

**TRAVIS-LIKE CASES AND ADEQUATE IDEAS: A  
CRITICAL NOTICE OF BOZICKOVIC'S *THE  
INDEXICAL POINT OF VIEW***

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**Abstract:** In this critical notice we review Bozickovic's recent proposal to settle two interrelated issues: (i) the issue of the

cognitive significance of indexical thoughts expressed at a time in the face of difficulties posed by cases in which the subject either mistakes two objects for one or one for two different objects; (ii) that of the cognitive dynamics of temporal indexical thoughts in the face of difficulties posed by cases in which the belief seems to be retained while the proper adjustments fail to be made (that is, in cases such as Rip Van Winkle's). We argue that, despite its elegance and merits, the proposal falls short of accounting for the problematic cases in their full complexity. For one thing, the intended non-modal construal of Frege's Criterion of Difference promoted by Bozickovic does not block, in our view, the “proliferation” of senses brought about by the occasion-sensitivity of the individuation of demonstrative thoughts. For another, the proposal fails to appreciate the need for the subject to have an adequate conception of the object of her thought when it comes to orienting herself in space and time. That being so, we take it to be unfit to settle (ii).

## 1. Introduction

Large swaths of the *Indexical Point of View* (hereafter, IPV) are devoted to critically reviewing attempts to account for (i) the cognitive significance of indexical thoughts at a time in the face of difficulties posed by cases in which the subject either mistakes two objects for one or (as happens with Frege cases) one for two different objects; (ii) what it takes to keep on expressing (thinking) the same temporal indexical thought over time in the face of difficulties posed by cases in which the thought (belief) seems to be retained while the proper adjustments fail to be made (that is, in cases such as Rip Van Winkle's). We basically agree with IPV's critical bits. With respect to (i), we agree that the attempts to account for the difference in cognitive significance of (sub)utterances of sentences (such as “that<sub>1</sub> is that<sub>2</sub>” or “Today is my husband's birthday”, uttered twice) wherein co-referential indexicals

with the same meaning-type occur, and of the corresponding thoughts, either in terms of character-plus-accompanying-features (Kaplan 1989a, b) or by positing a further layer of (reflexive) content beyond the said (Perry 2012) ultimately fail. And with respect to (ii) —*i.e.*, cognitive dynamics—, we concur that failing to make the standard linguistic adjustments pointed by Frege (1918) in his famous remark (*viz.*, replacing “today” with “yesterday” on d+1, “the day before yesterday” on d+2, etc.) need not result in failing to retain the original belief on the new day of utterance, as cases such as Rip’s apparently suggest.

More contentious is the author’s proposal to settle the foregoing issues. In what follows, we shall pinpoint two difficulties faced, in our view, by Bozickovic’s positive account. One pertains to the proliferation of senses brought about by an uncritical application of Frege-inspired criterion of difference for thoughts to the case of perception-based demonstrative thoughts. Bozickovic argues that the proliferation can be blocked by a suitable modification of the criterion on which identity of sense (thought) is a matter of the rational subject’s being in no position to take conflicting attitudes towards the thought-content (IPV, ch. 6). However, if there is no single set of features that enables one to tell on all occasions what counts from what does not count as thinking the same thought-content or different ones, it might be that the modification of the criterion, as suitable as it seems, does not avoid all proliferation of senses. This should come as no surprise to whoever is familiar with the idea that the individuation of thoughts (including, indexical ones) is an occasion-sensitive matter (for a general and all-purpose argument, see Travis 2000, 2017).<sup>1</sup> Another

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<sup>1</sup> As Putnam (2002) makes clear, the idea that the individuation of thoughts is occasion-sensitive is one application of “Travis’ central

difficulty has to do with the (alleged) suitability of the proposal when it comes to accounting for the conditions under which the same (this-, here-, or today-) thought can be had once the original extralinguistic context is left behind. To put it roughly, even if the day (object, place) remembered is the sole causal source of the subject's thought *and* represented by her as the same from one occasion to the next (*i.e.* via the same sense), this hardly suffices for the thought entertained to be (diachronically) the same, for entertaining demonstrative or temporal indexical thoughts (*i.e.* situated thoughts) seems to require in addition that the subject be able to find her way (*i.e.* to locate her cognitive egocentric perspective) in objective space and time. We take it that this is one (and possibly, the main) lesson to take from cases such as Rip's. Or so we argue.

## 2. Outline of the View on Offer

Throughout IPV Bozickovic provides an elegant “broadly Fregean” (p. 76) single solution to (i) and (ii) that purportedly carries over to all instances of indexical thought. Although (i) and (ii) both concern the individuation of perspectival mental representations of the world—the former at a time, the latter over time—, they correspond to different issues raised by different kinds of cases. Still, if it can be established

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idea of the ‘occasion-sensitivity’ of sense” (p. 96). So-called Travis or Travis-like cases hold, accordingly, just as much against occasion-insensitive truth-conditions as against occasion-insensitive ways of individuating (demonstrative) thoughts (see Travis 2017, sec. 8 & 9). It is worth emphasizing, however, that the corresponding claim is far from trivial and that its truth needs to be vindicated. For a recent attempt to do so along different lines than the ones followed here, see Dobler 2020.

(as Bozickovic aims to) that a proper solution to the problem of cognitive dynamics, understood as the problem of how to account for the internal alignment of belief-states over time, requires that the belief thought-contents be the bearers of cognitive significance and, conversely, that the cognitive individuation of indexical thoughts at a time must be as coarse-grained as their possible retention at a later time require them to be, the prospects for a single solution to both issues seem good.

Bozickovic's proposal is aptly characterized as "broadly Fregean" to the extent that he takes thought-contents or components thereof (senses or modes of presentation) to be both the bearers of cognitive significance and that which explains the internal continuity required by belief-retention. In his view, the same indexical thought *qua* bearer of cognitive significance is expressed *or* re-expressed so long as the thinker unreflectively takes for granted that the individual thought about at  $t$  and  $t'$  (with  $t'$  possibly different and later than  $t$ ) is the same, that is, just in case the perceived individual (location, day) she receives information from is thought about under the same Fregean mode of presentation at  $t$  or during the  $t$ - $t'$  interval —as small as the interval may be. In Bozickovic's own terms:

(...) What makes an indexical thought the same is representing the individual thought about as the same by way of unreflectively taking it for granted that it is the same individual. If I take it for granted that two different parts of the same individual that I synchronically perceive belong to the same individual, I will think about it under the same mode of presentation which serves as a thought-constituent. And the same holds for diachronic thoughts and belief retention in general. (...) Conversely, if I

entertain doubts as to whether two different parts of the same individual that I synchronically perceive belong to the same individual, I will think about it under two different modes of presentation and hence entertain two different thoughts about it. The same applies to diachronic cases featuring individuals, days, and locations. (IPV, p. 7)

To see how the proposal works with respect to the problematic cases, consider the following examples of synchronic and diachronic deictic (*i.e.*, perception-based) thought and of temporal indexical thought, respectively expressed by utterances of (1), (2), and (3).

- (1) That<sub>1</sub> is not that<sub>2</sub>.
- (2) This body is illuminated by the Sun.
- (3) Today is December 24.

Suppose I utter (1) while pointing simultaneously to the stern and the bow of what I (mis)take as parts of different ships. Since I do not take them to be parts of the same ship, the ship thought about is thought about under different modes of presentations —difference captured by my assenting to “that<sub>1</sub> is F” while dissenting at the same time from “that<sub>2</sub> is F”, or the other way round. Now, if I unreflectively (mis)take them as parts of the same ship —a thought perhaps expressed by an utterance of “that<sub>1</sub> is that<sub>2</sub>”, rather than (1)—, the ships thought about are thought about under the same mode of presentation (Fregean sense). This means that what makes a synchronic deictic thought the same or different is, for Bozickovic, the unquestioning or questioning stance taken by the subject (thinker) towards the object

identity in relation to the parts pointed to.<sup>2</sup> And the same holds, in his view, for deictic thoughts expressed at different times such as the thought(s) expressed by successive utterances of (2) in the morning and in the evening. If the thinker for some reason doubts that the same celestial body is referred to by utterances of the same demonstrative-type in the morning and in the evening (that is, if she calls into question the identity of the object co-referred), then two deictic thoughts rather than one are expressed even though they are about a single object (*viz.*, Venus). But if she happens to be in no position to raise doubts about the object identity throughout the time interval, then the same deictic thought is, intuitively, re-expressed in the evening—the same object is thought about under the same coarse-grained mode of presentation from  $t$  through  $t'$ . Now suppose someone utters (3) again later, while mistakenly believing that midnight has passed and that, as a result, she no longer accepts it as true. Even if (3) *is* true, the mere fact that the subject does not take it to be so is enough for her to think of the day referred to under two different modes of presentation (Fregean senses) —thought-difference not captured, it is worth noting, at the level of *linguistic meaning*. Conversely, if she unreflectively takes the day referred to by “today” on both utterances of (3) to be the same, then the same mode of presentation is entertained throughout even though the day presented is *not* the same—in the reverse kind of case, one can imagine that the subject is unaware that midnight *has* passed and that in uttering (3) on  $d+1$  she denotes (rather

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<sup>2</sup> This stance is a matter of presuming rather than judging (or asserting) that the object is the same (or not). This is crucial to avoid embarking on an infinite regress when positing an explicit identity premise.

than refers to) December 25 while keeping on thinking of the intended referent that it is December 24, thereby retaining the original indexical belief (see IPV, 4.5).<sup>3</sup> On the view on offer, Rip's case while slightly more dramatic can be handled along just these lines: his failing to make the required linguistic adjustments on waking up twenty years later (because of his misperception of the time elapsed) does not prevent him from retaining the original indexical belief considering that the intended referent (*i.e.* his last waking day) is the sole causal source of his belief *and* represented (by him) as the same.

Also key to the view on offer is the transparency thesis: the thesis that two thought tokens cannot have the same content or different contents without the subject knowing *a priori* that they do (Boghossian 1994, p. 36; 2011, p. 457).<sup>4</sup> It

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<sup>3</sup> Bozickovic does not consider representing *d* as the same from *d* through *d+1* as a sufficient condition for belief retention. In addition to that, he holds that *d* must be (taken to be) *the sole causal source* of the belief. See IPV, pp. 70 & 86.

<sup>4</sup> It is unclear which version of the transparency thesis the author is committed to. Transparency of mental content as defined by Boghossian concerns the subject's epistemic access to it and involves the ascription of second-order beliefs about sameness and difference of content. Since, in Bozickovic's view, cognitive significance is a matter of first-order beliefs and semantic content is meant to capture the subject's cognitive perspective, we gather that *functional* transparency (the thesis that sameness or difference of content is determined by the thought-token's cognitive use) is the relevant version here. On the distinction between epistemic and functional transparency, see Wikforss (2015, p. 146-8). Note that, in contradistinction to Recanati (see 2012, p. 109), Bozickovic seems to be committed to *full* functional transparency, that is, to the view that if two thought tokens are *treated* (*e.g.* in reasoning) as representing different objects, they have different contents even



plays a key part throughout the book be it to provide a positive account in content terms of the rationality of certain inferences from the thinker's cognitive perspective (IPV, ch.3) or a positive argument to the effect that the internal continuity required for belief retention need be accounted in terms of sameness of thought-content (ch. 4-5). But since it is more of a requirement to handle the problematic cases than a datum in need of explanation, we can safely put it to a side and concentrate on the features of the proposal just highlighted to pinpoint difficulties faced by it.

### 3. Does (and Ought) Modified Frege-Inspired Criterion (To) Avoid All Proliferation of Senses?

In Bozickovic's view, the individuation of indexical thoughts, including those that are associated with (sub-)utterances of the same sentence type such as the ones under scrutiny, must obey a cognitive constraint usually couched in terms of an epistemic criterion of difference (and identity) for thoughts-contents derived from Frege.<sup>5</sup> On its standard formulation, the criterion reads as follows:

(CD) Two thoughts are different (have different contents) if it is at the same time

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though they refer to a single object (as in Frege cases) and that if they are treated as representing the same object, they have the same content although they refer to more than one object or fail to refer.

<sup>5</sup> An "Intuitive Criterion of Difference" is formulated by Evans (1982, p. 18-9) based on passages quoted from Frege's correspondence with Jourdain and Russell. In fact, it pervades Frege's writings, as Evans himself acknowledges. Note that a criterion of *identity* can be derived by *modus tollens* from it.

possible for a rational subject to take conflicting epistemic attitudes towards them. Hence, if the thought is the same (has the same content), the subject cannot at the same time rationally take conflicting epistemic attitudes towards it. (IPV, p. 90 ; see also p. 10-11, 43)

One thing worthy of note is the occurrence of modal notions. (CD) does not state that two thoughts (or thought-contents) are different if the rational subject simultaneously *takes* conflicting epistemic attitudes towards them (*viz.*, accepting one as true while simultaneously rejecting the other as false or remaining agnostic as to its truth-value), but that they are if it is *possible* for her, or for *someone* (Evans 1982, p. 19), to take such attitudes. Conversely, if the thought (or thought-content) is the same, she cannot (*i.e.*, it is *not possible* for her to) take at the same time attitudes such as those towards it. One can appreciate the significance of the use of modal notions if we consider the case of thoughts expressed by utterances of co-denoting definite descriptions such as (Frege's) "the morning star" and "the evening star" in sentences such as "the morning star is a body illuminated by the Sun" and "the evening star is a body illuminated by the Sun". Suppose the subject knows that the morning star is the evening star and, precisely for this, does not take conflicting attitudes towards the sentences. Even in this case, it would still be possible for her to take at the same time antagonistic epistemic attitudes towards them (*viz.*, to accept one while rejecting or abstaining herself from accepting the other) and, thereby, to express different thoughts. This is so, in Bozickovic's view, because the descriptions' *linguistic meanings* provide the rational subject with different ways of identifying the object — the number of ways being restricted here to two. The possibility of taking without irrationality conflicting attitudes towards the content, and thereby, to express

different thoughts (or thought-contents) is, so to speak, *semantically* grounded in the difference in *linguistic meanings* between the descriptions.

There is much to say about (CD). One is that it is meant (as the name suggests) as a *criterion*, that is, as a way to know or as defeasible (non-empirical) evidence in support of the claim that the thoughts expressed aren't the same. Bozickovic wants something stronger out of it, namely, a principle of individuation for thoughts (or thought-contents). Another is that it is meant to hold for epistemic attitudes taken *at a time* and isn't, for that reason, particularly helpful when it comes to individuating thoughts over time. Bozickovic is aware of this (IPV, p. 91, down), but seems willing to bite the bullet on the grounds that if a change of mind occurs between two co-referential demonstrative utterances, (CD) — or rather, some suitably modified version of it — can still serve to individuate them provided the change results from the subject's (mis-)taking herself to be perceiving two objects from one occasion to the next while receiving a unified stream of information from a single object (IPV, p. 92).<sup>6</sup> The real issue is, for Bozickovic, “that of [the] criterion's plausibility when it comes to individuating perception-based demonstrative thoughts” (p. 91). (CD), the worry is, becomes implausible when applied to instances of perception-based demonstrative thoughts because the sheer possibility that the subject introduce as many divisions as she wishes into the information on which her thought is based

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<sup>6</sup> This plainly falls short of providing an *independent* diachronic criterion of identity and difference of the kind required by a careful application of (CD) (see Evans 1981, p. 292-3; Dokic 1997, p. 4). The driving thought behind this seems to be that the need for an independent diachronic criterion can be overlooked if the same *kind* of unreflective stance taken towards the object's identity at a time can be taken by the rational subject over time.

misleadingly suggests that more senses are required to think about the object (the information derives from) than are indeed used. If this is what one is to understand by “proliferation of senses” — namely, not just the multiplication of senses beyond necessity, but the illusion, brought about by an uncritical application of the standard modal version of (CD), that more senses are required to think about the perceived object than those actually used — , then it seems that a non-modal version of (CD) would be enough to block it. This is, precisely, what Bozickovic argues (see IPV, p. 106-9, 111, 113).

Our point here is to show that promoting a non-modal reading of the criteria of difference and sameness for thoughts for the case of perception-based demonstrative thoughts is perhaps enough to dispel the illusion just mentioned, but not to avoid all proliferation of senses. In addition, we take “proliferation” to be just a bad name for a pervasive phenomenon better conceived of as the semantic underdetermination and variability (*i.e.* occasion-sensitivity) of thought-individuation.

To get a better grip on the implausibility diagnosis and the reformulation of (CD) put forward by Bozickovic, let us focus on an example (IPV, p. 92-3). Suppose a rational subject who perceives the parts of a ship correctly takes herself to be perceiving a single ship and, for that reason, assents to (either simultaneous or successive) utterances of “this ship is the Enterprise” made while pointing to the stern and the bow. Since it is *in principle possible* for her to make an identification error either by mistaking the parts for parts of different ships or the given ship for a replacement ship, it might be thought that she is thinking of it via different senses (in fact, *as many senses* as this possibility in principle allows) regardless of whether she actually takes herself, correctly or not, to be thinking about (parts of) the same ship. The illusion that more senses are needed than are actually used

by the thinker in this kind of case is brought about by an uncritical application of the standard modal reading of (CD) to the case of perception-based demonstrative thoughts. We saw that the applicability of (CD) to the case of co-denoting definite descriptions turned on the availability of different identifying conditions of the object (*i.e.* senses) supplied by a difference in *linguistic meanings* of the relevant expressions, even in cases in which the rational subject took the morning and the evening stars to be the same. But the case — so the argument runs — is unmatched by that of perception-based demonstrative thoughts expressed by different (sub-)utterances of “this (ship)” for the simple reason that the (complex) demonstrative has the same meaning-type on all of its utterances. So, if it is in principle possible for the rational subject to think of the (parts of) the ship via different senses for the reasons just outlined, this possibility is not a *semantically grounded* one. This turns the application of (CD) to the case under scrutiny implausible. More plausible seems to be the (outlined) view that since the rational subject in the case at hand is in no position to take conflicting epistemic attitudes towards utterances of the same indexical sentence, the sense (thought-content) is the same. Conversely, it seems more plausible to hold that if she finds herself in a position to take conflicting epistemic attitudes towards the utterances, the senses (thought-contents) associated with utterances of the same demonstrative-type are different. This is, precisely, what (CD’) — Bozickovic’s reformulation of (CD) — states.

(CD’) Two thoughts are different (have different contents) if a rational subject is at the same time in a position to take conflicting epistemic attitudes towards them. (IPV, p. 94)

We agree that a non-modal reading of (CD) such as the one provided by (CD’) and the corresponding non-modal

criterion of sameness is perhaps liable to dispel the illusion that more senses are required to handle the problematic cases than are actually used by the rational subject, but we doubt that all (intrapersonal) “proliferation of senses” is thereby blocked.<sup>7</sup> For, even if the rational subject unreflectively takes for granted, as in the example above, that the object is the same (or that the pointed parts belong to the same object), there is still room, depending on the circumstances, for her to take conflicting epistemic attitudes towards the utterances, and hence by (CD), to express more than one (coarse-grained) deictic sense.

Suppose our rational subject takes it for granted that *this ship* [pointing to the bow] is the same as *this ship* [pointing to the stern], namely as *the Enterprise*, yet takes it to be a discontinuing object. For instance, one can imagine that the Enterprise, for some reason, has been divided in two uneven halves and that the subject is aware of this. In this case, even though the halves may have been replaced, unbeknownst to her, by those of another ship, she certainly is in a position to assent to “this ship<sub>1</sub> [pointing to the bow] weighs  $x$  pounds” while dissenting from “this ship<sub>2</sub> [pointing to the stern] weighs  $x$  pounds”. Which understanding of the demonstrative utterances is more reasonable to have is an occasion-sensitive matter, that is, is ultimately up to the rational subject’s purposes and interests. If her plan is to travel to Europe, it seems more reasonable to understand them as expressing different thought-contents and hence to be unfit to the plan. But if the plan is to relocate the Enterprise to some other place (say, from New York to California), understanding the utterances as expressing the same thought-content about a single discontinuing ship

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<sup>7</sup> We leave aside here the interesting issue of the *interpersonal* proliferation of senses also tackled by Bozickovic in the book.

sounds more reasonable and plan-fitting, presumably because dividing the ship into uneven halves turns the relocation easier.

This example illustrates the view that there is no single set of features that sets apart on all occasions of use what counts and what does not count as entertaining the same thought-content or different ones. It also illustrates our main point, namely, that a non-modal interpretation of (CD) does not block all proliferation of senses. To say that the senses “proliferate” is to give a bad name to a pervasive phenomenon better thought of as the semantic underdetermination and variable availability of (deictic) senses. In some circumstances, and according to what would be considered more rational to understand in such circumstances, just one thought (or thought-content) is involved; in other circumstances, and according to what would be considered more rational to understand in such (different) circumstances, two are involved although in both cases the expression’s standing meaning is the same and the subject takes the object to be the same. This means that one has no *principled* reason to favor one thought-content specification over the other; for instance, one that maps a plurality of thought-contents onto utterances of the same indexical sentence-type over one that maps a single thought-content, or the other way round. The main lesson to take from Travis-like cases such as the one sketched above is that the individuation of thoughts is fundamentally undetermined. Being undetermined, the individuation of (demonstrative) thoughts is semantically and psychologically underdetermined, that is, it fails to be specified by a rule that associates thoughts to sentences-in-context or by the mental stance taken by the rational subject or by some subpersonal cognitive mechanism.

This does *not* mean, however, that since the linguistic facts (*viz.*, the fact that “this ship” is used twice to make

recognizable what thought, of the demonstrative type, is expressed) *and* the expression's standing meaning leave open in the cases at hand how one is to count the thought-contents (*i.e.*, as one or two), we are completely free to associate *any* number of thought-contents we wish to utterances of the same indexical sentence-type. Here we make our own Travis's words in a similar context in which ways of counting demonstrative thoughts are considered.

The conclusion to draw from this (...) is not that there is some fixed (and very large) panoply of thoughts of Pia that she is stunning, or of Venus that it is. Exactly not. We must recall that the task of counting thoughts suffers pressure from two opposing forces: publicity, shareability, on the one side, pushes against the needs of proof, on the other. If pressures from the one side (especially that of proof) were allowed to reign unfettered by pressures from the other, the outcome would be, either inability tout court to serve the needs of proof, or an *intolerable proliferation of thoughts* [our emphasis] of any given thing that it was any given way (so that we could never get started thinking at all). Just as not everything can require proof at once, so not every possibility for distinguishing one thought from another can be exploited at once. Archimedean points are always in demand. But to say this is not to endorse the view that a thought is identified purely and solely by the objects, and ways for them to be that it is of. (2017, p. 374)

If “to proliferate” means to let the senses (or thought-contents) multiply freely (*i.e.* without any kind of constraint



or conceptual pressure), then surely it is something that is desirable to avoid even on the present view. But if the price to pay to block the proliferation is to deny, in the cases under scrutiny, that there is more than one way to count the demonstrative thought expressed and that what is counted as one *or* two thoughts on a given occasion need not be understood in the same way from one occasion to the next, then surely this is a price we are not ready to pay even acknowledging that (CD) and its sameness counterpart are liable to dispel the modal illusion.

#### 4. The Need for Adequate Ideas

Another feature of Bozickovic's proposal concerns (ii), that is, what it takes to keep on believing that, say, *today is a fine day* once the original context of utterance is left behind. Frege's suggestion is that appropriate linguistic adjustments need be made on the new day of utterance: not only need "today" be replaced by another indexical (rather than by *any* coreferential expression), but by an indexical, to use Evans's (1981) terminology, of the same "family" (*i.e.* temporal, as opposed to, say, spatial). Following this (fairly narrow) construal of "the problem of cognitive dynamics", Kaplan argues, using his own framework, that what need be adjusted (*i.e.* changed in order to retain the original indexical belief) is the indexical expression itself *along with its character* (roughly, its *linguistic meaning*) since the bearer of cognitive value is, for Kaplan, the character under which the belief is held.<sup>8</sup> Now, the case of a person such as Rip Van Winkle who fails to

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<sup>8</sup> "It is tempting to say that cognitive dynamics is concerned not with retention and change in what is believed, but with retention and change in the characters under which our beliefs are held. I think that this is basically correct." (Kaplan 1989a, p. 537, fn64).

make the standard appropriate (Fregean or Kaplanian) adjustments on the new day of utterance because of her misperception of the time elapsed, challenges both views. For, if making the appropriate adjustments is taken to be a necessary condition for indexical-belief retention, Rip clearly fails by these standards to retain the original belief (expressed on his last waking day by an utterance of “today is a fine day”) in uttering the day he wakes up “yesterday was a fine day”, since “yesterday” refers, in virtue of its linguistic meaning, to the day before he woke up, not to its *intended* referent (Rip’s last waking day). And “this seems”, as Kaplan (1989a, p. 538) points out, “strange”.<sup>9</sup> The feeling of strangeness can be partly dispelled if the standard appropriate adjustments are no longer held to be a necessary condition for belief retention. This is Bozickovic’s next move (see IPV, sec. 4.5; Bozickovic 2015, sec.1). He denies that Rip failed *by all means* to retain the original indexical belief (hence, that it “seems strange” to assert that he did) because, in contrast to Kaplan and also, presumably, Frege, he does not embrace (P), that is, the assumption that

(P) one’s sincere acceptance of an utterance of an appropriate temporal indexical commits one to thinking of the day it designates in virtue of

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<sup>9</sup> Intuitions (as is more often the case than usually assumed in philosophy) may diverge on this point. Evans (1981, p. 295, fn11), for instance, “sees no (...) strangeness” here and takes it that Rip failed to retain the original indexical belief not because he failed to make the standard appropriate adjustments, but because of a tracking (*i.e.* internal continuity) failure. Our aim here is not to adjudicate the debate at the level of intuitions, but to show that, even granting Kaplan’s point, there still is an issue as to whether keeping track (as broadly as it may be conceived) is *enough* for same-thinking over time.

its linguistic meaning, whichever day it is that one intends to think about. (IPV, p. 68; 2015, p. 479).

Indeed, if Rip's sincere acceptance of an utterance of "yesterday was a fine day" on the day he wakes up — in Irving's (1991) short story, twenty years after drinking liquor with Dutch countrymates on his last waking day — does not commit him, as Bozickovic has it, to think of the intended referent the way its linguistic meaning "wants" him to, then failing to make the standard semantic adjustments need not prevent him from retaining the original indexical belief. Agreed. More contentious, however, is Bozickovic's positive account of same-thinking in this kind of case. As seen earlier (see sec. 2 above), he holds that the original indexical belief is retained provided there is a sense in which Rip can be said to have kept tracked of *d* through the sleeping interval, namely not in the sense of having maintained a continuous experiential link with *d* — keeping track of a day "cannot by its nature involve this kind of link once the day has passed" (IPV, p. 72) —, but in the following sense: *d* is the sole causal source of Rip's belief and he is representing *d* as the same day as the one his original indexical belief was about (IPV, p. 68; 2015, p. 480). And the latter conditions hold, the idea is, for all instances of belief retention, even when the subject fails, like Rip, to make the standard appropriate adjustments. When these conditions are met, retaining the original belief amounts to thinking a single thought "of a broadly Fregean kind" through context changes (IPV, p. 70; 2015, p. 480). Given that Bozickovic does not mention any further condition to be met, we can safely assume that this is, in his view, all that is required to count as thinking the same temporal indexical thought over time. In what follows, we raise doubts about the (joint) sufficiency of the conditions

and, hence, the suitability of Bozickovic's proposal. Our key concept is that of *adequate Ideas*. In the case of temporal and spatial indexicals, it has to do with the subject's ability, when thinking spatial or temporal indexical thoughts, to find her way in objective space or — thinking of Rip's case — objective time.

The point about the unsuitability of the proposal is more easily made with respect to perception-based demonstrative thoughts.<sup>10</sup> Suppose one holds that it is *enough* to entertain the same perception-based demonstrative thought in space and over time not only that the thinker be informationally (*i.e.* causally) linked to the (salient) object of her thought — so that the thought-content entertained on various occasions can be assessed as true or false on the basis of that link —, but that she be able to keep track of it in Evans's (and Campbell's) fairly narrow sense. This requires in turn of the subject that she both be able to maintain a continuing information-link with it and disposed to selectively respond to changes in information she receives from it.<sup>11</sup> Whoever holds this is faced with the task of accounting for cases in which both conditions are (perhaps) met, yet no perception-based demonstrative thought is had because the subject fails to have an adequate Idea of the object of her thought. In the case of demonstrative thoughts about spatial-temporal particulars, having such an Idea partly involves either being able to identify it as the occupant of such and such (spatial) position at a time and, presumably also, over time, or, as Evans puts it, knowing the truth of an identity proposition

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<sup>10</sup> In what follows, for ease of exposition, we mainly draw on Evans (1982, notably ch. 6).

<sup>11</sup> Only then can the subject have an “evolving conception” of the object of the kind required to identify it demonstratively over time, as Evans (1982, p. 146) makes clear.

of the form  $\ulcorner$  this (or that) F =  $\delta \urcorner$ , where the demonstrative is used of an object seen (or heard) and the greek letter stands for an identification of the kind just pointed. It seems reasonable to hold that these are *further* conditions to be met (in addition to that of being informationally related to the object) because one may find oneself in *no* position to locate the object of one's thought on the basis of that relation. This means that the information-link *per se* does not provide the subject with such abilities and that the possibility of demonstrative thoughts is not guaranteed by the "sheer existence" of such a link (Evans 1982, p. 148-9), as continuous as the link may be.

The two conditions pointed above (following Evans, 1982, p. 149) as distinct conditions on successfully thinking demonstrative thoughts correspond to different kinds of cases: standard, as opposed to non-standard cases of demonstrative identification. And what it means for the Idea of the object involved in the thinking to be *adequate* varies, of course, with the case. In cases involving circuitous information-links and time lags (*i.e.* non-standard ones), having an adequate Idea means having a *concept* of the informational relation entertained by the object seen (or heard) with its causal source, as (spatially or temporally) distant as the latter may be from the subject. Evans (1982, p. 149-50) gives as an example people reported to be "mystified" by wireless transmission devices (such as radio or television) while hearing (or watching) a broadcast for the first time. Even after being told that the man heard (or watched) was in a very distant place from them, they could not understand the idea, convinced that the man was inside the transmission device. In such a case, it seems reasonable to claim that in uttering "this man is F" no (proper) demonstrative thought is entertained, deprived as those people are of a concept of the informational relation between the object heard (or seen) and its (remote) causal

source; deprived, that is, of an *adequate Idea* of the object of their thought. Arguably, the case can be rehearsed for information-based thoughts involving time lags such as perceptual demonstrative thoughts entertained about stars.<sup>12</sup>

Having a *concept* of the information relation is required only when the subject is in no immediate position to locate the object of her thought on the basis of the information received from it. Since, in the standard cases of demonstrative identification, the subject *is* in such a position, having an adequate Idea of the object means something else. In a nutshell, it means being able both to specify the object's position in egocentric space (*i.e.* the space that has the subject as point of origin) on the sole basis of the perceptual information received from it (*i.e.* regardless of the possession by the subject of the corresponding egocentric *concept*) and to bring the positions thus specified into coincidence with those of objective space (*i.e.* space, conceived of as a network of interrelated places simultaneously given to the subject). Only then can the subject have an adequate Idea of the object of her thought as occupant of a position in *public* space (Evans, 1982, p. 162-3). So, suppose the perceptual information received from the object is not specifiable through egocentric spatial vocabulary (without the use of

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<sup>12</sup> It might be objected that it is perfectly possible, in uttering “*that star is the brightest in the Earth’s night sky*”, to successfully think a demonstrative thought about a particular star (say, Sirius) without having the faintest idea of the informational relation holding between the perceived star and its causal source. It is worth remembering, however, that the intended referent here is, ultimately, not the star *seen* in the Earth’s night sky, but the star as occupant of a position in objective space, causally responsible for the reception of the information by the subject. This turns demonstrative identification less cheap than it is sometimes taken to be.

egocentric spatial *concepts*) or is, yet cannot be made to coincide (for some reason) with positions on the subject's cognitive map of a region of space, either way it follows that the subject has no adequate Idea of the object, hence is not, appearances notwithstanding, successful in her attempt to think a perception-based demonstrative thought. In what follows, we shall argue that this holds *mutatis mutandis* for temporal indexical thoughts and that Bozickovic's failure to appreciate this point raises (further) doubts about the suitability of his proposal.

What seems to stand in the way of straightforwardly applying the conditions just set out to the temporal case is that we cannot take for granted that some analogue to the egocentric-objective distinction is available in the latter case.<sup>13</sup> Still, if there are enough grounds (as we believe there are) to keep the analogy in place, applying the conditions to temporal indexical thoughts is perhaps not as illegitimate a move as it may seem. In the same way that we speak of perceptual demonstrative terms specifying the egocentric spatial information encoded by perception, indexicals such as "today" or "yesterday" are commonly said to reflect the subject's position in time *vis-à-vis* the events in such a way that the information thus specified is immediately relevant to her behavior, just like in the spatial case (Le Poidevin, 1999, p. 26). Anyway, it is not with respect to this disjunct that cases such as Rip's threaten not to fit the bill. Consider the other condition for being credited with an adequate Idea of the object in the demonstrative case, namely, bringing the positions on the cognitive map into some kind of congruence with the egocentric spatial information encoded

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<sup>13</sup> Le Poidevin (1999) cautiously argues in favor of its availability while emphasizing significant disanalogies with the spatial case (see in particular, p. 26-7).

by perception. Luckily, an analog procedure is available in the case of time thanks to which we manage to orient (and keep on orienting) ourselves; precisely, by bringing an objective (allocentric) temporal frame of reference into coincidence with a temporal egocentric frame — of the kind used to specify the subject's position in time *vis-à-vis* the events. It is worth quoting Campbell at length here:

Can we make sense of a similar procedure in the case of time? Can we make sense of the idea of there being temporal frames of reference with which we orient ourselves? We can. Take, for example, the question so often hotly disputed by clergymen: 'Which day of the week is it?' (...) Here the problem is to orient oneself with respect to another frame of reference, so that one can say, 'Yesterday was Tuesday, so tomorrow is Thursday, and in four days it will be the Sabbath.' One uses such terms as 'today' and 'tomorrow' in orienting oneself in the temporal frame of reference just as in the case of spatial orientation one uses 'here' and 'over here' in orienting oneself using a map. There are also parallels in the strategies one uses to keep oneself oriented. For example, one may keep track of landmark days, such as the Sabbath, or use methods that enable one to tell directly whether this is Wednesday. (1994, p. 37-8).

Back to Rip. When he wakes up twenty years after falling asleep, his intention in uttering "yesterday was a fine day" — in conformity with his (mis-)perception of the time elapsed —, is to refer to the day he remembers as his last waking day, namely *d* — also referred to by "today" on *d*. This, however,



can hardly count as successfully thinking on  $d+20$  years about  $d$  since, as the story is usually told, there is not even an *attempt* on Rip's part to bring the temporal information specified egocentrically into coincidence with a position specified via another, objective or allocentric, frame of reference. Having no adequate Idea of the target of his thought, Rip is presumably deprived of the capacity to draw the inferences human beings usually draw to find their way through time and adjust their behavior accordingly, namely inferences involving particular times referred to objectively (regardless of any temporal perspective) and thought of by the subject as causally affecting events occurring at another particular time (see Campbell 1994, ch. 2). The inadequacy of his conception of the intended referent is liable to emerge when facing the behavioral consequences of the belief expressed by an utterance of "yesterday was a fine day" in relation to other beliefs and desires of his. Suppose that believing that "yesterday" (*i.e.* his last waking day) was a fine day and having planned with friends to picnic outdoor just in case the day kept on being fine, Rip sets out to go picnicking the day he wakes up, convinced that it is the day following his last waking day. He might get crushingly disappointed on finding out that more time has elapsed than his perception of it allowed him to size up. And only can he find this out as a result of an attempt to bring his egocentric temporal perspective into coincidence with a public temporal frame of reference.

Keeping track of the days in Bozickovic's broader sense (than Evans's and Campbell's) *may* allow Rip to retain on  $d+20$  years the original indexical belief expressed on  $d$  by "today", despite Rip's failure to make the standard appropriate linguistic/semantic adjustments. But this certainly does *not* amount (for Rip) to thinking the same *thought* on  $d$  and  $d+20$  years, especially if the thought expressed is to be public and shareable, as it is required of

Fregean thoughts. For the thought to own these properties, the subject must have an adequate conception of its object, which is obviously not the case, as the story is usually told by philosophers, with Rip.

## 5. Conclusion

To sum up, we have been arguing that, despite its merits and elegance, Bozickovic's "broadly Fregean" proposal to deal with the issues of cognitive significance and cognitive dynamics in IPV falls short of accounting for the problematic cases in their full complexity. For one thing, a non-modal construal of (CD) along the lines of (CD') — and its sameness counterpart — is perhaps enough to block some, but not *all* proliferation of senses. It blocks the proliferation brought about by an uncritical application of (CD) to the case of perception-based demonstrative thoughts. Yet, it does not avoid the "proliferation" that emerges from the occasion-sensitivity of the individuation of (demonstrative) thoughts. Nor ought it to, unless senses are allowed to multiply freely as a result of releasing all kinds of conceptual pressure upon them. For another, conceptual pressures that stem from the fact that spatial and temporal thoughts are *situated* thoughts (*i.e.* thoughts only available to whoever occupy a certain position in space and time) have been considered in the remainder of the notice and led us to emphasize another shortcoming of the view on offer. In a nutshell, it can hardly be taken to deal successfully with the issue of cognitive dynamics in the "broadly Fregean" terms in which it purports to, because it fails to appreciate the need for the subject to have an adequate conception of the object of her thought when the thought serves, among other things, to orient oneself in space *and* time. Our point is that Rip's predicament illustrates just *that*.

One might wonder whether the points made in sections 3 and 4 are compatible with each other. We believe there need not be any incompatibility between them. In section 3, following Travis, we claimed not only that counting thoughts was an occasion-sensitive matter and that no occasion-transcendent counting principle was, therefore, available, but that what counted *on a given occasion* as one or two cognitive contents needed not be understood in the same way from one occasion to the next. This seems to clash with our attempt in section 4 to articulate general (*i.e.* occasion-transcendent) conditions on situated temporal thinking. But we can take this to mean, instead, that two requirements (call them, respectively, *the cognitive rationality* and *the objectivity requirements*) need be met at the same time, no matter *how* they are met. It is with respect to these requirements that principles and methods are, perhaps, needed to individuate Fregean thoughts (or thought-contents) and a solution to the problems of cognitive significance and cognitive dynamics is to be sought for. Options abound here. One may think, like Travis, that there is no principled way to semantically and psychologically individuate cognitive contents and that no (*a priori* or empirical) method is available to enable one to do so. Or one may think, like Strawson and Evans, that it is possible to describe the features of our conceptual scheme and articulate “from the armchair” conditions of objective representation (and cognitive rationality) in thought. Or else, one may think, like Burge (2010), that no “armchair constitutive requirements” of objectivity (and rationality) allegedly represented by the individual himself are needed; only requirements set by our most successful scientific explanations of the phenomena, notably by the science of perception. In sections 3 and 4, we resorted to approaches of the first and the second kind while remaining neutral about which was to be considered the right one. Should we pick one, nothing precludes, however, that results from

other kinds of approach (notably, the third listed above) be brought to bear on the issues tackled here, provided the requirements are met.

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