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Frege's Puzzle: Much Ado about Nothing? (**)

Resumen: *En su artículo "¿Puede Frege formular el puzzle de Frege?", Stavroula Glezakos argumenta que, a menos de que uno presuponga la noción teórica de sentido, no hay en principio una división epistémica entre las oraciones de la forma "a=a" y "a=b". Se seguiría que el puzzle de Frege no puede usarse para argumentar en favor de los sentidos, como Frege lo hizo, so pena de circularidad. En este artículo argumento que puede especificarse un criterio de identidad del nombre basado en la noción de correferencia explícita, el cual no presupone la noción de sentido. Muestro cómo semejante criterio actúa plausible e implícitamente al establecerse el puzzle, y que puede usarse para rescatar a Frege de la acusación de circularidad.*

Palabras claves: *Puzzle de Frege. Correferencia. Nombres. Identidad. Forma lógica.*

Abstract: *In her paper "Can Frege Pose Frege's Puzzle", Stavroula Glezakos argues for the claim that, unless one presupposes the theoretical notion of sense, there is no in-principle epistemic divide between sentences of the form "a=a" and "a=b". It would follow that Frege's puzzle cannot be used to argue in favour of senses, as Frege has done, on pain of circularity. Here I argue that a criterion of name identity based on the notion of explicit co-reference can be specified that does not presuppose the notion of sense. I show how such criterion is plausibly implicitly at work in setting up the puzzle, and that it can be deployed to rescue Frege from the accusation of circularity.*

Key words: *Frege's puzzle. Co-reference. Names. Identity. Logical form.*

1. Introduction

Frege's main reason for introducing the notion of sense in his "Über Sinn und Bedeutung" (*SuB*) stems from the observation that identities of the form "a=b", where 'a' and 'b' are genuine singular terms, can be informative, while identities of the form "a=a" are always trivial, analytical, and hence knowable a priori. If the semantic content of singular terms were solely their reference, like the Millian theory of proper names suggests, then such differences in cognitive profiles would be utterly mysterious, Frege thinks.

While Frege's doctrine of sense has notoriously been questioned on several grounds, his puzzle appears to have survived virtually unscathed, as it continues to spark lively debates and to provide the basis for adequacy conditions of theories of meaning of the most diverse brands.

In her paper "Can Frege Pose Frege's Puzzle", Stavroula Glezakos (2009) argues for the bold claim that philosophers made much ado about nothing on this score. Frege's puzzle, she argues, cannot be set up unless one *presupposes* Frege's senses. It would follow that the puzzle cannot be used to argue in favour of senses, as Frege has done, on pain of circularity. Moreover, it would follow that the puzzle does not pose a threat to any theory of meaning whatsoever. In fact, if you have Fregean inclinations, that is if you are independently convinced that singular terms have a sense, on top of a reference, then surely you will not find Frege's puzzle puzzling. On the other hand, if you are not convinced by Frege's doctrine of senses, you will not even be able to set up the puzzle to start with, so you won't have to worry about dissolving it.

I think Glezakos is right in observing that Frege's puzzle, in the form in which Frege set it up in *SuB* does presuppose some relevant criterion of name identification. However, it is arguable that the puzzle can be set up in such a way as not to presuppose any theory about the identification of proper names at all. The identification of proper names enters the scene because Frege decided to set up the puzzle in terms of identity sentences and of their differing cognitive profiles; but he was arguably not forced to do so. Thus, for example, he might just as well have presented the reader with two sentences like:

(1) Hesperus is shining.
(2) Phosphorus is shining.

He could then have proceeded exactly as he did in *SuB*, inviting the reader to ponder about the different cognitive profiles of these two sentences, *vis a vis* the theory that names (assuming everybody agrees that 'Hesperus' and 'Phosphorus' belong to this category) contribute to the meaning of these sentences solely by picking out the object which is claimed to be shining.[1] Sure, this way of setting up the puzzle presupposes that we can reliably recognize that 'Hesperus' and 'Phosphorus' are different names. However, unlike the complex case of name-identity, the question of whether two distinct words should count as different names appears more amenable to a solution that is purely syntactic, and hence to a solution that does not presuppose any particular semantic theory. It follows, I think, that if Glezakos has a point against Frege's puzzle, it is a point that only applies to the peculiar (and perhaps unfortunate) formulation that he gave to it in *SuB*.

Here, however, I don't wish to pursue this general criticism further, partly because it has been addressed extensively elsewhere, and partly because I think the details of Glezakos' argument are interesting in their own right and can help us to shed light on Frege's thought.

Glezakos' argument proceeds from the observation that Frege's puzzle can only be set up if competent speakers can safely discriminate identities of the form "a=a", where tokens of the *same name* flank the identity sign, from identities of the form "a=b", where *different names* flank the identity sign. Now, under what conditions do two signs count as two tokens of the same name, rather than tokens of two different names? Having noted (correctly) that Frege cannot rely on phonograhic indistinguishability as an individuation criterion, Glezakos rightly points out that Frege can neither claim that it is identity or difference of *sense* which determines whether a sentence is of the "a=a"-type or "a=b"-type, for then he would have to presuppose what the puzzle was supposed to prove, i. e. that names express senses. Yet, she argues, this is precisely what Frege is ultimately "forced" to think.

According to Glezakos, Frege's (implicit) doctrine as to the identity conditions of proper names oscillate between two, equally unsuitable positions. In SuB, she affirms, Frege inclines towards the claim that two tokens of the same sign are tokens of the same name-type if and only if they have the same *reference* (let us call this a *referentialist criterion of identity*). In his essay "Der Gedanke" (1918-1919), on the contrary, Frege would be more inclined to claim that it is sameness and difference of *sense* which does the job (I shall call this a *descriptivist criterion of identity*). Either way, Frege would be at pains in setting up his puzzle. Under the referentialist criterion, sentences of the form "a=a" and "a=b" are epistemically on a par, so a fortiori from that perspective one could not wonder about their differing cognitive profiles. Under the descriptivist view, on the contrary, sentences of different forms *are* epistemically different, but their differing cognitive profiles do not appear to be puzzling at all.

Here I shall argue that it is implausible to read the Frege of SuB as subscribing to the referentialist criterion of identification. As to the descriptivist criterion, I shall argue that, if it is correct to ascribe it to Frege at all, it does not engender any vicious circle. Notice, in fact, that in order to accuse Frege of circularity it is not enough to show that he endorsed a descriptivist criterion of identity for names: it must be further shown that there is no other intuitive, theory-neutral criterion of identity that could explain the prima facie indubitability of the argument's premises. Moreover, to set up his puzzle, Frege

does not need a *general* criterion of identity of proper names, applicable to all the lexical items in the public language. It is enough, in fact, that such criterion exists that is applicable to a restricted (non-empty) well-behaved subset of all name tokens. If Frege's puzzle can be set up in the case of well-behaved (unambiguous) names, then its consequences for the semantics of proper names, whatever they are, will extend to the totality of names.

If such criterion of identity exists, then, I argue, after having used this ladder to convince the reader that names (at least well-behaved names) have senses, nothing could prevent Frege from throwing it away and adopt the criterion of identity for names that he deemed more adequate. I shall argue that such an intuitive criterion of identity actually exists. Moreover, I shall argue that there are good reasons for thinking that this is the criterion implicitly at work in the first paragraphs of *SuB*, and that it is compatible with what Frege says in the Aristotle footnote to be discussed in the following section.

I shall start by taking issue with Glezakos' interpretation of Frege's attitude towards the identity of names in *SuB*.

2. The same-reference-same-same-name criterion of identity

As I said in the introduction, Glezakos attributes to Frege (in *SuB*) the view that two orthographically identical signs (following Kaplan, I shall call these: *phonographs*) count as tokens of the same name if and only if they have the same reference (the referentialist criterion).

The textual evidence offered by Glezakos for attributing to Frege the referentialist criterion of identity of names comes from Frege's well-known remarks about the "actual proper name Aristotle" in his footnote B of *SuB*. There, Frege notices that different people may ascribe different senses to the name 'Aristotle'. For example, they may ascribe slightly different descriptive meanings to the name, to the effect that, under one use of the term, it would be *analytical* that Aristotle was teacher of Alexander (as this feature would be

inbuilt into the very sense of 'Aristotle'), while under another use (of the same name?) one may reasonably doubt whether Aristotle ever went into pedagogy at all.

Frege further claims that we can "tolerate" such differing uses, "so long as the Bedeutung remains the same" (SuB, 153). Glezakos takes these remarks as showing that Frege endorsed a referentialist view as to the identity of proper names. The same name, 'Aristotle', after all, is claimed to be susceptible of having different senses according to different speakers; and Frege may seem to be saying that only if two tokens of 'Aristotle' referred to different individuals would they count as tokening different names.

However, I think that this reading of footnote B is not forced upon us. As I shall argue, it is most natural to read Frege as holding the view that speakers diverging as to the senses which they attribute to proper names strictly speaking don't use the same language. As we shall see, while this idiolectal, idiosyncratic picture of natural languages is compatible with much of what Frege says elsewhere, it is also compatible with his remarks in footnote B.

Early philosophers of language, like Frege, Russell and (the early) Wittgenstein, unlike contemporary ones, were notoriously interested in semantics primarily because they believed it could help us to free our thoughts from the imperfections and lack of clarity of natural language, thus enabling us to construct a *perfect* language, a "philosophical logic" (Russell), a "conceptual notation" (Frege); a perfect language with which mathematical concepts could be expressed *unambiguously*. In view of this agenda, in the context of *SuB*, all reference to "the language" and to its semantics, including the principled distinction between sentences of forms "a=a" and "a=b", should be arguably better understood as referring to such an ideal language.[2]

Thus, for example, when Frege claims that "the sense of a proper name is grasped by everybody who is sufficiently familiar with *the language*" (*Ibid*), we should better understand him as describing the universal, context-free semantic features of an *ideal* language, to be contrasted with the messy, context-dependent

features of *natural* languages (which are the subject matter of the footnote that he appended to these words). Frege is quite explicit about this. Shortly after the footnote he affirms that: ''to every expression belonging to a complete totality of signs, there should certainly correspond a definite sense; but natural languages often do not satisfy this condition, and one must be content if the same word has *the same sense in the same context*''(*Ibid*).

The semantics of (actual) proper names is a clear example of such context-sensitivity of natural language expressions, and Frege appears to have made precisely this point when he considered the case of two people who associate slightly different descriptive meanings to the word 'Aristotle'. The "actual" (as opposed to ideal) proper name 'Aristotle' does not appear to express a sense in abstraction from a context of utterance. Thus, it seems, we cannot expect different speakers (or even the same speaker at different times) to be expressing exactly the same sense when using the word 'Aristotle'. Of course, this by no means entails that two speakers *must* assign different senses to the same expression, or that the idiosyncratic senses that they express cannot in principle be publicly accessible: it just means that it is *possible* that different utterances of the same expression differ in descriptive meaning, unbeknownst to the speakers.

These considerations, I think, suggest that Frege held the view that, strictly speaking, the identity of proper names in vernacular languages, hence the form of the sentences in which they occur, is highly idiosyncratic. This view is well expressed in the following passage from Kaplan (1989, 600, my emphasis):[3]

> […] the feeling one gets in reading Russell on logically proper names, and even more so in reading Frege, that, like Humpty Dumpty, *everyone runs their own language*. When we speak, we assign meanings to words; the words themselves do not have meanings […] [T]he assignment of meanings is subjective, and thus the semantics is subjective.

If things are so, then it is all to be expected that, within a Fregean framework, different speakers of a vernacular language may disagree about the form of identity sentences. However, this is not because speakers are unsure about the meaning they attribute to tokens of the same proper names, but because they may legitimately doubt about whether tokens of the same signs uttered by them and by other speakers of their (vernacular) language ought to be treated as tokens of the same proper name, or as tokens of different proper names which happen coincidentally to be spelled and/or pronounced the same.

If this was the end of the story, then Frege's puzzle could only be set up within the idiosyncratic, solitary language of each speaker in a given context. Within these restricted infra-personal contexts, phonographs that are only *coincidentally* co-referring are clearly discriminable from genuine tokens of the same proper name. I know, when I use a proper name, whether I intend it to initiate a new chain of explicitly co-referring expressions (a linguistic baptism), or whether I intend it to explicitly co-refer with previous tokens of the same sign in my idiolect. Moreover, if I intend to use a name to explicitly co-refer to previous tokens, I know that they so co-refer even if I am not in the position to individuate its reference (more on this later).

Fortunately, however, the prospects for our communication are not so deem. True, appreciating the sense in which other speakers use their words requires appreciating their idiosyncratic contexts; but, as a matter of empirical evidence, we *are* capable of doing so most of the time. As Burge (2005, 38) aptly put it:

> In quite a lot of his work it is clear that Frege takes each person to have his own idiolect, commonly with idiosyncratic senses for proper names and demonstratives used in a context. So contextual ingenuity may be necessary to effect successful communication of certain thoughts.

It is because we do have such contextual ingenuity that, I submit, Frege claims that slight divergences of sense may be "tolerated". I think it is possible to read Frege as holding the view that when divergences such as the one envisaged in the Aristotle footnote occur, such contextual

ingenuity does not perturb the identity of proper names in the respective idiolects, but it nonetheless ensures that people understand each other (for practical purposes). Indeed, I shall argue that this interpretation is most plausible if one considers the use of the notion of name that Frege implicitly makes at the beginning of the paper.

Consider, for example, the celebrated case of Kripke's Peter who, having heard the name 'Paderewski' in two non-overlapping circumstances comes to believe that there are two persons, both named 'Paderewski', when there is in fact only one (following Kit Fine, I shall say that Peter makes a *fractured* use of the name 'Paderewski'). Glezakos (2005, 204, note 9) claims that "someone so situated may well go on to deny the truth of the sentence 'Paderewski is Paderewski' –a sentence that contains the same name twice, and is thus of the form a=a. Given such denials, we must conclude that sentences of the form a=a are not always knowable a priori". As I have argued, however, nothing in Frege's text legitimates such an interpretation of the Paderewski scenario.

Suppose another speaker, John, aware of the fact that there is only one Paderewski, decides to express a tautology by (consciously) using two explicitly co-referring names, thus: "Paderewski is Paderewski". Sure, it will be claimed, John so managed to utter a sentence of the form "a=a". Now suppose that Peter hears John uttering this tautology. May he not legitimately doubt about the truth of the thought it expresses? And, if Peter so legitimately doubts, shouldn't John claim that Peter legitimately doubts a truth of the "a=a"-type? While I find this reasoning convincing as far as it goes, I think it is certainly not in keeping with Frege's internalistic conception of logical form. If we were to interpret Frege as affirming that Peter doubts a truth of the "a=a"-type, we would thereby ascribe to Frege the view that the logical form of propositions is individuated externalistically, rather than being transparently accessible to Peter's competent mind. This is surely not in keeping with Frege's understanding of the logical form of propositions.

If my interpretation is correct, in a Fregean framework, actual proper names require supplementation by a context to acquire any semantic property. It follows that it is only relative to a certain context that questions of name-identity can arise. Under this interpretation, two phonographs count as tokens of the same name if and only if they *explicitly* co-refer. However, in a Fregean world, the same two tokens may explicitly co-refer relative to a context while failing to do so relative to another. 'Paderewski' and 'Paderewski', for example, always explicitly co-refer according to John, but not according to Peter. This entails that the two signs are *necessarily* (by the rules of the language) tokens of the same name according to John, but they may be (depending on intentions) tokens of different names according to Peter. This is a short step from saying that the form to which a (natural language) sentence belongs, according to Frege, may be relative to the context too. "Paderewski is Paderewski" has the form "a=a" according to John, who utters it, and may have the form "a=b" according to Peter, who hears it.[4]

Let me now turn to the issue of "tolerance", which is the sole textual evidence mentioned by Glezakos in support of her referentialist interpretation of Frege. Imagine Peter hearing the sentence "Paderewski is Paderewski" at a logic class, where his professor intends to exemplify a tautology. Although, under my reading, Peter and the professor don't share the same language as far as Paderewski is concerned, it would be uncharitable on Peter's side to interpret the professor (in that context) as affirming that the identity of what he (Peter) takes to be two different Paderewski's is tautological. Contextual ingenuity, we said, must come to the rescue of our defective languages. So Peter would be well advised to interpret the professor as explicitly tokening the same name twice.[5] Notice that Peter, lacking the relevant contextual information, would not be in the position to guess which sense of 'Paderewski' the professor has in mind in running her example. Indeed the sense *really* expressed by the professor might be different from any sense that Peter could express.[6] Nevertheless, Peter's contextual ingenuity ensured that the communication was successful; and this is why, I argue, Frege claimed that such divergences in sense ought to be "tolerated", for practical purposes. What is to be tolerated is precisely

the unwanted circumstance in which different speakers are not in the position to know if two tokens of the same phonograph are being used as tokens of the same name or not.

The limit of such "tolerance", according to Frege (and quite understandably) is sameness of reference. If two speakers used the same expression not only as a vehicle of two slightly different proper names, but as denoting two different individuals altogether, the communication between them would be bankrupt, as they would not even be connecting (approximately) the same thought with the same proposition. For example, the two users of the word 'Aristotle' mentioned by Frege might disagree about Aristotle's date of birth. As far as this disagreement is concerned, the slight divergence in descriptive meaning that they associate with the word 'Aristotle' appears irrelevant, and it should therefore be "tolerated".[7] However, such divergence should not be tolerated –not even for the sole purpose of their disagreement- if it so happened that the two speakers were referring to two different individuals, for in this case their disagreement would be seen to rest on a straightforward misunderstanding.

I shall further develop the idea that the relevant criterion of identity is based on the notion of explicit co-reference later. Here I shall content myself with arguing that it is the most plausible interpretation of Frege's text. It is clear to me, from how Frege sets up his puzzle, that he thinks that it is possible to express *tautological* self-identities (I think he is obviously right about this). Now, the effect of *tautological* self-identities is produced by the phenomenon of explicit (as opposed to coincidental) co-reference, i. e. by the linguistic phenomenon in which we represent an object *as the same*, on top of as merely *being the same* (cf. Fine, 2007). Isn't it then plausible to read Frege as (implicitly) assuming that sentences are of the form "a=a" only if the two occurrences of 'a' *explicitly* co-refer? How could tautologies be always knowable "a priori", on the sole basis of the rules of the language, otherwise? If things are so, isn't it plausible that Frege is presupposing that the relevant criterion of identity of names is one according to which two phonographs count as tokens of the same name (in the relevant sense

of "name") only if they *explicitly* co-refer, rather than if they *merely* co-refer?

3. The same-sense-same-name criterion of identity of names

Glezakos claims that Frege later changed his mind about the identity of proper names. In his essay "Der Gedanke", according to Glezakos, Frege took the rather different stance that what makes for identity and difference of names is identity and difference of sense (the descriptivist criterion). If this were true, and there was no other theory-neutral way to partition identity sentences according to the relevant categories, then only *presupposing* that names do in fact have senses could we partition identity sentences as falling under the "a=a" –or under the "a=b"- category. This would be disaster for Frege, since his master argument in favour of senses rests on the alleged *datum* that we can so partition identity sentences.

The textual evidence for this interpretation of Frege comes from the well-known Dr. Lauben example. There, Frege asks us to entertain conjecture of a circumstance in which two persons, Garner and Peter, refer to a third individual, called Dr. Lauben, by means of two non-overlapping sets of definite descriptions. "As far as the proper name 'Dr. Gustav Lauben' is concerned", says Frege (1918, 333), "Herbert Garner and Leo Peter do not speak the same language, since, although they do in fact refer to the same man with this name, they do not know that they do so". Glezakos (2009, 206) interprets these words as entailing that Frege is implicitly assuming that name identity "is (at least in part) determined by associated sense".

I think this interpretation of Frege's text is correct. Indeed, contrary to what Glezakos claims, I think that a similar view of the identity of names is also compatible with what Frege says in the Aristotle footnote. What I wish to question, here, is whether the descriptivist criterion of identity has the grave consequences for Frege's puzzle that Glezakos thinks it has.

In order to show that Frege's argument in *SuB* is circular, as we have already noted,

it is not enough to show that Frege himself subscribes to the descriptivist criterion of identity of names: one has to further show that Frege has no alternative, theory-neutral, intuitive way to individuate names, which may plausibly be implicitly deployed by a non-Fregean reader in the first paragraphs of *SuB*. Moreover, Frege does not need to put forward a non-Fregean criterion of identity for names that is applicable *also* to the defective cases mentioned above. Of course, he will need to provide a suitable account of these defective cases. However, for the purpose of setting up his puzzle, it is sufficient that a criterion of identity exists that is applicable to a suitable subset of all names in the language. As I shall argue, such criterion exists, and it is based on the notion of explicit (or *de jure*) co-reference.

4. Some remarks on tokening the same name

The word 'name' can (and is) used in a variety of different ways: in our ordinary language, in linguistics, cognitive psychology, logic, etc. Each of these different uses come equipped with its own perspicuous criterion of name-type identification. It is important that we have clear in mind what notion of name is relevant for our discussion.

Consider Kaplan's example of the mischievous Babylonian who (perhaps with the intention of playing a trick on his fellow compatriots), upon seeing Venus in the evening, thinks: "Oh, this is just as beautiful as Phosphorus is! In its honour, I shall call it 'Phosphorus' too!". Suppose further that this usage catches up with the Babylonians, who, somewhat confusingly, subsequently continue to use the same sign to designate both the morning star and the evening star. Now, in a sense we may say that we are being confronted with only one name: 'Phosphorus'.[8] Upon reflection, however, this way of identifying names, although legitimate in its own right, is clearly not what is relevant for our purposes.

What we are seeking here, I argue, is some criterion of identity (if there is any) which will unable us to distinguish signs which are only *coincidentally* co-referential from signs which

are *explicitly* co-referential. In the example of the mischievous Babylonian, the fact that two occurrences of the sign 'Phosphorus' co-refer is utterly coincidental: it is a coincidence of usage. Or, put differently, the fact that the morning star and the evening star are both called 'Phosphorus' is a coincidence. Similarly, in a loose, untechnical sense, I share my first name (Emiliano) with Emiliano Zapata, the main leader of the Mexican revolution. Now, there is surely a sense in which my first name and Zapata's are tokens of the same name. Following common usage, then, we may be tempted by the idea that if two signs are spelled and pronounced the same, then they should count as tokens of the same name. But this criterion of identity will not allow us to set up the puzzle. Surely Zapata's being named Emiliano is independent from me being named Emiliano: there are two independent baptisms, and this is why there are *two* proper names, in the sense that is relevant here.[9] Analogously, the Babylonian moon was baptised twice, and this is why there are *two* names for her: they just happen, coincidentally, to be spelt and pronounced the same and, equally coincidentally, they happen to co-refer.

It is part of the essence of the category "proper name", in the sense of 'proper name' that is relevant for our discussion, that two tokens of a name co-refer *explicitly*. Whenever a competent speaker uses a sign as a genuine, or logical proper name, she must either (1) intend to create a new name –like the mischievous Babylonian did, with some sort of "baptism" -, or (2) she must intend to re-token a name that was tokened before (by herself or by someone else). In the latter case, the fact that the different tokens co-refer is *guaranteed* by the rules of the language. Various tokens of a sign used as a name cannot fail to co-refer, even if the speaker is ignorant or totally mistaken about their referent (I shall come back to this important point later).[10]

Conversely, if a speaker can reasonably doubt about whether two tokens of the same sign co-refer, this must be because she is not intending to use them as tokens of the same proper name, or because she is not understanding them as being used as tokens of the same proper name. Should it turn out that speakers of a language are never

in the position to appreciate whether two tokens of the same sign co-refer *explicitly*, then we will have to conclude that that language does not contain proper names at all.[11]

Of course, one could insist in cutting the class of all names into equivalence classes which do not reflect our desiderata at all. Indeed some may argue that the identity of names does not even require sameness of reference.[12] For our concerns, however, this is to some extent a terminological issue. Even if you insisted in using the expression 'proper name' to refer to some other (more inclusive) class of linguistic items, I argue, you would still have to come to terms with the phenomena of disambiguation and explicit co-reference, whatever you may decide to call those tokens of a name which *explicitly* co-refer.[13] For the sake of brevity, in what follows I shall use the term 'name' to refer to a type of *explicitly* co-referring signs.

Here 'explicitly' does not mean 'on the sole bases of phonetic or lexical form'. Actual names in natural languages clearly do not bear their identity conditions on their sleeve in this context-independent way. By saying that tokens of the same name 'explicitly' co-refer I mean that whoever uses or understands two tokens of a sign as tokens of the same proper name, must know that they explicitly co-refer (if they refer at all). Moreover, such knowledge must be provided by the lexical/syntactic context alone, perhaps with the supplementation of the linguistic intentions of the speaker, and it should not require any detailed knowledge or individuating capacity relative to the entity that is being referred to: "[o]ne can, of course, simply *repeat a name*, intending to refer to the same person, thus […] guaranteeing that the same reference is in question".[14]

Explicit co-reference, moreover, needs not be construed as an inherently infra-personal phenomenon. Suppose, for example, that you overhear a conversation in which a friend of yours mentions something –something which you don't manage to hear quite distinctly– about a certain 'Andrea'. About Andrea you know nothing, other (perhaps) that he or she is human, and that he or she is called 'Andrea'. These pragmatic inferences, however, are clearly insufficient for you to develop any individuative capacities relative to the person

named 'Andrea'.[15] Nevertheless, if you asked your friend something about this Andrea –something like: "Who is Andrea?", or "Is Andrea female or male?"-, you would clearly manage to co-refer with the utterance you have overheard. This is only because you would *intend* to use your token of 'Andrea' as explicitly co-referring with that tokened by your friend. This is what I mean by 'explicit co-reference'.

If, after asking your questions, you wondered about the truth of the sentence "Andrea is Andrea", where the first token is uttered by your friend and the second by yourself, you would certainly come to the conclusion that it is a tautology; and this is not because you would be capable of individuating the references of these two utterances (you would not be, under our assumptions), but solely because you made an intentional use of 'Andrea' *as a proper name*.

Notice that only a criterion of equivalence which satisfies the desiderata discussed above will enable us to set up Frege's puzzle, for only if the names that flank the identity sign *explicitly* co-refer will the identity itself be *guaranteed* to be trivial, and only if they *coincidentally* co-refer will it be possibly informative. Moreover, as Glezakos rightly points out, it will be better for Frege if there exists a criterion which satisfies these desiderata without presupposing the existence of Fregean senses. As I shall argue, such criterion is provided by the notion of *explicit* co-reference, and does not presuppose the existence of Fregean senses.

5. Explicit co-reference as a criterion of name identity

I think it is rather undisputable that the linguistic phenomenon of representing an object *as the same*, as opposed to as merely *being the same*, is real.[16] The fact that the phenomenon appears to occur in very different linguistic (and even extra-linguistic) domains is a safe indicator of its existence as a definite cognitive phenomenon. Consider, as an example, the case of anaphora. Suppose I utter a sentence like: "I saw Pedro, he was wearing a cool t-shirt". Anyone

who understands this sentence (in this context) is obliged to interpret the word 'he' as referring to the same person as 'Pedro' (whoever he is): one cannot sensibly raise the question of whether 'Pedro' and 'he' co-refer. Notice that, in order to so interpret this sentence, one needs not be in the position to identify Pedro.[17] Similarly, as noted by Fine (2003, 2007), the identities "x=x" and "x=y" have different semantic imports in mathematics and formal logic. Finally, it is arguable that a similar phenomenon occurs also in the domain of perception, as the case of object tracking shows.

Analogously, suppose I utter the sentence:

(3) "It is a tautology that Aristotle is Aristotle!".

Whoever understands this sentence is obliged to interpret the two occurrences of 'Aristotle' as *explicitly* co-referring, even if one associates no descriptive meaning to it. If you asked me how I know that the sentence is even true, I would have to conclude that you did not understand what I meant. I know that it is true because I *intended* to make an explicitly co-referential use of the word 'Aristotle'. You know that it is true because you have successfully detected my intention to co-refer. Notice that nothing that I said so far indicates that I am presupposing something like a descriptivist criterion of identity for names (Fregean or other), or even the mere existence of Fregean senses, for that matter. Whoever understands sentence (3) must correctly "read" my intentions to use the two tokens of 'Aristotle' as *explicitly* co-referential, and in order to do so one needs not presuppose any particular theory of meaning.

Many authors have recognized the importance of explicit co-reference, and have attempted to put forward a theory of its workings. Pinillos, who calls the phenomenon *de jure* (as opposed to *de facto*) co-reference, for example, argued that it cannot be accounted for in terms of classical semantic features. He therefore postulates a new, dedicated semantic relation (called 'p-link') which cannot be reduced to other classical semantic properties or relations (Pinillos 2003, 2006). Kit Fine, who calls it *strict* co-reference, or *coordination*, argues that

the phenomenon forces us to abandon classical semantic doctrines in an even more radical way. A treatment of it that is irreducibly relational, he argues, allows us to tackle a number of puzzles (including Frege's) in substantially new ways (Fine 2003, 2007). Taylor, instead, put forward an intentionalist, anaphorical account according to which the phenomenon is to be explained in terms of speakers' intentions to re-present an object *as the same* (Taylor 2003). It is arguable that Kaplan's analysis of the 'intentions to repeat a name', on which he grounds the links in his 'historical chain' account of 'currency names', finally, is yet another attempt to characterize the same phenomenon (Kaplan 1990).

Here I deliberately wish not to take side in these disputes as to the mechanisms which underlie explicit co-reference. Usually, theories of explicit co-reference are neutral with respect to a theory of meaning. However, different theories of explicit co-reference may be more or less hospitable to a Fregean or to a referentialist theory of meaning. Taylor's account, for example, while being compatible with both a referentialist and a Fregean theory of meaning, appears to be capable of fencing off referentialist accounts from a number of standard objections. Different theories may also differ as to whether they place the phenomenon at the semantic level (as Fine and Pinillos do) or at a level that, following Kaplan, we may call "pre-semantical". Fregeans will presumably agree with Fine that the phenomenon is to be placed at the level of semantics (cf. Fine 2007, 42), but they will disagree with him in assuming that if two names represent an object *as the same* this is because they represent it *in the same way* (sense).

What matters for our concerns, however, is the mere *existence* of the phenomenon. "I take it that we all have some intuitive grip on this notion of coordination or representing as the same", says Fine (Fine 2007, 40). I agree with him, and I argue that it is this intuitive grip on the phenomenon which provides us with the pre-theoretical criterion of name identity that one is supposed to deploy in interpreting the set-up of Frege's puzzle.

So far I have argued that explicit co-reference provides us with the grounds for a plausible

criterion of name identity,[18] but I haven't said how explicit co-reference should be used to build such a criterion, and what are its scope and limits. I shall conclude this paper with some considerations which go in the direction of filling in this gap.

Let N be a sequence of name-tokens in a given language: $n_1, n_2, \ldots n_n$. I shall say that a relation C on N is a "coordination scheme" for N if it is such that two tokens in N are related by it only if they refer to the same individual. Since two tokens that instantiate a given coordination scheme may or may not be *explicitly* co-referential, there will always be several coordination schemes for any given sequence of name-tokens. Thus, for example, the (uncoordinated) sentence "Paderewski is Paderewski", which features two occurrences of 'Paderewski' (t_1 and t_2), can be associated with two different coordination schemes: one according to which t_1 and t_2 are strictly coordinated (call it C^+) and one according to which they are not (C^-).[19]

According to the proposed criterion, name-types are classes of equivalence induced on sets of phonographs by the relation of positive coordination. Thus, the proposed criterion is the following:

> **[Name identity]** Two tokens of the lexicon l_1 and l_2 are tokens of the same name iff: (1) they are phonographs and (2) they explicitly co-refer.

The challenge for a referentialist theory of proper names is to specify in virtue of what semantic property two proper names which co-refer merely *de facto* differ. The standard referentialist response has been to deny that the relevant difference should be accounted for in terms of a difference in semantic value. Fregeans, on the contrary, opt for an account in terms of different ways of representing the same object. There is no reason, however, to assume that Fregeans and referentialists should disagree about the relevant pre-theoretic notion of sameness of name, at least insofar as setting up the puzzle is concerned.

It will be immediately objected that my notion of sameness of name cannot be extended beyond the range of individual idiolects (following Chomsky, I shall call these: I-languages). Thus, for example, according to the present proposal, Peter's I-language will contain two different homographic proper names for Paderewski, while the I-language of standard users (or the public language, if such thing exists) will only contain one. Therefore, as we have seen, Peter's belief in the proposition that Paderewski is Paderewski will be (correctly) referred by a standard speaker (e. g. John) as a belief in a proposition of the "a=a"-type, while Peter himself may take it to be a belief of the "a=b"-type. One may then worry that the notion of coordination invoked may not be suitable to establish a partitioning of identity statements into the relevant categories in standard communicative contexts.

Faced with this difficulty, one may be tempted by a response that bites the bullet, since for the purposes of setting up Frege's puzzle, one needs not trespass the borders of I-languages. Just pick up a name whose use is not fractured within *your* I-language (call it 'a'); and pick up a co-referring name that is different from *a* within *your* I-language (call it 'b'). Now wonder about how the sentence "a=a" could differ in cognitive profile from "a=b" (in your I-language), if the semantic contribution of proper names to the meaning of sentences were simply to pick out their referent. I think that this response is adequate as far as it goes. Fortunately, however, for the purposes of setting up Frege's puzzle, we need not confine our notion of name to the realm of speakers' I-languages.

For this purpose, it will be useful to distinguish infra-personal (or *internal*) cases of explicit co-reference, from inter-personal (or *external*) ones. Internal explicit co-reference occurs when a speaker intends to use two phonographs (within his idiolect) as representing an object *as the same*.[20] Thus, for example, a speaker aware that Paderewski the musician and Paderewski the politician are one and the same, may express the (tautological) proposition that Paderewski is Paderewski by making an *internally* coordinated use of two occurrences of 'Paderewski'. The paradigmatic case of *external* explicit co-reference, instead, is the case of direct acquisition of a name from another speaker.

Thus, when Peter first hears the word Paderewski from John, his use of tokens of 'Paderewski' and John's use of them thereby become positively coordinated.

If one includes external explicit co-reference into the picture, in an attempt to extend the treatment of proper names to the case of a public (or intersubjective) languages, one must countenance the possibility that the use of a name may be fractured within one I-language (e. g. Peter's) and unfractured according to another (e. g. John's). These possibilities are problematic, for they render the relation of positive coordination non transitive, and hence unsuitable to induce a relation of equivalence among public name tokens. In our familiar scenario, for example, the tokens which belong to the single, unfractured use that John makes of the name 'Paderewski', are (externally) explicitly co-referential with *all* phonographic tokens of 'Paderewski' in Peter's I-language (all of Peter's tokens, *ex hypothesi*, originally come from standard, unfractured uses of the name), regardless of whether they belong to the "musician type" or to the "politician type". Thus, explicit co-reference, so extended to include interpersonal communication, is not necessarily transitive.[21]

Using our terminology, we may describe the situation as follows. Let N be the common stock of name-tokens (N) available to a community of speakers I. Is there a general coordination scheme *C* for N which will be consistent with that of *all* individuals in I? As the defective cases discussed above show, such matching of coordination schemas (let us call this: an *intersubjective coordination scheme*) may fail to exist in given concrete cases. However, as I have anticipated in the introduction, in order to set up Frege's puzzle one needs not assume that an intersubjective coordination scheme (ICS) exist for *all* possible name-tokens in the language, and for *all* individuals in the community at large. What matters, I argue, is that an ICS exists for a restricted subset of all tokens. I shall call such restricted subset of name-tokens –one which renders the relation of positive coordination transitive, relative to a given community of speakers- the *transitive core of the lexicon* for that community.[22]

The extended, intersubjective notion of proper name which emerges is thus the following:

[Public Name identity] Two tokens of the public lexicon l_1 and l_2 are tokens of the same name for a community of speakers *I* iff: (1) they are elements of the transitive core of the lexicon for *I*, (2) they are phonographs, and (3) they explicitly co-refer.[23]

I wish to emphasize once more that I am not claiming that this criterion of name is adequate in its own right, or that it is free from common objections. Indeed, as I have already said (in note 18), one may reasonably doubt about its virtues, on the basis of independent considerations. Some, for example, might doubt on independent grounds about the viability of the "two-name" account of the Paderewski scenario, which the criterion imposes on us (see for example Pinillos, 2011). I am personally inclined to agree with Pinillos that such an account of the Paderewski case is unwarranted (if one abandons Frege's tenet of the epistemic transparency of logical form). However, here I am only claiming that it is plausible to read Frege as presupposing this criterion in the opening passages of *SuB*, and that, contrary to what Glezakos claims, the criterion does not require the notion of sense to be satisfied.

Now, if Frege-like examples can be put forward using singular terms belonging to a transitive core, then whatever conclusion one thinks it is legitimate to draw from them regarding the semantics of proper names, will extend to the whole lexicon. There is no reason, in fact, to suppose that "defective" proper names differ in their semantic properties from well-behaved ones. After all, what makes a name "defective" (in this sense) is a contingent lack of matching of its coordination pattern within an individual's I-language, with its pattern of coordination within other individuals' I-languages. Why suppose that such contingent matters should affect the semantic rules of the language?

6. Conclusions

Summing up: I have argued that sameness of name (in the relevant sense) is more thin-grained than co-reference. Strict co-reference has been shown to provide us with an intuitive criterion of identity. Contrary to what Glezakos claims, it does not presuppose the Fregean doctrine of senses.

Although Frege might understandably endorse a descriptivist criterion of name identity, as Glezakos claims, and hence a descriptivist explanation for the phenomenon of explicit co-reference, it is implausible to interpret him as requiring that his readers *presuppose* such criterion when they first encounter the puzzle. As Glezakos correctly points out, such requirement would make his argument patently circular; but there is no need whatsoever to impose it on a naïve reader in order to set the puzzle off the ground. One may well have referentialist preconceptions as to the semantic role of proper names (or no preconceptions at all, for that matter), and yet be in the position to appreciate the setting of the puzzle. In order to be in such position, one needs only be a competent speaker of the language, with all the context-sensitive subtleties that this entails. Among such subtleties, there surely is the capacity to detect the phenomenon of explicit co-reference, and this is all that Frege needs to assume on the part of his readers to set-up the puzzle. In order to represent an object *as the same*, on top of as merely *being the same*, in fact, Frege needs not *presuppose* that names express modes of presenting the object (senses), although he may well *believe* that they do.[24]

Notes

**   I wish to thank Andrea Bianchi, Marco Ruffino and David Suárez-Rivero for their comments and helpful discussions.

1.   Indeed, this is the form Frege gives to the puzzle in his Frege (1891, 138). Thanks to Andrea Bianchi for pointing this out to me.

2.   Cf. Burge (2005, 38) and Hahn (1995, 174).

3.   See also Kripke (1972, 91) for a similar interpretation of the views of Frege on the semantics of vernacular languages.

4.   It may turn out that this story can only be sensibly told by presupposing that names have Fregean senses, in which case Glezakos' debunking argument would go through (I shall discuss this matter in the next section). Here, however, I am only concerned with Glezakos' attribution of the referentialist criterion of identity to Frege.

5.   Although Peter has two name-types associated with the word 'Paderewski', nothing prevents him from consciously tokening the same name-type twice.

6.   In principle, Peter might express the same sense expressed by the professor if he appended to the descriptive meaning of 'Paderewski' an anaphoric reference to 'whatever sense the professor is expressing by using this sign'. Cf. Burge (2005, 232) and Taylor (2003).

7.   Notice that, crucially, in the Aristotle example the two speakers are supposed to ascribe to the name 'Aristotle' descriptive meanings that partly overlap. This is in stark contrast to the Dr Lauben scenario (to be discussed in the next section), where the speakers associate two totally non-overlapping senses to the same word.

8.   After all we have one single expression which, unbeknownst to the Babylonians, is used to refer to a single entity.

9.   Cf. Kaplan's discussion of 'generic names' in his paper *Words*.

10.   To realize that the phenomenon is purely lexical/syntactic one may want to consider that the effect of explicit co-reference can occur even if the tokens fail to refer (e. g. "Superman is Superman").

11.   Cf. Taylor (2003).

12.   See for example Perry (2001) and Recanati (1993).

13.   Thus, for example, Fiengo and May (1998) reserve the word 'name' to the more inclusive notion of phonograph, while they call the types under discussion here: 'syntactic expressions'.

14.   Wettstein (1989, 333-334), my emphasis.

15.   On the basis of similar considerations, many (e. g. Kripke) have argued that in these cases it is implausible to assume that names possess anything like Fregean senses.

16.   Cf. Fine (2007).

17.   For that matter, in order to interpret the sentence as a case of explicit co-reference, Pedro needs not even exist (he may be my imaginary friend).

18.   Mind it that I am making no claims as to the plausibility of such criterion per se. One plausible objection to it is precisely that it entails

a "two-name view" of Paderewski-like scenarios. Philosophers with referentialist inclinations, or at least philosophers not willing to endorse Frege's doctrine of the transparency of logical form, may reject this criterion on this ground alone. Here, however, I am only concerned with arguing that this is plausibly the criterion of name identity that is at work in setting up Frege's puzzle, that it is adequate relative to Frege's other preconceptions about language, and that its satisfaction does not presuppose the technical notion of sense.

19. Notice that the (coordinated) sentences which can be expressed using these differently coordinated tokens (call them s$^+$ and s$^-$) are to be distinguished from the uncoordinated sentence s, which is silent as to whether the occurrences of 'Paderewski' are positively or negatively coordinated.

20. Different authors put forward different tests for the presence of explicit co-reference in a piece of discourse. For our purposes, it will suffice to rely on internal epistemic intuitions, along the lines of Fine's proposal: "[...] an object is represented as the same in a piece of discourse only if no one who understands the discourse can sensibly raise the question of whether it is the same" (*Ibid*.). Vice versa, if someone can sensibly raise the question of whether an object is the same, like in the Dr. Lauben scenario, then it is safe to conclude that the two phonographs co-refer merely coincidentally (if they co-refer at all).

21. Kit Fine takes notice of this point in his Fine (2007).

22. Pinillos (2011) has argued convincingly that *de jure* co-reference sometimes fails to be transitive even if one confines herself to *internal* co-reference. All the cases brought to bear on this issue, however, pertain to the anaphoric use of pronouns, and there is no indication that (internal) failure of transitivity may afflict also *de jure* co-reference between proper names. For present purposes, therefore, I shall neglect this issue.

23. Notice that these conditions are not entirely independent. Condition (3), in fact, is well defined in an intersubjective domain only if condition (1) is satisfied.

24. As we have seen, the object in question may even not be "presented" at all to the speaker's mind, let alone presented in some qualitatively specifiable way. Likewise, in order to appreciate that anaphoric dependences impose that the anaphor and its antecedent strictly co-refer, one needs not have any preconception (Fregean or other) about the meaning of demonstratives.

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