

**PREDICATION AND LOGIC OF LANGUAGE (II)**

*Section I*

*Sense, Truth and Predication*

First, a terminological remark. I use the term 'predication' in a special sense. Predication is the sense-structure of propositions. The generic concept of predication consists of the common predicative structure shared by all propositions. The term 'proposition' is also being used in a special sense. I follow Frege in distinguishing sharply between intelligible or *conceptual content* of statement (or judgments, assertions) and the *acts* of stating, judging, asserting, etc. A proposition does not *make* sense, it constitutes sense, it is a sense-content. Propositional *signs*, for example, an appropriate sentence-form, makes sense or *connotes* a proposition. Predication, then, is the sense formation (formative structure) of propositions. The thesis which I shall attempt to establish is that all *propositions* share a common predicative form (share common predicative features). This is the generic-intensional conception of predication <sup>14</sup>

This requires explication. The distinction between proposition, judgment and assertion as presented by Frege is, from one point of view, simple and straightforward. But upon closer examination certain difficulties arise. This is how Frege presents the point :

“ An interrogative sentence and an indicative one contains the same thought; but the indicative contains something

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else as well, namely, the assertion. The interrogative sentence contains something more too, namely a request. Therefore two things must be distinguished in an indicative sentence : the content, which it has in common with the corresponding sentence-question, and the assertion. The former is the thought, or at least contains the thought. So it is possible to express the thought without laying it down as true. Both are so closely joined in an indicative sentence that it is easy to overlook their separability. Consequently we may distinguish :

- 1) the apprehension of the thought—thinking
- 2) the recognition of the truth of a thought—judgment
- 3) the manifestation<sup>a</sup> of this judgment—assertion

We perform the first act when we form a sentence-question... we declare the recognition of the truth in the form of an indicative sentence". "The Thought : A Logical Inquiry" in Strawson (ed.), *Philosophical Logic*, p 21-22).

I use the term 'proposition' in the special way that Frege uses 'thought'. Although thinking is an *act*, Frege makes it clear that a proposition (thought) is not an act—not constructed. Sentences are constructed. A proposition is something *apprehended* in thought—conceptual content or intelligible (sense)-content. Judgment is an *act* of consciousness which is performed by some agent. However, Frege stresses that "the act of judging did not make the thought of set its parts in order; for the thought was already there. But even the act of grasping a thought is not a production of a thought, is not the act of setting the parts in order; for the thought was already there with its parts in order before it was grasped." ("Negation", Geach & Black, pp. 126-127).

*Note* : Predication, as I use the term (and Frege too), consists in the structural relations of the "parts of the thought". I agree with Frege on the independence of proposition. I do not mean to commit myself to everything Frege says about thought, for example, that they are eternally (atemporally) existing objects. I wish to reserve judgment on the ontological status of propositions. At this point I merely wish to stress the logical independence and priority (in some sense) of propositions and predication.

The *acts* of thinking, judging and asserting (stating) must not be confused with *what is thought* (content)—the proposition. We construct sentences, but we do not construct propositions.

This preliminary distinction seems good enough to work with. Predication is the formative structure of propositions; it is not the formation of propositions. In a sense, then, the terms 'proposition' and 'predication' are interchangeable. The difference is that the former suggests a unified whole, while the latter suggests the structural relations of the constituents which make up the whole. The point I wish to stress is that the term 'predication' *does not indicate some activity* performed by someone, but indicates the structure of proposition.<sup>15</sup> This is a radical departure from the common use of the term predication. I wish to *recommend* that the term be used in this strictest sense, and I shall attempt to justify this use of the term. Frege, too, uses the term 'predication' in this way. The difference is that Frege restricts predication to singular and relational propositions, while I generalize the term for *all* propositions.

Predication, then, is not an act. It is not, for example, *affirming* or *denying* a predicate of a subject. It is not the construction of a sentence, etc. Predication is not to be identified with attri-

bution, description, supplying a predicate to a subject, or *vice versa*, not assertion, and not judgment. It is important (crucial) to distinguish between predication, on the one hand, and judgment, assertion, on the other. A basic thesis of this work is that predicability and assertibility must be systematically distinguished. Let me develop this point in a preliminary way.

### *Predicability and Assertibility*

A predication (proposition) makes sense.<sup>16</sup> We raise the question of sense/non-sense of a *sentence*. We construct sentences but not predications. I agree with Frege that the sense of an indicative sentence is a proposition :

“ We may say a sentence expresses a thought ” (Thought, p. 20).

A *sentence* is appraised in terms of expressing or making *sense* or *nonsense*. If it represents a proposition it has the sense-value-*sense*, if not, the sense-value-*senseless*. In a derivative sense the concept of predicability applies to the construction of indicative sentences. Such sentences—qua predicative content—have two possible sense-values; *Sense/Senseless*. Predication consists of the sense-formation of propositions.

### *Sense Values and Truth Values*

I distinguish between *sense* and *meaning*.<sup>17</sup> The term ‘ sense ’ is reserved for propositions. The term ‘ meaning ’ is broader and applies, for example, to statements. Meaning includes such pragmatic features of language as the *use of expressions*, linguistic performances (illocutionary acts, forces), etc. It also includes epistemic features of language connected with judgment and truth—conditional structure, truth—functions, etc. ‘ Sense ’ is *purely semantical* and is independent of epistemics and pragmatics. (This is developed below.)

“Predicability” refers to the sense-conditions of a predication (propositions). Rules of predicability (sense-formation) are not the same as rules of truth-formation. The latter are rules of assertibility. “Assertibility” refers to the truth-conditions of an indicative *sentence*.

We must now explore the independence as well as the connection between *sense* and *truth*. A well-formed indicative sentence may be appraised in terms of its sense (sense-value) and its truth (truth-value). Rules of sense formation are prior to (independent of) rules of truth-formation. We must proceed with caution here. For certain philosophers of logic and language analyze meaning precisely in terms of truth-conditions.

Let us explore this more closely. We have just distinguished between sense and meaning. We must now distinguish clearly between sense and truth. It was said that propositions made sense. But are *propositions* also true or false? This seems to be what Frege claims :

“... What does one call a sentence? A series of sounds; but only when it has a sense, by which is not meant that every series of sounds that has a sense is a sentence. And when we call a sentence true we really mean its sense is. From which it follows that it is for the sense of a sentence that the question of truth arises in general...”

“... Without wishing to give a definition, I call a thought something for which the question of truth arises. So I ascribe what is false to a thought just as much as what is true. So I can say : the thought is the sense of the sentence without wishing to say as well that the sense of every sentence is a thought...” (*Ibid.*, pp. 19-20).

When we speak loosely we say that a proposition is true or false. Frege's remark that " a thought is something for which the *question* of truth arises " leaves open the question whether propositions themselves *are* so-to-speak—the bearers of truth. In other places certain remarks of Frege suggest that sense is independent of truth. It seems, in fact, that is precisely the point of his distinction between *sense* and *reference*. Here are some remarks :

" We now inquire concerning the sense and reference of an entire declarative sentence. Such a sentence contains a thought. Is this thought, now, to be regarded as its sense or its reference ? ... The thought, accordingly, cannot be the reference of the sentence, but must be considered as the sense ". (*Sense and Reference*, Geach & Black, p. 62)

Frege goes on to establish that the identity of the thought is independent of its reference. Prior to the above passage he said :

" The regular connection 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 . It may perhaps be granted that every grammatically well-formed expression representing a proper name always has a sense. But this is not to say that to the sense there also corresponds a reference... In grasping a sense, one is not certainly assured of a reference " (*Ibid.*, p. 58)

(Note especially that proper names have sense, that reference is essentially connected with an object, and that sense is independent of reference—which has to do with existence of objects )  
Subsequently Frege says,

"... Why is the thought not enough for us? Because and to the extent that, we are concerned with its truth value... It is the striving for truth that drives us always to advance from the sense to the reference".

" 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". (*Ibid.*, p. 63).

In the last passage Frege in effect admits that sense is independent of truth-value. Here is another passage in which he explicitly contrasts predication with truth :

"It follows that the relation of the thought to the True may not be compared with that of subject to predicate. Subject and predicate (understood in the logical sense) are indeed elements of thought; they stand on the same level for knowledge. By combining subject and predicate, one reaches only a thought, never passes from sense to reference, never from a thought to its truth value. One moves at the same level but never advances from one level to the next. A truth value cannot be a part of a thought, any more, say, than the sun can, for it is not a sense but an object". (*Ibid.*, p. 64)

In this critical passage Frege makes it clear that sense and truth are independent and on "different levels". He also has a clear sense that the constituents of predication are sense-contents, not object. Frege's followers, we shall see, fail to retain this important distinction.

There is another way to make the distinction between sense and truth. In introducing the distinction between proposition, judgment and assertion. Frege notices that the same conceptual

(predicative) content may figure in different sentence forms—for example an interrogative sentence, and yet there is no truth value. The question of truth and falsity arises only in the case of the declarative or statement form. This is another indication that, strictly speaking, predicative content is independent of truth. In another place Frege makes the point still differently. He raises the question whether the being of a thought consists in its being true (having a truth value) :

“ Truth cannot go along with the sense of an interrogative sentence; that would contradict the very nature of a question. The content of a question is that to which we must decide. Consequently truth cannot be counted as going along with the content of the question. When I raise the question whether the sun is bigger than the moon I am seeing the sense of the interrogative sentence

‘ Is the sun bigger than the moon ’

Now if this sense were a thought whose being consisted in its being true, then I should at the same time see that this sense was true. Grasping the sense would at the same time be an act of judging; and the utterance of interrogative sentence would at the same time be an assertion, and so an answer to the question. But in an interrogative sentence neither the truth or falsity of the sense may be asserted. Hence the interrogative sentence has not as its sense something whose being consists in its being true. The very nature of the question demands a separation between the acts of grasping a sense and judging. And since the sense of an interrogative sentence is always also inherent in the assertoric sentences too. *In any case we need a short term for what can be the sense of an interrogative sentence. I call this a thought. If we use language this way, not all thoughts are true. The being of a thought does not consist in its*



being true." ( "Negation" - Geach & Black, pp. 118-119, my italics )

Of course Frege also means to include falsity here. This passage makes it clear from another point of view that thoughts are not *inherently* true or false. It is only where judgment and assertion are concerned that truth-value is introduced.

(Note : Searle generalizes this distinction between propositional content and different speech acts. For example,

1. Sam smokes habitually
2. Does Sam smoke habitually ?
3. Sam, smoke habitually !
4. Would that Sam smoked habitually.

Searle points out that the same predication or propositional content obtains in all four cases, but only the first is an assertion, and is true or false. ( See *Speech Acts*, pp. 22 ff. ) A *declarative* sentence has two functions associated with it : sense and reference. The thought is its sense. This is related to but independent of its reference. It is the *reference* of the sentence that constitutes its truth value<sup>18</sup> Thus, strictly speaking, the thought (proposition) itself is not true or false. Frege's sense-reference distinction is designed precisely to distinguish between sense and truth. Nevertheless, we saw that for Frege sense and reference have *some* connection.<sup>19</sup> How does he explain ? The key point here is that *judgment* is the connection :

".. But so much should already be clear, that in every judgment<sup>20</sup> no matter how trivial, the step from the level of thoughts to the level of reference (the objective) has already been taken". ( *Ibid.*, p. 64 )

" 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.* (*Ibid*, p. 65 – my italics)

Thus far we are told that a declarative sentence has two independent (though related) components: a proposition (sense) and a truth-value (reference). The connecting factor is judgment—this is the *moment beyond* the sense to truth. This is still vague and metaphorical. We need to have a more clear grasp of the relation between judgment and truth. Is truth somehow a function of judgment? Frege explicitly rules this out:

“Our act of judgment can in no way alter the make-up of a thought. We can only recognize what is there. A true thought cannot be affected by our act of judgment” (Negation, p. 122).

It must be admitted that truth does not depend upon the *act* of judgment. It may nevertheless be dependent in some peculiar way upon judgment. Frege makes a compelling case for the independence of sense and truth, but the connection between them is not satisfactorily explicated. It is merely claimed that we connect them in judgment.

We have seen that, strictly speaking, a proposition itself is not what is true or false. Yet Frege speaks of thoughts as being true or false (almost by definition). I think a reason for this is that he uses the term ‘thought’ ambiguously; in a strict sense (in which it stands for sense) and in a loose sense (in which it stands for judgment): For example,

“In a similar way it has perhaps been said ‘a judgment is something which is either true or false’. In fact I use the term ‘thought’ in approximately the sense which ‘judgment’ has in writings of logicians...” (“Thought” (footnote), p. 20)

Now a *statement* expresses a judgment, and it may be more accurate to say that statements (judgments) are true or false, not propositions. A statement is an assertion. Frege's need to distinguish between sense and reference in the way he does is due to the fact that the very same expression—the declarative sentence—expresses sense and designates reference. (See "Sense and Reference", p. 61) On the one hand he distinguishes clearly between proposition (sense) and judgment or assertion (truth). On the other hand, he connects the proposition with the sense of a *declarative sentence*. But then he goes on to claim that assertoric force arises with the form of the declarative sentence, and here the original distinction is threatened (even undermined) :

"The truth claim arises in each case with the form of the declarative sentence" (*Ibid.*, p. 64).

Again,

"Only those sentences in which we communicate or state something come into question" (Thought, p. 21).

I am suggesting that the force of Frege's brilliant distinction between sense and truth is undermined by the unfortunate habit of calling propositions (in the strict sense) true or false. Frege himself succumbed to it. A way of avoiding the confusion is to distinguish between *predication* and *assertion*, between predicability and assertibility. Strictly speaking, only assertions (what is expressed in a declarative sentence) are true or false. The *sense* of a sentence is specified by its sense-conditions, while the *meaning* of a statement is specified by its truth-conditions.

I have spent much time on this point. But it is a critical point for logical theory. It is of the utmost importance to distinguish systematically between sense (the laws of sense) and truth (the laws of truth). As far as I know, Frege was the first

logical theorist to make a clear distinction here, and apparently at times he himself lost sight of the distinction.<sup>21</sup> Most logicians would admit some form of the sense-reference distinction. But then the carry-over into the sense-truth distinction slips by unnoticed. The very conception of logic turns on this point. For if there is a distinction between the rules of sense-formation (predication) and the rules of truth-formation (judgment/ assertibility), then the primary task of logic is not so much the discovery of the laws of truth as the laws of sense. Frege's intentions here seem clear enough :

"... I assign to logic the task of discovering the laws of truth, not of assertion or thought. The meaning of the word 'true' is explained by the laws of truth" (Thought, p. 18)

However, in another place he seems to have lost the priority :

"To discover truths is the task of all sciences; it falls to discern the laws of truth...Laws of nature are the generalization of natural occurrences with which the occurrences are always in accordance. It is rather in this sense that I speak of the laws of truth. That is, to be sure, not a matter of what happens so much as of what is. Rules of asserting, thinking, judging, inferring, follow from the laws of truth". (*Ibid.*, p 17)

I believe it would be more in the spirit of Frege's intentions (and more accurate) to speak instead of the laws of sense. I suggest the following re-phrasing :

The task of logic is the discovery of the laws of sense formation (predicability). The laws of sense are not so much concerned with *what is* as with *what may be*. Rules of judging, asserting, inferring, presuppose the laws of sense.

Let me proceed now to explicate, in a rough and preliminary way, the connection between sense and truth. We have distinguished between sense-values and truth-values. Strictly speaking, both are used in the appraisal of sentences (of a certain type). Sentences have sense-value (S and -S) in terms of the predicative content, and they have truth-value (T and F) in terms of the assertive-judgmental content (force). The key to the connection between sense and truth is judgment and assertibility (as Frege suggested). Propositions in the strict sense are not inherently true or false. They may be true or false in some oblique way mediated by the sentence and very likely by judgment and assertibility. The relation between a sentence and its sense is different in an important way from the relation between a sentence and its truth value. This is what Frege has been stressing. But the important *connection* has not been clarified."

A proposition is not something that is itself true or false. It is more accurate to speak of a judgment or assertion (statement) as being true or false. In apprehending a proposition one entertains some state of affairs (abbreviated : State). A proposition is an intelligible content. Let us say that a proposition *specifies* a State. A State is not a sense-content, not intensional. A State is a possibility. A *fact* is a State which obtains (exists, is actual). It is here that we find the special sort of relationship between propositions and truth.

Propositions do not specify facts. They do not support to specify *what is the case*. Only judgments (or the expression of judgments in statements) purport to represent (picture) facts (what is). If we can explicate the relation between States and facts we are likely to come closer to explicating the peculiar relation between possibility and actuality (sense and truth). Possibility has a peculiar relation to actuality. This is the model

for explicating the relation between sense and truth. In specifying the truth-conditions of a sentence (assertibility) one indirectly gives (presupposes) the sense of the sentence. This is because reference presupposes (is a function of) sense. To know the *meaning* of a *statement* is to know the conditions under which it is *true or false*. (Sometimes the latter disjunction is stressed (as a disjunction) suggesting that it should be taken *as a whole* and this is different from either disjunct alone. There is something suppressed here, a hidden tension. For when 'true or false' is said by a truth-functional logician he can only interpret it determinately—in terms of the conditions under which the statement is *true or else false*, rather than as true-or-false.) But *sense* of *propositions* is given with the specification of sense-condition. Now sense conditions are related to truth-conditions in the way that the possible is related to the actual.

Can this relation be formally explicated? To do so I shall make clear the relation/distinction between a property-word and a category (absolute)-word. (See Sommers' "Types and Ontology", in Strawson (ed.) - *Philosophical Logic*) The logical relation of contrariety holds between a term (expression) and one form of its opposite. For example, colored/colorless, wise/unwise, visible/invisible, true-false, etc., are *logical contraries*. Aristotle defines the special relation between contraries in such a way that to deny one term is to affirm the contrary. Thus, to say that *Socrates isn't wise* (where 'isn't' is the sign of denial of a term) is logically equivalent to the affirmation of the contrary: *Socrates is unwise*. Contrariety, then, is a form of term opposition. Another form of term opposition which is different from (and not to be confused with) contrariety is the complementary opposition: true/non-true, colored/non-colored, visible/non-visible, etc. The range of applicability (extension) of the latter (of complements) is different from the range of

applicability of the former (contrary opposition). While everything in the universe of discourse is either colored or non-colored, not everything is either colored or colorless—for example, the equator is neither colored nor colorless, neither is the number seven. This is a key to a formal criterion of sense. For category-rules govern the contrariety relation, but not the complementary relation.

Now an absolute term is a term which consists of the disjunction (logical sum) of a term and its contrariety: *P-or-un-P*. An absolute term, then, has as its extension the range of applicability of the term together with its contrary. While a term has a contrary, an absolute term does not. This is an important logical feature of an absolute term (category-term). Contraries are polar opposites which stand in a privative relation to one another. They are not extensionally but *intensionally* (sense) related. There are categorial restrictions of the applicability (predicability) of a term and its contrary. The absolute term exhausts its domain, hence specifies a category. A property word, by contrast, specifies a class, not a category. A class has a very different status from a category. Nothing outside a category is privative with respect to anything in a category. The notion of privation is *internal* to a category.

To see that an absolute (category) term has a different logical status from a class (property) term we may use Descartes' example in the Second Meditation—the conceptual experiment with the piece of wax. Descartes is attempting to make the distinction between a class-term and a category term. In the conceptual experiment Descartes is drawing a distinction between the properties of the wax, all of which undergo transformation (color, shape, texture, size, etc.) What remains permanent through all the transformations are its features—its categorial properties—/extension. The wax, he says, is constituted by its features. Its

features do not undergo transformation. While we may perceive its properties by means of the senses, we can only *conceive* its features—in this case we conceive that the wax (*qua* material body) is an /extended/ thing. Its particular determinate size, shape, color, etc., are its properties, but its /extension/—is a categorial feature. This we do not perceive by means of the senses. Nevertheless, the feature is “intimately connected” with the property, for to have some determinate size or other presupposes the *feature* of extension. Yet the status of the feature is different in some fundamental way from the properties.

Now I have been attempting to draw a distinction between a class-term and a category term to show that they are at once “in the closest relation” yet of a different status. I am suggesting that this formal relation between a category-term and a property-term serve as the paradigm for making clear the relation and distinction between sense and truth.

The status of being /T/ is different from the status of being true or being false. Nevertheless, they are related in the way a property term is related to a category term. We shall say that propositions are /T/, while statements are true or false. To state the conditions under which a statement is true or false is not the same as to state or specify the /T/ conditions of a sentence. The concept (and status) indicated by /T/ is different from the concept indicated by the terms ‘true’ or ‘false’. The intelligible is that which is /T/. To state the /T/ conditions of a sentence is to specify its sense. This is different from specifying the conditions under which a statement is true or false (truth-conditions). Rules of sense determine the /T/ conditions, but rules of truth (assertibility) determine the truth-conditions.

Although predications are categorially /T/, they are not inherently true or false. The categorial truth-status means only



that *propositions* are of the *type* (category) such that they may stand in relation to what is true or false. We saw earlier that to be /T/ does not entail being true or false, determinately. Thus, there is an important asymmetry between being /T/ and being true or else. The latter entails the former, but not *vice versa*. *Statements*, however, are categorially /T/, but here it does entail that they are true or false.

This will sound odd, especially for the truth-functional. For if the absolute predicate is the disjunction of a term and its contrary (the weak 'or' is used here), then is this really different from specifying truth-conditions (where this means the conditions under which a statement is true *or* false)? A counter question to this: is there any difference between the status of being possible and being actual (determinate), especially when it is seen that that which is possible *can* also be actual? The status of /T/ is that of possibility, while the status of being true or false is that of actuality (being determinate). It seems to depend upon how the 'or' is interpreted here—distributively or non-distributively. But this is not the crucial point. The point is that sense is linked with possibility status (configurability), while truth (or falsity) is linked with actuality and determinacy. A State—that which is entertained in the apprehension of a proposition—is a possibility. It is something which may or may not obtain. But that which is (is not) is actual or determinate. And this is precisely where judgment comes in.

Now it is this difference between sense and truth that, I believe, Frege was hinting at. A proposition is not inherently true or false, but it is still in "the closest relation" to the truth—i.e. /T/. A proposition is the type of thing that can stand in relation to what is the case. Frege claims that judgment intervenes and moves beyond sense /T/ to reference (determinate

truth value). The possible is of a different status from the actual (fact), and yet it stands in relation to the actual. But still there is a *world* of difference between the two.

The relation between the possible and the actual is real and objective, and is not *determined* by thinking or judgment. Nevertheless, it is *in judgment* that *we make* the connection between sense and truth, i.e., move from the level of sense to what is the case (fact). The concept of truth, then, is essentially related to judgment and assertibility. This is why it is more accurate to apply the terms 'true' and 'false' to judgments or statements, rather than to propositions (predications). It seems that this is what Strawson is getting at when he distinguishes between meaning (connected with sentences) and truth (connected with the use of sentences in *making* statements). (See *Introduction to Logical Theory*, pp. 174 ff.)

*Note* : For related discussion of these points see –

Kneale – *Development of Logic* pp. 45-54

Davidson – “Truth and Meaning”, esp. pp. 310–ff  
where he says, “To give the truth-conditions is a way of giving the meaning of a sentence”.

Searle – *Speech Acts*. p. 125, agrees that meaning is specified by truth-conditions

Strawson – “Meaning and Truth” – *Logico-Linguistic Essays*, esp. pp. 179 and 182.

We may say, then, that intelligibility or sense stands to truth (assertibility) as possibility stands to actuality, or as States stand to facts.

Propositions, then, have the feature of /T/. They have *truth-status* (categorically) but no *truth-value*. To have a truth-value

is to stand in relation to the actual—to what is. But propositions do not (qua proposition) represent facts but States. Propositions have sense values (sentences qua sense) but no truth values. Statements (judgments) have truth values. Statements *purport* to represent facts (what is the case). It is for this reason that we may appropriately inquire into their truth value. A proposition cannot *fail* to specify a State, for this is what it means for a proposition to constitute sense. But a statement cannot fail to represent a fact. A proposition *can fail* to represent a fact for it is not its function to represent facts at all. This means that it *cannot succeed* in representing facts either. There must be some intermediary, and this is judgment. It is the thinker—judge who represents facts by means of propositions (sense), just as it is the judge who makes a *reference* by means of the sense of certain referring expressions. *Judgment is a function on a proposition such that it is brought into relation to what is.* This opens the way for the distinction between sense—functions and truth—functions. This is why Frege rightly focused on judgment as the connecting function between sense and truth. We shall speak of judgment as introducing a truth—function on propositions. *A proposition cannot stand in relation to what is without the addition of a truth—function.* Judgment is a functional relation between sense and truth. To know the truth—conditions of a sentence is to know under what conditions it may be asserted. To specify the truth—conditions of a sentence (the conditions under which a sentence is (*true or false*))—is to specify the *meaning* of a statement—the assertibility of the sentence.

I shall now illustrate some of the points just made by looking at some “propositions” of Wittgenstein’s *Tractatus*. He is a good example of a philosopher who confuses sense and truth.

The following remarks show on the one hand that he distinguishes between sense and truth, and at the same time confuses them :

2 - What is the case—a fact—is the existence of a state of affairs.

2.1 - We picture facts to ourselves.

2.11 - A picture presents a situation in logical space, the existence and non-existence of states of affairs

(See also 4.1 and 4.21.)

*Contrast :*

2.201 - A picture depicts reality by representing a possibility of existence and non-existence of state of affairs.

2.202 - A picture represents a possible situation in logical space.

2.203 - A picture contains the possibility of the situation that it represents.

*But then he immediately says :*

2.21 - A picture agrees with reality or fails to agree; it is correct or incorrect, true or false (See 4.25)

*Contrast :*

2.22 - What a picture represents it represents independently of its truth or falsity, by means of its pictorial form.

2.221 - What a picture represents is its sense,

2.222 - The agreement or disagreement of its sense with reality constitutes its truth or falsity.

Wittgenstein then recognizes the need for judgment :

2.223 – In order to tell whether a picture is true or false we must compare it with reality.

2.224 – It is impossible to tell from the picture alone whether it is true or false.

He then immediately overlooks the important distinction between state of affairs and fact :

3 – A logical picture of facts is a thought.

3.001 – 'state of affairs is thinkable' : what this means is that we can picture it to ourselves.

4.021 – A proposition is a picture of reality : for if I understand a proposition, I know the situation it represents. And I understand the proposition without having its sense explained to me.

4.022 – A proposition *shows* its sense.

A proposition *shows* how things stand *if* it is true. And it *says* they do stand.

Also, compare : 4.431 (A proposition is the expression of its truth-conditions), 4.024, 4.031, esp. 4.061 and 4.064.

*Distinction between Syntax, Semantics, Epistemics and Pragmatics*

It is timely to introduce some more terminology and make a further terminological remark. In the theory of signs (semiotic) it is customary to make a distinction between syntax, semantics, and pragmatics. Briefly, *syntax* deals with the formal relations between signs, *semantics* deals with the relation between signs and the objects to which the signs are applicable and *pragmatics* is the theory of the relations between signs and those who produce or receive or understand them. This division seems straightforward, clear and useful. Certain philosophers of language take

one or the other of these areas as the focal point of their theory and priority (of some kind) is given to the preferred area or approach. In so far as they are concerned with the other two divisions they deal with them in a derivative way. For example, one approach has been to take logical syntax as primary and autonomous and attempt to explain meaning in terms of syntax. By contrast, a speech-acts theory focuses on the pragmatic features of expression and linguistic communication and attempts to explain meaning mainly in terms of acts of communication, and so on. Sometimes the three levels are ordered in some direction such that one is taken as primary, the second presupposes the first, and the third presupposes the second and third.<sup>28</sup> For example, one arrangement is to begin with syntactic rules, then semantic rules presuppose syntax, and then pragmatic rules presuppose semantic rules, which in turn presupposes syntax, (in some level of rectitude), etc.

As useful as this division (in its various forms and combinations) may be for certain purposes (e.g. linguistics) it turns out that for theory of predication it raises more problems than it solves (clarifies). As it stands it is not precise enough for theoretical purposes in logical theory for the distinction cuts across and violates important distinctions—for example, the distinction between sense and truth. The distinction should not be thought of as being theory neutral. For the distinction itself presupposes (stems from) a particular approach to theory of logic and language. Also, since these three areas or branches have been interpreted in various ways and taken to stand in different relations, it becomes necessary for anyone who wishes to use these terms (viz., "syntax", "semantics" and "pragmatics") to theorize about language and thought to state explicitly how he is using them and what the connections between them are.

Realizing that such characterization of these terms stems from a certain view of language (or at least is not independent of some presuppositions) I shall state in a rough and preliminary way how I shall use these terms, and what their relations are.

*Logical Semantics*

This is the theory of sense and sense-relations between terms, the sense-formation of propositions and their constituents. Semantics, as the theory of *sense*, is concerned with the logical relations between linguistic expressions (sentences, e. g.) conceptual content (propositions, e. g.) and the objects (intelligible) they specify (states of affairs : States, e. g.). Semantics deals with predicability (thinkability/intelligibility) and sense-functions. It has nothing directly to do with truth-functions and assertibility. Of course assertibility presupposes predicability. This is a radical departure from the common use of the term 'semantics'. Semantics in this sense does not give an account of reference, although it is concerned with connoting (*specifying*) (e. g. an expression, say an appropriate sentence-form connoting or specifying a proposition). Semantics deals with possible objects (sense-contents), not with actual/existent objects.

*Logical Epistemics*<sup>21</sup>

This is the theory of truth-functions and judgment. It deals with the relation between expressions (e. g. a sentence), their sense, and their relation to *what is* as mediated by judgment. It is theory of judgment and *assertibility*. Epistemics is the theory of truth, and reference. It presupposes semantics, and is in a sense *applied* semantics. Epistemics deals with the relation between sense and truth. It attempts to state the laws of judgment and assertibility. Its objects are actual/existent objects. Epistemics deals with reference insofar as the latter plays a part in judgment and assertion. In this respect epistemics covers a part of what

is customarily included in pragmatics—the *use* of expressions—e.g. to *make* reference or *make* an assertion.

I distinguish between semantics and epistemics in order to avoid a systematic ambiguity in the current use of the term 'semantics', which it used to cover both theory of *sense* and theory of *truth* (reference). Since this distinction is important for logical theory it seems sensible to use two *distinct* terms to avoid confusion. The term 'epistemics' is not to be confused with epistemology. (Perhaps 'ontics' might have been a better label.)

Epistemics is the theory of affirmation/denial—of *statement* formation. This will include theory of modality (modes of affirmation and denial). Reference plays a role in judgment, for in judgment the judge moves beyond sense to *what is*. In this respect reference is not to be taken in the full *pragmatic* sense (although it involves the expression and the *use* of the expression in *making* a reference, and in *identifying* actual objects and facts). But there clearly is some overlap between epistemics and what is understood as 'pragmatic' features of discourse. For in *judgment* expressions are *used*, and this introduces the notion of an agent (judge-user). Nevertheless, judgment is still independent of expression and communication, which, as we shall see in a moment, are legitimately included under 'pragmatics'.

Thus, epistemics, as theory of judgment as assertibility, includes the notions of agency and use. As such it is also concerned with *inference* (in contrast to *entailment*, which falls within the domain ontological semantics).

### *Logical Pragmatics*

Logical pragmatics is the theory of *speech acts*. It deals with the relation between expressions (e.g. sentences), their sense, and



the *use made* of them in acts of expression and communication. That is, the analysis of speech acts (linguistic performances of expression and communication) fall under pragmatics, and it takes into account social conventions, institutional rules, illocutionary force, etc. For example, the logical conditions of asking a question, making a command, making an assertion, referring to an object...etc., are linguistic acts which are susceptible to logical analysis, which exhibit logical features. Where epistemics is concerned with the analysis of truth-conditions and assertibility, pragmatics is concerned with the *making* of a statement (assertion)—the commitment that is involved on the part of a person making the assertion (endorsement) in an act of communication. This applies not only to assertion (where the question of truth and falsity is relevant) but a wide range of linguistic acts in which the question of judgment and truth is *not* involved: making a promise, commanding, etc. These acts of communication introduce categories and exhibit logical features of their own which are not introduced or relevant at the level of semantics or epistemics. The logical analysis of *judgment* (epistemics), for example is independent of (prior to) the considerations of communicating and expressing a judgment (making a statement). Pragmatics would *presuppose* (in some clear sense) semantics and epistemics (rule priority) for example in the analysis of *assertion making*.<sup>25</sup> Judgment is the mere recognition of truth (as Frege points out), not the endorsement or commitment to truth that is conveyed in the *act* of assertion. Thus a distinction must be made between *assertibility* (epistemics) and assertion (pragmatics).

*Note*: The notion of *meaning* spans all *three* areas: semantics, epistemics and pragmatics. The term '*sense*' applies only in logical semantics. This is why it is important to distinguish between theory of *sense*, and theory of *meaning*. Now that we

have distinguished between semantics, epistemics and pragmatics it should be clearer that theory of predication—theory of the *sense* structure of *propositions* (sense—contents)—is purely semantic. This means that in *some* sense theory of propositional structure is *prior to* and *independent of* considerations of epistemics and pragmatics. This point requires elaboration.

Even in *thinking* (the Fregean sense) expressions of a particular language are involved. This is how we have access (in thought) to propositions (sense—contents). Nevertheless propositions themselves, as Frege stressed, are independent of thinking (the act) or the mode of expression or representation. This means that propositions are independent (in some sense) of any particular natural language. It becomes crucial in logical theory (theory of predication) to isolate the special problems and features connected with *expression* of propositions in a particular language. Frege says,

“ Much of language serves the purpose of aiding the hearer’s understanding, for instance the stressing of part of a sentence by accentuation or word-order... A sentence can be transformed by changing the verb from active to passive and making the object the subject at the same time... Naturally such transformations are not indifferent in every respect; but they do not touch the thought, they do not touch what is true or false. If the inadmissibility of such transformations were generally admitted then all deeper logical investigation would be hindered. It is just as important to neglect distinctions that do not touch the heart of the matter as to make distinctions which concern what is essential. But what is essential depends upon one’s purpose ” (“Thought”, p. 25).

If our purpose is to give an account of expression and communication in natural discourse then pragmatic-epistemic features of language are essential. But if our purpose is to give an account of the sense-structure and formation of propositions, then these feature are irrelevant. Thus, theory of predication is concerned with the structure of propositions. Propositions are expressed and apprehended via some mode of representation (sentences in a particular language), but propositions are nevertheless independent of the particular mode of representation. Theory of predication is not essentially concerned with natural languages (particular sentences), but only insofar as natural languages reflect (represent) propositions. So theory of propositions is independent of expression of thoughts (epistemics and pragmatics).

#### *Logical Syntax*

Logical syntax is the theory of the formal (structural) relations between signs or expressions. The constituents of propositions stand in determinate relations, and syntax is concerned with the formal representation of elements of thoughts in their mutual configurative arrangements.

Logical syntax is *not* autonomous in the sense that its rules are independent of semantic, epistemic and pragmatic functions. Logical syntax is shaped by these forces. It deals with the "special" arrangements of signs and their structural features as they function in thinking, judgment and expression. However, syntax is autonomous (independent) in one sense: *given* the semantic, epistemic and pragmatic features and functions of signs, certain structural and formal relationships between them may be abstracted and investigated in their own right. This is what logical syntax is concerned with. Thus, the structural relations between signs is objective and the investigations of these features is a legitimate independent study.

Syntax is shaped by semantic, epistemic and pragmatic functions. There are degrees of determinants of syntactic form. For example, the logical syntax of predication would deal with the sense-formative structure of propositions independently of epistemic (truthfunctional) or pragmatic functions. This aspect of syntax, for example, would correspond to Frege's treatment of propositional (conceptual) content apart from the judgmental function (stroke).

Syntax at this level is the formal-structural features of semantic (sense) functions. The logical syntax of predication presented in the next section attempts to explicate precisely this aspect of syntax: the formal-structural features of predicative formation abstracted from content. Syntax, being formal, does not take into account the material content of predication. For this reason the rules of syntax (the proper formation of sentences) does not guarantee the semantic correctness of predicative content. Thus, a sentence may be well-formed syntactically (structurally) but may fail to have a sense value: *sense*. Part of a well-formed *predication* is its syntactic form. This is a necessary, but not a sufficient condition for sense-formation. Certain semantic features of *content* cannot be captured by syntax, and these play a role in sense-formation. It is a mistake to suppose that logical syntax can (or should) be sufficient to account for sense-formation. This is not what syntax is about. It is only one aspect of sense-formation.

*Logical form* is often identified with logical syntax. This is correct only when it is understood that syntax is the attempt to capture the structural and formal features of semantic, epistemic and pragmatic functions. Logical form is not autonomous and independent of semantic determination. Once syntax is given

it may be considered apart from content (sense-content), but it could not get started apart from semantics. This is the sense in which syntax is *not* autonomous and independent. Syntactic rules—rules of proper sentence-formation—cannot get started apart from semantic functions and sense-formation. Rather it is precisely the attempt to capture and represent the formal features of sense-formation. The view that syntax is prior to and independent springs from the attempts to construct artificial languages. Natural logical syntax cannot get started in a vacuum—apart from semantic considerations, even though this may be possible in artificial syntax. Even the syntactic (formal) representation of so-called logical signs (formatives) cannot capture the *content* of these signs (functions). We shall see below that in the theory of formatives these functions have *form and content* of their own. The syntactic features of formatives do not capture the full *content* of formative functions.

*Summary :*

- 1) Logical Semantics, theory of predication, is the level of sense-formation—intelligibility, conceptual content. The act of thinking (in Frege's sense) applies here in the apprehension of propositions, wherein the thinker entertains a State.
- 2) Logical epistemics is the level of judgment and truth-functions—theory of assertibility. It is at this level that sense is brought into relation with the actual (what is) and this gives rise to truth-falsity. This is the level of assertibility (not assertion). The act of judging (in Frege's sense) is not a psychological act but (like thinking) a *logical act*.
- 3) Logical pragmatics focuses on linguistic performances—speech acts. Here, for example, the logical conditions of making an assertion is relevant. From one point of view the analysis

of speech acts of various sorts presuppose the two prior levels. Illocutionary forces, performatory utterances in acts of expression and communication occur at this level.

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#### NOTES

14. For an intensional treatment of predication see Leibniz, *Logical Papers* p. 19 ff.  
*Note* : A proposition is a natural element (unit) of thought. This does not mean that they are discrete *atoms*. We shall see later that propositional-terms stand in sense relations (configure) with other terms.
15. Searle, for example, characterizes predication as a speech-act. Although he distinguishes sharply (the way Frege does) between propositional content and assertion, etc., he nevertheless goes on to speak of "propositional acts" which are "slices" of illocutionary acts. He points out that "propositional acts" cannot occur alone. "When a proposition is expressed it is always expressed in the performance of an illocutionary act". *Speech Acts*, p. 29. See also pages 25, 123, 125)
16. Strictly speaking, a predication (proposition) *constitutes* sense-content, and appropriate sentence-form *makes* sense. Sometimes, however, I shall speak loosely and say indifferently that propositions make sense. A proposition, however, *cannot* make non-sense, for it essentially constitutes sense.
17. Sommers distinguishes between sense and meaning in "The Ordinary Language Tree" (*Mind*, 1959). His distinction is different.
18. Although I subscribe to Frege's distinction between sense and reference (truth) I do not accept his odd postulation of two entities, The True and The False. It seems a natural move to have made since reference is tied to some object. But this move is not the only (nor best) I would prefer (if I had to speak this way) to speak of The Actual (Actuality) or

What-is-the-case. A sentence is true when the state of affairs it represents is actual (obtains), etc.

19. Linsky says, "Frege thought that sentences of fiction, myth, etc. did express 'thoughts' (propositions). They could do this even though they contained names such as 'Odysseus' which do not have a reference. Of course, such sentences would not have a reference. Of course, such sentences would not have a reference (truth-value), because since the reference of a sentence is a function of the references of the constituent names contained in it, sentences containing names without references would be without references themselves". *Referring*, p. 28.
20. (In his footnote Frege says: "A judgment, for me, is not the mere comprehension of a thought, but the admission of its truth").
21. Linsky says, "Frege's semantics deals with signs, their senses, and their references. Signs are said to 'denote' (or to 'refer to') their references and 'to express' their senses. These technical terms are used to refer to the relation of signs to their senses and their references. There is, however, no term in Frege's writings to stand for the relation of sense to reference. Frege says that the sense is a 'mode of presentation' of the reference". (*Referring*, p. 30)  
This is another sign of unclarity in characterizing the relation between sense and reference.
22. On the one hand Frege makes a clear distinction between a proposition (sense) and truth (reference). He establishes their independence. Nevertheless, he sees that a thought is intimately related to truth:  
"In thinking we do not produce thoughts but we apprehend them. For what I have called thought stands in the closest relation to truth. What I recognize as true I judge to be true quite independently of my recognition of its truth and of my thinking about it. That someone thinks it has nothing to do with the truth of the thought". (*Thought*, p. 35)  
So, the proposition itself is not inherently true or false, yet it stands "in the closest relation to" the truth. It is this relation that we need to explicate.
23. See G. Harman - "Three Levels of Meaning"  
P. F. Strawson - "Truth and Meaning" *op. cit.*
24. I stress the term *logical* epistemics to distinguish it from *psychologistic* theories. Theory of judgment and truth-functions is not concerned with *actual* thought processes. I use the term in the sense in which Frege understands judgment. It is an *act* (process) but it is a *logical* act, and is susceptible to logical investigation.
25. Searle distinguishes between propositional acts (predication and illocutionary acts): "We might put it in this Fregean way: meaning is prior to reference; reference is in virtue of meaning". (*Speech Acts*, p. 92)

## THE PHILOSOPHY OF KALIDAS BHATTACHARYYA

Proceedings of a seminar organised by the Department of Philosophy, Rajasthan University, the book contains a critical appraisal of various aspects of the late **Kalidas Bhattacharyya's** philosophical thought, and includes his own final formulation of his philosophical position.

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