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Understanding Anaphoric Dependence: A Reply to Glezakos[1]

Resumen: *El argumento de Glezakos (2009), a saber: que el puzzle de Frege no puede incentivar las teorías fregeanas, consiste en que el planteamiento del puzzle requiere la presuposición de una visión fregeana, y por ello puede ser ignorado por los no-fregeanos. Respondo mostrando que el contraste exigido por los casos de Frege requiere solamente una noción de correferencia interna o de iure, la cual no presupone, preteóricamente, compromisos fregeanos.*

Palabras claves: *Puzzle de Frege. Correferencia de iure. Sentido. Identidad. Validez.*

Abstract: *Glezakos's (2009) argument that Frege's puzzle cannot motivate Fregean theories is that stating it requires presupposing a Fregean view, and hence it can be ignored by non-Fregeans. I respond by showing that the contrast needed for Frege's cases requires only a notion of internal or de iure coreference, which pretheoretically does not presuppose Fregean commitments.*

Key words: *Frege's puzzle. De iure co-reference. Sense. Identity. Validity.*

Glezakos (2009) argues that Frege's puzzle of identity cannot be posed in neutral terms acceptable to theorists of different persuasions: "in order to generate his puzzle, Frege must invoke that which he seeks to establish the necessity of: the theoretical account of *Sinn*" (*Op. cit.*, 202). Her argument takes the shape of a dilemma for Fregeans: "If an identity sentence's form is specifiable without appeal to something like the theoretical notion of sense, then Frege will not be able to maintain that sentences of the form *a=a* are, in general, uninformative or knowable to be true a priori (at least no more so than true sentences of the form *a=b*). If, instead, sameness or difference in *Sinne*, expressed by the names in the sentence, is what determines an identity sentence's form, then the puzzle fails to hold as a general puzzle; it arises only if we assume a role for the very sorts of theoretical entities that Frege presents it as leading us to" (*Op. cit.*, 203).

In this paper I'll provide a reply to Glezakos's argument, on behalf of a broadly construed Fregean perspective on the issues she discusses; I'll explain below in what ways the perspective here assumed is only broadly Fregean. I'll point out that natural and artificial languages encode (albeit in significantly different ways) relations of *anaphoric dependence*. Then I'll argue that this allows for the notion of *form* that is needed to pose, in sufficiently neutral terms, the Fregean puzzles of cognitive significance –not just those involving identity sentences, but, more adequately, also those involving other sentences. I'll conclude that, although Glezakos has presented an interesting challenge involving important philosophical issues that are far from being well understood, the challenge can be met.

Frege posed his problem of cognitive significance for identity sentences, but, as many commentators have pointed out,[2] this is just for

dramatic convenience. Sentences of the forms *a=a* and *a=b* have different semantically relevant properties, even when both are true: the former is *a priori* (in fact – and in my view this is what is truly semantically significant – *a priori* because *analytic*) while the latter is not. But the same applies to *a is F* and *b is F*, even when *a* and *b* co-refer: the former logically (and hence, in my view, analytically, which again is what I take to be a semantically significant feature) follows from *a is F*, while the latter does not. In developing her dilemma, Glezakos considers only identity sentences, but we will have in mind the more general issue.

On the first horn of the dilemma constituting her challenge, the form of true identity sentences is determined by a narrowly syntactic condition: "The most natural account of what determines an identity sentence's form involves the notion of sameness of name" (*Op. cit.*, 203), sameness of name being understood in terms of sameness of form plus sameness of referent. Let us call this the *narrowly syntactic* ('NS') characterization of the form we are after. As Glezakos points out, given NS there are no significant differences to account for between *a=a* and *a=b*, and hence no puzzle at all; for, of course (as Kripke's (1979) 'Paderewski' example illustrates), a true identity of the first form might require empirical investigation to establish as much as one of the second. On the second horn, which we will call the *question-begging* ('QB') one, sameness of name requires sameness of sense. But given QB, the puzzle is not presented in a sufficiently theory-neutral way to engage theorists of a non-Fregean presuasion, shuting out Fregean senses.

The problem with Glezakos's argument is that her dilemma misses at least one relevant option – an epistemic one, not presupposing any notion of *sense*, which appeals to what I will call the *internal coreference* ('IC') criterion. I will argue for this by introducing a directly related issue I discussed in previous work (García-Carpintero, 2004) about the notion of logical form involved in accounts of logical validity. Let us assume that an argument expressed in a natural language is logically valid if it has a valid correct formalization in a formal language, and consider the English sentence (1):

(1) Hesperus equals itself.

Is the formula (2) a correct first-order formalization of it?

(2) a=a.

By allowing it to be so, we can count (1) as logically valid under the previous assumption, in that there is a correct formalization of it in first-order logic with identity that is formally valid. This looks like an intuitively acceptable result; however, under the first criterion of sameness of form that Glezakos considers, NS, the answer should be in the negative. It is a syntactic feature of (2) that it includes expressions of the same type at two different syntactic positions in the sentence's structure. In that respect, it differs from (3):

(3) a=b.

(3), on the other hand, would count as a correct formalization of, say, (4) below, which is not logically valid because a correct formalization such as (3) is not first-order valid, and no alternative correct first-order-valid formalization appears to exist:

(4) Hesperus equals Phosphorus.

The more general problem for NS now appears manifest: given it, (3) appears to provide the correct formalization of (1), in that the relevant traits of (1) for that criterion are those that it shares with (4), namely, it features co-referential expressions of different types occupying the subject- and object-positions of the verb 'equals'. Thus, given NS, (1) does not share its logical form with the (one sentence) arguments correctly formalized by (2), and therefore should not count as logically valid. What this suggests is that NS misses what is really relevant to determine logical validity, which is not a narrowly syntactic feature (the one (1) shares not with (2), but with (3)). Instead, (2), given the expressive conventions of the formal language in which it is couched, conveys the existence of a semantic relation of anaphoric dependence of the second occurrence

of 'a' on the latter, which in natural languages is sometimes expressed in the same way as in the formal language to which (2) belongs, but which, as (1) shows, can be expressed in different ways.

I have made this point with an example involving a reflexive pronoun as our anaphoric expression. There are strict linguistic constraints (articulated by principles A and B of Binding Theory) requiring that reflexives like 'itself' in (1) be interpreted as anaphoric relative to 'Hesperus', and foreclosing that repeating 'Hesperus' could have the same effect.[3] However, the point can also be made by means of examples without this feature. Consider, for instance, (5):

(5) If *Hesperus* equals Phosphorus, then *it* is visible in the morning.

There is no linguistic requirement that 'it' in (5) be interpreted as anaphoric with respect to 'Hesperus'. It is rather a pragmatic matter whether, in a given utterance, it should be understood that way, or as anaphoric relative to 'Phosphorus' instead, or rather as referring to another, contextually specified object. Still, if the former is the case, given an adequate conception of logical form there is no question but that (6) is a correct first-order formalization –one counting as valid the inference from (4) and (5) to 'Hesperus is visible in the morning':

(6) a=b → P(a).

The reason is (as I would prefer to put it, cf. García-Carpintero, 2004, and references there) that what we formalize is a topic-neutral (a 'logical constant', one might say) constituent of what is understood, independently of the means (syntactic, pragmatic or whatever) by means of which that understanding occurs. This topic-neutral component is the one expressing the relation of anaphoric dependence, which philosophers writing on the topic give different names, such as 'internal' or 'de *iure*' co-reference.[4] But NS misses this, and therefore the criterion for when two co-referential expression "count as the same name" does not allow us to capture the relation of sameness of form that is required to properly account for validity.

Does this mean that, in order to recognize that such a relation is indicated, we should employ QB instead? That would be at the very least as devastating for the Fregean as the conclusion of Glezakos's argument. In fact, it is easy to see that the issue I have briefly highlighted in the previous paragraphs is just a generalization of the one Frege poses at the beginning of "On Sense and Reference". The issue is this: we have precisely defined notions of logical validity, such as the Tarskian model-theoretic one presupposed above applying to arguments in formal languages like those including (2), (3) and (6). However, to the extent that they are compelling, this is because they offer good explications of a pre-theoretical notion applying to arguments involving natural language sentences such as (1), (4) and (5), and, indeed, the thoughts they express.[5] This is a pre-theoretical notion of logical validity, paradigmatically one that semantic theories (broadly conceived) are supposed to account for; it is a manifestly *semantically relevant* property, in the previously canvassed sense.[6]

Now, the Fregean picture is a class of such broadly semantic theories, and hence it is to be expected that Fregeans will want to invoke their proprietary theoretical notions for that purpose. Thus: logical validity is logical truth-preservation, and this requires preservation of reference of the sort illustrated by (2) and (6), i. e., the one captured in formal languages (but not, as we have seen, in natural language) in the way the criterion NS allows for. The Fregean will want to say that this common "sort" will ultimately consist in that the referent of one expression is understood to be determined by the same sense as the referent of the other. It would be devastating for this project that the only way of presenting the set of issues that such a semantic proposal is intended to account for were through the question-begging criterion QB – that the relevant referential expressions in (1) and (5) have the same sense.

But is it the only way? Are we reduced to NS and QB when we try to present the *explanandum* in all these cases? Fortunately, this is far from being the case. As we have seen, the inference formalized as *Fa*, ∴ *Fa*, in contrast to the one formalized as *Fa*, ∴ *Fb*,

is valid and non-enthymematic; the suggestion that it *is* enthymematic – i.e., that there is an implicit third identity premise identifying the referent of the subjects of the other two –would launch us into a regress (cf. Heck, 2012, 154-5, and Recanati 2013, 47-50 for recent discussions, and references therein). The claim formalized as $a=a$, as opposed to the one formalized as $a=b$, is similarly valid. External co-reference is hence not sufficient for the relation that in formal languages is captured by identity of type.[7] Identity of type of the representational device –which is what NS provides as a condition– is not sufficient either, nor is it necessary, as the examples above show. What manifests the presence of the relation of *de iure* or internal co-reference is rather an epistemic property, certainly not easy to explain but clearly in the vicinity of the properties that Frege mentioned,[8] which different writers have tried to capture in slightly different terms:

> First, […] the co-reference strikes you as *obvious* in the sense that no calculation or reflection is required before you're willing to treat the two uses of 'Bush' as co-referential (contrast: '54 = 7 + 47'). Second, […] the co-reference strikes you as *rationally incontrovertible*: you couldn't imagine how it could turn out that Bush isn't Bush […] (Schroeter, 2007, 600; cf. also Schroeter, 2012, sec. 1).

> […] a good test of when an object is represented as the same is in terms of whether one might sensibly raise the question of whether it *is* the same. 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 (Fine, 2007, 40).

> Any competent speaker who fully understands [(5)] will know of the italicized occurrence that if they manage to refer, then they refer to the same thing (Pinillos, 2011, 305).

Acknowledging the relation identified by these epistemic criteria –obtaining between, say,

'it' and 'Hesperus' in (5)– does not require the acceptance of any Fregean tenets. To agree that such a relation obtains and stands in need of explanation requires only the minimal self-awareness involved in detecting data for semantic theorizing. It is just one more factor we have to reckon with in properly accounting for rational assessment and rationalizing explanations of our acts, including mental acts such as judging, deciding or inferring.

The clearest proof that such an acknowledgement does not beg any question in favor of a Fregean picture is that one can pre-theoretically identify the relation in the way just suggested, and then go on to provide a non-Fregean account. Thus, for instance, although Heck's (2012) general outlook is sympathetic to Fregeanism, he summarizes his proposal – which essentially involves recognizing the sort of "formal" relations highlighted above– thus: "I have argued […] that the notion of sense is not needed for the solution to Frege's puzzle" (*Op. cit.*, 172). Fine (2007) provides an account in terms of *semantic* (or, more generally, *representational*) *requirements*", stating facts "which belong to the semantics of a given language" (or to a theory of representational states) (*Op. cit.*, 50) –the class of facts to be predicted or explained by such theories. The account is supposed to be entirely compatible with a Millian picture, barring any role for Fregean senses. Pinillos (2011, 317-322) offers a similarly relational account in terms of a primitive relation of "p-linking", which he characterizes by means of four axioms. His proposal is not merely compatible with Millianism; he in fact offers an argument against any theory which purport to explain co-reference by ascribing a common item to the co-referring terms, be it a Fregean sense, a mental file, or whatever; the argument depends on the fact that such theories would characterize co-reference as an equivalence relation, while, he argues, it is not transitive.[9]

Thus, the third option that Glezakos's dilemma misses is what I named above the *internal co-reference* criterion, IC. On this alternative, we have identity of names (or, better, terms or referential expressions in general) in the required sense when one *anaphoric depends* on the other in the way we have highlighted, as established

by criteria like the ones offered by Schroeter, Fine, and Pinillos I have quoted above. IC differs from NS, because it does not rely on identity of type plus external co-reference, and hence does not fall prey to Glezakos's objection to that first criterion. It also differs from QB, because it does not assume that Fregean senses are required for an adequate characterization of the data to be accounted for. Last but not least, IC provides a historically sensitive account of how Frege's puzzle is to be presented, because the epistemic terms in which it is couched are in sync with those that Frege invokes: it could not be accused of merely constituting "changing the topic".

Of course, the most interesting philosophical questions remain to be answered; an important contribution of Glezakos's paper lies in forcing us to think more deeply about how they should be articulated. To me, the most interesting one is whether, in order to fully explain the anaphoric dependence relations that –we have seen– a proper presentation of Frege's puzzle must mention, we must appeal to Fregean senses. By a "full explanation" I mean the sort of first-personally intelligible account of our rational assessments and rationalizing explanations that Fregeans aspire to provide. In previous work (García-Carpintero, 2000, 2006) I have defended a form of the Fregean picture that I take to be immune to Millian arguments. This proposal agrees with Millians that the content of the assertions made with (1) and (5), and of the attitudes they express, are just singular propositions individuated by the referents of the singular terms. I argue, however, that a full account of the relevant *states/acts* requires accompanying reference-fixing acts of presupposing. Both Pinillos (2011, 308) and Goodsell (2014, 296-7) contend that we cannot account for anaphoric dependence in such terms. I believe that their arguments can be answered, and that here too the presuppositional account is in a position to vindicate the need for a full-fledged Fregean account. Similarly important in this respect would be to deal with the objections presented by Schroeter (2012), also in the context of accounting for anaphoric dependencies, to the sort of "two-dimensional" account I envisage. However, these are tasks for another occasion.

Notes

2. Cf., e.g., Heck, 2012, 155-6, and references there.

3. In a real utterance of "Hesperus equals Hesperus" (outside the rarefied realm of hackneyed philosophical example), the second occurrence of 'Hesperus' is understood as *not* dependent on the first, even though the terms are, of course, presented as co-referential. Perhaps, for instance, two different naming practices associated with the expression-type are assumed in the context, relative to which the identity is asserted: "(that) Hesperus is (that other) Hesperus". Perry (1988, 242fn.) appreciates this point; Schroeter (2007, 599) also acknowledges it, but she seems to think that there are "standard" contexts in which it would be understood with logical form (2). I take it that this only happens in philosophical contexts; in truly standard ones, (3) provides its correct formalization.

4. Perry (1988) and Lawlor (2010) use the first, Schroeter (2007) and Pinillos (2010) the second. Fine (2007, 40, 68) speaks instead of objects "being represented as the same".

5. García-Carpintero (2004) (cf. also references there) substantiates this claim.

6. Semantics *narrowly conceived* aims to explain the sort of issues about language acquisition, etc, that a Principle of Compositionality is intended to deal with, on the view that García-Carpintero (2012) articulates. As (5) suggests, it may well be that an adequate account of intuitive validity should go beyond the proprietary resources of this theoretical undertaking, allowing itself to use more "pragmatic" notions.

7. In fact, external co-reference is not necessary either, as shown by the cases of confusion discussed in the literature already referred to; cf., e.g., Schroeter, 2007, and Lawlor, 2010.

8. Frege mentions *apriority*, but this is puzzling; he surely wants to say that $9=3^2$ has the form $a=b$ (the two expressions have different senses), even though the identity is *a priori*.

9. I do not find the argument compelling; cf. the discussion by Recanati (2013, 104-112) and Goodsell (2014, 310).

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