- (R₈) "I" refers to the salient impersonal object owned or used by the tokenner.

In *group-contexts*, where (among other relevant factors) the con-

versation is about groups of people owned or commanded or in some way intimately associated with the tokener, and the tokener uses an "I"-sentence with a predicate that applies to that group (or at least could apply to it), "I" obeys the rule

- (R₉) "I" refers to the salient group of people owned, commanded, of intimately associated in some other way with the tokener.

The metarule governing these and other reference-fixing rules of "I" does not admit of just any reference-fixing rule but only those allowing *the tokener or an adoptee of the tokener as a referent*. Something *x* is "adopted" by the tokener (in my technical sense) if and only if the tokener can truly say of *x* "*x* is mine" and can refer to *x* in sentences beginning with "my *x*". Jackson's army is Jackson's adoptee since he can say with truth "the army is mine" and can talk of "my army"; likewise, if I adopt the runner No. 10 or the car I can talk truthfully of "my runner" or "my car". There are various ways in which the tokener can adopt something; he adopts the army by commanding it; he adopts the car by driving it; and he adopts the runner by placing a bet on him. By virtue of this adoption, the item in question becomes *his* and he can refer to it either by using the expression "my so-and-so" or by using "I" in one of its adoptee-uses.

The distinction I have drawn in this section and the past two sections between the reference-fixing rules of an indexical and the metarule have implications for some current debates about indexicals. A discussion of these implications will provide a fitting way to bring the argument of this paper to a conclusion.

5. CONCLUSION: SOME IMPLICATIONS OF THE RULE/METARULE DISTINCTION FOR THE THEORY OF INDEXICALS

The rule/metarule distinction has ramifications in every area of the theory of indexicals. These include the issues of the directness/indirectness of the reference of indexicals, the rigidity/nonrigidity of their reference, the distinction between demonstratives and pure indexicals, and the general definition of an indexical.

(i) *The Distinction Between Direct and Indirect Reference*

Roughly speaking, a token of an indexical directly refers if its referent is a part of the proposition expressed by the sentence-token of which the indexical-token is a part. A token of an indexical indirectly refers if it expresses a sense such that its sense but not its referent is a part of the proposition expressed by the sentence-token of which the indexical-token is a part. A major debate today is whether indexicals directly refer or whether they indirectly refer. Both parties in this debate share a common assumption:

- (A) Either all uses of each indexical directly refer or all uses of each indexical indirectly refer.

Assumption (A) is false since the metarule for each indexical specifies that some of the reference-fixing rules fix the reference as direct and others fix the reference as indirect. A number of examples support this claim, but I will here offer only two. The metarule governing the reference-fixing rules of “now” specifies that if “now” is used as a part of a taped message that is intended to be played back at numerous discontinuous future times, none of which are identified in advance, then the utterance of “now” does not directly refer to these times. Rather, it expresses the sense that is also expressible by “at whatever time(s) this message is being played back”. There is a relatively straightforward argument that this is the case. Suppose I record “I am not at home now” and intend it to be played back on a phone-message machine whenever somebody phones my house and I am not at home to answer. My utterance of “now” cannot directly refer to all and only the times at which the message will be played back and these times cannot be constituents of the proposition my sentence-utterance expresses because *it is not then determined which times will in fact be the ones at which somebody will phone me*. If the proposition now expressed by my sentence-utterance includes a future time during which John is phoning me, then John is now logically determined to perform this future act, which is inconsistent with his freedom.¹⁷ My utterance of “now” must instead express a descriptive sense that is contingently satisfied, if at all, by the times that later turn out to be the times at which people phone me. My utterance of “now” indirectly refers to these times by expressing the sense *at whatever time(s) this message is being played back by a phone-caller*.

Suppose, on the other hand, I am calling from a phone booth and say to a friend “I am not at home now. I am phoning from a public phone booth”. The reference-fixing rule of this use of “now” determines that this use directly refers to the time that is, in fact, simultaneous with my phone conversation. I have shown elsewhere¹⁸ that this use of “now” does not express the sense *at whatever time is simultaneous with this utterance* or the sense *at whatever time is 1986 years, 7 months, 21 days and 12 hours later than Christ’s birth* or any other such sense. The metarule of “now” specifies that the reference-fixing rule governing this use of “now” is a *direct reference* rule.

(ii) *The Distinction Between Rigid and Nonrigid Designation*

It is widely assumed that

- (B) Either all uses of each indexical are rigid designators or all uses of each indexical are nonrigid designators.

However, the examples I just gave show that “now” is used nonrigidly when the phone message is taped and rigidly when the call from the phone booth is made. The times the phone message plays back vary from world to world (the descriptive sense of this token of “now” is satisfied by different times in different worlds) but the time that actually includes my phone-booth conversation does not vary (the direct referent of this token of “now” is the same in each world to which this token refers).¹⁹

(iii) *The Distinction Between Demonstratives and Pure Indexicals*

A *demonstrative* is an indexical that requires a demonstration on the part of the tokener in order for the reference of the indexical to be fully determined. A demonstration is a reference-determining act of a certain sort that the tokener performs supplementary to her tokening act. Typically, this supplementary act is a pointing with one’s arm at the intended referent, a nodding of one’s head in its direction, shifting one’s eyes towards it, and the like. A *pure indexical* is an indexical that does not require a demonstration in order for its referent to be fully determined. It is universally assumed that “I” is the paradigm of a pure indexical and “that” the paradigm of a demonstrative. It is alleged that “I” never requires an associated demonstration and that

“that” always requires one. However, the recognition that each indexical has various reference-fixing rules should make us suspicious of this assumption. Indeed, we find that in some uses “I” is a demonstrative and “that” a pure indexical. When I utter “I am in last place” to refer to somebody other than myself, the reference of my use of “I” may well require an associated act of pointing. Pointing at No. 10, I utter “I am in last place”, thereby identifying which person is my adoptee. “That” is used as a pure indexical in such utterances as “That is all for today” or “That is where I shall stop today”, when I am ending a lecture, musical rehearsal, or any other sort of activity. “That” does not require an associated demonstration in these uses since its reference is fully determined through its reference-fixing rule specifying that it refers to the point or stage in the activity at which it is tokened. “That” no more requires a demonstration in these uses than does “I” when it is used to refer to the speaker. Thus, instead of dividing *indexicals* into demonstratives and pure indexicals, we should divide *uses of indexicals* into *demonstrative uses* and *pure indexical uses*.

(iv) *The Definition of an Indexical*

Perhaps the most important implication of the metarule/reference-fixing rule distinction concerns the definition of an indexical. The standard definition is that an indexical is a locution both dependent upon its context for its referent and governed by a rule that determines its reference in terms of certain features of the context. Kaplan’s definition is typical:

What is common to [indexicals] is that the referent is dependent on the context of use and that the meaning of the word provides a rule which determines the referent in terms of certain aspects of the context.²⁰

This definition is inadequate in two respects; it fails to refer to the metarule of the indexical and fails to indicate that there are several rules which determine the referent, one for each different sort of context of use. A more adequate definition would read:

Locution L is an indexical = Df. The locution L is such that: (a) The referent of L is dependent upon the context of its use. (b) L is governed in different sorts of contexts by different reference-fixing rules, one rule for each different

sort of context; each such rule determines the reference of L in context C in terms of features of C. (c) Each reference-fixing rule of use of L is governed by a rule-fixing rule of use, a metarule, which remains constant from use to use and which determines which reference-fixing rule of use governs L in any given context.²¹

NOTES

¹ Some authors, like Castañeda, include tensed copulae among indexicals and others, like Kaplan, do not. I here include them to emphasize some similarities between them and temporal adverbs and pronouns. But there are also important differences, discussed in my 'Temporal Indexicals', *Erkenntnis*, forthcoming.

² The following five quotations are from Steven Boer and William Lycan: 1980, 'Who, Me?', *The Philosophical Review* 89, 434; Donald Davidson: 1971, 'Truth and Meaning', in Jay Rosenberg and Charles Travis (eds.), *Readings in the Philosophy of Language*, Prentice-Hall, Englewood Cliffs, New Jersey, p. 464; David Lewis: 1970, 'Anselm and Actuality', *Nous* 4, 185; John Perry: 1977, 'Frege on Demonstratives', *The Philosophical Review* 86, 479; A. N. Prior: 1968, 'Now', *Nous* 2, 104.

³ I am pleased to note that there is at least one author who has recognized that "now" is sometimes used to refer to future times. *Vide*, Gerald Vision, "I am Here Now", *Analysis* 45 (1985). Also see David Kaplan, *Demonstratives*, Draft No. 2 (mimeograph, 1977, p. 101, Note 3). Kaplan's remarks suggest he is implicitly aware that "now" has more than one character, but this awareness remains undeveloped in his theory.

⁴ Richard Gale: 1968, *The Language of Time*, New York, p. 214.

⁵ Hector-Neri Castañeda: 1967, 'Indicators and Quasi-Indicators', *American Philosophical Quarterly* 4, 87.

⁶ The salient item is the one that is conspicuous or striking in the communication situation. See Howard Wettstein: 1984, 'How to Bridge the Gap Between Meaning and Reference', *Synthese* 58, 82, (Note 32) and David Lewis: 1979, 'Scorekeeping in a Language Game', *Journal of Philosophical Logic* 8, 339-59.

⁷ For examples, see Wettstein, *op. cit.*

⁸ See Bertrand Russell: (undated), *Introduction to Mathematical Philosophy*, New York, p. 32.

⁹ The following quotations are from Roderick Chisholm: 1981, *The First Person* Minneapolis, p. 48; Nelson Goodman: 1951, *The Structure of Appearance*, Cambridge, Massachusetts, p. 291; David Mellor: 1981, *Real Time*, Cambridge, p. 74; Bertrand Russell: 1948, *Human Knowledge*, New York, p. 91; John Searle: 1983, *Intentionality*, Cambridge, p. 221.

¹⁰ Russell, *op. cit.*, p. 90.

¹¹ Gale, *op. cit.*, p. 214.

¹² These quotations are from Jon Barwise and John Perry: 1981, 'Situations and Attitudes', *Journal of Philosophy* 78, 670; David Kaplan, *op. cit.*, p. 44; John Pollock: 1982, *Language and Thought*, Princeton, p. 118; Hans Reichenbach: 1947, *Elements of Symbolic Logic*, New York, p. 284; Wettstein, *op. cit.*, p. 68.

¹³ Kaplan, *op. cit.*, p. 10.

¹⁴ Castañeda, *op. cit.*, p. 86.

¹⁵ *Vide*, Vallicella: 1985, 'The Semantics of Self-Awareness', mimeograph, pp. 8–10. Vallicella points out in his discussion that the reference of "I" is "type-variable" in that it ranges over impersonal objects as well as speakers. I am particularly indebted to Vallicella's discussion of this impersonal use of "I", for it was through reading his discussion that I first realized that the dogma that "I" always refers to the utterer is without foundation.

¹⁶ If these sentences are used metaphorically, they can be used to refer to persons, as when "I am out of gas" is used to convey that I am out of energy.

¹⁷ For a fuller account and justification of some of the premises of my argument, see Steven Cahn: 1967, *Fate, Logic, and Time*, New Haven.

¹⁸ *Vide*, Quentin Smith: 1988, 'The Phenomenology of A-time', *Dialogos* 52, pp. 143–53; 'Problems with the New Tenseless Theory of Time', *Philosophical Studies* 52 (1987), pp. 371–92; 'Sentences About Time', *The Philosophical Quarterly* 37 (1987), pp. 37–53; 'The Impossibility of Token-Reflexive Analyses', *Dialogue* 25 (1986), pp. 757–60; 'The Mind-Independence of Temporal Becoming', *Philosophical Studies* 47 (1985), pp. 109–19. My positive account of "now" (in its use to refer to the time of tokening) is fully presented only in 'Temporal Indexicals', *op. cit.*

¹⁹ In 'Problems with the New Tenseless Theory of Time', *op. cit.*, I expressed my belief that "now" (as used to refer to the present time) is not a rigid designator *given the implicit assumption that times are sets of events*. If times are sets of events and "now" a rigid designator, then counterfactuals involving "now" are self-contradictory. "I might not have been writing now" would then mean (approximately) "In possible world W, the set of events S, which actually includes my writing, does not include my writing". This is self-contradictory since sets include their members essentially. If "now" is a rigid designator, times must be event-independent moments; i.e., the absolutist theory of time must be true. This issue is discussed fully in my 'Temporal Indexicals', *op. cit.*

²⁰ David Kaplan, *Demonstratives*, *op. cit.*, p. 8.

²¹ I am grateful to William F. Vallicella and two referees for *Synthese* for helpful criticisms of earlier drafts of this paper.

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