# ARE FREGE'S THOUGHTS FREGEAN PROPOSITIONS?

**Summary**

Some of the most pressing issues in contemporary semantics concern the nature of propositions. One of them is whether propositions are structured entities that should be individuated in terms of their components or, contrarily, they lack structure and should instead be individuated in terms of the inferential relations they have with each other. Another point of contention is whether propositions should always contain all the information that is needed to deem them true or false—whether they should always be Fregean propositions. The debate as to how much information propositions should contain might seem to presuppose a certain position in the debate about their structured character. However, it is the first aim of this paper to argue that the two debates are orthogonal. Moreover, we will use Frege's thoughts as an example of what we would contemporarily call 'propositions' that, though trivially Fregean, lack structure. Since it is not uncontroversial that Frege's thoughts are unstructured, it is the second aim of this paper to show that it follows from Frege's writings that they are.

**Keywords:** Frege, thought, Fregean proposition, relativized proposition, unstructured proposition.

## 1 Introduction

Some of the most pressing issues in contemporary semantics concern the nature of propositions. One of them is whether propositions are structured entities that should be individuated in terms of their components or, contrarily, they lack structure and should instead be individuated in terms of the inferential relations they have with each other (see Brandom 1994, 2001). Another point of contention is whether propositions should always contain all the information that is needed to deem them true or false. If they do, then they will be Fregean propositions;[1] if they do not, then at least some of them will be said to be relativized, i.e. their truth-value will be relative to certain parameters (see Prior 1959, 17; Lewis 1979, 517-519; Perry 1986, 214-215; Kaplan 1977/1989, 503; Kölbel 2004*a*, 70-72, 2004*b*, 305-308; Lasersohn 2005, 662-664; Recanati 2007, 35; Richard 2008, 89; MacFarlane 2014, 49-52).

The debate as to how much information propositions should contain might seem to presuppose a certain position in the debate about their structured character: since we are discussing whether propositions should contain this or that thing, it might be natural to assume that both parties take propositions to be made up out of smaller parts put together in a certain way and thus be structured. However, it is the first aim of this paper to argue that the two debates are orthogonal, since it is possible to define what it is for a proposition to contain a certain amount of information without accepting that it contains this or that component. In fact, the four possibilities that result from combining the two debates have all been historically instantiated.

Moreover, we will use Frege's thoughts as an example of what we would contemporarily call 'propositions' that, though trivially Fregean, lack structure. The unstructured character of the thought, in fact, we take to be one of Frege's major contributions to the philosophy of language, and his insistence on the distinction between a thought, which is unstructured, and the expression of that thought, which exhibits linguistic structure, shows that he himself gave great importance to that contribution. This contrast is obscured by the traditional translation of *Satz* as 'proposition', and not keeping it in mind is a major obstacle to acknowledging that structure is not needed to speak of relativization. Showing that it follows from Frege's

[1] This sense of 'Fregean proposition' is not to be confused with another one which is, in fact, the main use in the literature. Many authors (for instance, Branquinho 2000; Ruffino 2007; Sacchi 2006) call propositions composed of modes of presentation of individuals and properties 'Fregean propositions' (as opposed to so-called 'Russellian propositions', composed of individuals and properties). We will ignore this use in this paper.

writings that his thoughts are unstructured is in fact the second aim of this paper. If this is so, the thesis that propositions have everything they need to possess a truth-value, an essential Fregean insight, doesn't imply that Fregean propositions have a fixed structure. To say that a conception of propositions according to which they have all *components* needed for deeming them true or false is in the spirit of Frege's thoughts does not do justice to Frege's conception of thoughts. If we do not separate the debate on relativization from the debate on structure, then we might end up with the seemingly paradoxical claim that Frege's thoughts are not Fregean propositions.

The structure of this paper is as follows. In Section 2, we define Fregean propositions by contrasting them with relativized propositions. To explain the distinction, we first introduce the debate between temporalists and eternalists, where temporalists hold that at least sometimes we express a particular kind of relativized propositions—temporal propositions, i.e. propositions that are true or false only with respect to time (see Richard 1981). Once this debate has been introduced, we will allow propositions to change their truth-value with respect to parameters other than time to obtain relativized propositions and, with them, Fregean propositions as those that are not relativized. We also explore what status Fregean propositions have in two different theories: nonindexical contextualism and relativism.

To show that relativization is independent from structure, we devote the following sections to offering examples of how to construct Fregean and relativized propositions without components. Our main example of Fregean unstructured propositions are Frege's thoughts. In Section 3, we collect some of the passages in which Frege holds that thoughts have to be complete to count as such. In Section 4, we use textual evidence that points in the direction that Frege's thoughts lack structure. What that evidence tells us is that Frege individuates thoughts in terms of what follows from them, and not in terms of which components they have. In Section 5, we show that the two features of Frege's thoughts pointed out in the previous two sections are compatible by arguing that talking about the information that a proposition contains does not require that that proposition has components. In an unstructured approach, to ask whether a proposition contains a given parameter will just amount to asking whether the proposition is not neutral with respect to that parameter. Thus, we can characterize Frege's thoughts without requiring them to be structured. We use Stalnaker's propositions too as an example of propositions that contain all the information needed to deem them true or false but have no components.

In Section 6, we use Lewis' (1980) conception of a proposition to show that unstructured propositions can be relativized as well, which completes our argument that structure and relativization are orthogonal issues. In Section 7, finally, we answer to some objections against our interpretation of Frege. The objections can generally be said to concern the fact that Frege actually talks about components sometimes. Our point is that, when he does, he does so in a metaphorical way, as he himself acknowledges.

## 2 Fregean and Relativized Propositions

The debate about whether propositions should be Fregean or relativized is better understood if we start with the debate between temporalism and eternalism. To establish the contrast between these two positions, let us consider sentence (1) first:

(1) Donald Trump is not the president of the USA.

It is natural to say that (1) expressed something true in 2009, while it expresses something false nowadays. However, we can give two different explanations of why this happens: the

*temporalist* and the *eternalist* one. The temporalist thinks that (1) expresses a proposition *p* that was true in 2009 and is false nowadays. The eternalist, on the other hand, thinks that (1) expressed a proposition in 2009 and a different one nowadays, the first being true, the second false. For the temporalist, (1) expresses a proposition that can change its truth-value over time. These propositions are called 'temporal'. For the eternalist, however, the proposition expressed by (1) at each time is true or false once and forever. We will say that, for the eternalist, (1) expresses an eternal proposition.

Hence, for the eternalist, what proposition is expressed will change depending on the time at which (1) is uttered. In this sense, the eternalist thinks that the proposition expressed by (1) at *t* is the same that would have been expressed at that very time by the sentence

(2) Donald Trump is not the president of the USA now.

We could even say, if we are eternalists, that (1) is the same sentence as (2), albeit in elliptical form (see Richard 1981, 2).

Let us call the speaker who utters (1) in 2009 and in 2019 *S*. According to the eternalist, the proposition that *S* expresses in 2009 is the same that she would have expressed by uttering (2) in 2009, or equivalently, by uttering

(3) Donald Trump is not the president of the USA in 2009.

This proposition is always true: it is true in 2019 too that Donald Trump was not the president of the USA in 2009. For that reason (because it expresses an eternal proposition), we say that (3) is an eternal sentence. However, according to the eternalist, when *S* utters (1) in 2019, she is also expressing the same proposition that she would express if she uttered (2) in 2019, but this time the proposition is not the same as the one that would be expressed by uttering (3), but the one that would be expressed by

(4) Donald Trump is not the president of the USA in 2019.

Now we have a proposition that is always false: it was false already in 2009 that Donald Trump would not be the president of the USA in 2019. (This is precisely one of the points that motivate the introduction of temporal propositions, for it might seem counterintuitive to say that it was already determined in 2009 whether Donald Trump would or would not be the president of the USA ten years later.) (4) is an eternal sentence too, for the truth-value of the proposition it expresses is the same independently of the time with respect to which we assess it. Hence, for the eternalist, (1) expresses a true proposition in 2009, whereas it expresses a false proposition in 2019. For the temporalist, on the other hand, (1) expresses the same proposition both in 2009 and in 2019, but that proposition was true in 2009 and is false in 2019. This is how the temporalist and the eternalist explain that (1) expresses something true in 2009 and something false in 2019.

According to what has been said up to now, we can propose the following definitions:

**Temporal proposition:** A proposition is a temporal proposition iff its truth-value changes with respect to time.

**Eternal proposition:** A proposition is an eternal proposition iff its truth-value stays constant with respect to time.

Sentences that express eternal propositions, as we have said, are eternal sentences. If we also say that sentences that express temporal propositions are temporal sentences, then we can say that the supporter of eternal propositions thinks that (1) is an eternal sentence, while the

supporter of temporal propositions holds that it is temporal, for it expresses a proposition whose truth-value is relative to time.

A well-known temporalist argument (Kaplan 1977/1989, 502-503) goes like this: temporal operators tell us at what times the proposition under their scope needs to be true in order for the whole sentence to be true. But, if the time of utterance were part of the proposition expressed, then it would make no sense to ask whether that very same proposition would have been true at another time. This would make the temporal operators that are in fact part of our language redundant. However, note that this can be argued about any parameter, not only time. This is the motivation that lies at the bottom of the relativist proposal: why should the truth-value of our propositions be relative only to time? Why not suppose that there are other parameters with respect to which a proposition can be neutral? After all, there does not seem to be anything about time that makes it special compared to other parameters, for there are other operators in our language besides temporal ones. Let us consider, for instance,

(5) It is raining.

For a temporalist, (5) expresses a single proposition *p* that is true with respect to any *t* at which it is raining and false with respect to any *t* at which it is not. But let us suppose that it is raining now and I utter (5). We then evaluate *p* with respect to the time of my utterance. Can we say that *p* is true without taking anything else into account? Well, *p* can be false even with respect to the time of my utterance, because, in the same way as it is raining in Granada (where I am), it is also true that the sky is clear in other cities. So, there is at least one more parameter with respect to which we have to evaluate *p*'s truth: place (let us call it '*s*').

We have then that *p* is true for *t* = 18 February 2019 and *s* = Granada, false for *t* = 17 February 2019 and *s* = Granada, and false for *t* = 18 February 2019 and *s* = Seville. *p* is a proposition whose truth-value depends on time and place, and, as such, a relativized proposition. And we can go further; for instance, *p* is true in the actual world (let us call it '@'), but it would not be so in a world in which it was not raining at this moment and this city (let us call it '$w^*$'). Let *w* be the parameter corresponding to the possible world with respect to which we assess *p*. Then, *p* is true for *t* = 18 February 2019, *s* = Granada and *w* = @ and false for *t* = 18 February 2019, *s* = Granada and *w* = $w^*$.

The series of parameters with respect to which relativized propositions are true or false are the *circumstances of evaluation*. Circumstances of evaluation are the (actual or counterfactual) situations with respect to which it is possible to ask about the extension of a certain expression (Kaplan 1977/1989, 502). Hence, for instance, we cannot abstractly wonder what the extension of the predicate 'dinosaur' is. This is so because the extension of a predicate is the set of objects to which the predicate applies. So, right now, the extension of 'dinosaur' is the empty set, while it was not 70 million years ago. If we consider the extension of a sentence to be its truth-value, then we can talk of circumstances of evaluation of sentences. On the other hand, it seems natural to say that sentences are true or false by virtue of their expressing propositions. Following this intuition, we can also talk of circumstances of evaluation of propositions (MacFarlane 2014, 76). So, finally, the circumstances of evaluation of a proposition are the situations with respect to which it is possible to ask whether it is true or false. Circumstances of evaluation consist of parameters. Some typical parameters (which we have already mentioned) are time, place and possible world, but many others can be introduced, such as epistemic standards, taste standards, etc.

For the relativist to be able to say that some proposition is true with respect to a certain parameter and false with respect to another, she has to accept that both the proposition and

the circumstances of evaluation are needed to determine a truth-value. This feature is called 'duality' by Recanati (2007, 33). If the relativist position is the one which accepts duality, we have the following definition:

**Relativized proposition:** A proposition is a relativized proposition iff it does not contain all the information that is needed to determine its truth-value.

A supporter of Fregean propositions, however, will hold that no proposition can change its truth-value as we switch the circumstances of evaluation. Using the terminology we have just introduced, she rejects duality: for her it is enough to have a proposition to determine a truth-value. So:

**Fregean proposition:** A proposition is a Fregean proposition iff it contains all the information that is needed to determine its truth-value.

Along with duality, Recanati holds that the determinants of truth-value distribute over content and circumstances of evaluation: if something contributes to determining a truth-value, then it is part either of the proposition or of the circumstances of evaluation. Recanati calls this feature 'distribution' (Recanati 2007, 34). The supporter of relativized propositions accepts distribution. The supporter of Fregean propositions, however, cannot accept it. This is so because, once we have (by rejecting duality) rejected that the proposition and the circumstances of evaluation are determinants of truth-value, it makes no sense to require that they are the only determinants of truth-value.

## 3 Frege and the Completeness of the Thought

In the previous section, we have introduced the debate about whether propositions should be taken to be Fregean or relativized. In the following sections, we show that the positions in this debate can be characterized without taking propositions to be structured. To do so, we offer examples of both: authors who defend unstructured, complete propositions, such as Frege and Stalnaker, and authors who defend unstructured, relativized propositions, such as Lewis. In this section, we focus on the first half of the claim that Frege's thoughts are unstructured, Fregean propositions.

Propositions that have their truth-value in an absolute way have at several points in the literature been associated with Frege's conception of a thought:

> From a modern, Fregean point of view, (…) (a) complete thought content can only be true or false (…) (Recanati 2007, 43)
>
> On the orthodox Fregean model, propositions (…) are absolute: If a proposition is true (false), it is true (false) no matter who asserts and who assesses it when and where. (Einhauser 2012, 590)[2]

This association is only natural, for, at some points, Frege explicitly holds that thoughts must be true or false *simpliciter*, and he sometimes puts this in terms of their components. In his annotations to Jourdain's 1912 article 'The Development of the Theories of Mathematical Logic and the Principles of Mathematics', for instance, he says:

> A thought is not true at one time and false at another, but is either true or false—*tertium non datur*. The false appearance that a thought can be true at one time

[2] If a proposition could be true or false depending on the circumstances of its assessor, it would not be true or false *simpliciter*. It would thus be something other than true or false, a possibility that Recanati sees the Fregean point of view as rejecting. Hence, Recanati's and Einhauser's quotes point to the same intuition.

> and false at another arises from an incomplete expression. A complete sentence[3] (*Satz*), or expression of a thought (*Gedankenausdruck*), must also contain the time-datum. If we say: 'The Elbe has risen one metre above the zero of the gauge at Magdeburg', the time belongs to the thought-content of the proposition if what is said is the case. But the truth is timeless. (Frege 1912/1967, 338-339)

In this passage, Frege says that a thought cannot be true or false relative to a parameter (in this case, time), but has to be true or false *simpliciter*. In particular, Frege seems to claim that the thought has to contain a time, by which he cannot mean an instant in the physical sense, for it is not physical objects that propositions are made of for Frege, if they are made of anything at all for him. Contrarily, what the thought should contain is the *sense* of the time-datum that refers to the time at issue.[4] This is so because, for Frege, the notion of an incomplete thought makes no sense: something has to be able to be presented as true or false to count as a thought.

Another passage in which Frege requires thoughts to be true or false *simpliciter*, although with no reference to their components, can be found in 'Logic', written between 1879 and 1891:

> If someone wished to cite, say, 'The total number of inhabitants of the German Empire is 52 000 000', as a counter-example to the timelessness of thoughts, I should reply: This sentence is not a complete expression of a thought at all, since it lacks a time-determination. If we add such a determination, for example, 'at noon on 1 January 1897 by central European time', then the thought is either true, in which case it is always, or better, timelessly, true, or it is false and in that case it is false without qualification. (Frege 1879-91/1979, 135)

In other words, for a sentence to express a thought, that thought has to be true or false *simpliciter*; its truth-value cannot depend on any parameter (in this case, time). Both this passage and the previous one also insist that, for the thought expressed to contain a sense for a time *t*, an expression with that sense (a time-datum, in the first quote; a time-determination, in the second) has to explicitly appear in the sentence. However, this thesis is independent from the one that requires thoughts to be true or false *simpliciter*.

A final passage in which Frege requires thoughts to be true or false *simpliciter* can be found in the first part of his 'Logical Investigations', called 'Thoughts' and written between 1918 and 1919:

> Now is a thought changeable or is it timeless? The thought we express by the Pythagorean theorem is surely timeless, eternal, unvarying. But are there not thoughts which are true today but false in six months' time? The thought, for example, that the tree there is covered with green leaves, will surely be false in six months' time. No, for it is not the same thought at all. The words 'This tree is covered with green leaves' are not sufficient by themselves to constitute the expression of thought, for the time of utterance is involved as well. Without the

[3] The translation originally says 'proposition', but we have replaced it with 'sentence' to avoid confusion. It is in fact unfortunate that the term used for something with a linguistic structure, such as a sentence, is in some many translations the same we standardly use today for what Frege called 'thoughts', that are not necessarily structured. This may have been one factor that explains the tendency to assign structure to thoughts.

[4] In section 7 we will argue that, in fact, Frege's talk of such things as times *belonging* to propositions is metaphorical and, as such, does not commit him to a conception of propositions as structured entities.

> time-specification thus given we have not a complete thought, i.e. we have no thought at all. Only a sentence with the time-specification filled out, a sentence complete in every respect, expresses a thought. But this thought, if it is true, is true not only today or tomorrow but timelessly. (Frege 1918-19/1984a)

This is perhaps the passage in which Frege insists with more clarity on the two ideas suggested in the two previous quotes: thoughts contain all the information needed to bear an absolute truth-value, and only when the sentence features all such information can we say that it expresses a complete thought. As in the quote from 'Logic', Frege manages here too to state his requirements without talking about components of the thought. It seems clear, then, that Frege's thoughts have their truth-value in an absolute way.

## 4 Frege and the Unstructured Character of the Thought

We have just seen that Frege requires thoughts to be complete. Besides complete, we also think that Frege's thoughts are unstructured, and that is the second, historical thesis that we will support in this paper.[5] Throughout his development as a thinker, Frege seems to change his mind several times as regards whether thoughts have structure. Passages can be produced that seem to push in different directions. However, the crucial point is that Frege does not need thoughts to be structured for them to play the role he needs them to play in his project. Taking thoughts to be unstructured is more coherent with Frege's purpose, and he himself gives us clues to understand the passages seemingly contradicting this conception of thoughts under this light. In this section, we point out some textual evidence for our interpretation of Frege. In Section 7, we will discuss some passages that seem to contradict this interpretation.

One could hold our historical claim by arguing that, for Frege, the same thought can be seen under two different structures, which means that there is not a structure that is *the* thought's structure. If thoughts do not have a fixed structure, structure cannot be one of the features that allow us to individuate thoughts. One could use passages such as the following to support this view:

> Designations of thoughts with such a structure are got according to the pattern: 'the negation of the negation of *A*', where '*A*' takes the place of the designation of a thought. Such a designation is to be regarded as directly composed of the parts: 'the negation of ——' and 'the negation of *A*'. But it may also be regarded as made up of the parts: 'the negation of the negation of ——' and: '*A*'. Here I have first combined the middle part with the part that stands to the left of it and then combined the result with the part '*A*' that stands to the right of it; whereas originally the middle part was combined with '*A*', and the designation so got, viz. 'the negation of *A*', was combined with what stood to the left of it 'the negation of ——'. The two different ways of regarding the designation have answering to them two ways of regarding the structure of the thought designated. (Frege 1918-19/1984, 387-388)

Here, Frege seems to argue that the different ways of giving a sentence structure reflect different ways of giving the thought it expresses a structure. However, the evidence that this excerpt supplies is not conclusive. The reason is twofold. First, even someone who claimed that thoughts are structured could recognise different analyses for the same thought, and

[5] For another defense of this claim, see Kemmerling (2011). This seems to be Frege's approach to propositional content in *Begriffsschrift*, and it is our view that he kept that approach throughout his career, as we hope the quotes from his later work we include below will show.

would still claim one of them to be the one that reveals its ultimate nature. A possible answer to this is that such analyses should always be compatible with each other, while Frege's do not have to be. In *Begriffsschrift*, Frege accepts that the same thought can be analyzed in at least two ways that are both possible but cannot be subscribed to at the same time:

> 'The circumstance that carbon dioxide is heavier than hydrogen' and 'The circumstance that carbon dioxide is heavier than oxygen' are the same function with different arguments if we regard 'hydrogen' and 'oxygen' as arguments; on the other hand, they are different functions of the same argument if we regard 'carbon dioxide' as the argument. (Frege 1879/1967: 22)

'Hydrogen', 'oxygen' and 'carbon dioxide' cannot be at the same time arguments and parts of a function; both analyses are possible, but we have to choose one of them. If the thought had a fixed structure, on the other hand, we could only accept analyses that can be compatible with each other. If the real structure of 'The circumstance that carbon dioxide is heavier than hydrogen' is one in which 'hydrogen' (for instance) is the argument, any analysis will have to respect the restriction that 'the circumstance that carbon dioxide is heavier than' is a function. Dummett can be seen as making a similar point when he holds that, for Frege, the thought expressed by the sentence 'Socrates is wise' can be decomposed as formed by the object Socrates and the first-level concept corresponding to the predicate '*x* is wise', or as formed by the same first-level concept inserted into the argument-place of the second-level concept corresponding to the predicate '*X*(Socrates)' (Dummett 1973, 62).

But there is a second, stronger objection against our reading. It could be argued that Frege's example points to different ways of regarding the same structure, not to a thought that can be given different structures. The quotes above, and Dummett's point, would be compatible with this. Hence, we need to look for a stronger argument for the claim that Frege's thoughts are unstructured.

For Frege, thoughts are not individuated according to their components: in fact, two sentences with different components which are nonetheless logically equivalent express, in Frege's view, one and the same thought. $p \vee \neg p$ expresses the same thought as $\neg(p \wedge \neg p)$, and it is clear that, if structure were our guide, we would have to judge that two different thoughts are in play, as the first sentence has components that the second lacks (such as disjunction), and the same happens the other way around. What individuates thoughts are their inferential relations to other thoughts, and exactly the same things follow from $p \vee \neg p$ and $\neg(p \wedge \neg p)$. Hence, we do not have different thoughts that happen to be logically equivalent; we have the same thought in both cases, which is the key to seeing Frege as an inferentialist (see Brandom 1994, 2001). This is suggested by the use Frege makes of 'expressing the same' in passages such as the following:

> (T)he sense of '*A* and (not *B*)' is the same as that of '(not *B*) and *A*', for any '*A*' and '*B*' that are sentences proper. (…) For any '*A*' that is a sentence proper, '*A* and *A*' expresses the same thought as '*A*'; the former says no more and no less than the latter. (...) Equally, '(not *A*) and (not *A*)' also expresses the same as 'not *A*'; and consequently 'not [(not *A*) and (not *A*)]' also expresses the same 'not (not *A*)', or '*A*'. (…) (N)ot only '*A* and *A*', but also '*A* or *A*' has the same sense as '*A*'. (Frege 1923-26/1984, 403-405)

The senses of '*A* and (not *B*)' and '(not *B*) and *A*', or of 'not [(not *A*) and (not *A*)]' and '*A*', are not equivalent: they are the same one, because '*A* and (not *B*)' and '(not *B*) and *A*', and 'not [(not *A*) and (not *A*)]' and '*A*', say the same. If there were an ultimate analysis of the

thought, '*A* and (not *B*)' and '(not *B*) and *A*', and 'not [(not *A*) and (not *A*)]' and '*A*', would have to express different thoughts, as such thoughts would have different components.

The thoughts appearing in the previous excerpt are expressed by molecular sentences. Can there also be cases in which we seem to have two atomic sentences that differ only in their structure, and that in fact express the same thought? That is the possibility that Frege seems to acknowledge in the following passage:

> Consider the sentences 'Christ is immortal', 'Christ lives for ever', 'Christ is not immortal', 'Christ is mortal', 'Christ does not live for ever'. Now which of the thoughts we have here is affirmative, which negative? (Frege 1918-19/1984, 380)

In this passage, Frege offers an argument against the possibility of distinguishing between affirmative and negative thoughts. If we could make such a distinction, we would do it following the structure of the sentence that expresses them; if it intuitively looks so artificial (as the examples show),[6] it is because it is not the sentence's structure what we follow in individuating the thoughts expressed by it, but the inferential properties of the latter. And if the sentence's structure is irrelevant in individuating thoughts, it is because it does not manifest the latter's structure, because thoughts have no structure, even though they can be given one. Of course, 'Christ is not immortal' and 'Christ does not live for ever' are not atomic sentences, since they both contain a logical constant—negation. However, by questioning that e.g. 'Christ is immortal' and 'Christ lives for ever' express different thoughts, Frege allows for the possibility that two atomic sentences express the same thought. A thought compatible with these different analyses should lack a structure *per se*. Thus, Frege's thoughts are structur*able*, but not structur*ed*.

## 5 Fregean Unstructured Propositions

How can Frege hold that thoughts are complete without, at the same time, requiring them to have structure? As we advanced before, talk of propositions containing more or less information is compatible with conceiving them as unstructured entities, and when Frege says that a time belongs to a thought-content (Frege 1912/1967, 338-339, quoted above), this does not conflict with his commitment to the unstructured character of the thought.

It is tempting to understand the debate as to whether propositions should contain all the information needed to deem them true or false in terms of whether they should contain this or that component. When temporalists and eternalists discuss whether time should be part of the proposition or part of the circumstances of evaluation, it is only natural to assume that they both take propositions to be structured entities that can feature or lack a time-component. However, talk of propositions containing more or less information is compatible with conceiving them as unstructured entities, as we will show.

To say that a proposition contains a certain amount of information is to say that such information does not belong to the circumstances of evaluation. For instance, to say that a proposition contains a time is to say that the latter is not part of the circumstances of evaluation, and this just means that the proposition's truth-value is not relative to time. Suppose that there is a ball that is red at $t_1$ but green at $t_2$, after we have given it a coat of paint. The proposition that the ball is red at $t_1$ contains more information than the proposition

[6] Perhaps Frege is wrong in holding that 'Christ is immortal' and 'Christ lives for ever' express the same thought, for it is possible to find thoughts that follow from the first but not from the second. But, even in that case, it is the inferential power that individuates thoughts, even if it follows from this that no two different atomic sentences can express the same thought.

that the ball is red because, while the former is true at all times, the latter is only true at those times at which the ball is red: if the ball is red at $t_1$, it will be true at $t_2$ that the ball is red at $t_1$, and it will also be true at any other time. To say that the proposition that the ball is red at $t_1$ contains more information than the proposition that the ball is red is not to say that $t_1$ is among the components of the former: it is just to say that, while the former proposition's truth-value changes from $t_1$ to $t_2$, the former does not. This can be replicated for all other parameters we may think of; in all cases, to ask whether a proposition contains a given parameter will just amount to asking whether the proposition's truth-value remains constant as the value for that parameter shifts, that is, whether the proposition is neutral with respect to that parameter.

This conception of what containing a certain amount of information means conflicts with another, natural one, according to which to say that a proposition contains a certain amount of information is to say that it allows us to distinguish among a certain number of possibilities. The proposition that the ball is red contains more information than the proposition that the ball is colored because it leaves out a larger number of possibilities: if the ball is green, we will know the former proposition, but not the latter, to be false. Conversely, if we know the proposition that the ball is red, we will know that it is not green, while we will not know if it is if we only know that the ball is colored. Talk of possibilities like these can be put in terms of possible worlds: the proposition that the ball is red contains more information than the proposition that the ball is colored because it is incompatible with a higher number of worlds—not only those in which the ball is not colored, but also those in which the ball is of a color other than red. If we follow this path, a proposition contains more information if its truth-value varies than if it does not, which is exactly the opposite of what follows from the notion of information used in this paper. However, it is not our aim here to argue for any particular notion of information: both can be kept as helping to elucidate different senses of 'containing information'.

Thus, we can say that Frege's thoughts contain all the information that we need to determine whether they are true or false without saying that they do so by virtue of containing specific components. When Frege says that a time belongs to a thought-content, he just means that we do not need to supply it in addition to the thought in order to get a truth-value. Moreover, there have been other cases in the literature in which it has been defended that propositions are unstructured entities, and the propositions emerging from some of these proposals can naturally be said to be Fregean, for, be they true or false, they will be so independently of any parameter. This proves that structure and relativization are independent issues.

Another proposal in which propositions are both unstructured and Fregean can be found in Stalnaker's (1976) theory. Stalnaker identifies each proposition with the set of possible worlds in which the sentence that expresses it is true:

> (A) proposition may be thought of as a set of possible worlds: the set of worlds in which the sentence expressing the proposition denotes the value true. (Stalnaker 1976, 80)

Given any world, it will either belong or not belong to the set. Hence, the sentence, and consequently the proposition will be true or false *simpliciter*: it will all depend on whether the actual world, or the worlds that some operator selects, belong to the set or not.[7] Moreover,

[7] One might argue that the proposition is not true or false *simpliciter*, since its truth-value is relative to a possible world. However, we make the uncontroversial assumption that for a proposition to be true or false *simpliciter* is for its truth-value not to depend on anything beyond possible worlds. Separating possible worlds from other parameters is natural once we take into account that, while two different contexts can determine

inasmuch as Stalnaker's propositions are identified with sets of worlds, they lack structure. This is what Stalnaker insists on in the following passage:

> The possible-world account attributes these logical features (they can be true and false and can stand in logical relations like implication, independence, and incompatibility) to propositions withouth any of the extraneous structure of language. Propositions, according to this account, have no syntax, no 'exact words' or word order, no subjects, predicates, or adverbial phrases; nor do they contain semantical analogues to these notions. (Stalnaker 1976, 83)

So, if we accept propositions as sets of possible worlds as a notion that makes sense, then there are unstructured propositions that can naturally be said to be Fregean.

## 6 Relativized Unstructured Propositions

We have seen that unstructured propositions can be Fregean. Can they be relativized too? An affirmative answer to this question would support the idea that the debate about structure and the debate about relativization are orthogonal, so the possibility is not by itself contradictory. Moreover, we can find an example of propositions that lack structure and whose truth-value is relative in Lewis (1980).

With Stalnaker, Lewis is willing to take propositions as functions from worlds to truth values (Lewis 1980, 93). If propositions are functions, then they are not structured in the relevant sense. But worlds, not being the only shiftable feature of the context, are not enough to determine a truth-value, and Lewis cites Stalnaker himself as recognizing that world-time pairs could be used instead of worlds[8] (Lewis 1980, 95). Lewis then proposes to go beyond times as well. If we follow his suggestion, we will have relativized propositions; but, everything else staying the same, the propositions we arrive at will still be unstructured, now being not functions from worlds to truth values but functions from more complex tuples to truth values.

Here again, it is possible to talk about the amount of information a proposition contains without assuming that it has a structure. To say that a proposition is relativized with respect to time, for instance, is to say its truth-value can change if we shift the time-parameter in the circumstances of evaluation. In fact, with a notion of a proposition such as Stalnaker's or Lewis', propositions are just sets of circumstances of evaluation—those that make them true.

The fact that we can find instances of all the possible combinations of the positions in the debate about structure and the debate about relativization shows that these two debates are independent from each other. Among structured propositions, we can find both Fregean and relativized propositions; and, when we turn to unstructured propositions, Frege and Stalnaker on the one hand and Lewis on the other offer us examples for both combinations.

## 7 Objections

A natural objection to our reading of Frege is that, along with the passages quoted in Section 3, there are also places throughout Frege's work in which he seems to commit, in a more or less explicit form, to thoughts having structure. If those passages could serve as evidence for

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two different times, personal taste standards, etc., they will always determine the same world—ours. We can speak or assess from different times or standards, but not from different worlds: we are stuck in this one.

[8] This being mere acknowledgement that such a thing *could* be done, we will keep characterizing Stalnaker's propositions as Fregean.

such commitment, we would be unjustified in characterizing his position as we have done. But it is our view that all of them can be explained in a different way, as we will show next.[9]

One of the texts in which Frege seems to commit to propositions having structure belongs to *Grundgesetze*:

> If a name is part of the name of a truth-value, then the sense of the former name is part of the thought expressed by the latter name. (Frege 1893/1964, §32)

Since what Frege means here by 'name of a truth-value' is a sentence, what this quote has traditionally been taken to mean is that the sense of a sentence has the senses of the expressions of which it consists as parts (Heck & May 2011, 128). Thus, the senses of sentences —thoughts— have parts.

But Frege may well have a picture of how meaning gets individuated in which we first have the meaning of a sentence and, then, we get the meaning of its constituent words by segmenting that meaning. If Frege had this conception of how meaning gets individuated, it would allow us to explain how Frege can say what he says without the commitment we want to avoid attributing to him: he could be understood as simply stating that, if we have obtained the sense of the first name by segmenting that of the second one, then the second sense should obviously be a function of the first. This is compatible with us having different ways of segmenting a thought, so that thoughts do not have parts *per se*. Note that we are not claiming that Frege sees the individuation of meaning in such a way. All we are saying is the following: if one wanted to read the quote above as implying that thoughts have parts *per se*, one would need to impose on Frege a certain way of seeing how meaning gets individuated, and to ground it independently,

We might also find a more or less explicit commitment to the structure of thoughts in a letter that Frege writes to Jourdain in 1914, in which he says:

> (A) sentence[10] consists of parts which must somehow contribute to the expression of the sense of the sentence, so they themselves must somehow have a sense. (Gabriel *et al.* 1980, 79)

That is to say, it seems that, for Frege, the only way in which words can play a role in making a sentence meaningful is that they themselves have a meaning. Again, there is no commitment here with the thought's having fixed parts, for the fact that words have meanings is compatible with the possibility that thoughts are unstructured.

But it may be the paper 'Logic in Mathematics', from around 1914, where Frege's alleged commitment to thoughts having structure seems most explicit. There, Frege says:

> It is remarkable what language can achieve. With a few sounds and combinations of sounds it is capable of expressing a huge number of thoughts, and, in particular, thoughts which have not hitherto been grasped or expressed by any man. How can it achieve so much? By virtue of the fact that thoughts have parts out of which they are built up. And these parts, these building blocks, correspond to groups of sounds, out of which the sentence expressing the thought is built up,

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[9] I would like to thank an anonymous referee for *Grazer Philosophische Studien* who suggested me to include and discuss evidence that goes against my point as well.

[10] As in the quote from Frege's annotations to Jourdain's 1912 article 'The Development of the Theories of Mathematical Logic and the Principles of Mathematics' (see n. 3), here too the translation originally says 'proposition', but we choose to replace it with 'sentence' to avoid confusion.

> so that the construction of the sentence out of parts of a sentence corresponds to the construction of a thought out of parts of a thought. And as we take a thought to be the sense of a sentence, so we may call a part of a thought the sense of that part of the sentence which corresponds to it. (Frege 1914/1979, 225)

It has been argued (Dummett 1987, 308) that, in these lines, Frege is presenting an argument for the picture according to which the meanings of subsentential items are conceptually prior to the meanings of sentences themselves (see, for instance, Chomsky 1971, 74). According to that argument, this would be what explains the fact that, by knowing a finite number of expressions and a finite number of construction rules, we are capable of producing an infinite number of meaningful sentences. However, the fact that we are capable of constructing new thoughts from components that we already have does not preclude that those components have as well been obtained from other thoughts. Since such thoughts could be segmented in different ways, they would not have a structure *per se*. Hence, it does not follow from the quote that thoughts have a structure for Frege.

But let us now take a look at a different version of this same excerpt, which heads the article 'Compound Thoughts', from 1923-1926. Frege starts in terms close to those of 'Logic in Mathematics':

> It is astonishing what language can do. With a few syllables it can express an incalculable number of thoughts, so that even a thought grasped by a human being for the first time can be put into a form of words which will be understood by someone to whom the thought is entirely new. (Frege 1923-26/1984, 390)

Then, he puts matters in a slightly different way, not talking about how thoughts are constructed, but about our ability to distinguish parts in them:

> This would be impossible, were we not able to distinguish parts in the thought corresponding to the parts of a sentence, so that the structure of the sentence serves as an image of the structure of the thought. (Frege 1923-1926/1984, 390)

And he closes by lowering his commitment to the thesis of thoughts' having parts:

> To be sure, we really talk figuratively when we transfer the relation of whole and part to thoughts; yet the analogy is so ready to hand and so generally valid that we are hardly ever bothered by the hitches which occur from time to time. (Frege 1923-26/1979, 390)

In this later version, the quote much more clearly does not imply that thoughts have parts: what is important to explain the productivity of natural languages is that we are able to distinguish parts in thoughts, and we can talk about them as having parts only as long as we acknowledge such talk to be metaphorical.[11] Under this light, the passages quoted in Section 1 to which Fregean thoughts owe their name do not presuppose that they are structured: when Frege says that 'the time belongs to the thought-content of the proposition' (Frege 1912/1967, 339), he only uses the word 'belongs' in a metaphoric way.

[11] I would like to thank the same anonymous referee from n. 9 for directing my attention to this second version of the passage, which can be used to downgrade Frege's apparent commitment in the first version. It should also be considered as a plausible possibility, as the referee suggested, that Frege never really made up his mind about whether propositions have a structure.

The passages quoted above are among the strongest ones in which Frege seems to commit to thoughts' having structure. Since even those passages can be explained as not implying that commitment, we stand by our original assertion that Frege's thoughts lack structure.

Frege provides us with an example of how thoughts can be said to contain more or less information without them being structured, a possibility that Section 4 was devoted to highlighting. Thus, we have to be careful in relating some positions in the debate about relativization with Frege's conception of a thought, since we might easily attribute extraneous commitments to him.

## 8 Concluding Remarks

We have held two different theses in this paper. First, we have shown that the question as to whether we should relativize propositions is independent from the question as to whether propositions are structured entities. To do so, we have proposed a way of defining what it is for a proposition to contain more or less information that makes no reference to components. Frege's thoughts would be an example of unstructured, non-relativized propositions, and Lewis' propositions would exemplify unstructured, relativized propositions. The former claim, and specially the idea that Frege's thoughts are unstructured, is the second thesis of this paper. This we have argued by discussing some textual evidence in Frege's works.

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