Hintikka on Demonstratives

John Perry
Philosophy Department Stanford University

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Introduction

I want to discuss an account of demonstratives based on a footnote of Jaakko Hintikka's in his seminal 1967 talk at the Oberlin Colloquium, "On the Logic of Perception."[1] Here is what I hope to do:

1. Explain the theory that is implicit in this footnote, or at least develop a theory which is inspired by the footnote; this will involve explaining the approach to certain problems about perception and its language to which the footnote alludes;

2. Based on this theory, and other things Hintikka says in his article, articulate a Hintikkian-in-1967 inspired account of recognition statements;

3. Based on this account, develop a Hintikkian-in-1967 inspired treatment of certain problems about subjectivity, due to Castañeda, Nagel, and Jackson;

4. Having done that, I will turn to what seems to me to be a problem with Hintikka's approach, what he calls perceptually individuated individuals. I try to develop an alternative way of looking at things, which seems to me to avoid the need for these individuals which, in spite of Hintikka's protests to the contrary, seem to me somewhat weird.

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[1] First published in *Perception and Personal Identity*, edited by Norman S. Care and Robert M. Grimm, Press of Case Western University, 1969: 140-173; reprinted in Hintikka's *Models for Modalities* Dordrecht: Reidel, 1969: 151-183.

1 The footnote in context

The footnote I have in mind is rather short, so I will quote it in full:

> 25 Demonstratives are typical instances of the former, proper names of the latter.

Now all we have to do is understand what is meant by "the former," and why demonstratives are typical instances of it, and we will have the theory.

To do that, we have to understand the difference between these two formulas:

(7) (Ex) (d perceives that $a = x$)

(14) ($\exists x$)(d perceives that $b = x$)

The quantifier in (7) is the ordinary existential quantifier, that ranges over individuals as ordinarily individuated. One such individual is Hintikka himself; not by any means an ordinary individual, but one who is individuated — unlike say the Dalai Lama — in ordinary ways. Hintikka takes "perceives" to be an intensional context. (7) tells us that the sentence $a = x$ is true in every possible scenario consistent with what d perceives. Suppose, for example, we substitute "Hintikka" for "a", and "Perry" for "d", so we have

(7e) (Ex)(Perry perceives that Hintikka $= x$).

That would be true in the circumstances like the present, when I look at Hintikka, and recognize him. That is, there is someone whom I perceive to be Hintikka; in every scenario consistent with what I believe, that man is Hintikka.

This sort of statement is very important in Hintikka's approach to the logic of knowledge and belief. According to Hintikka, quantification into a statement like

(1) Perry believes that the author of *Knowledge and Belief* is a Finn

is not legitimate unless an additional condition is met,

(2) (Ex)(Perry knows that $x =$the author of *Knowledge and Belief*.

That is, before we say, on the basis of (1), that

(3) (Ex) Perry knows that x is a Finn

we have to ascertain that Perry knows who the author is. That is, we need to ascertain that there is a certain person, such that in every scenario compatible with what Perry knows, that person is the author of *Knowledge and Belief*.

This treatment provides Hintikka with a solution to a question posed by Quine. Suppose that Ralph knows that the shortest spy is a spy. It doesn't seem that that would suffice to make the FBI interested in interviewing him. But there does seem to be a stronger condition that would make the FBI interested, and that would be implied if we said that there is someone, that Ralph knows to be a spy, or, to make the quantification in more explicit, there is someone such that Ralph knows that *he* is a spy. But surely we can't say that just on the basis of Ralph knowing that the shortest spy is a spy, because anyone who knows English knows that. Hintikka says that the stronger condition is that Ralph knows who the shortest spy is, that is,

$$(\mathrm{E}x)(\text{Ralph knows that } x = \text{ the shortest spy}).$$

This guarantees that there is something about Ralph's knowledge state that guarantees that there is a certain individual, in every scenario compatible with what he knows, who is the shortest spy. It is that individual whom the FBI would like to identify, and this would lead to an interest in interviewing Ralph.

But there is a problem with this approach when it comes to perceptual knowledge. Let's return to the case of Ralph and Ortcutt. Suppose Ralph is partying on the beach with his FBI friends, when he sees Ortcutt passing documents marked "classified" to obvious Bolsheviks on the beach. It is in fact his neighbor Ortcutt, but he has never seen Ortcutt in a speedo, and doesn't recognize him. Ralph has no idea whom that man he is seeing is. As far as he knows, he has never seen him before, doesn't know his name, and doesn't even see any thing about him that would allow him to identify him again later. In the possible scenarios compatible with what Ralph knows, there is no unique individual that is the person he sees. So we can't say, using our ordinary quantifier:

(4) (Ex)(Ralph perceives that x = that man)

or

(5) (Ex)(Ralph perceives that x is a spy.)

And yet, he has information of interest to the FBI. Moreover, at least while everyone stays on the beach, we could say that Ralph knows who the man is. He can identify him to his FBI friends simply by saying, "that man" and pointing. If Ralph, trained in intensional logic, were to say to an FBI friend, were to say,

(6) There is someone such that I know that he is a spy

we wouldn't criticize him for illegitimate quantifying in. If the FBI agent were to ask, "Who?" Ralph would answer with a demonstrative and a demonstration, "that man".

This is where the formulation in (14) comes into the picture. The backwards-E quantifier, as in (14), quantifies over individuals that are *individuated perceptually*. Consider all the worlds compatible with what Ralph knows. Although there isn't a single individual in all of them who is passing classified documents to Bolsheviks, there is a certain *role* that is played in each of those worlds by someone or other, the role of being the man Ralph is watching on the beach. And this is surely enough to make Ralph's knowledge of interest to his FBI friends. They wouldn't say, "Go find out his name, then we'll be interested."

So (14), with the backwards quantifier, formulates a condition on Ralph's knowledge that, as Ralph would put it, "that man is a spy," that gets at the reason such knowledge might be of interest to his FBI friends, and allows Hintikka to maintain his thesis that it is identification conditions, knowing which individual one holds a belief about, that is the condition of quantifying across epistemic operators.

2 Demonstratives

Now consider what happens when Ralph says to the agent, "that man is a spy." Let's pursue Hintikka's suggestion in the footnote. The text to which the footnote is appended goes as follows

> In terms of the behavior of singular terms vis-a-vis the two sorts of quantifiers, we can now make certain secondary distinctions between different kinds of free singular terms. It was already said above that the difference is *not* due to a difference in the individuals they refer to. There are not any strange entities here to be referred to. There may be differences between different kinds of free singular terms, however, in that the way in which some terms refer to the individuals they in fact refer to depends more on the perceptual situation while the way other terms refer turns more on physical criteria and on other features independent of the particular perpetual situation we are considering.[25] On the logical level, this difference is betrayed by the fact that the former kinds of singular terms are more likely to make (14) true when substituted for

'b' than the latter, which conversely makes (7) true more often than
the former when substituted for 'a'.

When Ralph says, "That man is a spy," then, we have two routes to referents
in other possible worlds for "that man". The route of physical individuation
goes to the demonstrated man, to the same individual in other worlds, via
what Hintikka calls physical methods of individuation. Suppose the world in
question in was in which Ortcutt decided not to go swimming on the day in
question. Then we can trace the man on the beach back to Ortcutt's house, and
then follow the trail of that man in the other possible world. The other route
goes through the perspective Ralph has on Ortcutt. Ortcutt plays a certain
role in Ralph's life; he is the man that Ralph is visually attending to at that
moment. To get to the demonstratively determined referents of "that man"
we stick with Ralph' act of visual attention, and find to whom he is visually
attending in other possible worlds.

The demonstrative will only have referents in worlds in which the utterance
is made (or the belief exists).

We can then say that Hintikka's ideas in this essay suggest the following
(overly simplified) account of a class of terms we can call "demonstratives"
within a class of singular terms. We assume that the predicates in our lan-
guages have extensions at worlds, that the names in our language are assigned
bearers, not relative to worlds, and that each demonstratives D is assigned to
a *role*, R_D, and that each utterance u has a speaker who makes it and a time at
which it is made, A_u and T_u.

- The meaning of a singular term α is a relation between utterances, worlds,
  and individuals:

  $\|\alpha\|(u, w, x)$, where x is the referent of u at w.

- If α is a description THEϕ, $\|\alpha\|(u, w, x)$ iff x is the unique object in the
  extension of ϕ at w.

- If α is a name N, $\|\alpha\|(u, w, x)$ iff x is the bearer of N.

- If α is a demonstrative D, $\|a\|(u, w, x)$ iff x is the unique object y such that
  at $w, R_D(u)$

Now suppose Ralph says, "I know that that man is a spy". This should be
true if in each world compatible with what Ralph knows the referent of Ralph's
utterance of "that man" is a spy. Our semantics seems to give this result.

3   Recognition

The Hintikka-inspired approach contrasts with direct reference approaches to demonstratives, most famously David Kaplan's account. On such an account a use of a demonstrative like Ralph's directly refers to Ortcutt. Ortcutt is the only individual supplied for the semantics of Ralph's statements, for this or any other possible world. The proposition that corresponds to "That man is a spy" is the set of worlds in which Ortcutt is a spy. I want to look at the advantages of the our Hintikka-inspired account for dealing with the phenomenon of recognition.

Suppose Ralph eventually recognizes the man he is perceiving. Intuitively, there is quite a difference between three things Ralph might think and say:

(8) That man is that man

(9) Ortcutt is Ortcutt

(10) That man is Ortcutt

If we give a directly referential semantics to demonstratives (and names), then each of these statements will express the same proposition. But there is a big difference between them, for only the third expresses recognition. On our Hintikka-inspired account of demonstratives, we can explain the difference. The first statement is true in worlds in which the speaker is looking at the man the speaker is looking at; it is trival, or virtually so. The second is true in worlds in which Ortcutt is Ortcutt; again, trivial or virtually so. But the third statement is true in worlds in which Ortcutt is the man the speaker is looking at. This is not trivial, for all the worlds in which he is looking at someone else are eliminated as incompatible with what Ralph believes. So we get a good result.

The same basic idea can be extended to other kinds of recognition. Suppose for example I know that I have a talk to give at the APA on Thursday, April 5, 2007. I wake up on that day, but I don't know what day it is, and start to plan a day of relaxing, followed by a nap, and then cocktails. Now at this point I could express my beliefs by saying "Today is today" and "Thursday April 5 is Thursday April 5. But when it suddenly dawns on me what day it is, and my knowledge state changes so that I say "Today is Thursday April 5" I learn something new. I exclude more worlds from the set consistent with what I believe.

Now there is an epistemic relation associated with the indexical "today". There is a way of knowing about the day on which the knowledge takes place.

I can find out if it is cloudy today by looking at the sky, for example. When I don't know what day it is, but look at the sky, we get the change in my knowledge state by excluding all the scenarios in which my looking takes place on a cloudy day. Given this, what I learn when I learn "today is Thursday, April 5" is that the actual world is one in which Thursday, April 5 2007 is the day that is playing this special role in my life; the set of worlds that models my knowledge state is one in which my thought and utterance occur on that date.

Here is another situation our theory handles well. Suppose I am on a flight from San Francisco to Buffalo. But the pilot announces that because of fog in Buffalo, we will probably have to land in Cleveland instead. I fall asleep. The fog in Buffalo lifts and the pilot announces we will land there after all. But I don't hear him. I awake as the plane is ready to land; I look out the window and think, "That city is Cleveland".

On a directly referential theory, what I believe is the same proposition as that Buffalo is Cleveland. This is almost a necessarily false proposition. I say "almost" because I suppose there is a possible scenario in which Buffalo and Cleveland each grow so large that they merge into one city. But that is a truly Erie possibility, so I will disregard it.

It doesn't seem that I believe a contradiction, and impossibility. Our theory gets at the possibility that seems to correspond to my thought. My thought is true in the worlds in which the city I am seeing at the time I have the thought is Cleveland. My thought is false, but not contradictory.

But now let's move to the acid test of theories of recognition, self-recognition.

4   Self-Recognition

Frege says that there is a unique way each person is presented to himself, and is presented to no other. On one way of reading this, it seems correct. There is an informational relation each of us has to ourselves, that we have to no other, and that no other has to us. We are the person whose headaches we find out about by having them, the state of whose stomach we find out about by feeling hunger, whose future movements we can know about by knowing what we intend to do, whose feet we can see by looking down, and so forth. That is, there is an informational relation that holds between each person and himself; there is an informational role that we each play in our own lives.

So just as our visual demonstrative "that$_V$" refers to the object the speaker visually attends to, the indexical "I" refers to the person the speaker is aware of in self-informative ways. Notice that in each case we have a relation with a subject and an object, or a subject-relative role. In this case the subject and the

objects are the same person.

Thus we can treat "I" as a demonstrative, with this role associated with it. This way of looking at things seems to give the right result when we think about people who don't know who they are. Consider Castañeda's amnesiac war hero. Sitting in the hospital room, not knowing his name, or anything about his past prior to waking up in the hospital room, he says, "I believe that I have a bandaged head." Does he know who it is, that has a bandaged head?

We might say of him that he knows who he is, because he knows, after all, whose mouth to put the food in when he is hungry, whose arms will move when he will his arms to move, who the things he sees are in front of; he knows that the answer to all of these questions is, "me". But he doesn't know who he is in another sense; he doesn't now that he is Elwood Fritchy, the famous war hero.

The possible worlds consistent with what Fritchy knows include ones in which many different people are moving his arms, finding out about the state of his stomach by having his hunger pains, and finding out about the objects in front of him by having his perceptions. So he does not satisfy the conditions laid down by (7); there is not someone he knows himself to be. That is the sense in which he does not know who he is.

On the other hand, in each of the worlds consistent with what he knows, "I" refers to the person who is moving his arms, learning about objects in front of him through perception, and so forth. So he does meet the requirements of (14), and does know who he is in that sense. His situation is analogous to Ralph's, who knew who the spy was, in sense (14), but not in sense (7).

Now we might object to this as follows. I have said that Elwood knows who he is, in the second sense, because he knows he is the person who is having certain sensations, whose arms move in response to certain volitions, whose stomach gives rise to certain pangs of hunger, and the like. But which sensations, volitions, and pangs? Clearly the ones he would identify as "the sensation I am having *now*. But then our account is circular.

This is the reason, or one of the reasons, I have defined the roles in this account as roles vis-a-vis certain events, utterances, thoughts, etc., rather than roles vis-a-vis a certain person at a certain time. I think there is a way of being aware of our own thoughts and sensations that we each have. We are aware of no one else's thoughts and sensations in this way, and no one else can be aware of ours in this way. Our knowledge that a certain sensation is occurring, when it is this sort of awareness, is properly expressible as "this$_I$ sensation, where "this$_I$ is an "inner demonstrative". As is the case with demonstrative knowledge of things, we know of it in virtue of a role it is playing in our lives,

but we do not think of it *as* the such and such that is playing a role in the life of so and so.

What I am advocating, then, is a version of one of Russell's theories of the self, the disguised description theory. We know of our own sensations and thoughts by acquaintance, not by description. We know of ourselves as the person who has these sensations and thoughts.

However, I am thinking of acquaintance here in a somewhat different way than Russell did, at least in his early work, and so the term "disguised description" is not appropriate. Implicit in Hintikka's approach is a distinction between description based knowledge and what I will call role-based knowledge. What Ralph expresses with "that man is a spy" seems rather close to what he might express with "the man I am seeing is a spy" or even "the man who is the object of this$_I$ perception is a spy." These descriptions seem to identify the condition that the man fulfills, in virtue of which he is the referent of Ralph's utterance or thought, "that man is a spy". But the referent of Ralph's thought or utterance is not cognitively mediated by references to himself or even to his perceptions. He thinks of the man by having the perception, not by thinking about the perception, and by being the person that has the perception, not by thinking about himself. The perception does its work not by being an object of Ralph's thought, but by being a part of Ralph.

In general, the properties of objects have an effect on our cognition by one way or another giving rise to ideas and thoughts that make their way into our minds one way or another through our senses. They indirectly affect our cognition. But our own thoughts, experiences and perceptions directly effect our cognition, because they are parts of us, presumably aspects of our brains. Ralph's perception of Ortcutt has a direct influence on his thinking and his actions. The nature of the perceptual experience rationalizes his action. If he sees Ortcutt as a man fifteen yards away to his left, then if he want to walk to Ortcutt he will walk in that direction; if he wants to speak to Ortcutt, he will speak loudly enough to be heard that far away. These actions make sense in virtue of properties of Ralph's perception. Ralph's actions, I will say, are attuned to the properties of his perception. But Ralph does not need to cognize his perception, as being a "man fifteen yards away" perception for it to have this affect. He doesn't have to think about his perception at all, he merely needs to have it.

When I say that Elwood knows himself as the person who has his sensations, and as the person whose arms are affected by his volitions, he does not need to think about those sensations and volitions. He merely has to have them, and to have them play their normal causal role in his action, that is, to

be attuned to to their informational properties. His knowledge of himself is role-based, not description based.

5   What Mary Learns

Now let's consider another famous case, Jackson's Mary as she leaves the Black and White Room and for the first time has color sensations rather than seeing the world completely in black and white. I think it is best to consider Mary in two stages. In the first stage, she is allowed into what I call a Nida-Rumelin world. This is a room that is full of colors, painted in random ways on the wall, but in which there are no familiar colored objects, like tomatoes and fire engines, which would allow Mary to recognize the colors she was seeing, and so to recognize the color sensations she was having. For the first time, she is able to think about the sensation of red as a sensation she is having. She says, "This sensation is rather nice," as she looks at a red patch on the wall. Let's introduce a special demonstrative, D_I for this inner use of "that" to refer to types of visual sensations. So "Rather nice(D_I)" is true if the sensation Mary is attending to is rather nice.

Let us suppose that in the Black and White Room Mary has learned a system for referring to color sensations; this can simply be "Red-sensations," "Blue-sensations" and the like. She knows that normal people outside the Black and White Room have such sensations when they look at appropriately colored objects in normal conditions. She will not be able to identify her current sensation in this vocabulary, while she is in the N-R room.

She may, however, acquire what we might call phenomenal concepts of the various color sensations she is having. She might, for example, introduce the term "Wow" for the color of the red patch, and the name Wow-sensation" for the experience she has when she sees that patch and other patches of the same sort.

These phenomenal concepts naturally give rise to concepts that are what I call recognitional, that are not tied to present sensations. Perhaps night falls, and she ceases to have color sensations. While she is asleep the room is re-painted. She might, when she awakes, be able to say quite reliably "this sensation is a wow-sensation" when she awakes. She has a concept of the color wow that is not tied to current perception, but to memories of past perceptions. (This is not automatic; I for example could develop a phenomenal concept of middle-C when hearing it played on a piano, but could not recognize the same tone even a few moments later.)

Now suppose she is allowed out into the world, and realizes quickly that

the color she called Wow is red, the color of ripe tomatoes, fire-engines and the like. Looking at a ripe tomato, she says or things, "this sensation is a Red-sensation" and "Wow-sensations are red sensations". What has she learned?

Well, which possible worlds are eliminated? The worlds in which something other than a red sensation, say a blue sensation or a green sensation, is playing the role of the sensation she is having and attending to and remembering. So, our Hintikka-inspired theory seems to provide an answer to the question of what Mary learns.

6   Perceptually Individuated Individuals

But, one might object, just how is (14) supposed to work? In Ralph's case we are allowed to say:

 (11) $(\exists x)$(Ralph perceives that x is a spy)

We are taught in logic class that quantifiers and variables work like this. Variables are assigned by a variable assignment to objects, independently of scenarios or episodes of perception. An existential quantifier requires that there be a variable assignment, relative to which all of those sentences are true, which lie in the scope of the quantifier and contain the variable.

But then there should be an individual who meets the condition, that in every scenario consistent with what Ralph perceives, that man is a spy. But there is no such man, certainly not Ortcutt, for there is nothing in Ralph's epistemic/perceptual state that requires that Ortcutt, as opposed to any other middle-aged man in a Speedo, be the one he is seeing. If we look at the scenarios consistent with Ralph's beliefs, including those he gains by perceiving Ortcutt pass the papers, we find many different individuals playing the role Ortcutt actually plays, of being the individual Ralph perceives.

Hintikka's phrase "perceptually individuated individuals" makes it sound like he is introducing a new kind of entity into our ontology. It sounds as though one of these new individuals is to serve as the witness for the quantification in (11). But Hintikka insists that this is not so, in several places; here is one, drawn from the quotation I gave above:

> In terms of the behavior of singular terms vis-a-vis the two sorts of quantifiers, we can now make certain secondary distinctions between different kinds of free singular terms. It was already said above that the difference is *not* due to a difference in the individuals they refer to. There are not any strange entities here to be referred to.

So, if perceptually individuated individuals are not a new kind of individual, what exactly is Hintikka proposing? I don't have the time or wit to trace Hintikka's complex ideas on these matters, but I believe the basic ideas are these. His philosophy of language and logic was somewhat similar to Davidson's, in taking reference, to be the basic phenomenon; the theory of reference, properly developed, provides a theory of meaning. Reference is not mediated by a Fregean sinn, nor by a level of intensions. But with Hintikka, the basic phenomenon is *multiple* reference; a term refers to individuals in scenarios. From our understanding of how reference works, something like intensions or what Carnap called "individual concepts" arise; that is, functions from worlds to individuals that reflect the facts about multiple reference. But all intensions are not created equal. There is a select group of these functions, that reflect important aspects of the way we conceive the world, the way it is, and the way it might be. These special functions give rise to different ways of individuating objects, different "trans-world heir lines" as Kaplan calls them, or different methods of "cross-individuation" in Hintikka's terminology. Individuation is not prior to cognition and our system of singular terms, but grows out of them.

To the extent that I follow Hintikka's thinking here, it does seem to be that some rather odd individuals emerge. Consider three scenarios compatible with what Ralph perceives; the actual one, in which he sees Ortcutt; an alternative, in which he sees Smith, and another, in which he sees Jones. Cross-individuation seems to give us a new entity, the man Ralph sees, perceptually individuated, who is Ortcutt in the actual world, Smith in another scenario, Jones in another. I can't get over the feeling that this is a somewhat odd individual.

Or consider Elwood, our amnesiac war-hero. The hospital staff is certain that Elwood is one of a number of missing soliders, and it has given him the list, hoping to jog his memory, but it doesn't work. For all Elwood knows, sitting in the hospital, he could be any of these missing soldiers. In Castañeda's example, Elwood wandered so far from the battle he was in, that he was not among the candidates. So it seems that the cross individuated individual that accounts for his knowledge of who he is, knowledge we called "the second kind" is an odd amalgam of a number of different soliders, not including him.

It is quite likely that I am fully appreciating Hintikka's thinking here. But in any case, I would like to suggest an alternative to cross individuation as a framework for our theory of demonstratives. This alternative is based on two ideas, which I call information games and role-linking.

Let's ask, why are we interested in knowledge? The same reason we are interested in anything. We are agents, and the success of what we do depends

on the circumstances in which we do them. To promote our goals, we must find actions that we have the ability to perform, which will bring about results that constitute the achievement of (or at least will probably promote the achievement of) the results that define the goals, in the circumstances in which we find ourselves. The more we can narrow down the circumstances, the more likely we can find an action that fits the bill.

Let's suppose for a moment that Ralph himself is an FBI agent. His fondest desire is to arrest a spy. To do this he must execute some movements that, in the circumstances he is in, bring it about that he has arrested a spy.

Now how do you arrest someone? It depends on their relationship to you. If you are talking to them, you just say "you are under arrest" and read them their rights. If they are a ways a way, you may walk over to them and proceed as before, or you may shout at them. In other circumstances you may have to drive for a couple of days to get to their hideout. The movements you need to make to arrest X depend on X's relation to you in space and time. I'll call these relations *pragmatic* roles.

When Ralph sees Ortcutt passing the documents, he learns that there is a spy in a certain relationship to him. What this information does for Ralph is this. It guarantees that in each of the scenarios in which he walks down the beach and says "you are under arrest" to the person he gets to, he will have arrested the spy. That is, perception gives him enough knowledge to formulate a plan, which if executed in any scenario compatible with what he perceives, will guarantee the identity

   The arrestee = The spy

In different scenarios, different people will be the spy; Ortcutt in the actual scenario, Jones in another one, Smith in another one, and so forth. But in each scenario, whoever the spy is, that person will also be the arrestee. This is the identity that needs to be guaranteed by Ralph's knowledge, expressed in the words "that man is a spy," in order for it to provide the knowledge that allows construction of a successful plan that has that same person as the arrestee.

Now suppose that Ralph does not want to arrest the spy, but to obtain a search warrant for the spy's house. There is a way for a law enforcement officer to get a warrant to search a person's house. You go to a judge and fill out a form with the person's name and address and the reason for the search. Ralph will have no problem with the reason for the search: the man is a spy. But he won't be able to fill out the first part of the form, because he doesn't know the fellow's name, and without his name can't find out his address. So the knowledge Ralph has, and expresses with "that man is a spy," does not support a plan for

getting a search warrant. Ralph can fill out a name and an address on the form, but has no guarantee that the man, whose house he has asked the judge for permission to search, is the spy.

Now let us generalize a little. Consider an act that has the result that a person X is in state S. I'll call "X" the applicandum of the act, with apologies to the Latin language. And suppose this act is taken with the goal of putting person Y is state S. I'll call Y the target of the act. If we are going to take action A with the intention of bringing it about that our target is S, it should be an action that, in all the scenarios compatible with what we know, the applicandum will be the target. Such identities I will call practical identities.

I suggest that knowing who someone is, is relative to a range of goals and plans for achieving them. If one knows that α is ϕ, one may know who α is relative to certain goals and plans for achieving them, but not relative to others. Ralph knows who the man in the Speedo is, relative to the goal of putting him under arrest by the method of walking up to him and saying, "You are under arrest". But he does not know who he is, relative to the goal of getting a warrant to search his house.

Now consider our formula (11):

 (11) $(\exists x)$(Ralph perceives that x is a spy)

Why should we want to use such a formula to characterize Ralph's state of knowledge, even though Ralph's perceptual knowledge does not guarantee that, in every scenario compatible with his perceptual state, the same man is passing the papers? It is useful because his state does guarantee that throughout a number of important action scenarios, the man he sees in that scenario will be the applicandum of his actions in that scenario.

The effect of Ralph's knowledge is to link two important roles that people might play in his life. One is an epistemic role, a role such that there is a way of gaining knowledge of those who play it, the role of being the person one is looking at. Another is a pragmatic role, a role such that there is a way of arresting the person who plays it, being the person a few yards away from one, who one can walk up to and say "you are under arrest". In every scenario compatible with what Ralph perceives, these two roles are linked; that is, the person who plays the first role, plays the second, the source of the information is the applicandum of the contemplated action.