

Passages from *Über Sinn und Bedeutung*

$a=a$ and $a=b$ are obviously statements of **differing cognitive value**; $a=a$ holds *a priori* and, according to Kant, is to be labelled analytic, while statements of the form $a=b$ often contain very **valuable extensions of our knowledge** and cannot always be established *a priori*. The discovery that the rising sun is not new every morning, but always the same, was one of the **most fertile** astronomical discoveries. [56]

If the sign ' a ' is distinguished from the sign ' b ' only as object (here, by means of its shape), not as sign (i.e. not by the manner in which it designates something), the cognitive value of $a=a$ becomes essentially equal to that of $a=b$, provided $a=b$ is true. A difference can arise only if the difference between the signs corresponds to a difference in the mode of presentation *of* that which is designated. Let a , b , c be the lines connecting the vertices of a triangle with the midpoints of the opposite sides. The point of intersection of a and b is then the same as the point of intersection of b and c . So we have different designations for the same point, and these names ('point of intersection of a and b ,' 'point of intersection of b and c ') likewise indicate the mode of presentation; and hence the statement contains actual knowledge. [57]

It is natural, now, to think of there being connected with a sign (name, combination of words, letter), **besides that to which the sign refers, which may be called the reference of the sign, also what I should like to call the sense of the sign, wherein the mode of presentation is contained**. In our example, accordingly, the reference of the expressions 'the point of intersection of a and b ' and 'the point of intersection of b and c ' would be the same, but not their senses. The reference of 'evening star' would be the same as that of 'morning star,' but not the sense. [57]

The designation of a single object can also consist of several words or other signs. For brevity, let every such designation be called a proper name. [57]

The sense of a proper name is grasped by everybody who is sufficiently familiar with the language or totality of designations to which it belongs; but this serves to illuminate only a single aspect of the reference, supposing it to have one. Comprehensive knowledge of the reference would require us to be able to say immediately whether any given sense belongs to it. To such knowledge we never attain. [57-8]

The regular connexion between a sign, its sense, and its reference is of such a kind that to the sign there corresponds a definite sense and to that in turn a definite reference, while to a given reference (an object) there does not belong only a single sign. The same sense has different expressions in different languages or even in the same language. [58]

In grasping a sense, one is not certainly assured of a reference. [58]

If words are used in the ordinary way, what one intends to speak of is their reference. It can also happen, however, that one wishes to talk about the words themselves or their sense. [58]

In order to speak of the sense of an expression 'A' one may simply use the phrase 'the sense of the expression "A" '. [59]

In order to have a short expression, we will say: In reported speech, words are used *indirectly* or have their *indirect* reference. We distinguish accordingly the *customary* from the *indirect* reference of a word; and its *customary* sense from its *indirect* sense. The indirect reference of a word is accordingly its customary sense. [59]

The reference of a proper name is the object itself which we designate by its means; the idea, which we have in that case, is wholly subjective; in between lies the sense, which is indeed no longer subjective like the idea, but is yet not the object itself [60]

A proper name (word, sign, sign combination, expression) expresses its sense, stands for or designates its reference. By means of a sign we express its sense and designate its reference. [61]

So far we have considered the sense and reference only of such expressions, words, or signs as we have called proper names. We now inquire concerning the sense and reference for an entire declarative sentence. Such a sentence contains a thought. Is this thought, now, to be regarded as its sense or its reference? Let us assume for the time being that the sentence has reference. If we now replace one word of the sentence by another having the same reference, but a different sense, this can have no bearing upon the reference of the sentence. Yet we can see that in such a case the thought changes; since, e.g., the thought in the sentence 'The morning star is a body illuminated by the Sun' differs from that in the sentence 'The evening star is a body illuminated by the Sun.' Anybody who did not know that the evening star is the morning star might hold the one thought to be true, the other false. **The thought, accordingly, cannot be the reference of the sentence, but must rather be considered as the sense.** [62]

The fact that we concern ourselves at all about the reference of a part of the sentence indicates that we generally recognize and expect a reference for the sentence itself. The thought loses value for us as soon as we recognize that the reference of one of its parts is missing. We are therefore justified in not being satisfied with the sense of a sentence, and in inquiring also as to its reference. [63]

We have seen that the reference of a sentence may always be sought, whenever the reference of its components is involved; and that this is the case when and only when we are inquiring after the truth value. We are therefore driven into accepting the *truth value* of a sentence as constituting its reference. By the truth value of a sentence I understand the circumstance that it is true or false. There are no further truth values. For brevity I call the one the True, the other the False. Every declarative sentence concerned with the reference of its words is therefore to be regarded as a proper name, and its reference, if it has one, is either the True or the False. These two objects are recognized, if only implicitly, by everybody who judges something to be true-and so even by a sceptic. [63]

..in every judgment, no matter how trivial, the step from the level of thoughts to the level of reference (the objective) has already been taken. [64]

The truth claim arises in each case from the form of the declarative sentence...[64]

If our supposition that the reference of a sentence is its truth value is correct, the latter must remain unchanged when a part of the sentence is replaced by an expression having the same reference. And this is in fact the case. Leibniz gives the definition: '*Eadem sunt, quae sibi mutuo substitui possunt, salva veritate.*' **What else but the truth value could be found, that belongs quite generally to every sentence if the reference of its components is relevant, and remains unchanged by substitutions of the kind in question?** [64]

If now the truth value of a sentence is its reference, then on the one hand all true sentences have the same reference and so, on the other hand, do all false sentences. From this we see that in the reference of the sentence all that is specific is obliterated. We can never be concerned only with the reference of a sentence; but again the mere thought alone yields no knowledge, but only the thought together with its reference, i.e. its truth value.

Judgments can be regarded as advances from a thought to a truth value.

Naturally this cannot be a definition. Judgment is something quite peculiar and incomparable. [65]

The supposition that the truth value of a sentence is its reference shall now be put to further test. **We have found that the truth value of a sentence remains unchanged when an expression is replaced by another having the same reference:** but we have not yet considered the case in which the expression to be replaced is itself a sentence. [65]

That in the cases of the first kind the reference of the subordinate clause is in fact the thought can also be recognized by seeing that it is indifferent to the truth of the whole whether the subordinate clause is true or false. [66]

One has the right to conclude only that the reference of a sentence is not *always* its truth value, and that 'morning star' does not always stand for the planet Venus, viz. when the word has its indirect reference. [67]

In the cases so far considered the words of the subordinate clauses had their indirect reference, and this made it clear that the reference of the subordinate clause itself was indirect, i.e. not a truth value but a thought, a command, a request, a question. [68]

A logically perfect language (*Begriffsschrift*) should satisfy the conditions, that every expression grammatically well constructed as a proper name out of signs already introduced shall in fact designate an object, and that no new sign shall be introduced as a proper name without being secured a reference. [70]

In the sentence

'If a number is less than 1 and greater than 0, its square is less than 1 and greater than 0,' the component in question is 'a number' in the conditional clause and 'its' in the dependent clause. It is by means of this very indefiniteness that the sense acquires the generality expected of a law. [72]

It is, in general, incorrect to say that in the hypothetical judgment two judgments are put in reciprocal relationship. If this or something similar is said, the word 'judgment' is used in the same sense as I have connected with the word 'thought,' so that I would use the formulation: 'A hypothetical thought establishes a reciprocal relationship between two thoughts.' This could be true only if an indefinite indicator is absent;* but in such a case there would also be no generality. [72]

The simple cases have now been discussed. Let us review what we have learned.

The subordinate clause usually has for its sense not a thought, but only a part of one, and consequently no truth value as reference. The reason for this is either that the words in the subordinate clause have indirect reference, so that the reference, not the sense, of the subordinate clause is a thought; or else that, on account of the presence of an indefinite indicator, the subordinate clause is incomplete and expresses a thought only when combined with the main clause. It may happen, however, that the sense of the subsidiary clause is a complete thought, in which case it can be replaced by another of the same truth value without harm to the truth of the whole-provided there are no grammatical obstacles. [74-5]

It follows with sufficient probability from the foregoing that the cases where a subordinate clause is not replaceable by another of the same value cannot be brought in disproof of our view that a truth value is the reference of a sentence having a thought as its sense. [78]

Let us return to our starting point.

When we found ' $a=a$ ' and ' $a=b$ ' to have different cognitive values, the explanation is that for the purpose of knowledge, the sense of the sentence, viz., the thought expressed by it, is no less relevant than its reference, i.e. its truth value.

If now $a=b$, then indeed the reference of ' b ' is the same as that of ' a ,' and hence the truth value of ' $a=b$ ' is the same as that of ' $a=a$.'

In spite of this, the sense of ' b ' may differ from that of ' a ', and thereby the thought expressed in ' $a=b$ ' differs from that of ' $a=a$.'

In that case the two sentences do not have the same cognitive value.

If we understand by 'judgment' the advance from the thought to its truth value, as in the above paper, we can also say that the judgments are different. [78]