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Posing Frege's Puzzle Without Presupposing Linguistic Senses

Resumen: *En su desafiante artículo "¿Puede Frege formular el puzzle de Frege?", Stavroula Glezakos argumenta que la presentación de Frege de su famoso puzzle es circular: el puzzle es supuesto al establecer la necesidad de los Sentidos y, sin embargo, ella asevera, para poder generar el puzzle Frege necesitaría, previamente, invocar los Sentidos. En respuesta argumento que el puzzle debería ser formulado sin apoyarse esencialmente sobre el lenguaje y las palabras. Intento mostrar que el auténtico puzzle no versa sobre las oraciones de identidad, sino acerca del valor cognitivo de los conceptos y los pensamientos. Asimismo, argumento que para formular el puzzle es necesario presuponer no los Sentidos, sino ciertos principios de transparencia para los conceptos y los pensamientos.*

Palabras claves: *Puzzle de Frege. Sentidos. Referencia. Valor cognitivo. Transparencia.*

Abstract: *In her challenging paper "Can Frege Pose Frege's Puzzle?", Stavroula Glezakos argues that Frege's presentation of his famous puzzle is circular: the puzzle is supposed to establish the need for Senses, and yet, she contends, in order to generate the puzzle, Frege should already need to invoke Senses. In response I argue that the puzzle should be posed without essentially relying on language and words. I try to show that the real puzzle is not about identity sentences, but about the cognitive value of concepts and thoughts, and also that, in order to pose the puzzle, it is necessary to presuppose, not Senses, but certain transparency principles for concepts and thoughts.*

Key words: *Frege's puzzle. Senses. Reference. Cognitive value. Transparency.*

1. Introduction

In her challenging paper "Can Frege Pose Frege's Puzzle?", Stavroula Glezakos argues that Frege's presentation of his famous puzzle is circular: the puzzle is supposed to establish the need for Senses, and yet, she contends, in order to generate the puzzle, Frege should already need to invoke Senses.

In response, I will argue that, although one particular way in which Frege presents the puzzle is admittedly wanting, the puzzle itself stands. Nonetheless, I think, Glezakos's observations help us to confront several important points: (a) the deep puzzle is not a puzzle about names and language, but one about concepts and thought; (b) the superficial puzzle about names involves particular ways of identifying names themselves; (c) the deep puzzle, which actually arises from a conflict between Externalism and transparency principles for mental content, must also be posed with caution if it is to avoid similar circularity objections.

2. Frege's Puzzle and Frege's Solution

Frege (1892/1970) originally intended to offer an *argument* against Mill's (1843/1973) view that the meaning of ordinary proper names is exhausted by their (unique) bearer. It is only

much later, when independent arguments in the 1970s established the Millian view as the new orthodoxy in philosophy of language, that Frege's insights came to be regarded as creating a *puzzle* for Millianism.

The puzzle may be posed in many different ways. One famous formulation derives from Frege's remarks in the opening paragraph of his classic paper, "On Sense and Reference" (1892/1970). There Frege notes an epistemic contrast between true statements of the form "a=a" and "a=b": whereas instances of the former "hold a priori," he says, instances of the latter "cannot always be established a priori." [1] How can there be such a contrast, if, as Mill claimed, 'a' and 'b' are merely tags for the same object?

As Frege uses them here, the schematic letters 'a' and 'b' stand for different 'proper names' in some natural language. And by 'proper names', Frege means singular terms, i. e. terms purporting to designate some unique individual. A central example discussed by Frege involves two descriptive names: while the truth of the statement (1),

(1) The Evening Star is the Evening Star.

is known a priori, he says, the truth of the statement (2),

(2) The Evening Star is the Morning Star.

was an a posteriori astronomical discovery. Frege invokes this kind of example to motivate a general distinction between two classes of identity statements, whose respective members are "obviously statements of differing cognitive value." For Frege, the "cognitive value" of a statement amounts to its informational power: the information that the statement carries and can thereby potentially add to what a competent subject already knew or believed given her mastery of the meanings of the terms occurring in the statement. In the example above, since the cognitive difference between (1) and (2) can only come from the substitution of 'the Evening star' with 'the Morning star', these two singular terms must have different cognitive values. Now the puzzle is this: how can these terms have different

cognitive values if they designate the same object and, according to Millianism, thereby have the same meaning?

To solve this puzzle, Frege argues that the different cognitive values are due to different *Senses*. Senses play the role of intermediaries between the sign and the referent: they correspond to different ways in which the referent is identified. Frege also suggests that the different ways in which the referent is identified correspond to different descriptive conditions that an object must satisfy in order to become the referent. These conditions, not the referent, enter the truth-evaluable contents – or *Thoughts* – expressed by the statements. In the case above, this gives us two different Thoughts:

(1-T) *that the evening star is the evening star*
(2-T) *that the evening star is the morning star*

Whereas the truth of (1-T) is known a priori, it is only an empirical accident that the two conditions in (2-T) are satisfied by the same object, viz. Venus.[2]

Generalizing Frege's points, we get the following formulation (I):

Purported data (I):
(A) True identity statements of the form (i) "a=a" are always trivial.
(B) True identity statements of the form (ii) "a=b" are sometimes informative.
(EC) Epistemic contrast: given (A)-(B), statements in (i) and (ii) may have different cognitive values.

Puzzle (I):
There is a conflict between the following claims:
(M) Millianism is true: the meaning of ordinary proper names is exhausted by their (unique) bearer.
(SM) Given (M), true statements of the form (i) and (ii) have the same meaning and content.
(EC) Epistemic contrast: given (A)-(B), statements in (i) and (ii) may have different cognitive values.

(DM) If two terms have different cognitive values, they have different meanings and/or different contents.[3]

Solution (I):

(i-S) Identity statements of the form (i) are trivial because their contents are Thoughts that involve the same Sense twice: *that S_1 is S_1.*

(ii-S) Identity statements of the form (ii) are informative because their contents are Thoughts that involve two different Senses: *that S_1 is S_2.*

Here Frege first poses the puzzle by observing an epistemic contrast between (i) and (ii), and then he goes on to solve the puzzle by positing a contrast between the two kinds of contents in (i-S) and (ii-S).

3. Glezakos's Challenge

There is an ambiguity, in this initial formulation of the puzzle, in the phrase "statements of the *forms*" (i) and (ii). One natural interpretation would be syntactic:

(i-synt) A statement is of the form "a=a" only if 'a' and 'a' are occurrences of the same word-type.

(ii-synt) A statement is of the form "a=b" only if 'a' and 'b' are occurrences of different word-types.

But then if Frege really means syntactic forms, the question arises, how we should individuate words?

As Glezakos notes, this issue becomes critical when we consider concrete instances of (i) and (ii) involving ordinary proper names. To borrow an example from Kripke (1979), suppose that Peter mistakenly thinks at time t_1 that there are two individuals called 'Paderewski', one who is a musician and the other who is a politician. Peter at t_1 assents to the statement (3),

(3) Paderewski is Paderewski.

when both occurrences are manifestly intended to designate the musician – i.e. when Peter regards the statement as an instance of (i-synt). But at t_1 Peter dissents from the statement (4),

(4) Paderewski is Paderewski.

when the first occurrence is manifestly intended to designate the musician and the second occurrence is manifestly intended to designate the politician – i.e. when Peter regards the statement as an instance of (ii-synt). Now we may ask: does (4) belong to class (i) or to class (ii)?

According to Glezakos, this question raises an important difficulty for Frege. The difficulty would not only undercut the grounds for his descriptivist *solution* to the particular version of his puzzle applying to ordinary proper names –as Kripke (1979) had already argued. It would also, and more radically, undercut the grounds for the *puzzlement* itself. Glezakos presents the difficulty as a dilemma concerning the individuation of ordinary proper names.

On the first horn of the dilemma, proper names should be individuated (in part) by their referent. From this it would seem to follow that (4) –just like (3)– is an instance of (i). However, the truth of (4) is informative to Peter at t_1, and this would have suggested rather that (4) belongs to (ii).

On the second horn of the dilemma, ordinary proper names should be individuated (in part) by a Sense, and not by a referent. However, if we go in that direction, we will have invoked Senses already in the criterion enabling us to classify (4) in (i) or (ii). Hence, contrary to what was initially promised, the classification in (i) or (ii) will not have provided an *independent criterion* telling us how many Senses (4) contains.

The challenge posed by Glezakos here is primarily methololodogical: is there a way to *present* the relevant sort of epistemic contrast between two kinds of identity statements without presupposing Senses? Everybody will agree that, if there are Senses, they will be responsible for the relevant contrasts. The methodological challenge is to offer some independent way of *ascertaining* the contrast, *before* we proceed to introduce Senses in order to explain that

contrast. As Glezakos puts it: we must first be puzzled, and only then look for a solution. If the methodological challenge cannot be met, this will indicate that the purported puzzle is not substantive.

Given the methodological circularity of the second horn, the only hope is to find a way to make the first horn acceptable: names in (i) and (ii) are individuated by a referent but not by a Sense. This means that (4), just like (3), should belong to (i).

4. From Language to Thought

We thereby acknowledge that differences in cognitive value do not correspond to syntactic differences in language. Now is this enough to show that *no* epistemic contrast at all exists between two ways of taking identities? This is what Glezakos appears to think:

> Though Frege's discussion of true identity sentences in the opening sentences of ''On Sinn and Bedeutung'' has been thought to present a problem for all who theorize about language, it in fact does not present a puzzle for *anyone* (2009, 206, italics mine.).

But I would disagree that the lesson to be drawn here should be so radical.

That statements of the form (i), such as (4), can be informative had been noted by Kripke (1979). Kripke regarded this as evidence that the puzzle highlighted by Frege, rather than being about the semantics of names, was fundamentally a puzzle about belief. Hence Kripke argued that the puzzle could not be used against Millianism, which concerns only the meaning of proper names in language.

It was clear from Kripke's puzzle about belief that we must abandon the idea that to each name there corresponds at most one cognitive value. As the case (4) illustrates, one and the same name may have differing cognitive values even for one competent subject at one given time. In other words, contrary to what Frege had originally suggested, there is no one-one correspondence between cognitive values and name-types.

This means that whatever is responsible for the relevant differences in cognitive values is not fully determined by the conventional meanings of names.

A similar point had been made by Perry (1977, 483-4) –among others– concerning demonstratives. Even a true identity statement of the form (i) containing two occurrences of the same demonstrative word-type may occasionally be informative. Thus statement (5),

(5) That is that.

may be informative to a competent speaker if, say, from her standpoint the middle part of the boat is obscured by some massive object. In other words, contrary to Kaplan's (1989) claim that the meanings or 'characters' of demonstratives determine their cognitive value, there is no one-one correspondence between cognitive values and demonstrative word-types. Hence, whatever is responsible for the relevant differences in cognitive values is not fully determined by the conventional meanings of demonstratives.

These observations suggest that the relevant contrasts do not pertain to pure linguistics. They also highlight the important fact that, in producing or interpreting a word-token, a competent speaker has some mental way of identifying the corresponding word-type. Indeed, as Glezakos writes:

> There is nothing involved in the notion of sameness of name that ensures that language users —even the most competent— will be able to identify and re-identify names when they encounter them, even when they appear in a single identity sentence (2009, 204).

If Peter had recognised that it is the same Millian word-type which occurs twice in (4), he would have assented to that statement. He would have been in a position to recognize this if he had seen that the names have the same meaning/ referent. So if word-types are individuated (in part) by their conventional meaning/referent, the mental way of identifying the word-type should (partly) consist in a mental way of identifying its conventional meaning/referent. In short, then,

whatever explains cognitive value in thought will also play a role in the cognitive identification of the relevant syntactic items in language.[4]

Note that the comparison between names and demonstratives reveals a distinction that Glezakos does not draw. In formulating the supposed dilemma for Frege, Glezakos contrasts two possible views of word individuation: by referent or by Sense. However, for demonstratives, the relevant theoretical options should rather be: by meaning or by Sense. In the case of names, if Millianism is true, conventional meaning and referent are the same. But in the case of demonstratives, conventional meaning and referent diverge. Even if a demonstrative word-type is individuated by its conventional meaning, the competent speaker will not need to identify the referent of a particular token in order to identify the type to which that token belongs.

So, cognitive value is a theme that really pertains to the theory of thought and mental content. At this point some philosophers may worry that differences in cognitive values could not be established without invoking observable uses of language. I myself do not share such worries. It is perfectly fine to imagine a subject like Peter, who was acquainted with Paderewski on two different occasions, and who did not recognize that the same Paderewski was in question, even if his mistake is not revealed by any observable utterance. Nevertheless, it is *convenient* to suppose in addition that Peter's mistake is betrayed by his dispositions toward particular uses of sentences. This helps the theorist to pose the puzzle without incurring specific commitments as to the nature of concepts.

What is the world like according to Peter at t_1, when he dissents from the statement (4)? Clearly, in the world as he thinks it is, there are two individuals called 'Paderewski': one is a pianist and the other is a politician. This way of representing his mental situation –as Stalnaker (2008) would also insist– does not commit us to any particular view about the semantics, syntax, or physics of concepts. Still, we may *stipulate* that whatever is responsible in his mind for the relevant difference in cognitive value will be

called a *concept*. This is how the term 'concept' will be used henceforth. Thus we introduce a minimal notion of concept which, while it does not commit us to any particular view of thought, allows us to formulate a criterion of difference:

(CD) Whenever the truth of an identity judgement (whatever its form) is informative, the judgement involves two concepts.

This criterion is harmless. It does not imply that the relevant epistemic contrasts supervene on syntactic matters. It is unproblematic by all standards to manipulate identity judgements in order to ascertain differences in cognitive values. So it will be easy, given (CD), to establish differences in 'concepts'. Given that the truth of (4) is informative to him at t_1, Peter has two concepts of Paderewski – and this is so even if, linguistically, (4) belongs to (i).

5. Concepts and Transparency

We have conceded that one particular way of posing Frege's puzzle is indeed problematic. The problem comes from the purported data: some statements of the linguistic form "a=a" are informative, contrary to (A) above. This observation undermines the original suggestion that the relevant epistemic contrast corresponds to a syntactic contrast between two kinds of identity sentences in language. So we obtain a new formulation (II) of the puzzle and its Fregean solution, which now concerns only thought contents:

> *Purported data (II)*:
> (A-B*) True identity thoughts (whatever their form) are sometimes trivial and sometimes informative.

> *Puzzle (II)*:
> There is a conflict between the following claims:

> (Ext) Externalism is true: the truth-conditional content of some singular thoughts directly involves a referent – we may call such thoughts, *referential* thoughts.
> (EC*) Epistemic contrast: given (A-B*), even true referential identity thoughts concerning

the same referent may have different cognitive values.

The conflict arises when the following claims are granted:

(SC) Given (Ext), true referential identity thoughts concerning the same referent have the same truth-conditional content.
(CC) If two thoughts have different cognitive values, they have different contents.

Solution (II):
(i-S) Identity thoughts are trivial when their truth-conditional contents involve the same Sense twice: *that S_1 is S_1*
(ii-S) Identity thoughts are informative when their truth-conditional contents involve two different Senses: *that S_1 is S_2*

In this new formulation (II) of the puzzle, the purported data are incontrovertible. Is there a problem in the generation of the puzzle? (Ext) is only a thesis about mental content, and (SC) just follows from that thesis. It is when the theoretical consequence (SC) of Externalism is combined with the empirical observation (EC*) that a conflict arises: cognitive values and truth-conditional contents do not perfectly match. But crucially, it is only if we think that a difference in cognitive value should automatically reflect a difference in content that a conflict arises. So principle (CC) is a key ingredient in the generation of Frege's puzzle.

Now in the background of (CC) several transparency principles are intertwined. There is an uncontroversial principle of transparency for cognitive values (TCV):

(TCV) If two occurrent thoughts of a thinker at some time t_1 have different cognitive values, the thinker at t_1 is able to know this a priori.

The role of (CC) is to extend the transparency of cognitive values stated in (TCV) to contents: (CC) exploits the transparency of cognitive values in giving a criterion of difference for the individuation of mental contents. Whence we obtain a principle of transparency of difference for contents (TD):

(TD) If two occurrent thoughts of a thinker at some time t_1 have different contents, the thinker at t_1 is able to know this a priori.

Now it seems that if (TD) is true and the thinker is able to tell a priori whenever two occurrent thoughts have different contents, she may also be able to tell a priori whenever two occurrent thoughts have the same content. Indeed, from (TD), the thinker realising that she does not know a priori that two occurrent thoughts have different contents may legitimately conclude that they must have the same content. Thus (TD) is intimately related to a principle of transparency of sameness for contents (TS):

(TS) If two occurrent thoughts of a thinker at some time t_1 have the same content, the thinker at t_1 is able to know this a priori.

Now Externalism predicts that the thoughts expressed in (3) and (4) have the same truth-conditional content. Yet Peter is not able to know this a priori. *That* is the deep puzzle discovered by Frege: there is an empirical conflict between Externalism and transparency principles.[5] As Boghossian (1994) also argued, the transparency principles are essential: without them the puzzle cannot be posed. And yet Frege is simply *assuming* those principles: he takes them to be obvious and never feels the need to argue for them. So I think that, although Frege's puzzle can be posed without presupposing Senses, it cannot be posed without presupposing transparency principles. While the principle (TCV) is uncontroversial, the principles (CC), (TD) and (TS) could be challenged by someone who rejected a picture of the mind according to which occurrent thought *contents* are introspectively transparent to the thinker.

But at this stage a different circularity threatens the generation of the puzzle. We must be cautious: not all construals of the notion of 'content' in the principle (CC) will avoid circularity. Frege's puzzle can be posed non-circularly by assuming that there are transparent 'concepts' (in our minimal sense) such that a

difference in cognitive value entails a difference in concept. But it cannot be posed non-circularly by assuming further that a difference in 'concepts' entails a difference in their *truth-conditional* contents. For *that* would be to presuppose Senses in the generation of the puzzle, in the way criticised by Glezakos. The claim that concepts always make a truth-conditional difference to contents is and should remain only part of a Fregean *solution* to the puzzle. If instead we assumed in posing the puzzle that concepts always make truth-conditional differences, then, given that (EC*) and (CC) are presupposed, Externalism should have been false from the outset – contrary to the initial hypothesis (Ext) in posing the puzzle (II). So we cannot assume, in *posing* the puzzle, that differences in concepts always correspond to differences in truth-conditional contents.

What we can legitimately do, however, is to start by granting that differences in concepts correspond to differences in *some aspect* of contents, leaving unsettled at that stage what aspects these are, and in particular whether they are truth-conditionally relevant or not. What we would have said, then, is only that concepts make a difference to contents – whether or not they also make a difference to truth-conditions. From there, it would then be a further *question* whether there are aspects of content that are not fully determined by truth-conditions and, in the affirmative, what these may be.

I think this should be the right way for a Fregean to pose the puzzle, given the kind of lurking circularity to which Glezakos calls our attention. Whence it would be *a further move* for the Fregean to respond to the puzzle by introducing Senses. Indeed, Fregean Senses are not merely 'concepts' (in our minimal sense). They are concepts of a specific sort: ones that always make a truth-conditional difference. The Senses introduced by Frege are supposed to play three roles: (1) differences in Senses should explain differences in cognitive values, (2) a Sense should make a difference to the truth-conditions of a Thought in which it occurs, and (3) a Sense should determine a unique referent. While (1) does not tell Senses from concepts, (2) and (3) do: they further specify distinguishing features of Senses in an attempt to solve the puzzle. So

an interesting lesson emerges here: the notion of 'content' in the puzzle (II) *must* be construed liberally, with an open mind, if the puzzle is to be posed in a non-circular way.[6]

In conclusion, while differences in cognitive values and transparent concepts are already invoked in the *generation* of the puzzle, differences in Senses are not invoked in the generation of the puzzle, but only in an attempt to *solve* it. If this right, then in the end Frege's puzzle can be posed.

Notes

1. Notice that by this formulation Frege is suggesting, without being more explicit here, that statements of the form "a=b" may sometimes be known a priori.
2. In this example, following a widespread (albeit unfortunate) practice, I ignore the fact that Venus is a planet, not a star.
3. Here, following Kaplan, I use the term 'meaning' for the conventional meaning that an expression-type has in a language, and retains on all occasions of its use, and the term 'content' for the contribution that an expression-token makes to the proposition expressed by the use of the corresponding expression-type on a given occasion. If Millianism is true, meaning and content coincide in the case of proper names.
4. I develop this idea at some length, within a two-dimensionalist framework, in Bochner (2013).
5. The deep puzzle is arguably even more dramatic in so-called twin-cases, inspired by Putnam (1975), where two different referents are confused and taken to be one. In classic Frege-cases, where one referent is taken to be two, one might still argue that the two contents involve one and the same referent, albeit presented in two different ways. But one cannot argue similarly in twin-cases, where the referent is not constant. So while Frege-cases appear to establish that referents are not sufficient to individuate contents, twin-cases may be taken to show further that referents are not even necessary to individuate contents – that there can be sameness of contents without sameness of referents. See Boghossian (1994).
6. This means that even if one eventually claimed, contrary to what Frege suggested, that the Senses explaining cognitive value are non-descriptive modes of presentation, one would have to have started with an open mind on the issue.

References

Bochner, G. (2013). The Metasyntactic Interpretation of Two-Dimensionalism. *Philosophical Studies*. *163* (3), 611-626.

Boghossian, P. (1994). The Transparency of Mental Content. *Philosophical Perspectives*. 8, 33-50.

Frege, G. (1892). Über Sinn und Bedeutung. In *Zeitschrift für Philosophie und philosophische Kritik*. 100, 25-50. Translated as On Sense and Reference by P. Geach. In P. Geach & M. Black (Eds.) (1970) *Translations from the Philosophical Writings of Gottlob Frege*. Oxford: Basil Blackwell, 56-78.

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, 202-207.

Kaplan, D. (1989). Demonstratives. In J. Almog, J. Perry & H. Wettstein (Eds.) (1989) *Themes from Kaplan*. Oxford: Oxford University Press, 481-563.

Kripke, S. (1979). A Puzzle about Belief. In A. Margalit (1979) *Meaning and Use*. Boston, Dordrecht: Reidel, 239-283.

Mill, J. S. (1843). A *System of Logic, Ratiocinative and Inductive: Being a Connected View of the Principles of Evidence and the Methods of Scientific Investigation*. Reprinted in J. M. Robson (Ed.) (1973) *The Collected Works of John Stuart Mill*, 7 (Books I-III), 8 (Books IV-VI). University of Toronto Press: Routledge & Kegan Paul.

Perry, J. (1977). Frege on Demonstratives. *Philosophical Review. 86* (4), 474-497.

Putnam, H. (1975). The Meaning of Meaning. *Minnesota Studies in the Philosophy of Science*. 7, 131-193.

Stalnaker, R. (2008). *Our Knowledge of the Internal World*. Oxford: Oxford University Press.

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