Discovering Identity

Let ‘a’ and ‘b’ stand for different but codesignative proper names. It then seems clear that the propositions expressed by \( a = a \) and \( a = b \) differ in cognitive value. For example, if ‘a’ stands for ‘Hesperus’ and ‘b’ stands for ‘Phosphorus’, then

1. Hesperus is Hesperus

and

2. Hesperus is Phosphorus

differ in cognitive value. But it is not clear how to account for the difference in cognitive value. In “On Sense and Reference”1 Frege argued that identity statements express relations between meanings of names as they refer to objects. Russell, on the other hand, claimed that identity statements express relations between objects.

Driven by the intuition that the propositions expressed by \( a = a \) and \( a = b \) differ in cognitive value philosophers constructing theories of beliefs and belief attributions have been attracted to Frege’s way of accounting for the difference in cognitive content by building modes of presentation into propositions. This, I will argue, has had the consequence that some of the theories entail that it is a necessary condition for one making the astronomical discovery that Hesperus is Phosphorus that one makes a mental discovery about one’s representations of Venus.

The first section of the paper will discuss the motivation behind Frege’s and Russell’s views and how Frege’s view as well as Mark Richard’s view, a state of the art Neo-Russellian view, make it a necessary condition for making astronomical discoveries that we make a corresponding mental discovery. In the second section I will present an example which shows that a Russelian who adopts a commonly accepted assumption of the direct designation theory
can provide an account that allows her to make astronomical discoveries prior to making the mental discovery that two mental representations are of the same object. I will show that, as long as this assumption is accepted, to impose a condition that makes it a necessary condition for discovering identity that one make a corresponding discovery about one’s mental representations is unwarranted. The last section will suggest a route that a direct designation theorist who accepts the assumption can take to account for the two discoveries. It will reject the Fregean idea, which Richard accepts and modifies, to build modes of presentation into propositions in favor of a Russellian view that accepts untainted singular propositions as objects of belief. The discovery of an identity will be accounted for in terms of one being justified in believing a proposition, while the discovery that one has two modes of presentation of a single object will be accounted for by the now familiar move of introducing mental files.

Since it seems impossible to discover that, e.g., Cicero is Tully without acquiring the belief that Cicero is Tully, I will work under the plausible assumption that discovering identity requires acquiring a belief of that identity.

I.

In the opening paragraph in “On Sense and Reference” Frege wonders how to read identity statements. Frege’s argument in the opening paragraph is, I believe, best construed as an inference to the best explanation. He considers and rejects potential readings of identity statements, and eventually settles for a reading which explains how what \( a=b \) expresses can be informative while what \( a=a \) expresses is not informative, ‘\( a \)’ and ‘\( b \)’ standing for different but codesignative names.
The first option Frege considers is to read identity statements as expressing a relation between what ‘a’ and ‘b’ refer to. He rejects this option because “it would seem that a=b could not differ from a=a.” If ‘a’ is distinguished from ‘b’ only as an object, i.e., only in terms of reference, then a=a has to have the same cognitive value as a=b, provided a=b is true. Suppose, then, that ‘a’ is distinguished from ‘b’ only as a name. Then, Frege argues, a=b does not express “proper knowledge,” i.e., no knowledge of the object named. How, then, do we explain the difference in cognitive values between a=a and a=b? The best explanation Frege has is that to the difference between the names ‘a’ and ‘b’ there corresponds a difference in the mode of presentation of the object referred to. ‘a’ and ‘b’ have different meanings.

So, how should we read identity statements? We cannot read them only as statements about objects. We cannot read them only as statements about meanings indicating modes of presentation. Instead, we have to read them as somehow involving the meanings of names as they refer to objects. Frege explains this with the following example:

Let $a, b, c$ be the lines connecting the vertices of a triangle with the midpoints of the opposite sides. The point of intersection of $a$ and $b$ is then the same as the point of intersection of $b$ and $c$. So we have different designations for the same point, and these names (‘point of intersection of $a$ and $b,’ ‘point of intersection of $b$ and $c$’) likewise indicate the mode of presentation; and hence the statement contains actual knowledge. So names have the dual roles of designating objects and indicating a mode of presentation, and they accomplish the former task through the latter. We should therefore read ‘a’ and ‘b’, as they occur in a=b, as expressing the meanings (modes of presentation) of ‘a’ and ‘b’, where the meaning of a name determines which object is being referred to and provides information value. But this has the consequence that I cannot discover that a=b without discovering that the
meanings of the two names pick out the same object, for the discovery requires that I recognize that my modes of presentation of Hesperus and Phosphorus are of the same object. Otherwise the discovery would not be informative.

The conclusion I have reached is weaker than one reached by Leonard Linsky. When Linsky discusses Frege’s views on discovering identity he writes

…once [someone] does discover (either by himself or from others) the identity [of Hesperus and Phosphorus], his discovery will be that the [sense] associated by him with ‘Hesperus’ and that associated by him with ‘Phosphorus’ pick out the same object, Venus…. His discovery is that two concepts are concepts of the same object. Thus what [he] discovers is not merely a fact about words or names. ‘Hesperus = Phosphorus’ does not mean that ‘Hesperus’ denotes the same object as ‘Phosphorus’.\(^6\)

While Linsky argues that the discovery is a discovery about concepts, namely that two concepts are concepts of the same object, I have only argued for the weaker conclusion that Frege is committed to the view that the conceptual discovery is a necessary condition for discovering that Hesperus is Phosphorus.

Salmon criticizes Linsky in *Frege’s Puzzle* and writes

Contrary to the impression left by Linsky, for Frege the sentence ‘Hesperus = Phosphorus’ does not mean … that the individual concepts *Hesperus* and *Phosphorus* determine the same object any more than it means that the names ‘Hesperus’ and ‘Phosphorus’ refer to the same object. It means simply that the objects Hesperus and Phosphorus *are* the same object.\(^7\)

Salmon is correct about what the identity sentence means and his criticism does address Linsky’s interpretation. The identity statement says that Hesperus is identical to Phosphorus, and we need
to account for the discovery about the object. We don’t account for that by showing how we can
discover that the concepts Hesperus and Phosphorus determine the same object, for that is a
discovery about our concepts and not the object. Similarly, we do not account for that by
showing how we can discover that the names Hesperus and Phosphorus name the same object,
for that would be a discovery about names and not the object.\(^8\) But Salmon’s criticism does not
affect the reading I have provided for Frege, for my reading is compatible with the identity
sentence being about the identity of objects and the discovery being a discovery about objects.\(^9\)

The reading I have provided does not account for a couple of possible scenarios. First, we
have the No Natural Language Case, when it certainly seems possible that a person who does not
have a command of any natural language can nevertheless discover identity. The No Natural
Language Case poses a problem for Frege, for while Fregean senses reside in the “third realm”
and are independent of language we grasp the senses through language and so our apprehension
of senses essentially involves language.\(^10\) Secondly, and more seriously, we have the No
Linguistic Representation Case, when we can discover identity of objects of which we have no
linguistic representation. Although the No Linguistic Representation Case has in the past lacked
supporters in philosophical circles, cognitive scientists, in particular Steven Kosslyn and his
team, have gathered significant evidence which supports the case that not all representations are
formulated in linguistic terms but are rather couched in mental images.\(^11\) In both cases we
discover that \(a=b\) without discovering that two linguistic representations are of the same object.
The No Linguistic Representation Case certainly has a great intuitive plausibility and flies in the
face of Frege’s solution of the meaning of identity statements.\(^12\)

Russell presented a rival view which can avoid the problems raised in the previous
paragraph. Russell, in effect, accepted the first option Frege considered and rejected in “On
Names, when used as names, contribute objects and not descriptive meanings to propositions, resulting in singular propositions. The propositions expressed by $a=a$ and $a=b$ contain the objects referred to by ‘$a$’ and ‘$b$’. In case ‘$a$’ and ‘$b$’ refer to the same object, $a=a$ and $a=b$ express the same proposition. Given this, singular propositions do not essentially depend on natural languages as do the Fregean propositions that we believe and so the discovery that $a=b$ does not seem to depend on the one making the discovery already having linguistic representations of the object. Consequently, one can seemingly make the discovery without having linguistic representations of the object and one can discover the identity of objects of which one has no names, thus avoiding the problems raised by the No Linguistic Representation Case.

So far so good. But we are back where Frege started. How can we account for the fact that what $a=b$ expresses is informative when what $a=a$ expresses is not informative? As long as we use names as names and not as disguised descriptions Russell has not dealt with the informativeness of identity statements. On the other hand, once we acknowledge that we think of objects under descriptive modes of presentation as Russell did when he claimed that usually names are not used as names but rather as disguised definite descriptions, we are pushed towards Frege’s solution again. And we are pushed towards Frege’s problem again.

Those who support the direct designation theory of names tend to accept Russell style propositions as being the objects of belief, namely propositions which contain individuals as constituents. But if singular propositions are objects of belief, then (1) and (2) express the same proposition. The direct designation theorists have thus, as did Russell, inherited the problem with the first option Frege considered and rejected. Those who accept the direct designation theory continue to be pushed towards the Fregean line of including modes of presentation in
propositions. But it appears to me that if we include modes of presentation in propositions then we run into the same issue as with Frege, namely that it becomes a necessary condition for discovering that two objects are identical that we discover that we have two modes of presentation of that object. In order to see this I will review Mark Richard’s recent theory of belief attribution. Richard is a direct designation theorist who attempts to account for our intuition that belief reports that contain different but codesignative names can differ in truth value.  

Suppose the Babylonian astronomer Hammurabi believes that Hesperus is Hesperus. However, he wholeheartedly rejects the claim that Hesperus is Phosphorus. We report this by saying that

3. Hammurabi believes that Hesperus is Hesperus 

is true, and

4. Hammurabi believes that Hesperus is Phosphorus 

is false.

Richard takes as a starting point of his theory of belief ascriptions our intuition that (3) is true while (4) is false. While he wants to acknowledge this intuition he also wants to maintain the Russellian idea that the referents of names are constituents of propositions. In an attempt to do so Richard introduces items of beliefs he calls Russellian Annotated Matrixes, or RAMs. When Hammurabi sincerely assents to “Hesperus is Hesperus,” the that-clause does not determine the Russellian proposition

5. <<identity, <Hesperus, Hesperus>>.

Instead it determines a fusion of the Russellian interpretation of the that-clause and the sentence expressing it, giving us a fine grained distinction between belief ascriptions. Hammurabi
believes a proposition under the sentence “Hesperus is Hesperus,” not under the sentence “Hesperus is Phosphorus.”

If person A and person B believe a Russellian proposition under different sentences, then A and B have different beliefs. If “Hesperus is Hesperus” is the sentence that expresses the proposition believed then the that-clause names the RAM

6. \(<\langle 'is', \text{identity} \rangle, \langle 'Hesperus', \text{Hesperus} \rangle, \langle 'Hesperus', \text{Hesperus} \rangle>\).

If, on the other hand, “Phosphorus is Hesperus” is the sentence that expresses the proposition believed then the RAM named by the that-clause is

7. \(<\langle 'is', \text{identity} \rangle, \langle 'Phosphorus', \text{Hesperus} \rangle, \langle 'Hesperus', \text{Hesperus} \rangle>\).

Since Hammurabi can have RAM (6) and not RAM (7) in his representational system (3) can be true while (4) is false. Our intuitions about the truth values of belief ascriptions are thus satisfied.

Further modifications are needed of this simple outline of Richard’s theory. Suppose Peter hears one day of a famous musician, Paderewski, and thinks to himself “Paderewski had musical talent.” Another day Peter hears of a Polish statesman, Paderewski, and believing that all politicians are poor musicians he thinks to himself, “Paderewski did not have musical talents.”

Since the musician and the politician are the same person Peter seems to have contradictory beliefs. But Peter would never accept contradictory beliefs. Since we are dealing with a single unambiguous language Richard has to account for the example by claiming that RAMs contain representational tokens. So, Peter’s ‘Paderewski’ tokens divide into two classes, one containing the musical ‘Paderewski’ tokens, the other one containing the political ‘Paderewski’ tokens.

So, supposing we have a token of the form \(Fa\) on the mental blackboard, then there is a RAM of the form \(<\langle d, e \rangle, \langle b, c \rangle>\) in the representational system where \(b\) and \(d\) are the representations determined by \(a\) and \(F\). Given this, Richard can say that Peter has two representations of
Paderewski and that he uses one when he thinks Paderewski thus and so and another when he thinks him not thus and so.

Suppose Hammurabi discovers that Hesperus is Phosphorus. Since (4) is presumably false prior to the discovery, Hammurabi does not have in his representational system the RAM named by the that-clause in (4), namely RAM (7). He uses one representation to think Venus thus and so, and another representation to think it thus and so. On Richard’s account, representations are constituents of the proposition believed and Hammurabi uses one representation when he thinks of Venus under the ‘Hesperus’ representational token and another representation when he thinks of Venus under the ‘Phosphorus’ representational token. Now, in order for Hammurabi to have discovered that Hesperus is Phosphorus, what (4) expresses needs to be true; i.e., RAM (7) has to be in his representational system. Furthermore, because representations are constituents of RAMs Hammurabi has to realize that <’Hesperus’, Hesperus> and <’Phosphorus’, Hesperus> are two ways of representing the same object in order to recognize that (4) is true, and a necessary condition for realizing that is to recognize that the first items in the ordered pairs, ‘Hesperus’ and ‘Phosphorus’, are mental representations of the same object. So, a necessary condition for Hammurabi to accept RAM (7) in his representational system is that he discover that the two representations are in fact of one and the same object. He needs to discover (and, thus, come to believe) that RAM (7) involves representational tokens of the same object. But this solution, like Frege’s solution, makes it a necessary condition for discovering identity that one make a discovery about one’s mental representations. So a discovery about one’s mental states becomes a necessary condition for making the discovery that Hesperus is Phosphorus.
II.

The direct designation theory has brought back Russell’s singular propositions. Those direct designation theorists who accept untainted singular propositions as objects of belief (as opposed to, for example, Richard’s RAM’s), are faced with Russell’s problem and the problem that turned Frege away from the first option he considered. We are now faced with two questions: How can the contemporary Russellian account for the informativeness of identity statements? And, assuming that identity statements express singular propositions, is it a necessary condition for discovering identity that one make a discovery about one’s modes of presentation?

Given an assumption made by most direct designation theorists a case can be made for someone discovering an identity without making the corresponding discovery about two mental representations being of one object. The assumption is this:

A sufficient condition for believing a singular proposition, $N \text{ is } p$ (where ‘$N$’ stands for a name and ‘$p$’ for a property), is that one sincerely assent to a sentence expressing the proposition.$^{19}$

Some clarifications are in order. First, no direct designation theorist requires that one remember how one acquires a name. Second, direct designation theorists typically do not require that one be able to mentally associate a “sense” of some sort with a name or that one remember one’s acquaintance with the object named. A case in point is historic characters, both known and especially little known. The typical direct designation theorist assumes that I may talk about and have beliefs about people that are mentioned in history books without it threatening their theory, and they assume that I can believe, for example, that Philidor was a great chess player after listening in on a conversation about the history of chess, that conversation being the only source
of information I have on Philidor. In both cases the typical direct designation theorist allows that
the person use the name after forgetting how she acquired it. For example, long after I forget
about the conversation I listened in on I still might say and believe that Philidor was a great
chess player. Third, although direct designation theorists typically talk about one believing a
proposition “in a way” or “under a guise,” they can couch that, as Salmon and Soames
recommend, in linguistic terms. For example, they may say that I believe that Philidor was a
great chess player in a way similar to ‘Philidor was a great chess player’, where the way of
believing is couched in the sentence under which I accept the proposition. So, ways of believing
do not require that one have a representation of the object itself. Finally, the typical direct
designation theorist holds that once I believe a singular proposition I have a belief about the
object in the proposition even though I might not have a representation of the object. So the
typical direct designation theorist accepts that one can have beliefs of an object without having a
representation or representations of it. Since the typical direct designation theorist accepts all of
the above, we have the following examples which she will have to accept.

Jan the astronomer is formulating a problem she is working on. After formulating the
problem she hands it to her mathematician, Mack, and asks him what he can find out about
Hesperus and Phosphorus from the formulations. Mack intends to use the names with the same
reference as does Jan, so the basic conditions of the direct designation theory for passing a name
on are satisfied. Jan has passed ‘Hesperus’ and ‘Phosphorus’ on to Mack as names of Hesperus
and Phosphorus. Mack starts his calculations and eventually concludes that Hesperus is
Phosphorus. He has thus discovered, and thus believes, that Hesperus is Phosphorus. Since he
has no representations of Hesperus and Phosphorus he has not made a discovery about
representations, so it certainly seems like it is not a necessary condition for him discovering that Hesperus is Phosphorus that he discover that his representations are of the same object.

Even if we accept that Mack has discovered that Hesperus is Phosphorus there is a difference between Mack’s discovery and a typical discovery of identity. In a way, Mack does not know what he has discovered, i.e., if we were to ask him what he has discovered he would not be able to elaborate and explain to us which objects are identical. He does not know the significance of his discovery, and if he were to see Hesperus he would not know that this is the object of his discovery. In spite of having discovered that Hesperus is Phosphorus he does not seem to know that his discovery is about Venus; i.e., in some significant sense he doesn’t seem to know that *Hesperus (this very object) is Phosphorus (this very object)*. To see what is missing from Mack’s discovery, let us construe a similar example involving Jan who does have representations of Venus.

Suppose now that Jan does her calculations herself and, before starting, writes at the top of her worksheet, “let ‘a’ designate Hesperus and ‘b’ designate Phosphorus.” She starts working towards a solution and forgets about ‘Hesperus’ and ‘Phosphorus’. Once Jan has forgotten about ‘Hesperus’ and ‘Phosphorus’ she is in a situation very much like Mack who acquired the names without knowing much about the object named.

After days of hard work Jan reaches the surprising conclusion that a=b. She goes over the calculations and decides that they are correct. She therefore believes that a=b. Since ‘a’ and ‘b’ are names of Hesperus and Phosphorus, respectively, she has discovered, and thus believes, that Hesperus is Phosphorus. In spite of believing that Hesperus is Phosphorus, Jan has not yet realized that her representations of Hesperus and Phosphorus are of the same object, nor has she
discovered that they are representations of the object whose identity she discovered. Before she realizes that she is killed by a falling meteor.

Although Jan does have mental representations of Venus she does not associate those mental representations with ‘a’ and ‘b’ when working through the derivations. Given that the direct designation theory allows that one can believe propositions about people one knows next to nothing about, such as my belief about Philidor, it would seem that it has to allow for Jan believing that a=b. So, the typical direct designation theorist will acknowledge that Jan believes that Hesperus is Phosphorus, for she believes that a=b. Herein lies the difference between the typical direct designation theorist and Frege and Richard. Unlike Frege and Richard the typical direct designation theorist does not build representations into propositions and can therefore accommodate the view that one can discover identity without recognizing relations among mental representations of that object.

It is clear that Jan has made a discovery. At the same time she has not recognized the significance of her discovery and she is unable to recognize the significance of her discovery until she makes a discovery about her mental states; namely that she has two representations of Venus. To make that discovery it might help her to look back at the top of her sheet and see how she introduced ‘a’ and ‘b’.

Shortly after Jan’s death her colleagues find her papers. Should there be any doubt in their minds that she had discovered that Hesperus is Phosphorus? Probably not. Because we typically make the two discoveries together it would be uncharitable for them, to say the least, to speculate whether Jan had made the second discovery that she had two mental representations of Venus, arguing that unless they knew she had made the second discovery they could not confidently claim that she had discovered that Hesperus is Phosphorus. But while we typically
make the two discoveries together the example of Jan shows we don’t have to do so. In fact, it might well be the case that when we reflect on a days work and suddenly realize that what we thought were two objects is one object, when we experience the “and then it hit me” feeling, we are doing what Jan failed to do; namely discovering connections among modes of presentation (doing what I will call file management in the following section). If so, then the scenario outlined in Jan’s case is an instance of a more common phenomena.

Note the “direction” of the discovery. Jan did not start with two mental representations and discover that they are of the same object and she did not make the two discoveries simultaneously. Instead, she started with the object, discovered that Hesperus is Phosphorus, but didn’t live to make the second discovery, namely the one about her mental representations. How does this compare with the direction of the discovery for Frege’s and Richard’s views?

According to Frege, in order to discover identity you have to make a discovery about both the object and the representations of the object. To discover that Hesperus is Phosphorus requires one to discover that the two representations are of the same object. Surprisingly, the same is true for Richard. Discovering that Hesperus is Phosphorus requires discovering that two mental representations are of the same object. Neither approach can account for Jan’s discovery.

III.

One way to try to account for the two discoveries that is compatible with Frege’s and Richard’s idea to build modes of presentation into propositions is to employ the distinction between (a) discovering the truth expressed by a sentence and (b) discovering that the sentence expresses a truth. Consider the following example that clarifies the distinction. An astronomer who I know is ultra-reliable tells me that red giants collapse and become white dwarfs. Since I know that the
astronomer is ultra-reliable I know that it is true that red giants collapse and become white
dwarfs, but since I am entirely unfamiliar with astronomy and do not even know what red giants
and white dwarfs are, I do not know the truth the sentence expresses. Similarly, we might want
to say that Jan discovered that a sentence expresses a truth without discovering the truth the
sentence expresses, and when we make both discoveries we discover both that the sentence
expresses a truth and the truth it expresses.

The problem with trying to account for the different discoveries by distinguishing
between discovering the truth expressed by a sentence and discovering that the sentence
expresses a truth is that it denies that Jan believes that Hesperus is Phosphorus and saddles her
instead with a meta-linguistic belief. This is a move that we are not ready to make when we are
dealing with, for example, sentences that provide us with knowledge of historical figures. When
I learn that Philidor was a great chess player we say, without hesitation, that I believe that
Philidor was a great chess player; we do not claim that I only have the meta-linguistic belief that
Philidor was a great chess player is true. If we are not ready to make the meta-linguistic move
when dealing with my belief about Philidor or other historical figures we should not be ready to
make the meta-linguistic move when dealing with Jan’s belief.

A more promising way of dealing with the examples involves the now common move of
introducing mental files of information. We need not settle here what kind of information goes
into the files; for our purpose we can accept both descriptive and nondescriptive information.
What we need to say is that the content in a mental file is about an object as one is acquainted
with it, and that the unity of the file comes from the information in the file being about what one
takes to be a single object. A couple of examples illustrate the basic idea of a mental file.
Information I gather about my daughter goes into a mental file about my daughter; let us call it my Dagny file. Since I have been around my daughter a great deal the Dagny file is rather extensive. And since we are not concerned, at this point, with what kind of information goes into a mental file we can be generous and claim that a file can potentially store information of linguistic items, mental pictures (still and motion), scents, and even mood. Thus, I can lean back in my chair and recall moments with my daughter, what she said, how she ran, and I can even in some cases recall the mood of the moment.

Among my files is a Weinstein file and a Kasparov file. Into the former I have filed information about a young promising chess player who, among other things, took lessons from Botvinnik. The Kasparov file is much richer in content and includes quite a bit of information about Garry Kasparov, the former world chess champion. My Kasparov file, however, does not have in it information to the effect that Kasparov took lessons from Botvinnik. I have both a Weinstein file and a Kasparov file because I take it that Weinstein and Kasparov are different people. Information I take to be about Weinstein goes into the Weinstein file and information I take to be about Kasparov goes into the Kasparov file. For all I know, Weinstein might never have been more than a promising youngster while Kasparov grew up to be a great champion.

File management can be of various kinds. We can, for example, remove items from a file and refile them, as when I realize that I had mistaken another girl for my daughter at a costume party and thus realize that some of the items I filed in my Dagny file do not belong there. We can check a file for consistency and “repair it” if we discover that it contains contradictory information. And we can combine contents of two or more files, as when I realize that Weinstein and Kasparov are the same person. These examples of file management show that one can work on file management in the absence of the objects the files are about.
The basic model described above can help us account for the example of Jan. Jan has a Hesperus file and a Phosphorus file and introduces ‘a’ and ‘b’ as names for Hesperus and Phosphorus. Consequently, she files information about object $a$ in the Hesperus file, and she files information about object $b$ in the Phosphorus file. The fact that she forgot about ‘Hesperus’ and ‘Phosphorus’ while working does not entail that she quit filing information into the Hesperus and Phosphorus files. She might have started filing information about what she took to be object $a$ in the Hesperus file while she still remembered that ‘a’ and ‘Hesperus’ and ‘b’ and ‘Phosphorus’ named the same object, thus establishing a pattern of where to file information about $a$ and $b$ before she forgot about ‘Hesperus’ and ‘Phosphorus’. However, given that she filed information about $a$ in the Hesperus file without realizing $a$ and Hesperus were the same object might indicate that the information filed was not integrated with the information already in the files. Jan might not have been doing file management.

An alternate explanation of Jan’s mental states might be that she established two new files, an $a$ file and a $b$ file, and started filing information on $a$ into the $a$ file and information about $b$ into the $b$ file. In that case she does not realize that her Hesperus file and her $a$ file contain information about what she takes to be the same object, and her Phosphorus file and her $b$ file contain information about what she takes to be the same object. She would then, in all likelihood, have to look at the top of her sheet to see that ‘a’ and ‘Hesperus’ name the same object to combine those two files, and that ‘b’ and ‘Phosphorus’ name the same object to combine those two files, and then she could combine the information in the resulting files once she realizes the full relations among her representations.

Since “$a$ is $b$” and “Hesperus is Phosphorus” express the same proposition, once Jan has discovered that $a$ is $b$ she has discovered that Hesperus is Phosphorus. But she did not get to
work on file management and therefore did not have a chance to properly integrate the information she had gathered. Had she had the opportunity to think about her discovery and piece together all the information she had gathered, in other words, had she worked on file management, then she would in all likelihood have realized that she had two mental files on the same object. But work on file management is purely a mental work and is entirely internal. Had Jan realized that she had two files on the same object then that would have been a discovery about her mental states.

In the case of Frege and Richard one might have two separate files; a Hesperus file and a Phosphorus file. But, given that Frege and Richard build modes of presentation into propositions, discovering that Hesperus is Phosphorus requires that one recognizes that the modes of presentation in the propositions are of the same object. One can, of course, be surprised when one later recalls pieces of information about Hesperus and recognizes that they also are pieces of information about Phosphorus, but that is more like looking through the materials in the file rather than combining two files; i.e., it is not discovering that two mental representations are of the same object but rather recognizing some of the consequences of having made that discovery.

The two discoveries are usually made together. One typically does a sufficient amount of file management “on the fly” so that once one discovers that what one took to be two objects is one object, one combines the files on the object. For that reason Jan’s colleagues would most likely not question whether Jan had made the second discovery. But the discoveries can be made separately, and theories about beliefs and mental representations have to acknowledge that we sometimes make discoveries of the first kind, i.e., discoveries where we do not recognize relations among mental representations and beliefs, and that we sometimes make discoveries of the second kind. Recognizing relations among mental representations and beliefs is often
difficult and labor intensive and a theory which stipulates something to the contrary is immediately suspect. And the mechanism needed to recognize the possibility of one making a discovery of the first kind includes propositions that do not build in modes of presentations; namely untainted singular propositions.

Frege, p. 56.

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If ‘a’ and ‘b’ stand for ‘Hesperus’ and ‘Phosphorus’, then the proposition expressed by “a=b” is (roughly) “the first celestial body seen in the evening is the latest celestial body seen in the morning.”


In both cases we can deduce from our discovery that Hesperus is Phosphorus. But that we need to deduce it shows that we have not discovered yet that Hesperus is Phosphorus.

It is sometime suggested that the Fregean view is that we think about objects through senses, and Alvin Goldman suggested that reading as a possible objection to my interpretation of Frege. While it is not entirely clear to me what it is to think through senses, it seems that this is not a plausible objection, as it seems compatible with my reading of Frege that, in some sense, our thoughts have to utilize senses to access the world.

While one may object to this that Frege was not primarily concerned with natural languages, one needs to recognize that even Frege made a distinction between actual languages and perfect languages (see, for example, Frege, footnote p. 58). Since we work with natural languages we can, as did Frege, assume that they are the vehicle of human thought.

Recently both Jennifer M. Saul and David Braun have entertained the possibility of persons entertaining thoughts of objects without having names for them, and instead using, e.g., diagrams or demonstratives to express their thoughts of them. See Saul’s “The Pragmatics of Attitude Ascription,” *Philosophical Studies* 92, 1998, pp. 363-389, and Braun’s “Understanding Belief Reports,” *The Philosophical Review* Vol. 107, 1998, pp. 555-595.

This interpretation is not threatened by Gareth Evans’ introduction of Fregean singular propositions. Evans’ view, as developed in *The Varieties of Reference* (Oxford: Oxford University Press, 1982), talks about Frege’s view being compatible with there being singular propositions, and that one could then have Fregean senses of singular terms. (See Evans, p. 38). In that case it appears that one cannot apprehend singular propositions except through Fregean senses. And if so, then we are lead back to the view that we have to grasp senses through languages.


This is, of course, Kripke’s famous example from “A Puzzle About Belief” in *Meaning and Use* (ed) A. Margalit, (Dordrecht: D. Reidel, 1979).

Richard, p. 182.


More formally, an attitude ascription, P believes that S, is true as taken in context C, iff there is a correlation function f which (a) obeys all restrictions in C related to P and (b) maps the annotated proposition expressed by S in C onto an annotated proposition S* that is explicitly accepted by P. So, if
\(a: \langle \text{‘Hesperus’}, \text{Hesperus}\rangle\)

and

\(b: \langle \text{‘Phosphorus’}, \text{Hesperus}\rangle\)

then we need, in the case of Hammurabi, correlations \(b \rightarrow a: a \rightarrow a\). That is, the mappings of the representations must be identity mappings.

\(^{18}\) Suppose Hammurabi does not discover that these two representations are of one and the same object. He nevertheless needs to acquire some representations of the object involved. His discovery then involves those representations instead of the ones discussed above.

\(^{19}\) Scott Soames, for example, has argued that in at least one sense of believe, in order to believe a singular proposition it is sufficient to accept it as represented by a sentence, and that the only way to account for some attitude ascriptions is to abstract away from modes of presentation. See his “Beyond Singular Propositions,” \textit{Canadian Journal of Philosophy} 25 (1995): 515-549.


\(^{22}\) For a discussion on descriptive and nondescriptive content in files, see Recanati’s \textit{Direct Reference}. 
