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Do Logical Aliens Think? Frege's Agent-Relative View of Logic's Constitutive Role for Thinking

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Abstract: Must you respect basic logical laws (BLL) – such as the law of non-contradiction – in order to think? Frege wrote that one must “acknowledge” BLL in order not to “abandon judgement altogether”. Some have argued that Frege therefore thought of logic as somehow ‘constitutive’ of thinking. However, some interpreters contend, due to his strong commitment to logic’s normative status, that Frege held the opposite view, namely the non-constitutivist view that (systematic) ‘illogical’ thinking is possible and that one need not accept or follow BLL in order to think as such, although one must do so in order to think correctly. The aim of this paper is to investigate the interpretative landscape regarding Frege’s view on logic’s constitutive role for thinking and suggest, against the non-constitutivist readings, that he indeed was committed to some version of the constitutivity thesis, but that this commitment is not, as some constitutivist interpretations suggest, inconsistent with the idea that logic is normative for thinking. I will, instead, propose to read his view in a soft and agent-relative sense, according to which it is a necessary condition for the possibility of thinking that the agent in question is sensitive to and acknowledges BLL.

Keywords: Frege; logic; normativity of logic; thinking; logical aliens

1 Introduction

Are basic logical laws (BLL) – e.g., the law of non-contradiction or the law of identity – necessary for *thinking*? In the Preface to his *Basic Laws of Arithmetic* (henceforth: Preface), Frege writes that one must “acknowledge [anerkennen]” BLL in order not to “abandon [verzichten] judgement altogether” (XVII). Frege thereby seems to

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endorse the idea that logic is somehow ‘constitutive’ of thinking.¹ However, in virtue of his strong anti-psychologistic commitment to logic’s universal and therefore normative status, some interpreters believe that Frege advocated the opposite view, namely the non-constitutivist view that (systematic) ‘illogical’ thinking is possible and that one need not accept or follow BLL in order to think as such but must do so in order to think correctly.² The textual evidence for both readings seems to have created a stalemate.

Questions over logic’s constitutive role for thinking have received significant attention in recent years, especially related to what has been canonized, following Frege and Wittgenstein, as ‘logical aliens’ – beings that reject BLL and thereby exhibit what Frege refers to as an “unknown kind of madness [Verrücktheit]” (Frege 2013: XVI).³ My aim in this article is to draw out the interpretative routes that have been taken regarding Frege’s view on logic’s constitutive role for thinking and rationally reconstruct from Frege’s texts what I call an agent-relative constitutivity thesis. I will argue that this view is not, contrary to other constitutivist readings of Frege, inconsistent with another of Frege’s main claims, namely that logic is normative for thinking.

Although not endorsing the view themselves, Conant (1991) and Cerbone (2000) portray Frege’s understanding of constitutivity in a strong sense, according to which every piece of mental activity not directly living up to the strictures of logic is disqualified as thinking. That is evidently inconsistent with the idea that logic provides guidelines for correct thinking (the normative claim), since it excludes that one can commit logical blunders that nevertheless count as thinking. However, besides being philosophically unstable, this strong rendering appears to be an inaccurate reconstruction of Frege’s view. Against that, I propose to read his view in an agent-relative sense. According to this view, it is a necessary condition for the possibility of an agent performing the activity of thinking that the agent is sensitive to and acknowledges the normative weight of BLL. As I will argue, this reference to agency does not entail psychologism, since it is not about the ‘nature,’ of logic, but about the relation between logic and the mental activity of thinking. This rational reconstruction is consistent with what Frege writes and is more appealing from a systematic point of view. It avoids the deficiencies of both the strong constitutivist and

1 This is for example argued by Conant (1991), Burge (1992), Cerbone (2000), MacFarlane (2002), Taschek (2008), Steinberger (2017), Mezzadri (2018) and Pedriani (2019).

2 We find this interpretation in Baker and Hacker (1984), Greimann (2014), Kanterian (2012), Mezzadri (2015a), Mezzadri (2015b), Evnine (unpublished).

3 The term was introduced by Ricketts (1996), canonized by Conant (1991), and has since been used frequently in the literature on Frege, Wittgenstein and the (constitutive) relation between logic and thinking, e.g., in Cerbone (2000), Tanesini (2014) and Mezzadri (2015a), Mezzadri (2015b), Mezzadri (2018).

the non-constitutivist view by making the constitutive and normative aspects interwoven (against the strong constitutivist) and by steering clear of the counter-intuitive claim that truth-seeking discourse can take place while one systematically rejects basic, truth-preserving laws (against the non-constitutivist). Nevertheless, Frege did not make any detailed and systematic articulation of the idea that logic is constitutive of thinking, hence the need for rational reconstruction. At times, he indeed hints towards a non-constitutivist view, which helps to explain the substantial disagreement about his position. However, an examination of those passages that *prima facie* favour the non-constitutivist reading will reveal that they do not do so unequivocally.

The paper is structured as follows: In Section 2, the alleged tension in Frege's view between the normative and constitutive status of logic is introduced alongside some essential concepts: logic, thinking and psychologism. In Section 3, I suggest a definition of 'constitutivity', which is followed up in Section 4 by an outline of what I call Frege's agent-relative view of logic's constitutive role for thinking, which tallies with the definition provided in Section 3. In Section 5, one of the more forceful non-constitutivist readings provided by Dirk Greimann is presented and contested. In Section 6, I consider how my reconstruction of Frege squares with a recent, and quite promising, constitutivist reading, particularly defended by Pedriali (2019), who assigns to Frege a view he calls "content-constitutivity" and rejects what he calls "agent-constitutivity". Although I sympathise with the main thrust of Pedriali's interpretation, I find the rejection of agent-constitutivity questionable whilst his version of content-constitutivity seems too broad in saying that logic is not merely constitutive of judging but thinking as such (in Frege's broad sense of thought-grasping).

2 The Alleged Tension

Frege thought of logic as somehow *normative* for thinking, since it provides "guidelines" or "standards" that are "prescribing" how to "arrive at the truth" (Frege 2013: XV–XVI).⁴ Logical laws are thus "laws of thought":

The ambiguity of the word "law" here is fatal. In one sense it says what is, in the other it prescribes what should be. Only in the latter sense can the logical laws be called laws of thought, in so far as they legislate how one ought to think. (Frege 2013: XV)

In its most plain sense, this means that it is bad to make judgements that violate laws of logic (say, the law of non-contradiction) and good to make logically consistent

⁴ In his unpublished drafts on logic dated to 1887, he compares logical laws with moral laws and calls logic a "normative science" (Frege 1979a: 128–129, 145–146).

ones. Let us call the assumption that logic has normative bearing on thinking Frege's normativity thesis.⁵

Before proceeding, let me briefly indicate how Frege understood the two *relata* in the Normativity Thesis, logic and thinking.

Logic is commonly understood as the specification of patterns of logical consequence on truth-bearers (Fregean thoughts, say). A conclusion follows from a set of premises if and only if any case where all the premises are true is also a case where the conclusion is true. Although Frege's general understanding of logic differs in many ways from contemporary ones, he entertains a conception similar to this when he says in "The Thought" that it "falls to logic to discern the laws of truth" (Frege 1956: 289). Basic logical laws (e.g., the law of noncontradiction)⁶ and logical inference rules (e.g., modus ponens) are concerned with truth-preservation, and truth-preservation is the core of logical consequence.

Thinking is typically defined by Frege as the mental act of "comprehending" or "grasping" a thought, or as the act of understanding the *content* or *sense* of a thought (Frege 1948: 216, Frege 1956: 294, 307), where thoughts, as he says in "On Sense and Reference", are the "objective content" of thinking, the senses of sentences and the primary truth-bearers (Frege 1948: 214). I agree with MacFarlane that this cannot be what Frege means when he says that logic is normative for thinking (MacFarlane 2002: 36ff). Grasping a contradictory thought does not convert me into a deficient reasoner. As MacFarlane points out, one could even say that grasping illogical thoughts is necessary for distinguishing good from bad thinking. To realize that something is wrong if I do not accept 'A' while accepting 'A ∧ B' requires that I understand the content of the conjunction of '¬A' and 'A ∧ B'. Consequently, if we say, following Frege, that logic provides guidelines for thinking, the term must have more to it than mere thought-grasping. Fortunately, Frege does define 'thinking'

5 This does not conflict with what Frege says in the opening lines of "The Thought" about logic's descriptive character, where he likens them to laws of nature, not moral laws (Frege 1956: 289). Frege's logical realism means, for example, that the law of identity (each thing is identical to itself) is a maximally general truth about every object. The normative aspect is a consequence of this descriptive character – you ought to acknowledge the laws of logic when judging because they constrain what can be true about reality (and truth is the aim of judging). On this relation between the descriptive and normative character of logic, see for example Steinberger (2017) and Willert (forthcoming).

6 Frege's realist and monist conception of logic and the specific laws of logic are given alongside his so-called 'Begriffsschrift' (concept-script), referring to the specific notational, logical system that he developed. As Taschek has said it, Frege attempts to provide a set of basic laws that function as substantive generalizations about objects and concepts, and to derive other laws from these (Taschek 2008: 380–381). The axioms of Frege's 'Begriffsschrift' are those basic logical laws (BLL). An example is the law of identity: $(\forall x) (x = x)$, which is a maximally general truth about every object (Frege 2013: XVII).

differently. In “On Sense and Reference”, he uses “thinking” as synonymous with “judgement”, where the latter is understood not as “mere comprehension of a thought, but the recognition [Anerkennung] of its truth” (Frege 1948: 216ff), or as the advance “from a thought to a truth value” (ibid.: 217), the public manifestation of which he calls “assertion” (Frege 1956: 294).⁷ If logic is normative for anything, it must be this truth-seeking activity.

Frege’s Normativity Thesis is deeply tied to his well-known rejection of so-called (individualistic) psychologism, which was a part of the ongoing ‘Psychologismus-Streit’ in Germany, roughly between 1890 and 1920. Psychologistic theories of logic, Frege states in his notes on logic, consider the “task of logic to be that of describing how men actually think” (Frege 1979a: 143). This is supposed to mean that logic (and truth) can be reduced to facts about human psychology and hence is, in some sense, subject-dependent (non-objective). Would a logical inference that is valid today be valid in two thousand years from now? A psychologistic logician would, according to Frege, have to say: not necessarily. Certain laws of truth *could* be true at time T_1 for some creatures while untrue for others at time T_2 .⁸ On the psychologistic view, the law of identity would in principle be as correct to follow as its denial. In that case, ‘logical error’ would become senseless and the normative status of logic would dissolve. To have a normative function, Frege argues, logic (and truth) must be objective – otherwise, the notion of error loses its strength:

The laws of being true are not psychological laws [...] but boundary stones which are anchored in an eternal ground, which our thinking may wash over but yet cannot displace. And because of this they set the standards for our thinking if it wants to attain the truth. (Frege 2013: XVI)

Besides claiming that logic is normative of thinking, Frege also indicates that logic is somehow *constitutive* of it (not Frege’s own expression). Let me introduce some of the relevant passages, which chiefly stem from the Preface. There, Frege calls the laws of logic the “laws of thinking”, which are the “most general laws, prescribing how to think wherever there is thinking at all” (XV). Elsewhere in the Preface, again motivated through his rebuttal of psychologism, he writes that one must “acknowledge [anerkennen]” BLL if one does not want to “abandon [verzichten]

7 Unless otherwise noted, I will use ‘thinking’ in this sense, and thus as equivalent for ‘judgement’. As the acknowledgement of a thought’s truth – as the step “from a thought to a truth value” (Frege 1948: 217) – judgement for Frege, at least from 1882 onwards, means the assertion of a thought. However, such a step can of course turn out to be correct or incorrect; that is, judgements can turn out to be either true or false. I therefore disagree with Ricketts’ epistemic equation of “judgement” with “knowledge” or “true judgement”, whereby judging is “to acquire a piece of knowledge” (Ricketts 1996: 131). Judgements are not necessarily pieces of knowledge no matter how flexible the latter term is cashed out. See Kremer (2000) for a critique of Ricketts’ reading.

8 Cf. Cohen (1998: 48).

judgement altogether” (XVII). And in *The Foundations of Arithmetic*, he questions whether one can be said to think at all if one denies fundamental propositions of arithmetic, which are, according to Frege’s logicist outlook, intimately tied to his conception of logic (Frege 1953: 21/\$14). In another central passage in the Preface, Frege elaborates on this idea by introducing what has been canonized as ‘logical aliens’. In arguing against logical psychologism, he considers the idea of beings that systematically reject BLL:

What, however, if beings were even found whose laws of thought directly contradicted ours, so that their application often led to opposite results? The psychological logician could only accept this and say: for them, those laws hold, for us these. I would say: here we have a hitherto unknown kind of madness [Verrücktheit]. (XVI)

What are logical aliens? Joan Weiner has defined them as “beings who actually could understand the content of a primitive logical law, yet reject it” (Weiner 1990: 74). A logical alien is not a being that often or occasionally makes logical mistakes, but one that abides by laws that outright contradict BLL, for example the negation of the law of non-contradiction. On a first and general approximation, we could understand the idea that such beings exhibit an “unknown kind of madness”, or that one abandons judgement if one does not acknowledge BLL, as follows: For an activity to be called thinking, it must be consistent with or abide by BLL. That idea is, on the face of it, distinct from and stronger than the assumption behind the normativity thesis, namely that it is (merely) a bad thing to be logically inconsistent. Seemingly, logical aliens are not merely bad reasoners, but fundamentally irrational, no longer within the scope of thinking, which would suggest that logic is, in some sense, constitutive of thinking.

The psychologistic logician cannot accept this. He is forced to accept that logical aliens are not bad, confused or mad thinkers; they are just different kinds of thinkers, following different types of laws, and therefore they would be warranted in considering us to be just as confused or mad. (As I come back to, this would entail that a being can be a thinker (truth-seeker) while discarding truth-preserving laws, as if one could be a chess-player while discarding the rules of chess).

However, a series of Frege-interpreters have argued that there is a fundamental tension in Frege’s general purview between the constitutive and normative aspects: If logically inconsistent thinking is disqualified as something that can legitimately be called thinking, there is no normative role for logic to play; illogical thinking is not even a theoretical possibility if an activity must be logically consistent to be instantiated as thinking.⁹ David Cerbone has for example argued that the laws

⁹ Mezzadri (2015a), Mezzadri (2015b) provides an informative overview of the different readings of this tension.

of logic cannot both say how “one ought to think” and be “internal to thinking” (Cerbone 2000: 298). Cerbone argues that if we examine Frege’s idea of logical aliens, then the normative and constitutive strands cannot be reconciled: According to the normative strand, the logical alien is nothing but a bad thinker, and according to the constitutivist strand, the logical alien is no thinker at all. Let us call this view of constitutivity, which is incompatible with the normativity thesis, the ‘strong constitutivity thesis’ (SCT):

SCT: To qualify as thinking, an activity must consist of parts that all instantiate a correct application of the laws of logic.

James Conant, who also ascribes SCT to Frege, writes that the laws of logic, according to Frege, “display what is involved in any thinking or reasoning” (Conant 1991: 134).¹⁰ On this reading, which occupies one end of the interpretative spectrum of Frege’s view, an activity is not qualified as thinking if it does not directly accord with BLL. (As we shall see in the next section, SCT is not a very attractive position, since it is much too demanding and discards simple, logical blunders as pieces of non-thinking. But Cerbone and Conant seem to think that Frege was committed to it).

At the other end of the spectrum, Baker and Hacker (1984), among others,¹¹ deny that there is any sense in which logic, according to Frege, is constitutive of thinking. They believe Frege rejected the idea that BLL are “constitutive rules, definitive of what counts as thinking” (Baker and Hacker 1984: 44). Instead, they argue that he was committed to the idea that logical aliens are thinkers, although awful ones. Thereby, they put the weight on the normative claim.

3 What is Constitutivity?

In Section 4 and 5, I will argue why both the strong constitutivist and the non-constitutivist readings are mistaken and why there is no tension in Frege’s view between the normative and constitutive aspects. To do that, allow me first to briefly deviate from Frege’s texts and look into a plausible definition of constitutivity (to my knowledge, no one writing on Frege’s constitutive view has yet attempted a definition of constitutivity). A general and vague definition could be the following:

¹⁰ He also writes that “*accord with the laws of logic* is constitutive of the possibility of thought.” (Conant 1991: 134, *my emphasis*). Without leaving out any wiggle-room for interpreting Conant’s use of “involved in” and “accord with” more loosely, it seems to me that he ascribes some version of SCT to Frege, since the constitutivity thesis is contrasted with the Normativity Thesis.

¹¹ Greimann (2014), Kanterian (2012) and Evnine (unpublished).

‘Constitutive Law’ (CL): A law *L* is constitutive of an activity¹² A iff *L* fixes or is essential to the instantiation of *A*.

Here, the deontic operator that relates the law to the activity comes with a necessity clause. One ought necessarily, not contingently, to comply with the law. As constitutive, the law is not a contingent part of the activity but must be involved for the activity to materialise. But how strongly should we understand the ‘must be involved’? John Searle (1969) has provided some useful conceptual tools with his distinction between regulative and constitutive laws. Traffic laws are regulative in the sense that even if violating them while driving, the activity still counts as driving. By contrast, constitutive laws or rules

create or define new forms of behavior. The rules of football or chess, for example, do not merely regulate playing football or chess but as it were they create the very possibility of playing such games. The activities of playing football or chess are constituted by acting in accordance with (at least a large subset of) the appropriate rules. (Searle 1969: 33–34)

First, it is a trivial fact that the activity of playing chess would not be possible if there were no chess rules – the rules create or constitute the possibility of the activity. Second, Searle anticipates the worry that not every attempted act of something has to be in accordance with every rule of something in order to qualify as an appropriate activity (only a “large subset” of the rules). That is surely a reasonable qualification. If the opposite was the case, I would cease to play chess the moment I made a move that contradicts those rules (e.g., if I move the knight from G2 to H5), even if my move merely resulted from a moment of unawareness, which strikes me as false. To take another example, people often make grammatical mistakes in their native tongue, but they do not thereby cease to speak that language. Bad English still qualifies as English – if, we could say, it lives up to a large subset of the rules of grammar. Regarding logic, it also seems reasonable to claim that in order to qualify a mental act as a logical fallacy; it must still be recognizable as an inference of sorts, as having something in common with a correct inference. And this could mean that sufficiently many (parts of) logical rules can be observed in that mental activity.¹³ Hence, to pose it as a necessary condition for the instantiation of a particular activity that it follows or accords with all the laws for that particular activity simply appears too demanding.

¹² To say that constitutivity is necessarily linked to ‘activity’ and ‘agency’ excludes talk, for example, about physical laws being ‘constitutive’ for physical ‘events’, since what pertains in those relations is a necessity constraint between the law and event: for an event to be a physical event, it must be subsumed under physical laws.

¹³ Thanks to an anonymous reviewer for pushing me to clarify Searle’s view.

However, the suggestion of a “large subset” also appears vague. It leaves us asking which and how many rules this subset ought to contain, a decision that will seem, to some degree at least, arbitrary. Can we define the constitutive relation between L and A in a less demanding way that supplements the vague qualification of a “large subset”? My proposal is that an ‘agential specification’ must partake in any plausible definition of constitutivity. Timothy Williamson has alluded to something along those lines by stating that a rule is constitutive of an activity if the person doing the activity exhibits “some sensitivity to the difference [...] between conforming to the rule and breaking it” (Williamson 2000: 240). This conception of constitutivity can incorporate, as opposed to more demanding conceptions, the normative aspect of laws, namely that the activity can be evaluated as good or bad depending on how well it conforms to the law in question. We can formulate this improved definition of constitutivity as follows:

‘Constitutive Law*’ (CL*): A law L is constitutive of an activity A iff

(1) it is a necessary condition for the possibility of the agent’s performing A that the agent is sensitive to and acknowledges the normative weight of L.¹⁴

To acknowledge the normative weight of something means that one accepts, when informed, that one has performed the activity badly when not following the law. On the other hand, a person would not merely do an activity (playing chess, say) wrongly, but cease to perform that activity if she violated the rules of chess without accepting, when informed, that she was doing something wrong.¹⁵

4 Frege’s Agent-Relative View

How does Frege’s position fit with the proposed definitions? The following passage warrants that Frege adhered to some version of CL*:

[W]hen we judge we cannot discard this law – of identity, for example – but have to acknowledge [anerkennen] it if we do not want to lead our thinking into confusion and in the end abandon [verzichten] judgement altogether [...] Whoever has once acknowledged a law of being true has thereby also acknowledged a law that prescribes what ought to be judged, wherever, whenever and by whomsoever the judgement may be made. (Frege 2013: XVII)

¹⁴ An advocate of SCT, say Cerbone and Conant’s reconstructed Frege, would probably agree with (1), but would be forced to reject (2), because (2) entails that one can still be said to perform the relevant activity without following the constitutive law for that activity, which SCT rejects.

¹⁵ In game examples, such as chess, one would probably have to add: “if you are not trying to trick your opponents”. One could be outwardly sensitive to and accept the rules of the game when someone points out a wrongdoing, but otherwise try to win by cheating.

Here Frege introduces an agential specification. He says that thinking is led into “confusion” and that we “in the end abandon judgement altogether” if we do not *acknowledge* BLL. However, the paragraph is ambiguous. Just after writing that one must “acknowledge” BLL in order not to “abandon judgement altogether”, he writes: “I neither want to dispute nor to endorse this opinion”. Thus, he presumably takes an ambivalent or agnostic stance towards the view that one abandons judgement altogether if one does not acknowledge BLL. However, if we examine the paragraph closely that is not a self-evident interpretation. Here is the entire passage:

As to the question, why and with what right we acknowledge a logical law to be true, logic can respond only by reducing it to other logical laws. Where this is not possible, it can give no answer. Stepping outside logic, one can say: our nature and external circumstances force us to judge, and when we judge we cannot discard this law – of identity, for example – but have to acknowledge it if we do not want to lead our thinking into confusion and in the end abandon judgement altogether. I neither want to dispute nor to endorse this opinion, but merely note that what we have here is not a logical conclusion. (ibid.)

The passage is ambiguous, since Frege’s agnosticism can refer to either (1) the claim about how creatures like us become judging subjects in the first place, that is, subjects aiming at truth, (2) that “when we judge we cannot discard” BLL, (3) that one must “acknowledge” BLL in order not to “abandon judgement altogether”, or (4) the conjunction of 1–2, 2–3 or 1–3.

Remember that what Frege neither wants to dispute nor to endorse is something that is not a “logical conclusion”. Of the four options, what is not a “logical conclusion” is that humans aim or strive for truth in virtue of our “nature and external circumstances” (because of physical inclinations or cultural conventions, say), since both (2) and (3) are, in a sense, ‘logical conclusions’, and here we are “stepping outside of logic”: If judging is a truth-seeking activity and BLL are truth-preserving laws, then that activity ought to be attuned to those laws; it would be semantically odd, if not outright unreasonable, to call someone who discards the laws of judgement a judging subject. To “abandon judgement altogether” refers to the demise of thinking as such; the demise of being a truth-seeking agent, a judging subject. Frege takes it as a necessary condition for all instances of thinking (wherever, whenever, whomsoever) that the thinker in question has “acknowledged a law that prescribes what ought to be judged”. That is, has acknowledged the normative authority of logic.¹⁶

Consequently, the normative and constitutive aspects of logic’s relation to thinking are not only compatible but interwoven. BLL are constitutive of thinking in

¹⁶ See Burge (1992: 648) and Taschek (2008: 384) for similar readings.

the sense that being a “thinker” involves recognizing their normative authority.¹⁷ Taking all of this together, my suggestion is that Frege endorsed the following thesis regarding logic’s constitutive role for thinking (modelled on CL*):

Agent-relative constitutivity thesis (ARCT): It is a necessary condition for the possibility of the agent’s performing T that the agent is sensitive to and acknowledges the normative weight of BLL.

My reading of Frege is therefore situated at the following locus in the interpretative spectrum: I oppose the non-constitutivist reading (I will argue why in the following section), but I also oppose the other end of the spectrum, where Frege is read as an advocate of SCT. The main concern for the latter reading, as already mentioned, is that it denounces the normative role of logic altogether. It implicitly denies the reasoning behind the Normativity Thesis: It is a necessary condition for X to be normative for Y that it is possible for Y not to follow X. If the laws of logic are normative for thinking, it must be the case that one can think illogically. And if one can think illogically, SCT is false. One could of course accept the strong reading and argue that Frege’s general view of logic’s relation to thinking is downright inconsistent. However, that would simply ignore the passage from the Preface where Frege inserts the agential requirement, or the passage from *The Foundations of Arithmetic* where he points out that if you deny fundamental propositions of arithmetic (and therefore also BLL) you are no longer in the business of thinking.

It is important to restate the following: Whether truth is, as a matter of empirical fact, something we actually value and strive for, is not strictly a logical or philosophical question. Hence, the normative part of ARCT, that a thinker is someone who is sensitive to and acknowledges the normative weight of BLL, is not derived from logic itself. The fact that there are truth-seeking agents (subjects with the mental capacity for judging) cannot be derived from BLL. But, if such an agent exists, that agent must acknowledge BLL. That is, we could say, a *logical conclusion*.

Considering Frege’s stark anti-psychologism and insistence on separating the logical from the psychological, some would maybe object that my reading makes Frege dangerously psychologistic, since the proposed relation between logic and thinking contains a reference to particular and specified agents. On Frege’s view, logic unfurls the laws of the word ‘true’ regardless of any particular subjects or empirical circumstances. According to Frege, truth is objective. Otherwise, the concept of ‘error’ would be senseless. Hence, a reading that makes Frege’s conception of logic depend on particular subjects or empirical circumstances must miss the mark.

¹⁷ In a similar vein, Tyler Burge has indicated that Frege advocates a sort of dispositionalist account of logic’s constitutive role for thinking: To be disposed to acknowledge the laws of logic is a necessary condition for thinking (Burge 1992: 644).

However, what I call agent-constitutivity does not entail that Frege was either inconsistent or had a psychologistic conception of the nature of logic. The reason is that ARCT, or any thesis about the constitutivity (or non-constitutivity) of logic for that matter, is not about the ‘nature’ of logic, but about logic’s relation to the mental activity of judging or thinking. Although Frege’s account of how these types of mental acts relate to the so-called ‘third realm’ of ‘thoughts’ and ‘logical objects’ is for a large part undetermined (which he was well aware of), there is no doubt that ‘judging’ or ‘thinking’ is a mental (psychological) activity and that the relation, if I am correct, between this activity and logic is somehow both normative and constitutive. What the agent-constitutive view assumes is that a subject only qualifies as engaging in this type of mental activity if this subject recognises logic as somehow authoritative for the performance of this activity. That does not imply that logic is subject-dependent or that any psychological investigation can justify the laws of logic. Judging is constituted by logic in the sense that the activity of judging is truth-seeking, and one cannot be a truth-seeking agent if rejecting truth-preserving laws.

5 A Case for Non-Constitutivism?

Assuming that ARCT is a view consistent with what Frege writes, it seems that logical aliens do not qualify as thinkers. Is that really Frege’s conclusion? Following Mezzadri, we could say that they are “radically wrong thinkers”, fundamentally irrational creatures, where madness should be understood as a “distorted or degenerate form of thinking, rather than as the absence of it” (Mezzadri 2015b: 597). It cannot be ruled out that this was Frege’s intended idea, since he was not overly explicit about stating that logical aliens reside *outside* the scope of thinking. Was he, after all, committed to a version of non-constitutivism? Dirk Greimann, who thinks so, has offered three reasons in support of the non-constitutivist reading (Greimann 2014: 277–278):

- (1) Frege’s invocation of logical aliens as exhibiting an “unknown kind of madness”, and his reference to them having their own “laws of thought” (Frege 2013: XVI), entails that they are radically irrational thinkers as opposed to non-thinkers. The entire paragraph in question actually “presupposes”, as Greimann puts it, “that the madman is capable of thinking” (Greimann 2014: 278). Furthermore, the following quote from the Preface underlines, according to Greimann, that logical aliens are merely awful thinkers (the normative claim), as opposed to non-thinkers:

[T]his impossibility, to which we are subject, of rejecting the law does not prevent us from supposing beings who do so; but it does prevent us from supposing that such beings do so rightly; and it prevents us, moreover, from doubting whether it is we or they who are right. (Frege 2013: XVII)

- (2) Frege does not define ‘thinking’ as a truth-seeking activity, but more broadly as the “grasping of thought”, and therefore thinking can take place without adhering to BLL (Greimann 2014: 278). BLL are, in other words, not constitutive of thinking because thinking is not directly or necessarily related to truth.
- (3) Frege’s aim is not to argue whether or not BLL are constitutive of thinking, but that the normativity of these laws is “absolute” (normative for everyone) and not “relative” (normative just for us). The question about constitutivity does not really surface in Frege’s texts.

(2) and (3) do not pose any serious threat to the constitutivist reading. (2) is contested by the fact that BLL are, according to Frege, constitutive of judging, not thought grasping. Furthermore, in several passages Frege equates ‘thinking’ with the truth-seeking activity of judgement.¹⁸ As he says at one place in his notes on logic: “[I]f we call them laws of thought or, better, laws of judgement” (Frege 1979a: 145). It seems clear that Frege refers to truth-seeking discourse (judgement) when he talks about logical aliens and logic’s potential constitutive role for thinking. As I will show in Section 6, logical aliens might be said to ‘think’ in the broad sense of thought-grasping, but that does not help Greimann’s case, since he insists that Frege talks about thought-grasping, not judgement, when he refers to the madman, which simply doesn’t square with the text.

Regarding (3): The fact that Frege aims to show that BLL are normative for everyone (who engage in truth-seeking discourse) does not exclude that he also intends to display their constitutive role for truth-seeking discourse. In fact, Greimann’s objection ignores that Frege’s claim is not exclusively about the normativity of logic. Why would we otherwise say that rejecting BLL forces one to “abandon judgement altogether”, propose BLL as necessary conditions for all instances of thinking (“wherever, whenever, whomsoever the judgement may be made”), or call it an “impossibility” for us to reject BLL, where ‘us’ refers to beings that engage in truth-seeking discourse?

Greimann’s first objection is of a more serious character. But the passages he highlights do not do support the non-constitutivist view unequivocally. Indeed, Frege does not directly claim that logical aliens are non-thinkers, only that they exhibit an “unknown kind of madness”. There is no agreement as to what Frege

¹⁸ See Section 2 above about Frege’s understanding of ‘thinking’.

means by “madness”. Some read it as a kind of *distorted thinking* (e.g., Conant 1991; Kanterian 2012), while others read it as the *absence of thinking* (Burge 1992). I do not think there is any clear and indisputable evidence behind Greimann’s suggestion that the madman is “capable of thinking”, and therefore it cannot be used as decisive evidence for whether Frege endorsed constitutivism or non-constitutivism. Furthermore, the passage Greimann refers to, where Frege claims that we cannot exclude the possibility of beings that reject BLL, but that we can claim that they do not “do so rightly”, and that we cannot doubt “whether it is we or they who are right”, in no way suggests that logical aliens ‘think’ – that their thinking or judging is “also wrong” – but merely that there is something deeply wrong about engaging in truth-seeking discourse while rejecting BLL. The “impossibility” to which, Frege says, “we are subject”, seems to refer to the impossibility of rejecting BLL (e.g., the law of identity) and not “in the end abandon judgement all together”. That does not mean that we cannot suppose “beings who do so”, that is, beings who reject BLL. The act of “rejecting” the law of identity does not, on Frege’s view, count as an act of thinking.

To ascribe logical aliens the status of judging or thinking would be, as he writes in *The Foundations of Arithmetic*, to say that such beings “judge without judging, or to wash the fur without wetting it” (36/§26). This slogan underlines that there are – notwithstanding the perplexing textual evidence – not only exegetical reasons to reject that Frege was a non-constitutivist, but also sound philosophical reasons to reject non-constitutivism. If thinking is understood as truth-seeking discourse and the laws of logic are truth-preserving laws, then it would be awkward, to say the least, to qualify an activity that is systematically rejecting those truth-preserving laws as an activity aiming for true beliefs. Just like someone who rejected the rules of chess would not just be called an awful chess player, but someone not playing chess at all. Hence, the non-constitutivist is faced by the following semantic problem: A being that rejects BLL has not really understood what it means to aim for truth.

6 Agent-Constitutivity or Content-Constitutivity?

An interesting constitutivist reading of Frege, which is inspired by Weiner (1990), has been proposed recently by Pedriali (2019).¹⁹ The idea Weiner ascribes to Frege is that the “concept of an assertion cannot be divorced from the primitive logical laws” (Weiner 1990: 74), and that our “understanding of the content of the judgement already includes some sort of correct understanding of the logical laws”

¹⁹ Medina (2002: 144) and Mezzadri (2018) propose a similar view.

(Weiner 1990: 75). According to this view, which Pedriali has dubbed “content-constitutivity”, one must be able to grasp or understand the content (‘sense’, in Frege’s terms) of a judgement to be a judging or thinking subject; one cannot judge ‘p’ if one has not understood ‘p’, and one has not grasped or understood the content of ‘p’ if one systematically infers ‘¬p’ from ‘p’.²⁰ This means that by failing to understand the sense or content of what they supposedly ‘judge’, logical aliens do not really think at all. To say that they were judging while rejecting the laws of judgement would be, to reiterate the citation from the previous section, to “judge without judging, or to wash the fur without wetting it” (Frege 1956: 36/§26).

The idea that one does not understand the content of a judgement if one does not understand or respect (implicitly or explicitly) BLL is compatible with the view I have ascribed to Frege. However, Pedriali takes the view a step further by saying that BLL are not only constitutive of judgements, but of the grasping of thoughts (‘thinking’ in the broad sense), which is not in itself a truth-seeking discourse.²¹ BLL are thus, according to Pedriali, constitutive of understanding content as such, which means that without BLL “there could be no thoughts, no order of truths, no content at all” (Pedriali 2019: 71).

I disagree with this version of the content-constitutivity view. Frege did not claim that thought grasping is constituted by a certain sensitivity to BLL. Thinking, in the broad sense, can *in principle* take place without being sensitive to logical strictures if one does not proceed to recognizing the thought’s truth-value – to a judgement. On Frege’s view, thinking is necessary for judging, but judging is not necessary for thinking. The logical alien who rejects the law of non-contraction can still grasp the content of ‘p’ and ‘¬p’ (have the thought ‘p’ and the thought ‘¬p’) while assuming that both can be true at the same time. The logical alien might be said to have thoughts, in the broad sense, but not judgements.

A preferable version of the content-constitutivist view is one where you have not understood the sense of a judgement if you do not accept BLL.²² I agree with Pedriali, though, that an advantage of content-constitutivism, both in the broad and narrow version, is that it avoids the psychologistic challenge of reducing talk of constitutivity to talk about our way of judging or thinking; it gives, as Pedriali formulates it, “absolute grounding”, and not just “local grounds” (Pedriali 2019: 71), for the constitutivity of BLL, since the activity of judging is the (objective and non-psychological) activity that aims for true beliefs. BLL, in virtue of being truth-preserving, are constitutive of this activity. No matter where, how and by who it is performed. Hence,

²⁰ This is something that Frege, at least in his later writings, indubitably endorsed: “It is impossible to recognize a thought as true before it has been grasped” (Frege 1979b: 251).

²¹ See Section 2.

²² Although he mainly indicates this strong view, Pedriali also points to a weaker view like the one I have proposed (Pedriali 2019: 70).

BLL are constitutive of something that is wholly independent of our cognitive make-up or specific situatedness (Pedriali 2019: 69). As Frege writes against logical psychologism in the Preface, the relation between logical laws and thinking “is not like that of the grammatical laws to language, as if they were to give expression to the nature of our human thinking and vary with it” (XVI). BLL are not just related to *human* thinking (judgement), but to thinking *as such*. This does not, it should be noted, conflict with my proposed ARCT, since ‘thinking as such’ is still a mental activity. Hence, the agential reference is intact, but as a reference to any truth-seeking agent – which is not necessarily limited to humans and our psychological or evolutionary set-up.

Besides the content-constitutive suggestion, there is a further conundrum in Pedriali’s reconstruction. He suggests that content-constitutivity is opposed to what he calls “agent-constitutivity”, according to which we “cease being reasoners” as soon as we “give up” on a BLL. This creates the “paradox”, according to Pedriali, that “in performing an act (the denial of a BLL), we thereby give up on agency”. This is supposed to show that what is lost in denying BLL is “not agency but content” (Pedriali 2019: 71).

Although Pedriali eschews giving a clear articulation of what he means by agent-constitutivity, the view I have ascribed to Frege seems to me to be immune to the paradox he refers to. He seems to suggest that, according to the agent-constitutivist, one must give up on agency as such if one denies BLL. What I have called ARCT is not committed to anything like that. It only assumes that judging agency, not agency as such (whatever that would mean), does not surface if one denies BLL. So, in performing the act of hesitancy (or outright denial) of BLL, one gives up on being a judging, truth-seeking agent.²³ The following should make that clear: The moment you deny the law of non-contradiction, you must, in order to uphold your status as a truth-seeking creature, deny the negation of that denial (or reconsider your denial of the law of non-contradiction), since both the denial of the law and the negation of that denial cannot be true at the same time. Thereby you nevertheless accept the law of non-contradiction. Consequently, you cannot be a truth-seeking creature while denying basic truth-preserving laws.

7 Conclusions

While some interpreters believe Frege was committed to a strong conception of constitutivity, which entails that there is an inconsistency between the constitutive

²³ Which, then, Pedriali immediately after seems to suggest when he refers to “agenthood” as “being a thinker, of being a judger” (Pedriali 2019: 71). But that is not what he says in the cited passage.

aspect and his view that logic is a “normative science” (Frege 1979a: 128), others out-and-out deny that Frege thought of logic as constitutive of thinking. Although the textual evidence is perplexing, there is enough passages pointing in the direction that both interpretations are a bit too ‘one-sided’. The view I extract from Frege’s texts amounts to making the constitutive and normative aspects, not only compatible, but interwoven. As he puts it, in order to attain the predicate ‘thinker’ one must “acknowledge” the normative authority of logic. To ‘acknowledge’ is not simply a recognition or cognition of something, but a recognition that gives some kind of authority to what is recognized through one’s acceptance of its truth. This implies that thinkers cannot be logic-independent creatures, since they must be able to acknowledge, at least implicitly, the normative authority of logic.

This interpretation is consistent with most of the relevant passages and makes Frege’s position consistent. Furthermore, there are systematic reasons to endorse some version of Frege’s agent-relative view of logic’s constitutive role for thinking. It accommodates the intuition that it is bad to be logically inconsistent (the normative \aspect) as well as the intuition that some types of propositional or conceptual activity are not just defective types of thinking but should not be considered to be in the business of thinking altogether (the constitutive aspect).

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