

André Leclerc (*)

Frege's Puzzle, Ordinary Proper Names, and Individual Constants

Resumen: *Mi propósito en las siguientes observaciones es simplemente recordar las motivaciones de Frege para introducir el Sinn, y algunos hechos importantes acerca de su uso de '='. Pienso que son relevantes al escuchar lo que ha sido denominado el "puzzle de Frege". Primeramente, Frege no utiliza el signo de identidad '=' exactamente como lo hacemos nosotros. En segundo lugar, su noción de objeto no es substantiva (física o mereológica), sino esquemática. Y en tercer lugar, la noción de Frege de nombre propio es enteramente distinta de la nuestra o de la del sentido común. Al final, lidio con el problema de Glezakos acerca de la individuación de los nombres. Concluyo, al igual que Glezakos, que el puzzle de Frege no es enigmático, mas proporciono razones un tanto distintas. La teoría de Frege de la intencionalidad y las reglas que gobiernan el uso que hacemos de las oraciones esquemáticas en el proceso de formalización son claves para entender por qué Frege propuso el problema tal y como lo hizo. Empero, no creo que la solución de Frege se sostenga para los nombres propios ordinarios. Creo que la solución de Frege funciona mucho mejor cuando los substituyentes de 'a' y 'b' son expresiones complejas, como lo son las descripciones definidas o las oraciones declarativas completas, debido a que estas expresiones expresan modos articulados de presentación, mientras que las expresiones no complejas, como lo son los nombres propios ordinarios, no expresan su modo de presentación en virtud de una convención definida, siendo la arbitrariedad inevitable.*

Palabras claves: *Frege. Oraciones de identidad. Sinn. Nombres propios. Constantes individuales.*

Abstract: *My aim in the following observations is simply to remind Frege's motivations for introducing the Sinn, and some important facts about his use of '='. I think they are relevant at the time of scrutinizing what has been called "Frege's puzzle". First, Frege does not use the identity sign '=' exactly as we do; second, his notion of object is not a substantive one (physical or mereological), but a schematic one; and third, Frege's notion of proper name is quite different from ours or that of common sense. At the end, I tackle Glezakos' problem about the individuation of names. I conclude, like Glezakos, that Frege's puzzle is not that puzzling, but for slightly different reasons. Frege's theory of intentionality and the rules that govern the use we make of schematic sentences in the process of formalization are keys to understand why Frege posed the problem the way he did. However, I do not believe that Frege's solution holds for ordinary proper names. I think that Frege's solution works much better when the substituents for 'a' and 'b' are complex expressions like definite descriptions or full declarative sentences, because these expressions express articulated modes of presentation, while the incomplex expressions, like ordinary proper names, do not express their mode of presentation in virtue of a definite convention, and then arbitrariness is unavoidable.*

Key words: *Frege. Identity sentences. Sinn. Proper names. Individual constants.*

1. Frege sets up his so-called “puzzle” by using two identity sentences of the language of first order predicate logic (with identity): “ $a=a$ ” and “ $a=b$ ”. If “ $a=b$ ” were a relation between two signs or names, there wouldn’t be any difference in terms of cognitive value between the two identity sentences. We can choose any signs we want, arbitrarily. The shape does not matter. If it is a relation between the object denoted by ‘ a ’ and the object denoted by ‘ b ’, then we lose the difference between the two sentences given that “ $a=b$ ” is true —they both state the same thing: that an object is identical to itself.

As we know, the language of predicate logic with identity is extensional, that is, it is a language in which the only semantic value that matters for calculations is the extension. All instances of “ $a=a$ ”, or so it seems, are truths knowable *a priori*; so, “Charles Dodgson=Charles Dodgson” is true just in case Charles Dodgson is the same (person)¹ as Charles Dodgson. That language in classical logic works with a non-empty domain. Therefore, the only thing we learn by understanding “Charles Dodgson=Charles Dodgson” is that there is an x such that x is identical to Charles Dodgson. That is not much informative, indeed. But Frege, correctly, calls our attention to the fact that instances of “ $a=b$ ” behave in a very different way. In arithmetic, to know (*a priori*) the truth of an equation like “ $(47+63)=(55+55)$ ” I have to do something, to calculate, and usually, it takes time to discover truths of the form “ $a=b$ ”. In some cases, it is an empirical discovery. “Charles Dodgson=Lewis Carroll” is true just in case Charles Dodgson is the same (person) as Lewis Carroll, but in that case, you don’t know that simply by inspecting the sentence. You have to investigate. So, here is the “puzzle”: given that a sentence of the form “ $a=b$ ” is true, given that ‘ a ’ and ‘ b ’ denote the same “object”, then what makes the difference between “ $a=a$ ” and “ $a=b$ ”? In other words, how a sentence of the form “ $a=b$ ” can be informative?

Frege considers as something “obvious” (*offenbar*) that the two schematic sentences (more precisely: all the instances of “ $a=a$ ” coupled with all the instances of “ $a=b$ ”, respecting *uniform* substitution) have different cognitive values. That premise is taken for granted at the outset.

So, ‘ a ’ and ‘ b ’ cannot have exactly the same meaning; therefore, meaning cannot consist solely in a denotation, since ‘ a ’ and ‘ b ’ have the same. Something more is required.² What remains to be done is to find the element that explains the cognitive difference, and to justify its introduction. The idea of mode of presentation or sense (*Sinn*) comes soon at the very beginning of Frege’s most famous paper (1892) as a very natural way to explain that difference. On that score, I agree with Glezakos: all this is hardly puzzling.

How puzzling must a problem be in order to count as a ‘puzzle’? I confess I don’t know. ‘Puzzle’, like any other noun, can be used in a relatively sloppy way. But if it is a puzzle at all, Frege has a readily solution and his puzzlement is not long-lasting. And the solution does not seem to me as new or revolutionary as it is usually taken to be. What is new and revolutionary, however, is the way Frege employs his notion of *Sinn* in the development of his philosophical framework.

2. In *Über Sinn und Bedeutung* (1892; hereafter *SuB*), Frege’s first motivation when he poses his “puzzle” seems to be the improvement of his ideal language. The first 1879 version of it speaks of “content” (*Inhalt*) without any further distinction. The second version in *The Basic Laws of Arithmetic* (1893) already uses the sense/denotation distinction. The symbol for identity is, of course, part of the ideal language in construction. But there is also an important rule essential to that language that derives directly from the principle known as the Indiscernibility of Identicals. The principle says that if $x=y$, then x has all the properties y has and *vice versa* (in symbols: $\forall x \forall y [(x=y) \rightarrow \forall P (Px \leftrightarrow Py)]$). From this follows a rule of substitution of co-referential terms widely used in mathematics and logic: for any property P , from $a=b$ and $P(a)$ it follows that $P(b)$ —‘ a ’ and ‘ b ’ can be substitute one for another in P (___) *salva veritate* (in symbols: $\forall P (a=b) \& Pa \vdash Pb$). That rule works quite well in extensional contexts, but it fails in intensional contexts. Frege’s second motivation is to explain the failure of that important rule in indirect discourse and to preserve it. Both motivations have to do with the correct interpretation of

'='. With the introduction of another semantic-cognitive value, the *Sinn*, Frege kills two birds with one stone.

But there is much more. By exploring the reasons why the Leibnizian rule fails in indirect discourse, Frege paved the way for a new philosophical logic. The introduction of sense as a component of meaning leads to a spectacular simplification in Frege's semantics, a decisive step in the direction of what Alonzo Church called the "Logic of Sense and Denotation", which is called today, simply, "Intensional Logic". One of the most important theses defended in *SuB* is the idea that the denotation of sentences is a truth-value. The introduction of senses makes possible the following simplification in Frege's system: the denotation of complete sentences or of a complete interrogative sentence with the force of a yes/no question is a truth-value. All true sentences have the same denotation and all false sentences too, the True and the False, respectively. Different declarative sentences do not denote, for instance, different "facts". But it is as clear as is the summer's sun that there is all the (cognitive) difference in the world between the sense of "A neutron is a particle with zero charge", and the sense of "The number of planets of our solar system is 8". Both sentences are names of the True, but this is the only thing they have in common. In an extensional calculus (like propositional logic) they can be substitute *salva veritate*. But the thoughts or senses they express are completely different, and a cognitive agent can believe one and not the other.

3. The identity symbol '=' in the language of first order predicate logic must be flanked by symbols for individual constants that stand for "objects".³ More precisely, "a=a" and "a=b" are schemas of identity sentences exhibiting the logical form of all their respective instances in a perspicuous way. The constant letter 'b' in the second sentence is there only to indicate that a different "name" is being used in the original sentence whose logical form is made explicit. Most instances considered as examples by Frege are taken from ordinary language, like the famous Morning Star/Evening Star example.

However, ordinary language, as we know, is full of truth-value gaps and intensional contexts.

We use a lot of empty names, like 'Excalibur', 'Sherlock Holmes', etc., and fiction is a genuine and important part of our lives. We do not always think and speak "seriously and literally", when the truth-value of our thoughts and assertions really matters to us. The existential presuppositions relatively to what we think and say are not always fulfilled, and we know that. Furthermore, we constantly ascribe to each other knowledge, intentional actions, and a huge variety of mental states whose contents are specified by the use of sentences belonging to a public language in the scope of a verb denoting a mental state. In Frege's ideal language (the first version of the language of first order predicate logic in modern time), there is no truth-value gap and no place for indirect discourse. Therein, all names, simple and complex, have a denotation, and their denotation is always their usual, customary denotation.

4. The introduction of *Sinn* as a semantic value is "new" in *SuB* and Frege's system. I said that Frege's solution is not overall new or revolutionary. In fact, it is not hard to find some equivalent notions in the history of logic. Actually, the pair <sense; denotation> echoes other famous distinctions. Port-Royal's *Logique* introduced the pair <*compréhension*; *étendue*>; Leibniz used the pair <intension; extension>, revived by Carnap centuries later; and Mill proposed the pair <connotation; denotation>. The first term of each pair refers to the cognitive part of language, what we do understand when we understand sentences. *Sinne* are what take us to the denotation when we speak and think *seriously*, as it happens most of the time. At least, it takes us to denotation when there is one. Now, what about fiction and empty names?

In some versions of free logic, it is not true that "a=a" can be known *a priori*. "Hesperus=Hesperus" looks as a good candidate for something knowable *a priori*, but it is doubtful in cases like "Excalibur=Excalibur". From "Excalibur = Excalibur" it certainly does not follow that there is an x such that x is identical with Excalibur. After all, the fact that an ordinary name has a *nominatum* is not something that can be known *a priori*. It is a contingent fact. Positive free logic says that "Excalibur=Excalibur" is true just for being an instance of a logical law.

In a Fregean free logic, the same sentence has no truth-value. In negative free logic, it is false.⁴ A false sentence, or a sentence neither true nor false, is of no use for specifying the content of a knowledge ascription, since the proposition that is the content of such an ascription, by stipulation, must be true. If our concern is ordinary language, free logic should be taken seriously. But Frege few excursions on the topic of empty names and fiction are open to interpretation and critique. Some consider incoherent the idea of a mode of presentation that does not present anything. Perhaps, mock beliefs are not genuine beliefs, or beliefs only in a degenerated sense. But why is it that people knowing a bit of British literature would reject immediately as wrong the belief that Sherlock Holmes is a fisherman? The idea of sentences expressing thoughts with no truth-value, after all, is not that implausible and should be treated on a par with the idea of ordinary proper names with a sense but no denotation.

5. The logical difference between “ $a=a$ ” and “ $a=b$ ” is spelled out in terms of knowledge. Where “ $a=a$ ” in classical logic (with a non-empty domain) always gives rise to analytically true instances knowable *a priori*, “ $a=b$ ” sometimes represents empirical, scientific discovery. Once again, Frege’s puzzle amounts to wondering: How is this possible when “ $a=b$ ” is true, that is, when ‘ a ’ and ‘ b ’ stand for the same denotation? The answer is simply that the two sentences involve different cognitive values. This is shown, for Frege, by the fact that, in normal conditions, it is not possible for a rational agent not to believe that $a=a$, while it wouldn’t be irrational for the same agent not to believe that $a=b$, because she represents the object for which ‘ a ’ and ‘ b ’ stand under different “aspects”, different “modes of presentation”, different *Sinne*. As we know, in a context like “ A believes that P ”, the substitution of co-referential terms is not allowed in P because it might change the belief and run into the risk of disrespecting the cognitive perspective of the agent. We do not always feel the need to respect the cognitive perspective of the agent. Most of the time, it is pragmatically “negotiable”. But there are situations in which it is of the utmost importance to determine exactly under which aspects an agent represents things or facts. The

president of a country is accused of corruption in a trial for impeachment. The whole nation wants to know if he/she knew the facts mentioned in the accusation. May be the president, in his/her cognitive perspective, represented the facts under aspects or modes of presentation making them something quite inoffensive and usual. May be not.

6. The sense is something we *grasp*; it is the cognitive dimension of meaning, what is understood when we understand linguistic expressions; and, importantly, it is objective, that is, the same for all competent speakers in a determined community. But is it always the same? “[...] [In] order to think we must use sense-symbol”,⁵ says young Frege, and our thoughts are composed out of *Sinne*, each one associated with words *by convention*. That is the theory. So it is a new, different *semantic* value that Frege introduced in his system. Therefore, senses supposedly are tied to languages, accessible to all those who master the conventions and rules of language. Thus, according to Frege, our knowledge of senses is a genuine and central part of our *semantic knowledge*. The sense of an expression is denoted by using the sentence form “The sense of ‘...’”.⁶ An entire hierarchy of indirect senses can be constructed in this way. Just continue the sequence: the sense of “the sense of ‘... E ...’”, etc., where E is any expression provided with a denotation.⁷ This way of denoting the sense of a linguistic expression ties up strictly the senses to language. However, it is not a device to *specify* the sense of an expression, as Sainsbury seems to suggest; this is obvious, we’ll see, in case of ordinary proper names. But old Frege with his doctrine of a third realm seems to underline the language-independent character of *Sinne*. And then it is hard to separate proper semantic knowledge from encyclopaedic knowledge.

Frege presents the sense as a semantic property of an expression, something understood or grasped by all those who know the language and are competent speakers. But then it seems hard to separate sense and linguistic meaning, especially for complex expressions where the rules of compositionality for the senses apply (definite descriptions, full declarative sentences, complete interrogative sentences). Do we always

grasp the same sense expressed by an expression? According to Burge (1990/2005), in many passages, Frege admit that the sense grasped is not always the one semantically expressed. He gave as examples the *Sinn* expressed by 'number' (and also 'inertia'), which became more precise over a long period of time by the addition of fractionary numbers, real numbers, complex numbers, etc. By its very nature, the *Sinn* cannot change. What become more precise is not the *Sinn*, of course, but our grasping of it. Frege never faced insistently the issue that became important in the late sixties and seventies in the philosophy of science: scientific progress *versus* change in meaning, but he anticipated it. As we saw, semantically, the *Sinn* expressed cannot change; it is always the same. But then, what about the sense of 'Aristotle'?

My hypothesis is that Frege's solution to the puzzle only works for complex names that express what I shall call *articulated modes of presentation*. For incomplex names, like ordinary proper names, numerals, and demonstratives or indexicals (for which there is no "completing Fregean sense" as Perry famously said), the doctrine of "sense-expression" is totally arbitrary. There is no obvious convention that picks up one and only one mode of presentation. You can know *a priori* the truth of an identity sentence like " $3^2 = \sqrt{81}$ " and the modes of presentation are easy to identify and grasp, because the expressions involved are complex and some rule of compositionality applied. But what would be the mode of presentation expressed by '9' in virtue of a convention? Would it be the successor of 8? Why not the last of the ten first integers, or the predecessor of 10, etc.?

In case of *ordinary* proper names, the whole doctrine is vulnerable, hardly consistent, arbitrary and ontologically expensive. There are infinitely many senses waiting to be grasped. For Platonists, this is no problem at all, but an army of naturalists will disagree. Fortunately, Frege observes that a complete knowledge of the denotation is not within our power. Any object has infinitely many properties and we can think of an object under infinitely many aspects or modes of presentation. But our cognitive capacities are limited; this is shown by the fact

that we cannot tell, of any sense given, if it is (or not) a sense of a determined denotation.

We all know the famous (for some, infamous) footnote about the sense of 'Aristotle'. Frege cannot specify the sense of an ordinary proper name like 'Aristotle' simply by saying "the sense of 'Aristotle'". It would sound ridiculous. So he suggests that the sense is specified by an indefinite numbers of definite descriptions, which are complex names. The sense of 'Aristotle' would be specified by one or more sentences like "the sense of 'the founder of the Lyceum'", "the sense of 'the most famous Plato's student'", etc. The denotation of 'Aristotle' is the individual that satisfies the condition of being the most famous Plato's student, etc. If Frege is right, ordinary proper names, when they have a denotation, necessarily have a sense, what we do understand when we understand the contribution made by a proper name to the truth conditions of a sentence uttered in a context. For him, definite descriptions are proper names too. But any individual has infinitely many modes of presentation; most of them will never be communicated, or will be ignored. Why should we choose one instead of another? Why Alexander's teacher rather than the founder of Lyceum? My encyclopaedic knowledge about Aristotle is poorer than that of any specialist, richer than most people I can meet in the street, and that knowledge is not (and needs not be) communicated when I use the name 'Aristotle'. An ordinary proper name that denotes must have a sense, but which one? What, if any, is the semantic rule attached to the name? How do we separate encyclopaedic knowledge from proper semantic knowledge in cases like that? How could we establish with precision the cognitive difference between 'a' and 'b' in " $a=b$ " when " $a=b$ " is the formalization of an identity sentence involving ordinary proper names? On that score, I take side with direct reference theorists.

7. As our main topic here is the interpretation of '=' in Frege,⁸ we cannot ignore truth-value names because, in Frege's system, truth-value names, like any other simple or compound names, are allowed to appear on each side of '='.⁹ And this is perfectly consistent in Frege's system. If 'P' and 'Q' are sentential letters, then " $P=Q$ "

is a well-formed formula in that system, and means that the two sentences are names of the same truth-value. Most of the time, of course, they will express different thoughts. Today we use ‘ \leftrightarrow ’ or ‘ \equiv ’ between sentences, and ‘ $=$ ’ only between constant letters, names in the strict (non-Fregean) sense. Names for Frege are signs or combinations of signs that denote. In his formal system, all the names denote, and the variables (Frege’s Roman letters in the *Begriffsschrift*) are not names, let alone rigid designators. They do not denote; they only “indicate”, he says.

When the puzzle is introduced, Frege speaks of “objects” denoted by the names on each side of ‘ $=$ ’, and we know that objects, for him, “stand opposed to functions.” So physical objects, like the Moon, count as objects, but also truth-values, courses-of-values, numbers, and also the possible denotations of “the sense of ‘... E ...’”. But Frege, surprisingly, seems to accept in *The Basic Laws of Arithmetic*, equations involving functional expressions on both sides of ‘ $=$ ’, like “ $\Phi(\zeta) = \Psi(\zeta)$ ”.¹⁰ But this must be just a way of saying that both functions have always the same truth-value for the same arguments, or that both functions have the same *Wertverlauf* (course-of-values). Frege’s notation for courses-of-values says exactly this: “ $\varepsilon! \Phi(\varepsilon) = \varepsilon! \Psi(\varepsilon)$ ”. Elsewhere, he says clearly: “[...] the relation of equality, by which I understand complete coincidence, identity, can only be thought of as holding for objects, not concepts” (Frege, 1892a, 175). We can think of a function—and concepts are functions—in different ways. These ways of thinking are unsaturated senses. The course-of-values (an object in Frege’s system) of two functions can coincide, but the cognitive significance attached to the predicate may diverge importantly. The function/concept denoted by “x is much taller than the average adults in North America”, and the one denoted by “x is tall enough to play in the NBA”, may coincide in truth-value for all arguments, but certainly not in cognitive significance. Frege says: “The fundamental logical relation is that of an object’s falling under a concept: all relations between concepts can be reduced to this. If an object falls under a concept, it falls under all concepts with the same extension [...]” (*Ibid.*, 173) The two complex predicates denote concepts with

the same extension, but they express different (articulated) modes of presentation.

So, this is an important point we should bear in mind at the time of scrutinizing Frege’s (so-called) puzzle. We should be aware of the fact that he does not use ‘ $=$ ’ exactly as we do.

8. Individual constants in a regimented language are a very simplified version of proper names, but they are far from retaining all the complexity of ordinary proper names. Individual constants retain a very small part of it. They stand for individuals, and that is part of their contribution to the truth conditions of the sentences in which they appear. Some would say this is their only contribution. Regimented, perspicuous languages are extremely useful when it comes to establishing the validity of an argument or the logical form and truth conditions of sentences of ordinary language when they masquerade their logical form. But the use of individual constants is very limited in a regimented language; in natural languages, proper names do not always serve the same and unique purpose of standing for a referent. We call someone a ‘Hercules’ just because he looks very strong, and a ‘Casanova’ a successful man with a disposition to womanize. This is what we call ‘antonomasia’ in Rhetoric. Ordinary proper names like ‘Ramses III’ or ‘Elisabeth II’ tell us something more than other ordinary names. They situate the bearer in time by telling us, for instance, that Elizabeth II comes after another famous queen with the same name. Frege introduced his famous puzzle by using the common notation for identity sentences in logic, but after considering a geometrical example, he turned to ordinary language to introduce his notion of *Sinn*. As he used the term ‘*Eigenname*’ in a very extensive way, definite descriptions count as proper names, and also predicates and complete sentences. Russell and the neo-Russellians would not follow Frege’s practice of flanking two quantified terms on both sides of ‘ $=$ ’. But ‘The Morning Star’ is a proper name? May be it should be counted as one; ‘Phosphorus’ surely is. ‘The Eiffel Tower’ looks like a definite description, but it is surely a proper name. It would be silly to pretend that there are possible worlds, in which “the Eiffel Tower” could have denoted another structure, say, the CN tower

in Toronto. 'The author of Waverley' is not an ordinary proper name, but it contains one *in modo obliquo*. What counts as a proper name depends largely on context. It is a pragmatic business. At the end of Kubrick's movie, *Spartacus*, a Roman centurion announces that the slave who will identify Spartacus' body, dead or alive, will have his life spared. When Antoninus, Spartacus' best friend, sees that he was about to surrender, he gets up and says, "I am Spartacus!" followed immediately by the other defeated slaves. They all get up and say "I am Spartacus!" 'Spartacus' is a proper name. Only one person could truly say, "I am Spartacus". Are Antoninus and his friends lying to the centurion? Well, that is not the impression we have. A lie is something a liar always tries to conceal; in that case, they do not even try to conceal anything. They know that the centurion would never believe they are all called 'Spartacus'. So, they are not lying. At that point, the name "Spartacus" became the symbol of something to be proud of. Is it still a proper name? Yes, but it became something more, and that "something more" is not captured by an individual constant in a process of formalization. Proper names of famous people are special too. They are salient. If I say "Balzac was a French writer" I will be understood immediately as speaking of Honoré de Balzac, even though my intention was speaking about Jean-Louis Guez de Balzac (a French writer of the XVII Century), simply because the first is much more famous and comes first to mind. Some ordinary proper names are used to designate a huge set of events organized in a certain way or with some more or less unifying characteristics, with no simple bearer, like 'Second World War' or 'Renaissance'. For someone using a schematic notion of object, like Frege, this is not a problem. The denotation of 'Second World War' is not an interval of time, but complex sequences of events running in parallel with some structuring elements (treatises and agreements among nations, for instance). The set of ordinary proper names is not something well unified. This is why the formalization of ordinary language sentences is a process that regularly involves decisions guided by some previous metaphysical conceptions.

9. What is a word? How do we individuate words? In Latin, 'bellum' (war) has the same form in the nominative, the vocative and the accusative. Is it the same word? Is the shape so important? Is the qualitative identity of the tokens enough? As the function is different in the three cases, the answer should be "no". An English translation in each case will render a different periphrasis, with different prepositions. So, the shape is not enough.

What is a name? This question is more specific. It is a bit depressing for me to write 'André Leclerc' in the Google search engine and to behold the result... So many people with the same name! But is it the same name? Glezakos (2009, 202-207) raises that important question, following a suggestion made by Kaplan. Suppose there are three André Leclerc: one living in Brazil, one in Quebec, and another in France. Let's follow the old rule —correctly criticized by Wittgenstein and Austin—, but only for ordinary proper names of non-fictional individuals: *unum nomen, unum nominatum*. We could distinguish or individuate the three names, by using a subscripted letter like this: André_B, André_Q, and André_F (or simply distinct numerals instead of letters). The individuation of the names, in these cases, presupposes the capacity to distinguish the bearers of the names. Then what will we do about fictional names, like Excalibur and Pegasus? What does not exist has no real qualities or properties. So what can we do to discriminate and differentiate Excalibur from Pegasus? Well, just to give a too short explanation, let us say that these names are always introduced in narratives that provide us with enough characteristics to recognize the figments that are the bearers of these names when they make an appearance, for example, in a movie. This is why we can say that the Sherlock Holmes of "A Scandal in Bohemia" is *the same* as the one in "The Hound of the Baskervilles", even if the actors are not the same. It is enough to suppose that the character is the same.

The situation described above with the name 'André' is extremely common when we consider ordinary proper names. How many people called André, Marco, Steve, Patricia, etc. Names sharing the same shape are in fact distinct from each other

because we know somehow that their respective denotations are distinct too. How do we know that? By applying cognitive resources, concepts (in a non-Fregean sense) or modes of presentation, enabling us to distinguish and classify what is in fact distinct. Ordinary proper names are always used against a background of information and knowledge. First of all, we need to know in which community (or sub-community) we are in order to identify the “relevant” André or David, or Marco. The cognitive resources involved in the epistemic process of distinguishing different bearers of the “same name” (or names with the same shape) are not necessarily those associated by a semantic rule to the proper name (*if there is such stable association at all*). Many proper names are introduced through descriptions, in narratives, by demonstration, etc. For me, and for a long time, ‘Kurt Gödel’ was the name of the man who demonstrated that arithmetic is incomplete. Today, after seeing photographs, I know he was also the man wearing funny round spectacles, and with a strange lock in his hair, as he got older.

Now, let’s go back to “a=a”. What does it mean exactly to say, “[...] the ability to recognize that the name is the same seems to involve the ability to recognize that the *referent* is the same”? (Glezakos, 2009, 205, italics in the text) The shortest answer is that Frege himself stipulates it. We do not start with logical forms. We formalize what we say and think in accordance with what we understand in the first place. Generally, substitution must be uniform in logic; so the two ‘a’ must replace the same name. To recognize and classify anything, in perception or thought, we must apply concepts (still in a non-Fregean sense). There is no recognition without that. Frege’s theory of intentionality does not allow the possibility of our thoughts and assertions being about something without the intermediation of something like modes of presentation or aspects. The same holds for Husserl, and today for Searle and Crane. There wouldn’t be any mental or linguistic reference without that. When he introduces the *Sinn*, Frege just points at something that *must be already there* according to his own principles. Furthermore, Frege makes it clear that if a term has a denotation, it must

have a sense. It would be incoherent to pretend that names on both sides of ‘=’ could lack a sense. So I am inclined to agree with Glezakos when she says: “[...] what emerges is that [...] [Frege’s] “puzzle” and his solution are in fact of a piece.” Frege’s solution involves his whole framework. But could it be otherwise?

I do not believe that ordinary proper names express a sense in virtue of conventions widely held in linguistic communities. Therefore Frege’s solution is not working well when ‘a’ and ‘b’ stand for ordinary (incomplex) proper names. But it works much better when the expression is complex (definite descriptions or full declarative sentences), when the expression expresses an articulated mode of presentation. I also agree with Glezakos that the puzzle is not very puzzling, may be for slightly different reasons. However, if this is so, we should reflect one moment on what leads so many people to see in the first paragraphs of *SuB* the presentation of a puzzle.

Perhaps, the diagnosis that accounts for the illusion of a (problematic) puzzle is this: we just focus too much on the schematic sentences in the first paragraph of *SuB*, and forget about the infinitely many substitution instances. By themselves, the schematic sentences do not represent anything. Schematic sentences like “a=a” and “a=b”, either are the result of a process of formalization, or are used to indicate *in abstracto* a logical form as a tool to make explicit some properties like reflexivity, transitivity and symmetry. They just retain what is common to infinitely many instances sharing the same form. In the formalization process, we substitute names for constants and the substitution, of course, *must be uniform*. When we compare the logical behaviour of “a=a” and “a=b”, the constant letter ‘a’ *must replace the same name*. Otherwise, we open the way for the fallacy of equivocation. Cases like that of ‘Paderewski’ are to be analysed before any formalization. The way we formalize depends upon the way we understand what we formalize in the first place. Formalization may help to reveal different possible readings. If someone believes that Paderewski is a musician and that the politician with the “same name” is another person, then that person believes (wrongly) something of the form “a≠b”, and

certainly not something of the form 'a=a'. We have two names in this case. What distinguishes them? It could be perceptual or psychological modes of presentation applied to the bearers, or linguistic modes of presentation used in two different narratives introducing the names, but not necessarily modes of presentation associate by convention to the name 'Paderewski' (if there are such conventions at all). As I said earlier, if the sense of a proper name is really something semantic in character, it must be tied up to the name in virtue of a convention, a social regularity. It must be there in all circumstances of use. But this is highly doubtful in case of all ordinary proper names. Part of the problem with the so-called "Frege's puzzle" is that the doctrine of sense-expression (that says what it is for an expression to express its sense) works well only for complex names and not for incomplex ones. But for us, today, ordinary proper names seem to be the best candidates the 'a' and 'b' in the initial formulas. Be that as it may, I think that Frege's puzzle, as posed by Frege himself, is not very puzzling, and that when the 'a' and 'b' are substitutes for ordinary proper names, Frege's solution fails.

We use regimented languages to formalize what we say and think, and we formalize in accordance with our previous, situated understanding. In many cases, a little hermeneutic work is necessary before using the resources of a formal language. And the basis of any hermeneutic work is always the spontaneous linguistic understanding we exercise all the time in familiar circumstances.

Notes

1. Here I set aside the issue raised by D. Wiggins (1980/2001), the question whether there is a dependency of identity sentences on sortals, and whether identity is relative or not.
2. For a reconstruction of the puzzle along these lines, see (Sainsbury & Tye, 2012, 2-3).
3. By 'object' here I do not have in mind necessarily a substantive notion of object, like that of a physical object. Actually, Frege's notion of object wasn't a substantive one. See (Frege, 1893, 35-36): "*Objects* stand opposed to functions. Accordingly, I count as *objects* everything that is not a function, for example, numbers, truth-values, and the courses of values [...]". But physical objects, like the Moon, are objects too.
4. On identity sentences and free logic, see (Crane, 2013, chap. 3). See also (Lambert, 2004).
5. (Frege, 1882, 155). By 'sense-symbol' the translator means here that signs can be perceived (seen or heard).
6. Frege made that suggestion in *SuB*. See (Sainsbury, 2002, 4).
7. See (Parson, 1981, 37-58). I said "provided with a denotation" because in most system we need an axiom of foundation, that is, there must be a denotation in the initial segment of the series.
8. Interestingly, Nathan Salmon defends that the puzzle has virtually nothing to do with identity. The puzzle is more general in nature; according to Salmon, it's a problem about the way pieces of information are encoded in sentences. See (Salmon, 1983 12-13).
9. (Frege, 1893, 36, 37, 40, 69, *et passim*). Of course, this is not what we do today. We do not put 'complex names' on both sides of '=', not even definite descriptions when they are clearly quantified terms.
10. See (Frege, 1893, 36, 40, *et passim*). The variable 'ζ' is metalinguistic.

References

- Beaney, M. (Ed.) (1997). *The Frege Reader*. Oxford: Basil Blackwell.
- Burge, T. (1990). Frege on Sense and Linguistic Meaning. In T. Burge *Truth, Thought, Reason. Essays on Frege*. Oxford: Clarendon Press, 2005.
- Crane, T. (2013). *The Objects of Thought*. Oxford: Oxford University Press.
- Frege, G. (1892). On *Sinn* and *Bedeutung*. In M. Beaney (Ed.) (1997), 151-171.
- _____. (1892a). Comments on *Sinn* and *Bedeutung*. In Beaney (Ed.) (1997), 172-180.
- _____. (1879). *Begriffsschrift*. In J. van Heijenoort (Ed.) (1967) *From Frege to Gödel. A Source Book in Mathematical Logic*. Cambridge: Harvard University Press.
- _____. (1893). *The Basic Laws of Arithmetic*. Translated by M. Furth. Berkeley: University of California Press.

- _____. (1882). On the scientific justification of concept-script. Translated by J. M. Bartlett. *Mind*. LXXIII (290), 155-160.
- _____. (1918) Thought. In M. Beaney (Ed.) (1997).
- Glezakos, S. (2009). Can Frege pose Frege's Puzzle? In J. Almog & P. Leonardi (Eds.) (2009) *The Philosophy of David Kaplan*. Oxford: Oxford University Press.
- Lambert, K. (2004). *Free Logic. Selected Essays*. Cambridge: Cambridge University Press.
- Parson, T. (1981). Frege's Hierarchy of Indirect Senses and the Paradox of Analysis. In *Midwest Studies in Philosophy*. 6 (1), 37-58.
- Salmon, N. (1983). *Frege's Puzzle*. Cambridge Mass: MIT Press Brandford Books.
- Sainsbury, M. (2002). *Departing from Frege*. London: Routledge.
- Sainsbury, M. & Tye, M. (2012). *Seven Puzzle of Thought*. Oxford: Oxford University Press.
- Wiggins, D. (2001). *Sameness and Substance Renewed*. Cambridge: Cambridge University Press.

(*) **André Leclerc** (Universidade Federal do Ceará, CNPq) is a Canadian working in Brazil since 1995. He is currently associate professor at the Federal University of Ceará. He is a fellow researcher of the Brazilian Council for Scientific and Technological Development (CNPq). He was president of the Brazilian Society for Analytic Philosophy (2012-2014), and Treasurer of the Latin-American Association for Analytic Philosophy. He publishes mainly in Philosophy of Mind and Philosophy of Language.

Received: Monday, September 8, 2014.
Approved: Monday, September 22, 2014.