

# Fregean Side-Thoughts

Thorsten Sander

Universität Duisburg-Essen

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This paper offers a detailed reconstruction of Frege's theory of side-thoughts (*Nebengedanken*) and its relation to other parts of Frege's pragmatics, most notably to the notion of colouring (*Färbung*), to the notion of presupposition (*Voraussetzung*) and to Frege's implicit notion of multi-propositionality. I also highlight some important differences between the subsemantic categories employed by Frege and those used in contemporary pragmatics.

Keywords: Frege; side-thoughts; colouring; conventional implicature; presupposition; multi-propositionality

## 1. Introduction

Universal statements are often understood as having existential import: on the assumption that there aren't any aliens, the sentence 'All extra-terrestrials are extroverts' will seem odd or even false, while the counterpart of that sentence in classical predicate logic, being equivalent to  $\sim\exists x ET(x) \ \& \ \sim E(x)$ , would be obviously true. How is that to be explained? Frege, the founder of modern logic, was aware of this issue, and in his attempt to get a grip on it he essentially made use of the notion of side-thought (*Nebengedanke*) – intuitively a Fregean thought that is, in some sense or other, not at issue.<sup>1</sup> On Frege's view, the truth of a sentence of the form *All Fs are Gs* does not depend on the existence of *Fs* (or *Gs*); the thought that there are *Fs* is only a side-thought thinkers regularly 'connect' (*verbinden*) to such universal statements.<sup>2</sup> Existential import, however, is not the only phenomenon that might be explained

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<sup>1</sup> When quoting from Frege's works I use the abbreviations listed in the References section; underlinings indicate changes to the translation.

<sup>2</sup> See [GGA I; §13] and his letter to Husserl (9 December 1906, [PMC 71], cf. Horn [2007: 44]). Frege's term 'Nebengedanke' may alternatively be translated as 'accompanying thought' [Picardi 2007] or as 'subsidiary

by side-thoughts: side-thoughts may also account for the oddity of ‘Frederick the Great won at Rossbach, or two is greater than three’ [Ggf 42] and for the intuitive difference between ‘Some humans are Greek’ and ‘Some Greeks are human’ [DPE 68]. More generally, Frege claims that our expressing thoughts is ‘almost always’ accompanied by side-thoughts, and in addition to side-thoughts merely ‘accompanying’ (*begleiten*) thoughts, there may also be side-thoughts that ‘belong’ (*gehören*) to the sense of a sentence [SB 46].

Fregean side-thoughts have not received much attention; for the most part, scholars have either ignored or discussed them in mere side remarks. (Horn [2007] and Picardi [2007] are two notable exceptions). In this paper, I shall offer a detailed reconstruction of Frege’s theory. I shall also show how the notion of side-thought is related to other notions that form part of his ‘pragmatics’, most notably to the notions of colouring and presupposition. In this way, a map of Frege’s pragmatics in general will emerge, which I think indicates some places where Frege buried philosophical treasure chests.

I shall proceed as follows. I begin, in section 2, with a discussion of the relation between side-thoughts and Fregean colourings. Section 3 provides a reconstruction of the psychological mechanism which, for Frege, is operative in cases where a side-thought is merely attached to the sense of a sentence. In section 4, I shall argue that the linguistic devices Frege analyses at the end of his ‘Über Sinn und Bedeutung’ are not to be construed as conveying side-thoughts that belong to the sense of a sentence but rather as multi-propositional sentences. Section 5 then argues that there are some words that do convey side-thoughts as part of a sentence’s sense. Finally, in section 6, I highlight some important differences between multi-propositional sentences, Fregean *Voraussetzungen*, and presuppositions, as understood in contemporary scholarship.

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thought’ [FR 168]. However, I think that ‘side-thought’, proposed by Horn [2002: 76, 2007], is more faithful to Frege’s original term.

## 2. Side-Thoughts and Fregean Colourings

Under diverse headings such as ‘colouring’ (*Färbung*), ‘illumination’ (*Beleuchtung*) and hint (*Wink*), Frege discusses the contribution of linguistic devices such as ‘but’, ‘cur’, ‘unfortunately’ and many others (see Dummett [1981: 84-9]; Neale [1999]; Horn [2007]; Picardi [2007]; Sander [2019]). Now there is one passage in Frege’s seminal 1892 paper where he claims that a word such as ‘but’ (*aber*) ‘illuminates’ (*beleuchtet*) the thought expressed by a sentence in a certain way, while having no impact whatsoever on the thought itself [SB 46]. A little below on the same page, Frege then uses the two terms ‘illumination’ and ‘side-thought’ almost interchangeably, which may suggest that, for Frege, colouring and side-thoughts are essentially the same linguistic phenomenon, exemplified for instance by ‘but’ (for such a reading see Feng [2010: 48-50]). Other passages, where he discusses items such as ‘but’ while shunning the term ‘side-thought’ [Ged 64], may support the view that Frege thought side-thoughts and colourings to be different (cf. Picardi [2007: 504]). What is, then, Frege’s official stance on that issue?

On the one hand, I take this to be a purely terminological point. Since Frege’s main aim in discussing expressions such as ‘but’ was to sweep aside all kinds of contents that are irrelevant to the expression of thoughts, he did not care particularly about terminological coherence. Accordingly, it is simply not clear whether he used ‘colouring’ (or ‘illumination’) more as a word that refers to a specific kind of secondary content, exemplified by ‘but’ or ‘cur’, or as an umbrella term for any kind of content which is only hinted at but not expressed, which would include what Frege calls side-thoughts.

On the other hand, however, there are, for Frege, salient differences between side-thoughts and at least *some* of the linguistic devices he discusses under headings such as ‘colouring’. On the plausible assumption that side-thoughts are thoughts, it is easy to see that many colouring

devices cannot be construed as conveying side-thoughts.<sup>3</sup> Take ‘cur’ as an example. Frege’s main point here is that that word does not contain the thought that ‘the speaker has a poor opinion of the dog’ [Log 152, FR 240-1]. Rather, ‘cur’ serves to convey the speaker’s non-doxastic attitude towards the dog, and similar things could be said about many of Frege’s standard examples of colouring such as ‘regrettably’ [Ged 63].

What about ‘but’? This, after all, is the word with respect to which Frege seems to use the terms ‘illumination’ and ‘side-thought’ almost interchangeably in his 1892 paper [SB 46], while in ‘Der Gedanke’ he specifies that word’s contribution by talking about hints (*Winke*) that ‘make no difference to the thought’ [Ged 64]. As noted above, that might be due to his terminological nonchalance when discussing secondary aspects of meaning, but I think the most plausible explanation for that diachronic tension is that Frege changed his mind about the content of ‘but’. When toying with the idea that ‘but’ expresses a side-thought, he may have been thinking of simple examples such as

(1) She is poor, but she is honest (cf. Grice [1961: 127])

where ‘but’ plausibly conveys the thought that poverty and honesty are negatively correlated or, similarly, that poor people are generally dishonest [Potts 2005: 40]. There are, however, other cases where the intended ‘contrast’ is much vaguer: by uttering ‘I called Tom, but he was drunk’ [Feng 2010: 109], you do not seem to convey any claim about correlations or the like. You rather may be suggesting a contrast between your expectations and reality. Finally, ‘but’ may also be used as an asymmetrical ‘utterance modifier’ [Bach 1999: 358]: by uttering sentences of the form *p but q*, speakers frequently concede that *p* might support some claim *r* while also conveying that *q* is a stronger reason for  $\sim r$  [cf. Anscombe and Ducrot [1977: 28];

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<sup>3</sup> It seems barely credible that Frege failed to notice that the word ‘Nebengedanke’ contains his technical term ‘Gedanke’. Accordingly, I don’t think we will understand Frege any better by identifying a scholar from whom he may have borrowed that term.

Dummett [1981: 86]; Horn [2013: sec. 5.3]).

So the Frege of 1918 was probably right in claiming that ‘but’, in general, does not express a side-thought, and in that respect he is in line with numerous contemporary scholars who have stressed that the semantic contribution of ‘but’ is hard to pin down (see, e.g., Dummett [1981: 86]; Bach [1999: 343]; Horn [2013: 152]). The take-away point from this is that, for Frege, there are clear cases of linguistic devices that convey side-thoughts as well as clear cases of colouring devices that do not express thoughts. Additionally, there are some words such as ‘but’ whose contribution might be construed in either way and which thus deserve particular scrutiny.

### 3. Side-thoughts that accompany the sense of a sentence

Frege seems to be committed to a distinction between two kinds of side-thought: side-thoughts that belong to the sense of a sentence and side-thoughts that merely accompany its sense [SB 46-7]. I shall start with the second kind, which I shall just call ‘(accompanying) side-thoughts’ in this section. Frege’s discussion of such side-thoughts is clearly an attempt to get a grip on a phenomenon that is somewhat similar to conversational implicature. Like Grice, Frege tries to explain how utterances may convey non-encoded contents. Unlike Grice, however, he does not appeal to some general principles of rational conversation but rather to ‘psychological laws’ [SB 46] that associate side-thoughts with the words we use. Picardi has claimed that we shouldn’t take Frege too seriously here. His talk of psychological laws is, according to her, just a ‘concession to the scientific psychology of his day’ [Picardi 2007: 502]. In contrast, I think that Frege’s brief remark on that issue should be taken at face value (Frege, after all, is not known for his generous concessions to his opponents) and that this remark contains some valuable insights into the relation between mental states and our use of language.

Consider one of Frege’s examples:

(2) Napoleon, [1] who recognized the danger to his right flank, [2] himself led his guards against the enemy position. [SB 47, FR 168]

Frege claims that, by uttering (2), the thought that [1] was a reason for [2] is not expressed (*ausgedrückt*) but only ‘slightly suggested’ (*leicht angeregt*). Thus, in the case of accompanying side-thoughts, the difference between main-thoughts and side-thoughts is just the difference between thoughts that have been made fully explicit and thoughts which are just intimated. Nevertheless, the side-thought that [1] is a reason for [2] can be conveyed by a speaker and grasped by an addressee. How is that supposed to work? The key for understanding the mechanism Frege has in mind seems to be the locution ‘on its own account’ (*von selbst*), which suggests that the transmission of a side-thought is effected effortlessly, as something that simply comes to mind and does not have to be retrieved by some sort of conscious calculation [SB 46]. A speaker S may utter (2) simply because S thought of [1] as a reason for [2]. And just by grasping the sense of (2), a hearer H may then realize that [2] is about one of Napoleon’s actions and that [1] describes one of Napoleon’s mental states which might explain his doing [2]. Since, as a matter of folk-psychology, we are used to construe certain mental states as causes of (or reasons for) our actions, H may effortlessly hear (2) as containing the thought that [1] was the reason for [2].<sup>4</sup>

Note that we should not read Frege as claiming that side-thoughts are essentially tied to the structure of the sentences carrying them. On the one hand, not every sentence of the form *Person P, who is in mental state M, performed action A* will convey that M is causally responsible for P’s doing A. (Think of ‘Napoleon, who had a headache that day, led his guards against the enemy position’ as an example). On the other hand, one may convey essentially the same side-thought by two separate sentences:

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<sup>4</sup> The fact that side-thoughts are automatically associated with main thoughts does not mean that they are non-cancellable aspects of content. One may utter (2) and proceed as follows: ‘but his recognition of the danger was not his reason for ...’.

(3) Napoleon recognized the danger to his right flank. He himself led his guards against the enemy position.

Accordingly, an explanation for why we hear a sentence, or a sequence of sentences, as conveying a side-thought will depend not only on sentence structure but crucially also on our knowledge of the world, most notably on folk-psychological knowledge.

Let us briefly consider another example. As mentioned in section 1, Frege claims that the alleged existential import of universal statements is similarly a mere matter of side-thoughts. Unfortunately, he never bothered to explain how, exactly, the thought *that there are Fs* may become ‘attached’ to sentences of the form *All Fs are Gs*. While I think that, in the case of his Napoleon example, Frege saw an important psychological mechanism<sup>5</sup>, I am not so sure whether his account of existential import is on the right track. But let me offer a brief sketch of a possible explanation on his behalf. It has long been known that most people are not very good at deductive reasoning and that many thinkers simply refuse to engage in purely hypothetical thinking [Luria 1976: 112]. Now if there aren’t any Fs, then a statement of the form *All Fs are Gs* will be about a purely hypothetical case many people are not willing to think about, and that fact might offer an explanation for why we frequently understand universal statements as having existential import.

Let us now turn to a passage in which Frege explains his notion of side-thought in more detail and also how side-thoughts may become part of what a sentence expresses:

Almost always, it seems, we connect with the main thoughts expressed (*aussprechen*) by us side-thoughts which, although not expressed (*ausgedrückt*), are connected (*verknüpft*) to our words, in accordance with psychological laws, also (*auch*) by the hearer. And since the side-thought appears to be connected with our words on its own account (*von selbst*), almost like the main thought itself, we may also want to express such a side-thought (*so wollen wir dann auch wohl einen solchen Nebengedanken mit*

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<sup>5</sup> There is psychological evidence that general categories such as agency, intentionality, causality and the like are indeed involved in language comprehension: see Zwaan and Radvansky [1998].

*ausdrücken*).<sup>6</sup> The sense of the sentence is thereby enriched, and it may well happen that we have more simple thoughts than clauses. [SB 46, FR 168]

What Frege says here seems to be this. There are cases where, due to some psychological tendency, a side-thought piggybacks on the thought we actually express. This is, for Frege, something that simply happens to us, and since it happens regularly (it is due to a psychological law, after all), we may wrongly believe that the side-thought is actually part of what we express when we utter a sentence<sup>7</sup> (which would explain, for instance, why people often believe that existential import is built into the very meaning of universal statements). In such cases, the side-thought *may* sometimes become part of what we want to express and thus transform into a thought. As Frege put it in one his posthumous writings: ‘A thought which to begin with was only suggested (*nahe gelegt*) by an expression may come to be explicitly asserted by it.’ [Log 152-3, FR 241].

Consider an example: suppose there was a time  $t_1$  where sentences of the form *All Fs are Gs* expressed the thought that  $\forall x F(x) \rightarrow G(x)$  while being merely connected to the side-thought  $\exists x F(x)$ . (Note that this is just some kind of thought experiment. I am not making any claims about the actual meaning, past or present, of the English word ‘all’.) Suppose further that at a later time  $t_2$  the side-thought became part of the sense of *All Fs are Gs*. In such a scenario, *All Fs are Gs* would express, at  $t_2$ , the two thoughts  $\forall x F(x) \rightarrow G(x)$  and  $\exists x F(x)$ , but neither of these two thoughts would deserve being called a side-thought. In the next section, we shall see that alleged cases of side-thoughts that belong to the sense of a sentence are similarly multi-propositional sentences.

Before turning to such cases however, let me briefly mention a less convincing aspect of Frege’s account, which will then quickly bring us to one of his insights. In the passage quoted

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<sup>6</sup> In Black’s translation, these eleven German words are rendered by only seven English words (‘we want it also to be expressed’), thereby suggesting that side-thoughts almost inevitably become part of a sentence’s sense, which would threaten the very distinction between *Gedanken* and *Nebengedanken*. Frege’s own words, most notably the German modal particle ‘wohl’, make clear that this is something that may but need not happen.

<sup>7</sup> Thanks to a referee for suggesting such a reading to me.

above, Frege seems to assume that side-thoughts somewhat inevitably give rise to semantic illusions: speakers are (generally, at least) unable to distinguish between side-thoughts and the ‘main thought itself’. What Frege seems to ignore here is the possibility that speakers may exploit some psychological tendency, while being fully aware that the side-thoughts they instill in their addressees are not part of what they actually express. (Many of the persuasive strategies recommended in rhetoric seem to be of that kind.) Frege’s insight, mentioned above, is simply that there are such psychological mechanisms.

Cappelen [2018: 123] has recently complained that philosophers have largely ignored that an ‘expression can have cognitive and emotive effects over and beyond ... any of its semantic and pragmatic properties’, and in spite of his being an unabashed anti-psychologist, Frege never lost sight of such ‘lexical effects’, as Cappelen calls them. In the case of side-thoughts, Frege is concerned with cognitive effects, and when discussing those forms of colouring I have recently described as ‘colourings without content’ [Sander 2019: 388], Frege is concerned with non-cognitive effects on the ‘ideas and emotions of the hearer’ [Log 151, FR 239]. Frege’s discussion of such effects is strongly focused on poetic language, but it seems clear that the phenomenon generalizes. Cappelen [2018: 124] offers the associations tied to brand names as an example, and some instances of pernicious language such as slurring or dog-whistling may be yet another. (It seems clear to me that a full explanation of what happens when we use ‘bad language’ has to take psychological effects into account, but I cannot argue for that here.)

Frege’s ideas on side-thoughts and colouring thus seem to contain some valuable insights into how language use is related to mental states. His notion of side-thought, more specifically, suggests an approach to the non-conventional surplus meaning of utterances that may indeed account for some cases of indirect communication. I am not sure how pervasive such cases are, but the post-Gricean debate on indirect communication generally seems to suggest that, apart from conversational implicatures, there are several mechanisms operative in our

conveying and grasping non-explicit contents. Gauker's [2001] 'situated inferences' and the implicature-like relations to which Saul [2002] has drawn our attention are two salient examples, and the associative mechanism treated by Frege may be a third one deserving closer attention.

#### 4. Side-thoughts vs. multi-propositional sentences

The picture that emerged in the last section is this: side-thoughts that accompany the sense of a sentence  $\Sigma$  are those thoughts that are not explicitly expressed by  $\Sigma$  but rather conveyed by means of psychological mechanisms. Now Frege seems to assume that there are also side-thoughts that belong to the sense of a sentence [SB 46-7]. What is, then, a side-thought of that kind? Since the criterion for accompanying side-thoughts is their not having been made explicit, it might seem tempting to suggest that we just have to make some piece of information explicit in order to transform an accompanying side-thought into a side-thought that belongs to the sense of a sentence. Recall sentence (2) from the previous section and consider a sentence in which the side-thought connected to (2) has been fully articulated:

(4) Since [1] Napoleon recognized the danger to his right flank, [2] he himself led his guards against the enemy position.

The question, then, is this: is (4) a plausible case of a side-thought that is actually being expressed? Intuitively, that approach seems to be plainly wrong: the thought that [1] is the reason for [2] is the very point of uttering (4) – it is a causal sentence after all – and thus cannot be a mere side-thought, at least if we take the term 'side-thought' at face value. But maybe that is not the exact notion of side-thought Frege had in mind. Since, unfortunately, Frege does not provide a criterion for that kind of side-thought, all we have, as a starting point, are the following three conditions (where  $\Sigma$  stands for a sentence and  $\delta$  for some linguistic device):

- A:  $\delta$  expresses a thought (and not an emotion or the like)
- B:  $\delta$  expresses a genuine *side*-thought (whatever that means exactly)
- C: the side-thought expressed by  $\delta$  ‘belongs’ to the sense of  $\Sigma$

In example (4), it seems safe to assume that conditions A and C are met while, intuitively, condition B is not.

Now what I’ve just been calling into doubt – that a causal sentence expresses the *side*-thought of there being a causal relation between two events – seems to be a claim Dummett actually advances. But before discussing his interpretation, I shall have a closer look at Frege’s own words. Towards the end of ‘Über Sinn und Bedeutung’, Frege briefly discusses (5) and (6) as examples and claims that they express the thoughts listed below the respective sentence:

- (5) Bebel wrongly-believes (*wähnt*)<sup>8</sup> that the return of Alsace-Lorraine will appease France’s desire for revenge. [SB 47, FR 169]
  - (5a) Bebel believes that the return of Alsace-Lorraine will appease France’s desire for revenge.
  - (5b) The return of Alsace-Lorraine will not appease France’s desire for revenge.
- (6) Because ice is less dense than water, it floats on water [SB 48, FR 169]
  - (6a) Ice is less dense than water.
  - (6b) If something is less dense than water, it floats on water.
  - (6c) Ice floats on water.

According to Frege, these are cases where ‘a clause (*Satz*) expresses more through its connection with another than it does in isolation’ [SB 47, FR 169]. Thus, Frege is clearly committed to what might be called a multipropositional account of the relation between sentences and propositions: there are, as Frege put it, ‘more simple thoughts than clauses’ [SB 46, FR 168]. What is not so clear, however, is whether, in the case of (5) and (6), Frege wants to distinguish main thoughts and side-thoughts. Although he frequently uses the term

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<sup>8</sup> The German verb ‘wähnen’ has no counterpart in English, so I chose the hyphenated word as a translation. Holton [2017: 249] claims there is ‘reason for being sceptical of Frege’s account of “wähnen”, even for nineteenth-century German’. But Frege was not misguided about his native language: Grimm’s ‘Deutsches Wörterbuch’ offers numerous examples that conform to his account.

‘*Nebensatz*’ (dependent clause) in his discussion of these two examples, the term ‘*Nebengedanke*’ (side-thought) does not occur a single time, and there is nothing in the text which would suggest that Frege would have taken one of the thoughts to be more at-issue than the others.

But maybe Frege thought the distinction between main thoughts and side-thoughts in his examples to be so evident that he simply saw no need to make it explicit. This seems to be the reading favoured by two eminent Frege scholars: Künne and Dummett. According to Künne [2010: 447], (5) expresses (5b) as a mere side-thought and (5a) as a main thought. Since the German verb ‘*wähnen*’, in the sense intended by Frege, may be construed as a mixture of a negation operator and a belief operator, this seems rather arbitrary. Why isn’t (5b) ‘at-issue’ and (5a) a mere side-thought? Obviously, the choice between these two options depends essentially on the notion of side-thought: is a side-thought just a thought that is less salient from the speaker’s or the hearer’s point of view, is being a side-thought a matter of some objective semantic or syntactic feature of a sentence, are side-thoughts determined by what is at issue in a conversation? Künne does not tell us, and absent a genuine criterion, there is only the vague intuition that (5) is primarily about one of Bebel’s beliefs, and not about the wrongness of what he believes, that speaks in favour of his reading. (Of course, one might argue that side-thoughts are projective thoughts. I shall come back to such an idea in section 6.)

The problem of identifying side-thoughts remains essentially the same if we move from the anti-factive ‘*wrongly-believes*’ to its factive counterpart ‘*knows*’, which is also mentioned by Frege [SB 48] as an example of the same linguistic phenomenon.<sup>9</sup> According to Dummett [2007: 524], sentence (7)

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<sup>9</sup> I am using the term ‘factive’ here as it is frequently used in philosophy: on such an understanding, ‘*know*’, ‘*because*’ and ‘*necessarily*’ are all factive operators. In linguistics, in contrast, a narrower usage seems to be common. Thanks to a referee for pointing that out to me.

- (7) Galileo knew that the Earth went round the sun.  
 (7a) Galileo believed that the Earth went round the sun.  
 (7b) The Earth goes round the sun.

expresses (7a) as a main thought and (7b) as a side-thought, and this may very well be correct in this specific case. When we ascribe knowledge to a figure from the past such as Galileo, what is at issue does not seem to be the truth of (7b), which is taken for granted by everybody today, but rather Galileo's epistemic situation in his time. But now see what happens when a factive operator is applied to a more controversial proposition:

- (8) [1] Sellars recognized that naturalism cannot simply culminate in the replacement of philosophy by some empirical scientific discipline ... [2] Philosophical questions go beyond the interest and the locus of the various scientific disciplines. [Rouse 2015: 8]

As before, it is clear that [1] expresses two thoughts, but our intuitions as to the main thought of [1] are shakier than in the case of (7). Dummett seems to assume that, in general, sentences containing factive verbs like 'know' or 'recognize' are primarily about a knower. In (8), however, the continuation [2] suggests that the main thought of [1] is not about Sellars but about naturalism.<sup>10</sup> Again, there does not seem to be a reliable procedure for recognizing side-thoughts. (As in the case of (5), one may argue that (7b) is a side-thought because it is a projective content, more on which in section 6.)

Let us finally have a look at (6). Michael Dummett [2007: 524-5] takes (6) to be yet another example of a side-thought that is actually expressed by a sentence. According to Dummett, (6b) is the side-thought while (6a) and (6c) are the main thoughts. In contrast to our previous two examples, this seems not only arbitrary but plainly wrong: the very point of uttering a causal sentence such as (6) seems to be making a claim about a causal relation between two

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<sup>10</sup> Think, more generally, of cases where sentences of the form '[Famous person] [factive verb]-s that ~p' are used in reaction to the claim that p. Simons [2007] offers an interesting, and somewhat Fregean, account of such cases: on her view, the main point is carried by the embedded clause, while the main clause functions as an evidential. She also notes that 'know' (unlike 'discover' or 'prove') cannot be used in such a way.

things, and what comes closest to that point is the conditional (6b), which Dummett nevertheless classifies as a mere side-thought.<sup>11</sup> Even more surprising is Dummett's claim that (6a) and (6c) are the main thoughts expressed by (6). In (6), two clauses are connected by the factive operator 'because', and it does not seem to be true in general that clauses which are constituents of a larger sentence  $\Sigma$  express  $\Sigma$ 's main thoughts (think of 'If  $p$ , then  $q$ ' as an example). Nor does it seem reasonable to suppose, in general, that a constituent  $p$  of a larger sentence  $\Sigma$  expresses a side-thought if  $\Sigma$  contains a factive operator as its main operator (think of 'It is necessarily the case that  $p$ '). As before, there might be some notion of side-thought according to which Dummett's proposal comes out as true, but Dummett's reading does not seem to be grounded in a genuine criterion for side-thoughts but rather in the mere intuition as to what a sentence is about.

Later on I shall say more about these examples, but for the time being I submit that there is no reason to suppose that Frege would have regarded examples (5)-(7) as examples involving side-thoughts (as opposed to multiple thoughts).<sup>12</sup> Accordingly, when Frege claims that in some cases 'it may be doubtful whether the side-thought belongs to the sense of a sentence or only accompanies it' [SB 46-7, FR 168], he should not be taken as proposing a distinction between two classes of side-thoughts. Rather, we should read him as claiming that a thought that *would be* a side-thought when being intimated becomes one of the thoughts that belong to the sense of a sentence when it is actually being expressed. This reading is further supported by a footnote [SB 47, fn. 14] in which Frege connects that distinction to the question of whether an assertion is a lie. On the plausible assumption that conveying false non-at-issue contents does not amount to lying, it seems clear that side-thoughts that are made fully explicit thereby turn into thoughts. Accordingly, Frege is committed not to a distinction

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<sup>11</sup> For reasons unknown to me, Dummett changes Frege's conditional (6b) to 'something's being less dense than water causes it to float on water', which makes his claim even less plausible. As a referee points out, Dummett's claim may be more plausible with respect to sentences involving 'since' (as opposed to 'because').

<sup>12</sup> See Neale [1999: 49-51] who similarly takes (5)-(7) to be examples of what he calls 'sequences' of thoughts. Künne [2010: 682] considers (but rejects) the similar idea of analysing (6) as a 'compound thought'.

between two kinds of side-thoughts but rather to a distinction between accompanying side-thoughts and multi-propositional sentences.

### 5. Side-thoughts and conventional implicatures

In the last section I argued that, for Frege, there are no side-thoughts that belong to the sense of a sentence.<sup>13</sup> Frege, however, may have been wrong about that. Recall the three conditions listed above:

- A:  $\delta$  expresses a thought
- B:  $\delta$  expresses a genuine *side*-thought
- C: the side-thought expressed by  $\delta$  ‘belongs’ to the sense of  $\Sigma$

It seems clear that these three conditions, taken together, lead to a notion of side-thought that is close to Grice’s notion of conventional implicature. Conventional implicatures convey propositions (A), they do so because of the conventional meaning of certain words (C), but nevertheless the propositions that are conveyed are not part of what is said (B). I said ‘close’ instead of ‘identical’ since there are at least two differences between Frege and Grice. First, Frege’s term *Sinn* is, of course, not to be confused with the notion of conventional meaning to which Grice [1989: 25] appeals. I assume, however, that this distinction does not play a significant role here. Second and more importantly, Grice’s concept of implicature in general, whether conventional or conversational, is necessarily tied to fairly complex communicative intentions (Grice [1989: 220]; but see Saul [2002]). Since Frege did not share Grice’s interest in such a notion of communication, or ‘meaning<sub>NN</sub>’, his notion of side-thought may be somewhat wider than Grice’s notion of implicature: there might be cases where speakers convey side-thoughts without meaning<sub>NN</sub> them.

Nevertheless, the logical space available to side-thoughts of that kind is quite small, which is

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<sup>13</sup> More exactly, Frege never offers an example of such a kind of side-thought.

primarily due to condition A. Many linguistic devices that have been offered as examples of conventional implicature will not count as side-thought expressing devices (henceforth: STEDs) since, for Frege, there are numerous devices that convey a certain kind of content (*Inhalt*) without expressing a thought. First of all, expressive terms such as ‘cur’ are instances of what Frege calls ‘colouring’; they are not, however, words that express thoughts, unless, of course, they are implausibly construed in a speaker subjectivist way (but see Künne [2010: 448-9]; Burge [2012: 63]). Second, ‘utterance modifiers’ [Bach 1999] like ‘therefore’ or ‘moreover’, which are most plausibly understood as indicators of Fregean *Kraft* or illocutionary force, will also not count as STEDs. Third, and perhaps most importantly, Frege seems committed to the claim that *any* kind of semantic indeterminacy of some sentence  $\Sigma$  implies that  $\Sigma$  does not express a thought, whether  $\Sigma$  contains vague terms such as ‘heap’ (see Frege’s letter to Peano, 29 September 1896; [PMC 114]) or ill-defined terms such as ‘the will of the people’ [SB 41].<sup>14</sup> This is important since, according to some scholars, conventional implicatures generally share a feature which Horn [2013: 160], following Potts [2007], calls ‘descriptive ineffability’ (cf. Gutzmann [2013: 42-4]), and descriptive ineffability means that the contribution of some device often cannot easily be characterized by means of a sentence that expresses a Fregean thought. The ‘elusive quality’ [Blakemore 2002: 53] of ‘but’, briefly discussed above, would be an example. Accordingly, the word that has become *the* standard example of a device that carries a conventional implicature is plausibly not a STED.

In order to see whether this leaves us empty-handed, we first ought to ask whether there is a test that may help in distinguishing thoughts from mere side-thoughts. Consider, for a start, the following two sentences.

- (9) The cur howled the whole night. [Log 152, FR 240]  
 (10) The dog howled the whole night, and I don’t like the dog.

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<sup>14</sup> I am assuming here that Frege’s account of vague terms in [GGA II: § 56] is his considered view. But compare Künne [2010: 256-70].

In a certain sense, these two sentences convey the same pieces of ‘information’: by hearing either (9) or (10), you learn something about an event in the past and about the speaker’s ‘attitude’ towards a certain part of that event. There is, however, a striking difference: in (10), the speaker’s attitude is described; in (9), it is expressed. Accordingly, you can react to (10) by uttering

(11) That’s not true; you’ve always loved the dog.

In contrast, (11) would not be a felicitous reply to (9). Asking yourself whether some piece of information can be directly denied or affirmed is, in effect, Frege’s ‘test’ (*Probe*) for whether words such as ‘cur’ contain ‘an entire thought’ [Log 152], which Frege denies.

It seems clear that Frege’s *Probe*, now known under various names such as ‘assent/dissent test’ [Koev 2018], may be employed not only as a means of distinguishing expressive from propositional content but more generally as a test for various kinds of ‘non-at-issue’ meanings.<sup>15</sup> Consider two examples, involving phenomena standardly categorized, respectively, as conventional implicatures and presuppositions:

(12) She is poor but honest.

(12a) Wrong, there isn’t any contrast between poverty and honesty.

(12b) Whaddaya mean, ‘but’?

(13) He has to pick up his sister at the airport. (Cf. Stalnaker [1999: 52])

(13a) That’s false, he hasn’t got a sister.

(13b) Wait a minute, I’ve always thought he only had a brother.

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<sup>15</sup> See Potts [2015: 175], who claims that ‘wait a minute’ can be used to object against a ‘wide range of non-at-issue content’, including conversational implicatures. It is perhaps worth noting that non-encoded contents such as accompanying side-thoughts sometimes cannot even be targeted by ‘wait a minute’ replies since such responses require a content that is, to some extent, obvious. Think of Frege’s Napoleon example: since, as Frege aptly notes, the side-thought is only ‘*slightly* suggested’, replying to (2) by uttering ‘Wait a minute, that’s not why Napoleon led his guards against the enemy position’ would be odd (in contrast to ‘Wait a minute, *do you want to suggest that ...?*’), and the same goes for some cases of particularized conversational implicatures.

In both cases, the (a)-answers are odd, while the (b)-answers, that target secondary contents by explicitly signalling that the answer is not a reaction to what is said, are felicitous. Of course, intuitions may and do vary in some cases, and so we shouldn't expect the diagnostic to work as reliably as litmus paper (see Koev [2018]), but for present purposes the diagnostic should be good enough.

The three conditions listed above may then be spelled out as follows. A linguistic device  $\delta$  is a STED iff

- A\*:  $\delta$  expresses a propositional content (unlike cases of colouring)
- B\*: that content cannot be directly affirmed or denied (unlike main thoughts)
- C\*:  $\delta$  expresses a thought as part of  $\delta$ 's linguistic meaning (unlike accompanying side-thoughts)<sup>16</sup>

Now I think there might be quite a few STEDs, but I shall focus on two particularly unproblematic examples: 'even' and 'too':<sup>17</sup>

- (14) Even Bill passed the exam.
- (15) Berta passed the exam, too.

It is generally accepted that 'even' conveys two distinct secondary contents (see Bach [1999: 354]; Horn [2013: 162]). First, by uttering (14), you convey that Bill's having passed the exam is, to put it roughly, surprising or improbable. Since, in this respect, the exact contribution of 'even' is as contested as the contribution of 'but', it seems safe to say that what is conveyed here is not a Fregean thought. Second, in uttering (14), you communicate that there were some other students who passed the exam, and this seems to be a clear

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<sup>16</sup> Since the relation between sense and linguistic meaning is controversial (see, e.g., Burge 2012), I should stress that I am not assuming here that the two notions can be identified, but it seems uncontroversial that the two notions coincide as long as we ignore indexicals and colourings.

<sup>17</sup> Interestingly, both of these words have been categorized as presupposition triggers, but also as devices that carry conventional implicatures (see Potts [2015: 171, 188] and the literature cited there). Since the borderline between these two phenomena seems rather blurry, it might be wise to construe such words more neutrally as 'use-conditional' items. Cf. [Kaplan 1999; Gutzmann 2013].

example of a thought. Moreover, it is a thought that is part of the linguistic meaning of (14) and thus ‘belongs’ to the sense of that sentence. However, in contrast to

(14a) Bill passed the exam, and some other students did so as well,

it is a non-at-issue thought. Suppose speaker A utters (14) and B reacts to that by saying ‘That’s not true’. The most natural interpretation of that utterance would be that B wants to deny that Bill passed the exam and not that B wants to claim that Bill was the only one who passed. If you want to claim that, you should resort to an indirect challenge of the ‘hey, wait a minute’ type. (Since (15) carries essentially the same existential implicature, I shall pass over it here.)

To sum up: Frege does not seem to have believed in the existence of side-thoughts that belong to the sense of a sentence, but he was arguably wrong: there are indeed some genuine STEDs, and although STEDs resemble conventional implicatures, the category of STEDs is not identical to conventional implicatures in the sense of Grice, Horn, Potts or any other scholar known to me.

#### 6. Multiple Propositions vs. Side-thoughts vs. Presuppositions

Let us finally see what happens when we apply Frege’s test to instances of multi-propositionality, focusing on the case of knowledge. Consider a slightly modified version of one of Frege’s examples:

(16) Bebel knows that the return of Alsace-Lorraine will appease France’s desire for revenge.

Suppose you utter (16) and somebody else (A) replies by saying ‘That’s not true’. What are you to make of that reply? The only reasonable way to interpret A’s denial seems to assume

that A wants to deny (16) *as a whole*, and this is just what we would expect on Frege's claim that (16) expresses a conjunction or a sequence of propositions.<sup>18</sup> (Compare this to a case where somebody utters either '*p* and *q*' or *p* and *q* in immediate succession.) If we want to single out one of the propositions contained in the sentence, it seems as though we have to state it explicitly, and when doing that, not much seems to depend on whether we use 'that's not true' or 'wait a minute', which may indicate that such contents are located somewhere in the penumbra between at-issue and non-at-issue contents.

(16a) That's not true, Bebel doesn't believe that in the first place.

(16b) That's not true, the return of Alsace-Lorraine won't appease France's desire for revenge.

(16c) Wait a minute, I'm almost certain Bebel doesn't believe that.

(16d) Wait a minute, returning Alsace-Lorraine clearly won't appease France's desire for revenge.<sup>19</sup>

Multi-propositionality, exemplified by (16), is different from either colouring or side-thoughts and must also be distinguished from presupposition. A striking feature of (16) is that it contains a word that is frequently classified as a presupposition trigger. This raises a simple question: since Frege was well aware of the existence of presuppositions, which he calls 'Voraussetzungen' (henceforth: F-presuppositions), why doesn't he take sentences such as (16) to be examples of F-presupposition? Let's have a look at a slightly altered version of the above example:

(17) The chairman of the Social Democratic Party knows that the return of Alsace-Lorraine will appease France's desire for revenge.

(17a) There is a chairman of the Social Democratic Party.

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<sup>18</sup> The importance of distinguishing conjunctions and sequences has been stressed by Bach [1999: 350-5] and Neale [1999: 57]. Since nothing seems to depend on that distinction here, I shall remain non-committal about this issue.

<sup>19</sup> A referee raises the question of whether Frege's multi-propositional account works for 'emotive factives' (such as 'regret'). A sentence such as 'Bebel regrets that *p*' clearly seems to be about one of Bebel's emotional states and not about the truth of *p*. There are all sorts of complicated issues here, but perhaps a Fregean could argue that this is not due to the semantic or pragmatic properties of such sentences but rather to the psychological salience of emotion terms. There is, after all, psychological evidence that emotion words are processed more quickly than neutral words (see Knickerbocker et al. [2014]).

(17b) The return of Alsace-Lorraine will appease France's desire for revenge.

According to textbook accounts of presupposition (see, e.g., Levinson [1983: 181-5]), (17) contains at least two presupposition triggers (a definite description and a factive verb) and thus presupposes (17a) as well as (17b). Frege, in contrast, takes only (17a) to be an F-presupposition of (17), while (17b) is, for him, just one of the thoughts expressed by (17).

This might seem odd since singular terms and the verb 'knows' both seem to carry projective contents. In both cases, operators such as negation function as (presupposition) holes. But this isn't a good reason for lumping these two cases together unless one assumes that all projective contents are presuppositional, which clearly isn't the majority view today. (Expressives such as 'that bastard', which are often thought to carry conventional implicatures [Potts 2005], are an obvious counter-example.) One might also claim that the proposition that does escape through the hole conveys a non-at-issue content, which might support Dummett's claim, discussed in section 4, that (7b) is a side-thought expressed by (7). While I would concede that this is one way of defining non-at-issueness<sup>20</sup>, there is no reason to assume that Frege thought projection to be constitutive of the phenomena he discusses, although he was aware of it [SB 40]. What sparked Frege's interest in words such as 'know' or 'because' was not projection but the threat of substitutivity failures [ibid. 47]; and his interest in F-presupposition was also not motivated by projectivity but by the threat of truth-value gaps [ibid. 28, 32-3, 39-41].

Frege talks about F-presuppositions quite rarely and only in application to proper names or definite descriptions such as 'Kepler', 'the person who discovered the elliptical form of the planetary orbits' [ibid. 40] or 'the separation of Schleswig-Holstein from Denmark' [ibid. 42, fn. 10]<sup>21</sup>, and what distinguishes these F-presuppositions from presuppositions in the modern

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<sup>20</sup> See Simons et al. [2010] who claim that meanings project iff they are not at-issue. Since, as noted by Stalnaker [1999: 55], knowledge claims sometimes involve answers to two possible questions under discussion, 'knowing' may be a counterexample to the left-to-right direction of the biconditional.

<sup>21</sup> Contrary to what some scholars [Levinson 1983: 182; Karttunen 2016: 707] assume, Frege did not think that

sense seems to be this. Suppose you want to express something like the thought that is expressed by (17) but want to remain non-committal about the truth of (17b). In this case, you can express that thought by using the sentence ‘The chairman of the Social Democratic Party *believes* that ...’. Similar things could be said about colouring devices such as ‘cur’: if you want to express what is conveyed by ‘The cur was howling the whole night’ *minus* the attitude expressed by ‘cur’, you can use ‘The dog was howling the whole night’; if, on the other hand, you want to remain non-committal about the descriptive content of ‘cur’, you might say ‘That damn thing was howling the whole night’. Thus, in the case of multi-propositional sentences and colouring devices, we always seem to be able to ‘disentangle’ the thoughts and attitudes that are expressed by a given sentence. In such cases, there is, or there might be, a sentence that conveys any possible combination of thoughts and attitudes we may wish to express.

Now suppose, in contrast, that somebody felt the strange urge to say what is being expressed by (17) *minus* the thought expressed by (17a). It seems clear that we cannot disentangle (17) and (17a) here since the falsity of (17a) would imply that (17) wouldn’t have a truth-value or wouldn’t express a thought in the first place.<sup>22</sup> In short, if you drop a presupposition such as (17b), you might express a *different* thought; if, in contrast, you drop an F-presupposition such as (17a), you will, on Frege’s view, either not express a thought in the first place or express a thought that lacks a truth-value.

Finally, the difference between presuppositions and F-presuppositions is also reflected in their behaviour in inferences and conditionals. As noted by Grice [1961: 128], if a proposition  $p$  is presupposed by some sentence  $\Sigma$ , one may make that explicit by a conditional of the form  $\Sigma$

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temporal clauses F-presuppose anything. The sentence ‘After the separation of Schleswig-Holstein from Denmark ...’ [SB 43, FR 165] does indeed F-presuppose that Schleswig-Holstein was once separated from Denmark. This, however, is not due to the temporal clause but to the proper name ‘the separation ...’. The sentence ‘After Schleswig-Holstein was separated from Denmark ...’, in contrast, expresses a sequence of thoughts.

<sup>22</sup> The two disjuncts correspond to the two accounts of vacuous terms considered by Frege. Cf. [SB: 32] vs. [17KS: 190].

→ p. A sentence such as ‘If A knows that p, then p’ is, of course, as boring as any other conceptual truth, but it is true and felicitous. When trying the same in the case of F-presuppositions, the result would be quite odd: a sentence such as ‘If Kepler is an astronomer, then he exists’ seems to involve a kind of category mistake reminiscent of the ontological argument.<sup>23</sup>

## 7. Conclusion

What emerges, then, in Frege’s discussion of side-thoughts and related phenomena is a set of four pragmatic categories: accompanying side-thoughts, multi-propositional sentences, F-presuppositions and STEDs, but his account of ‘non-at-issue’ contents (broadly construed) is richer than that: above all, there are the heterogenous devices Frege describes as conveying ‘colouring’ or the like. I have recently argued that there are three clearly distinguishable subtypes of colourings [Sander 2019], and combining these taxa with the categories I have been distinguishing here yields a detailed map of the types of secondary content Frege acknowledges (or, in the case of STEDs, ought to have acknowledged):

- I) Side-thoughts that accompany the sense of a sentence (cognitive lexical effects)
- II) Sentences that express multiple propositions (‘knows’, ‘because’ etc.)
- III) Devices that carry F-presuppositions (proper names)
- IV) STEDs (‘even’, ‘too’ etc.)
- V) Colouring devices
  - a) Colourings without content (non-cognitive lexical effects)
  - b) Colourings with content
    - i) Communicative colourings or hints (‘cur’, ‘but’ etc.)

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<sup>23</sup> Cases involving possibly fictional persons (‘If Homer wrote the Iliad, then Homer existed’) may appear more felicitous. Thanks to a referee for suggesting that example to me.

ii) Non-communicative colourings ('it is true ...' etc.)

Frege's taxonomy sorts linguistic devices in a way that seems odd when compared to standard textbook categories. This, however, does not have to be a bad thing. Quite to the contrary, Frege's alternative approach may deserve more attention as a theoretical competitor to conventional wisdom about implicature, presupposition and such. One moral to be drawn from recent work on these issues seems to be that the boundaries between different subsemantic phenomena are much more problematic than scholars would have assumed roughly two decades ago. Take the term 'conventional implicature' (CI) as an example. A striking feature of the debate on CIs is a constant conceptual gerrymandering: Grice's original notion of CI [1961: 126-32, 1989: 25-6] covers only a few words such as 'but' and 'therefore'. Bach [1999] argues, in effect, that 'CI' is an empty term. Potts [2005] claims that there are CIs but offers expressives and supplements as examples. Horn's [2007, 2013] notion of CI, or F-implicature, is roughly as encompassing as Frege's notion of colouring. And, finally, Lepore and Stone [2015: 149] argue that phenomena such as indirect speech acts, commonly thought to be akin to conversational implicatures, are also instances of CI. In short, the notion of CI is a conceptual muddle, and some of the Fregean categories *might* work better than the terminological tools to which we are accustomed today.

In order to see whether Frege's original theory is, at least in some respects, superior to more recent approaches, we would have to look more closely at the contribution of the linguistic devices he discusses, and that would go well beyond the scope of this paper. However, since some scholars who played an important role in shaping pragmatics have more recently realized that the 'rich palette of semantic relations' (Karttunen [2016: 705]; cf. Horn [2007, 2013]) which is to be found in Frege should play a role in shaping future research, I am confident that linguists as well as philosophers should be paying closer attention to Frege's theoretical approach.

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