Frege Colloquium, 3 Oct. 2025

# Fregean inference: How the truth of the premises is required for the validity of the inference

Susanne Bobzien, Oxford & Princeton

**Handout Part I: Structure of my Talk**

## 1. Introduction

**The acknowledgement requirement:** For something to be an inference, its premises must *be acknowledged as true.*

**The truth requirement:** For something to be an inference, the premises must *be true.*

## 2. Validity: Fregean inference is by nature or by definition valid inference

**Fregean inferences**: structured compounds of *judgements* that are linguistically represented as *assertions* of thoughts.

(i) *Fehlschlüsse* (fallacies), (ii) *Trugschlüsse*, (sophisms) (iii) *Pseudo-Schlüsse* (pseudo-inferences) are not *Schlüsse* (inferences).

## 3. Starting the argument

**The initial question**: *Why* does Frege consider the truth of the premisses essential for *something to be* an inference?

**Interim result (i):** It is reasonable to assume that for Frege, 'correctness of an inference' and 'truth of an inference' have the same referent, and that he used them synonymously.

**Subsidiary question 1:** Why, or how, is the truth of the premisses essential for *the correctness* of Fregean inferences?

**Frege's definition of inference** ("Grundlagen der Geometrie", 1906, CP 318):

> inference: a making of a judgment that is carried out in accordance with logical laws on the basis of previously made judgements.
>
> *Schluss … eine Urteilsfällung die auf grund schon früher gefällter Urteile nach logischen Gesetzen vollzogen wird.*

The correctness of the *inference* is based on the correctness of the *laws of inferring*.

**Subsidiary Question 2**: How is the truth of the premisses essential for the correctness of the laws of inferring on which the inference is based?

**Subsidiary Question 3**: How does Frege justify his logical laws, if at all?

**Interim result (ii)**: For Frege the correctness of an inference depends on logical laws. the logical laws include axioms, theorems and Fregean inference rules. *The only candidate for direct justification are these Fregean inference rules.*

**Subsidiary question 4:** Where and how does Frege justify his inference rules, if at all?

## 4. What Frege aims to justify

What Frege *does not* try to justify:

(i) the contemporary *modus ponens* inference rule (MP) that is applied to naked thoughts or sentences

$$\begin{array}{l} B \rightarrow A \\ \underline{B \qquad} \\ A \end{array}$$

(ii) the *tautological thought* $[[B \rightarrow A] \wedge B] \rightarrow A$

(iii) or expressed with Frege's *Begriffsschrift* choice of connectives (BS §5)

$B \rightarrow [[B \rightarrow A] \rightarrow A]$.

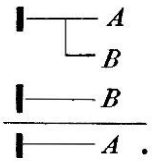
(iv) the *tautological judgement* $\vdash [[B \rightarrow A] \wedge B] \rightarrow A$

(v) this judgements expressed with Frege's *Begriffsschrift* choice of connectives,

$\vdash B \rightarrow [[B \rightarrow A] \rightarrow A]$.

**Fregean inference:** A structure composed of three judgements, two as premise judgements, one as conclusion judgement

Man könnte diesen Schluss etwa so schreiben:




A judgement is the same as the acknowledgement of the judged thought as true.

The judgement stroke represents the acknowledging-as-true of the thought to whose representation it is prefixed.

## 5. Frege's justification of |–MP ("inference MP")

In |–MP, from two *judgements* a third, new, *judgement* follows.

The falsehood of the *thought* represented as —— $B \rightarrow A$ is *incompatible* with the *acknowledgement* of —— $B \rightarrow A$ as true ( = incompatible with. |— $B \rightarrow A$ ).

## 6. A parallel passage on the incompatibility of judgement/assertion with falsehood

For Frege, it is incompatible to both acknowledge something as true and be aware that it is false.

## 7. From Begriffschrift §§ 5 and 6 via the subsidiary questions back to our initial question

The correctness of the Fregean inference rule depends on the truth of the premises of all inferences in that mode.

The correctness of *any* inference in that inference mode depends on the truth of the premisses of inferences in that mode.

From Subsidiary Question 1 to the Initial Question: "to be essential *for the correctness* of inferences" is just a co-extensive specification of "to be essential for (something) *to be* an inference".