

**SOME NOTES ON COGNITIVE DYNAMIC:
INSPIRED BY V. BOZICKOVIC'S *THE
INDEXICAL POINT OF VIEW***

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Abstract: Bozickovic's *The Indexical Point of View* is a rich and well-argued book in which he raises many interesting questions regarding indexical reference. In what follows I will mainly concentrate on Bozickovic's neo-Fregean proposal and the criticism he proposes to the Kaplan-Perry theory according to which characters are what help us to

handle the cognitive significance problem. Although I think Bozickovic's account to be accurate, the criticisms he raises against Perry may be dealt with without having to dismiss the Kaplan-Perry framework.

1. Introduction

Bozickovic's *The Indexical Point of View* is a rich and well-argued book in which he raises many interesting questions regarding indexical reference. He also proposes interesting answers concerning many issues pertaining to indexicality and, in particular, the cognitive significance conveyed by indexical expressions. In focusing on the modes of presentation accompanying indexical reference Bozickovic deals with two main topics: (i) What is the cognitive significance accompanying the utterance of an indexical expression? and (ii) How do we keep track under the same mode of presentation on the same object (e.g. "This is F" and "That is F" referring to the same object), day (e.g. "Today is F" and "Yesterday was F" referring to the same day), location (e.g. "Here is F" and "There is F" referring to the same place), etc.? In so doing Bozickovic discusses and criticizes various attempts proposed to tackle these concerns.

In what follows I will mainly concentrate on Bozickovic's neo-Fregean proposal and the criticism he proposes to the Kaplan-Perry theory according to which characters are what help us to handle the cognitive significance problem. Although I think Bozickovic's account to be accurate, the criticisms he raises against Perry may be dealt with without having to dismiss the Kaplan-Perry framework.

2. Cognitive Significance

In “Der Gedanke/Thoughts” (1918) Frege claims that if someone wants to express the same thought tomorrow as the one she expresses today by voicing “Today is sunny” she would have to utter “Yesterday was sunny”. Thus, ‘today’ uttered on d and ‘yesterday’ uttered on $d+1$ would express the same sense or mode of presentation (senses are thought constituents). Furthermore, in uttering these sentences on d and $d+1$ respectively, one could not have different cognitive attitudes toward the relevant day. For senses and thoughts, for Frege, are the bearers of cognitive significance and one, if rational, cannot have different cognitive attitudes toward the very same thought. Furthermore, if one utters “Today is sunny” on d and on $d+1$ one would express different thoughts. Since senses are, for Frege, what determine reference, ‘today’ uttered on d and ‘today’ uttered on $d+1$ ought to express different senses. Similarly, with utterances of the same first-person pronoun. If I utter “I’m sick” and you utter the same sentence we would express different thoughts: ‘I’ uttered by me would, therefore, express a different sense from the ‘I’ uttered by you.

Yet, ‘today’ and ‘yesterday’ are different indexicals with different linguistic meaning or characters. As Kaplan (1977) told us the linguistic meaning of an indexical (what he calls its “character”) can be represented as a function taking as input some contextual parameter (e.g.: agent, time, location, demonstration or directing intention, possible world) and giving as output the content or referent. Thus, the same indexical, in different contexts, may end up selecting different referents. This is, for instance, the case with ‘I’ uttered by different persons and of ‘today’ uttered on different days. The questions arising, from a Fregean perspective, are the following: (i) How is it that the very same

indexical can express different senses? and (ii) How is it that different indexicals can express the same sense?

Kaplan (1977), like Perry (1977), argues that characters (Perry calls them “roles”) are what help us dealing with problems pertaining to cognitive significance. In his original and seminal work, Kaplan assumes that if we change the character of an indexical, like in the today/yesterday case, we end up deploying different cognitive significances (and cognitive significance for Kaplan and Perry, like Bozickovic, and *pave* e.g. Wettstein 1986, is a problem that pertains to semantics). In this case the speaker or hearer would have different cognitive attitudes toward the different utterances, even if what one would end up saying or expressing is the same. Besides, two utterances of the same sentence would express the same cognitive significance since they are governed by the same character as it would be the case in uttering an indexical sentence with ‘today’ on d and ‘today’ on $d+1$. On Kaplan’s framework there is a clear distinction between the *what* (what one ends up saying) and the *how* (how one says something). What one ends up saying is represented by a singular or Russellian proposition having the referent as a constituent. Such a proposition cannot, though, be the bearer of cognitive significance: one can say the same thing in uttering different sentences and one can say different things in uttering the same sentence. If, looking into a mirror without realizing that the person reflected is myself, I utter “His pants are on fire” though referring to myself I would have a different attitude and different behavior from the one I would entertain in uttering “My pants are on fire”. To deal with problems pertaining to cognitive significance we must focus on *how* one expresses a singular proposition, or so goes Kaplan’s original story.

If we follow Frege, though, we must assume that one can express the same thought in uttering different indexicals, as in the today/yesterday example. If so, characters cannot be

what helps us to deal with the cognitive significance problem. On one side, Bozickovic argues that characters are too coarse-grained to capture cognitive significance, insofar as one can have different cognitive attitudes in uttering the same sentence. On the other side, characters are too fine-grained if we wish to deal with Frege's claim that one can express the very same thought in uttering 'today' and 'yesterday'. It seems, therefore, that something ought to go. Either we give up the view that characters or linguistic meanings are what help in dealing with the cognitive significance problem *or* we give up Frege's view that one can express the same sense/thought in uttering different indexicals. Bozickovic gives up the first horn of the dilemma and follows the Frege-inspired tradition (see, e.g., Evans 1982). To do so he focuses on the dynamicity of modes of presentation.¹

3. Cognitive Dynamics

In defending the Fregean view Bozickovic follows the neo-Fregean tradition: on d and $d+1$, with 'today' and 'yesterday', one expresses the same thought. For, one entertains a *dynamic*

¹ It should be stressed, though, that the neo-Fregeans such as Evans are any more inspired by Frege than Perry (see Perry 1977). For, in introducing the notion of *de re* senses and Russellian thoughts they depart from Frege as much as Perry does. The notion of *de re* senses has been proposed among others by, e.g., McDowell 1984 and Peacocke 1981. Such senses are, roughly, made up by objects and their modes of presentation. Thus, objects can come into the sense as sense-completers. This is, no doubt, quite a radical departure from Frege's original senses. For, it gives up the Fregean view that only senses can be thoughts constituents.

sense or mode of presentation of the relevant day.² One somewhat keeps track of the relevant day she once referred to using ‘today’ and the next day in using ‘yesterday’. To do so Bozickovic claims that characters are not suited to capture cognitive significance. Characters belong to meaning and are both too coarse grained and too fine grained to capture cognitive significance. The latter is not an aspect of meaning (see pg. 25). Modes of presentation are *cognitive* entities while characters are *linguistic* entities. Yet, characters *qua* functions or rules are not linguistic entities. Sure, they are associated with linguistic expressions. But modes of presentation, if we follow Frege, are associated with linguistic expressions as well.

The question that springs to mind is: How does one keep track of a given object be it a day, a banana, a location, etc.? I can refer to a given banana by uttering “This banana is mature” and later, moving away, “That banana is mature”. In so doing I use two distinct demonstratives with different linguistic meanings or characters. Yet, inasmuch as I keep track of the same banana, I would entertain the same mode of presentation and, as a rational being, I would not be in a position to have different cognitive attitudes toward the same banana. For, I would be implicitly assuming that there is not a malicious demon changing the banana when looking away. My cognitive perspective toward the referred object is transparent (see pg. 45). This perspective must be transparent in order to explain my cognitive perspective. The same happens if one days I put a bottle of chardonnay in the

² Dynamic senses or modes of presentation differ from Fregean senses. The latter belong to the third realm and are mind-independent with no causal power. On the other hand, dynamic senses are cognitive entities with causal power. Dynamic modes of presentation or senses have been introduced, mainly, to deal with the problems Frege introduced in his today/yesterday example.

fridge and the day after I pick it up. I automatically pick up the same bottle without having to think that the one I pick up is the same as the one I put in the fridge yesterday. The sameness of the bottle never crosses my mind. I keep track of it in an *automatic* and *unreflective* way. If I were to raise questions about the identity of the perceived bottle I would engage in a reflective project (see pg. 71). But we are not cognitively programmed to engage in such reflective activities when keeping track of an object. If we were to engage in thoughts concerning the identity of the relevant object, we would lose the ground floor guiding our unreflective use of perception-based demonstratives. We would lose, so to speak, the way we are cognitively programmed in making indexical reference and entertaining indexical, object-dependent, thoughts.

One way, it seems to me, to understand Bozickovic on the dynamicity of modes of presentation would be to appeal to Baumeister's view of the duplex mind, i.e. the distinction between the automatic mind and the reflective mind: "The conscious system did not decide which finger to use to press the elevator button, nor did it supervise each footstep. It only formulated the grand plan" (Baumeister 2005: 278). Along this line we could say that in keeping track of a perceived object one forms (unconsciously) a mode of presentation of said object without having to entertain the thought that, e.g., the bottle of chardonnay one put in the fridge yesterday is the same as the one she attends today. One automatically keeps track of it. Only when one comes to doubt the identity of an object the reflective mind enters the scene. It would be the case of, for instance, when one perceiving a car entering a tunnel wonders whether it is the same as the one coming out on the other hand. In short, we keep track of an object and entertain the very same mode of presentation in an unreflective and automatic way. Yet, if these dynamic modes of presentations were linked to characters or linguistic

meanings, they would be different and we would face difficulties to understand and explain dynamic thoughts. The fact that one can think of the same days by adopting different indexicals, like in the today/yesterday case, further shows that the identity of belief states is not linked to characters (see pg. 87). The identity of the object, day, location, etc. when entertaining a dynamic mode of presentation is only presumed, it is not asserted. Hence, Bozickovic argues that our way of thinking of, e.g., days, is not guided by linguistic meaning (characters). Sense or modes of presentation are wholly independent of characters. Furthermore, these character-independent modes of presentation are what guide behavior (see pg. 79). These actions are circumstantial and cannot be systematically linked to the meaning (character) of indexicals (see pg. 117). I am not sure I follow Bozickovic here. For, Frege introduced senses with respect to language, to explain the difference in cognitive significance between different co-referring expressions. But this does not limit senses to being used for characterizing language. The same with characters. They can be used to characterize and classify different behaviors.

If the actions guided by indexical thoughts are circumstantial, we can understand them as being embedded in the circumstance or situation they occur. If so, the indexical thought guiding an action should be evaluated *vis-à-vis* the situation in which it occurs. The modes of presentation composing this thought, being embedded in the situation, are context-sensitive. As such they can be represented, like characters, as taking some contextual input and delivering the referent. By being embedded in the circumstance, an agent's representation is of a given object inasmuch as the agent is contextually linked to said object. And these modes of presentation can be viewed as coarse grained. Thus, we would not succumb to a proliferation of modes of presentation. They can be dynamic. Consider the

case of “Today is sunny” uttered on d and “Yesterday was sunny” uttered on $d+1$. The speaker may keep track of the relevant day and form a single dynamic thought. Characters *qua classifiers* of indexical (dynamic) thoughts can be rescued. In the today/yesterday case the relevant character could also be spelled out as a function that takes a sequence of binary sequences of dates, agents, and locations and delivers the day d iff (i) date-1 is the date before date-2 (ii) agent-1 is agent-2; (iii) location-1 is the location of agent-1 on date-1 and location-2 is the location of agent-2 on date-2, and delivers date-1 as the value. This would be a “dynamic character”.³ In Frege’s case the uses of ‘today/yesterday’ would have this dynamic character. We would have the same character on both days, and the same singular proposition. And this dynamic character would classify the dynamic thought entertained by the agent.

4. Characters, Reflexive Contents, and Modes of Presentation

If we analyze an utterance along Perry’s line (see, e.g., Perry 2001/12), it comes equipped with various contents or propositions. In associating various contents to a given utterance, this picture should help to deal with the problem of cognitive significance raised by Frege. An utterance of “Hesperus is Phosphorus”, for instance, differs in cognitive significance from “Hesperus is Hesperus” insofar as they are associated with different reflexive contents. The latter is what helps us to *classify* what is going on in someone’s mind when she processes an utterance. In telling Mary “I am Jane”, Jane’s main intention would be to inform Mary of her name,

³ On dynamic characters I am indebted by discussions with John Perry.

i.e. that she is called 'Jane'. In grasping the reflexive content Mary can start her linguistic processing and come to know that the speaker addressing her carries the name 'Jane'. In short, as communication goes, we can focus on the variegated contents an utterance can convey. If we now consider Frege's identity sentences of the form $a=b$, like "Hesperus is Phosphorus" (call it u), it can be analyzed as follows: (i) There is an individual x and an individual y and conventions C and C^* such that: (ia) C and C^* are exploited by u ; (ib) C permits one to designate x with 'Hesperus' while C^* permits one to designate y with 'Phosphorus'; (ii) $x=y$. This is the reflexive content associated with the identity statement. In this content the names get mentioned and it is stated that they are co-referential (i.e. have the same content), as the " $x=y$ " stresses. When we come to indexical utterances, like in the today/yesterday example, an utterance of "Today is sunny" uttered on d , would have as its reflexive content: "There is a day d the speaker refers to using 'today' and said that it is sunny on d ". The reflexive content of "Yesterday was sunny" uttered on $d+1$ would be: "There is a day d the speaker refers to using 'yesterday' and said that it is sunny on d ". The two reflexive contents only differ in that in the first we have 'today' and the second 'yesterday'. But these reflexive contents *qua* classifiers of the mental state of the speaker need not classify different mental states. Reflexive contents, like propositions, are abstract entities we use in our classification of mental states. As abstract entities they have no causal power. Mental causation is explained by appealing to mental states. In these reflexive contents 'today' and 'yesterday' could well classify the same dynamic mode of presentation. If so, characters, as represented in the reflexive contents, do not cut too finely. Actually, a competent speaker knows that 'today' uttered on d and 'yesterday' uttered on $d+1$ refer to the very same day. And this knowledge prevents one from entertaining different modes

of presentation of *d*. Furthermore, this mode of presentation is sufficiently coarse grained allowing the agent of the utterance to entertain a single dynamic mode of presentation. It is only in supposing that each indexicals (with different characters) classify different modes of presentation that the latter would be too fine grained and would not help in explaining dynamic thoughts. But this presupposition can be dismissed. The two reflexive contents associated with ‘today’ and ‘yesterday’ could also be subsumed, as I mention above, under the same dynamic character as captured by the reflexive content, i.e.: as a function that takes a sequence of binary sequences of dates, agents, and locations and delivers the day *d* iff (i) date-1 is the date before date-2 (ii) agent-1 = agent-2; (iii) location-1 is the location of agent-1 on date-1 and location-2 is the location of agent-2 on date-2, and delivers date-1 as the value.

If the Perry-inspired picture, as I understand it, is correct, we can also accept Bozickovic’s view (see pg. 135) that there is a common cognitive mechanism governing all indexical thoughts independent of their difference at the surface level and the difference in the reflexive contents.⁴ We can also accept the view that modes of presentation are cognitive entities. We do not have, though, to dismiss characters as captured in the reflexive content of an utterance. For the latter is what help the theorist to classify what goes on in one’s mind, i.e. to classify one’s mental state and cognitive activity (and, thus, dealing with problems pertaining to cognitive significance). Besides, reflexive contents need not dismiss the fact that indexical thinking ultimately rests on an unreflective assumption which grounds our deployment of indexical modes of presentation. In short, reflexive contents *qua* classifiers of mental states can classify dynamic thoughts

⁴ If, though, we accept dynamic characters and reflexive contents, the story is even more straightforward.

without having to presume that one ought to entertain the thought that the object one refers in different occasions is the same. The identity of the given object, as in the today/yesterday case, is presumed to be the same and this presupposition need not reach the speaker reflective mind, i.e. it need not rise to the level of reflexive cognition. When a cognizer unconsciously takes a given referent to be the same, she can refer to and think of it using different indexicals under the same dynamic mode of presentation.

This can also expand to the interchange between two speakers. If A says “I’m F” and B replies “Are you sure you are F?”, ‘I’ and ‘you’ can have the same cognitive significance (see Kaplan 2012)⁵ both in intrapersonal and interpersonal terms. The different reflexive contents associated with these utterances can classify the very same mode of presentation. A and B actions, though, being circumstantial, i.e. embedded in different situations, can be very different. For, ‘I’ (unlike ‘you’) is, as Perry (1979) has forcefully shown, an essential indexical. As such it cannot be replaced by a co-referring expression without destroying the force of explanation. In entertaining an ‘I’-thought one forms a mode of presentation that, though, it could be the same as the one formed by an interlocutor entertaining a ‘you’-thought, triggers a different behavior. For, this ‘I’-mode of presentation is linked to the one who entertains it. If you and me both utter “I’m hungry” we both entertain the same (type-identified) mode of presentation, classified by the same reflexive content. Yet since you entertain it and I entertain it the token mode of presentation is different. While one belongs to you the other belongs to me. And it is this simple fact that can trigger

⁵ “The character of ‘I’ is unchanging on different occasions of utterance and is always distinct from the character of ‘you’. But an utterance of ‘I’ can have the same cognitive significance as an utterance of ‘you’”. (Kaplan 2012: 137)

different actions: me seizing a sandwich and you grabbing a pizza.

The fact that two tokens modes of presentation can be classified by the same reflexive content and that the same mode of presentation can be classified by different reflexive contents can also be explained in adopting Dretske's (1988) famous distinction between structuring and triggering causes of behavior. Roughly, if we consider one's behavior, we can focus on what shaped the event to occur, i.e. at its structuring cause. We can also look at what triggers this event to occur now, i.e. at its triggering cause. While the triggering cause, causes the process to occur now, the structuring cause is responsible for its being this process. In terms of thoughts and modes of presentation, we can say that in the case of 'I'-thoughts, for instance, the reflexive content classifies the structuring cause. Thus, the thought A and B both express in uttering "I am F" classified by the reflexive content ("The agent of 'I am F' said that s/he is F") is, *qua* type, the same. Their token thoughts, the ones triggering A and B behaviors, i.e. triggering different events, are different. It is the token thoughts that cause or trigger A and B to behave in a certain way. Yet if their tokens are of the same type, A and B tend to behave *ceteris paribus* similarly. And they do so insofar as the structuring cause is the same (this can support interesting psychological generalizations or laws). Characters, as represented in the reflexive contents, *qua* abstract entities do not and should not prevent us in the classification of cognitive entities like modes of presentation. Sure, modes of presentation are cognitive entities while characters are linked to linguistic expressions. Yet, characters help us to classify mental states and explain speakers' behaviors.

In short, if we take reflexive contents *qua* classifiers of modes of presentation, we can deal with Frege's view according to which, (i) the very same indexical can express different senses insofar as its reflexive content can classify

different (token) modes of presentation and (ii) that different indexicals can express the same sense insofar as they can classify the same (token) mode of presentation.

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