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**INFERENCES
OF UNDERSTANDING
AND REASON AS FACTORS
OF TEXTUALITY
IN I. KANT'S
PHILOSOPHICAL
DISCOURSE**

On the basis of Kant's texts, the author attempts to prove that two and three-element logical-semantic structures – called the judgements of understanding and reason by Kant – represent logically organised complexes of propositions grouping around the structural core of both types of inferences and are communicative forms of textual material "packaging" and, thus, are forms of textuality in I. Kant's discourse. Moreover, they give assertoric and apodictic modality to Kant's discourse.

Key words: inference, reason, proposition, antecedent, consequent, context, form, contextuality.

As we know, Kant's classification of inferences is based on the method of derivation of the consequent from the previous premise (explicit or implicit one). If the consequent (the conclusion) derives from the previous premise immediately, such inference is called an inference of understanding and if it derives mediately, such inference is called an inference of reason, however, they belong to different levels of reflection: understanding operates with the rules meant for the acquisition of empirical knowledge, and reason operates with the rules meant for the acquisition of transcendental knowledge, i.e. understanding is an object for reason. Inferences of understanding provide material for inferences of reason; understanding judges, reason infers. Moreover, inferences of understanding engage, according to Kant, all three cognitive faculties: power of judgement, reason as an ability to produce immediate inference, and understanding as an ability to produce mediated inferences. In the works of the pre-critique period, Kant stresses the difference in functions of these two cognitive faculties. Understanding is an ability to generate such judgements that make concepts clear and valid, i.e. the ability to clearly cognise, while reason is considered as an ability to generate logically mediated inferences, make them complete and real. However, both of them are based on the same ability to generate inferences. Kant of the critique period adds the ability to generate evaluative judgements, ability to reflect, ability to imagine, etc.

Inferences of understanding, from the linguistic point of view, have a two-element (implicative) form of the "if... then", "since... then" type or a two-element disjunctive form of the "not... but", "neither... nor... but" etc., i.e. they follow the antecedent – consequent model in wide sense; in other words, the function of antecedent is implemented by judgements that, this or that way, represent the basis a judgement (consequent) is generated from (or for).

Kant himself, in his work *On a discovery... (against Eberhard)*[1], calls the two-element judgement a mediated statement (Satz), in particular, he writes as follows:

Die Kritik hat den Unterschied zwischen problematischen und assertorischen Urtheilen angemerkt. Ein assertorisches Urtheil ist ein Satz. Die Logiker thun gar nicht recht daran, daß sie einen Satz durch ein mit Worten ausgedrücktes Urtheil definiren; denn wir müssen uns auch zu Urtheilen, die wir nicht für Sätze ausgeben, in Gedanken der Worte bedienen. In dem bedingten Satze: wenn ein Körper einfach ist, so ist er unveränderlich, ist ein Verhältniß zweier Urtheile, deren keines ein Satz ist, sondern nur die Consequenz des letzteren (des consequens) aus dem ersten (antecedens) macht den Satz aus. Das Urtheil: einige Körper sind einfach, mag immer widersprechend sein, es kann gleichwohl doch aufgestellt werden, um zu sehen, was daraus folgte, wenn es als Assertion, d. i. als Satz, ausgesagt würde. Das assertorische Urtheil: ein jeder Körper ist theilbar, sagt mehr als das blos problematische (man denke sich, ein jeder Körper sei theilbar etc.) und steht unter dem allgemeinen logischen Prinzip der Sätze, nämlich ein jeder Satz muß gegründet (nicht ein blos mögliches Urtheil) sein, welches aus dem Satze des Widerspruchs folgt, weil jener sonst kein Satz sein würde¹ [1, S. 304–305 (Anmerkung)].

This statement stresses that Kant's two-element structures with antecedent-consequent (cause-effect, or implicative) logical relations are a means to give the discourse an assertive modality, since the antecedent contains, as a rule, a condition, under which the consequent is presented as a true statement. For example:

1. (1) as the proposition "I think" (in the problematical sense) contains the form of every judgement in general and is the constant accompaniment of all the categories, (2) it is manifest that conclusions are drawn from it only by a transcendental employment of the understanding. This use of the understanding excludes all empirical elements; and we cannot, as has been shown above, have any favourable conception beforehand of its procedure² [2, S. 423].

¹ The Critique emphasised the difference between the problematic and assertoric judgements. The assertoric judgement is an assertive statement. Logicians define it erroneously as a judgement expressed by words, since when thinking we have to use words to formulate judgements that are not assertions. In the mediated judgement "if a body is elemental, it is unchangeable", there is a relation of two judgements, none of which is an assertion, but only the relation of consequence of the second (des consequens) from the first (antecedens) makes it such. The judgement "some bodies are elemental" can contain a contradiction, nevertheless, it can be expressed in order to understand what can derive from it, if it is presented as an assertion, i.e. a statement. The assertoric judgement "any body is divisible" tells us more than just a problematic judgement ("one should assume that any body is divisible", etc.), since it comes under the general logical principles of all affirmative judgements, namely: any statement should have grounds (rather than be just possible), which stems from the principle of contradiction, anyway, it will not be an assertive statement.

² Italics and numeration mine — I.K.

Here, antecedent (1) contains a condition, under which the consequent (2) is a true proposition.

The disjunctive form is used, as a rule, in the cases when the purpose is the need to emphasise the content of the second part of judgement, which can be logically unrelated to the first part but, nevertheless, be presented as assertion. For example:

2. (1) Reflection (*reflexio*) is not occupied about objects themselves, for the purpose of directly obtaining conceptions of them, *but* is that state of the mind in which we set ourselves to discover the subjective conditions under which we obtain conceptions [2, S. 354].

Thus, in both cases, the two-element structure of propositions gives its second part assertoric (affirmative) modality.

The cause-effect relations in Kant's discourse are of such versatile and formal character that they become a composite form of textuality in general, i.e. the form of text construction; at the same time, the antecedent represents, as a rule, a number of premises turning into a textual antecedent. This antecedent entails a series of statements of consequential character (textual consequent); its markers are words and phrases of consequential semantic *thus, therefore, consequently, hence, etc.*, thus, we can speak of a textual inference or a textual judgement-inference in general. For example:

3. (1) "I," as thinking, am an object of the internal sense, and am called soul. That which is an object of the external senses is called body. (2) *Thus* the expression, "I," as a thinking being, designates the object-matter of psychology, which may be called "the rational doctrine of the soul," inasmuch as in this science I desire to know nothing of the soul but what, independently of all experience (which determines me in *concreto*), may be concluded from this conception "I," in so far as it appears in all thought [2, S. 415].

This super phrasal unit (SPU) is can be divided into two parts — the antecedent (1) and consequent (2) ones, which are linked by a connective word of consequential semantic (*thus*). The first contains the premises, the second their conclusions.

From the perspective of topic-focus articulation, i.e. the division of a statement into the "given" and the "new" or the "theme" and the "rheme", in Kant's text, new information is contained in the conclusive (consequent) part. Thus, further development of the text takes place, as a rule, through the consequent, by means of further expansion of the content of its rhematic part or the rhematic core. At the same time, both parts of the logical two-element structure participate in the process of discourse generation resulting in structural cyclicity, which, according to Kant, is an a priori form. For example:

4. (1) [If] Thetic is the term applied to every collection of dogmatical propositions. (2) [Then] By antithetic I do *not* understand dogmatical assertions of the opposite, *but* the self-contradiction of seemingly dogmatical cognitions (*thesis cum antithesis*), in none of which we can discover any decided superiority. (3) Antithetic is not, *therefore*, occupied with one-sided statements, but is engaged in considering the contradictory nature of the general cognitions of reason and its causes [2, S. 509].

As follows from the example above, the logical-syntactic structure of this SPU is based on the "if... then" (1) and "not... but" (2) relations, where the latter is

subordinated to the former, since it is given in the consequent in order to emphasize by logical and rhematic means the main thought of this statement. The text is developed through the repetition of the "not... but" structure (as a manifestation of cyclicity) with an apodictic-conclusive modality. In effect, we deal with a three-element structure that resulted from the absence of the usual meaning of logical conclusion in the consequent (2), which takes place only in (3). It is worth mentioning that both structures under consideration can serve as the forms of expression for different illocutionary speech acts. In our example, the "not... but" form accounts for the speech act of definition in (2) and that of conclusion in (3), which is indicated by the *therefore* operator.

If the conclusive part of the "if... then" formula is expanded, i.e. includes a number of propositions, the following conclusion can be moved to the next paragraph, which leads to the formation of a super-paragraph SPU. For example:

5. (1) If a cognition is to have objective reality, that is, to relate to an object, and possess sense and meaning in respect to it, (2) it is necessary that the object be given in some way or another. (3) Without this, our conceptions are empty, and we may indeed have thought by means of them, but by such thinking we have not, in fact, cognized anything, we have merely played with representation. (4) To give an object, if this expression be understood in the sense of "to present" the object, not meditatively but immediately in intuition, means nothing else than to apply the representation of it to experience, be that experience real or only possible...

(5) The possibility of experience is, *then*, that which gives objective reality to all our a priori cognitions [2, S. 252].

As follows from this illustration, the consequent is presented by propositions in (2), (3) and (4). In (5), the content of statements (2), (3) and (4) is formulated more concisely and clearly with the help of the conclusion operator *then*. Therefore, the content of consequent is presented in the assertoric mode; there emerges a hidden syllogism with the following premises.

- 1. In order to give objective reality to cognition, it is necessary that the object be given.**
- 2. To give the object means to apply its representation to real or possible experience.**
- 3. Then, the possibility of experience gives objective reality to all our a priori cognitions.**

Therefore, we can arrive at a conclusion that, although Kant tries to distinguish between inferences of understanding and reason, as well as their functions, in effect, his texts do not always reflect this difference. The point is that the middle member of syllogism in an inference of reason is often an extension (a turn) of the content of the consequent of "if... then" structure, i.e. an inference of understanding. It takes place in those cases when it is necessary to give maximum logical apodicticity to the statement, especially in speech acts aimed at a proof. It can be illustrated with the text of the proof of the first antinomy stating that the world has a beginning in time, and is also limited as regards space.

6. (1) Let us assume that the world has no beginning in time; (2) up to every given moment of time, an eternity must have elapsed, and therewith passed away an infinite series of successive states of things in the world. (3) Now the infinity of a series consists in the fact, that it never can be completed by means of a successive synthesis. (4) It follows that an infinite series already elapsed is impossible, and that consequently a beginning of the world is a necessary condition of its existence. And this was the first thing to be proved. [2, S. 514].

In this example, the rheme of the consequent (2) is the phrase "an infinite series of successive states of things", which is later thematised, i.e. becomes the initial point (theme) of the middle premise of the syllogism (3). Both premises exclude each other, which makes it impossible for the thesis to be true.

Thus, we approached the discussion of the three-element logical structure that Kant calls the inference of reason. In the *Critique of Pure Reason*, Kant writes as follows:

The logical determination of a conception is based upon a disjunctive syllogism, the major of which contains the logical division of the extent of a general conception, the minor limits this extent to a certain part, while the conclusion determines the conception by this part [2, S. 315].

From the perspective of text linguistics, a syllogism as a mediated judgement is a means of text material "packaging", which can be seen in the following example:

7. (1) Understanding is, to speak generally, the faculty of cognitions. These consist in the determined relation of given representation to an object. But an object is that, in the conception of which the manifold in a given intuition is united. (2) Now all union of representations requires unity of consciousness in the synthesis of them. (3) Consequently, it is the unity of consciousness alone that constitutes the possibility of representations relating to an object, and therefore of their objective validity, and of their becoming cognitions, and consequently, the possibility of the existence of the understanding itself [2, S. 181].

This example is remarkable, because the major premise (1) represents a sum of several consecutive propositions (premises), only the third of which is used to construct the minor premise (2), thus, we should rather speak of the complex nature of the major premise. The conclusive part of the syllogism (3) is also a complex of propositions:

- 1. The unity of consciousness constitutes the possibility of representations relating to the object.**
- 2. It also constitutes the possibility of their objective validity.**
- 3. It transforms representations into knowledge.**
- 4. It makes understanding possible.**

The major premise also consists of several propositions:

- 1. Understanding is a faculty of cognition.**
- 2. Cognition determines the relation of given representation to an object**
- 3. Object is a conception.**
- 4. This conception unites the manifold in a given intuition.**

If we add to these propositions the proposition of the minor premise (2), the total number of propositions will be nine. From the above, one can make a conclusion that syllogisms in Kant's discourse are of *complex-propositional (textual) character and represent the composite form of organisation of textual material* and all three elements of the inference structure (main premises and the conclusion) can "develop" in the text different auxiliary propositions and forms of speech, the addition of which seems inevitable to the author as a result of their aspiration to the clarity, lucidity, soundness, and apodicticity of the propositions put forward. Such syllogisms could be called *propositional* and *contextual*. Here is an example of a contextual syllogism.

8. (1) All phenomena contain, as regards their form, an intuition in space and time, which lies a priori at the foundation of all without exception. Phenomena, therefore, cannot be apprehended, that is, received into empirical consciousness otherwise than through the synthesis of a manifold, through which the representations of a determinate space or time are generated; that is to say, through the composition of the homogeneous and the consciousness of the synthetical unity of this manifold (homogeneous). (2) Now the consciousness of a homogeneous manifold in intuition, in so far as thereby the representation of an object is rendered possible, is the conception of a quantity (quanti). (3) Consequently, even the perception of an object as phenomenon is possible only through the same synthetical unity of the manifold of the given sensuous intuition, through which the unity of the composition of the homogeneous manifold in the conception of a quantity is cogitated; that is to say, all phenomena are quantities, and extensive quantities, because as intuitions in space or time they must be represented by means of the same synthesis through which space and time themselves are determined [2, S. 258].

As follows from the example, the major premise (1) and the conclusion (3) are textual (propositional) formulae, which leads us to the conclusion that inferences of understanding and reason represent, in Kant's texts, the *factors of textuality in general*. This conclusion is supported by the fact that both structures can take different forms and modes of speech. A typical mode of argumentative speech is, for example, *introspection*, i. e. argumentation from the subject of empirical theoretical cognition. For example:

9. (1) The "I think" must accompany all my representations, for otherwise something would be represented in me which could not be thought; in other words, the representation would either be impossible, or at least be, in relation to me, nothing. (2) That representation which can be given previously to all thought is called intuition. (3) All the diversity or manifold content of intuition, has, therefore, a necessary relation to the "I think," in the subject in which this diversity is found [2, S. 173].

This example is representative, since it contains different modes of speech. The major premise (1) presents the *introspective modes of speech* of a transcendental I-subject, whose speech acts are used, as a rule, for the creation of a theory of transcendental method to obtain theoretical knowledge.

However, the "*if... then*" structure in its *introspective mode of an empirical I-subject of cognition* is used, as a rule, to justify, prove or illustrate the formulated theoretical statements, as in the following example.

10. (1) The time between the causality of the cause and its immediate effect may entirely vanish, and the cause and effect be thus simultaneous, but the relation of the one to the other remains always determinable according to time. (2) *If*, for example, I consider a leaden ball, which lies upon a cushion and makes a hollow in it, as a cause, *then* it is simultaneous with the effect. But I distinguish the two through the relation of time of the dynamical connection of both. (3) For if I lay the ball upon the cushion, then the hollow follows upon the before smooth surface [2, s. 296].

In this case, (2) and (3) offer arguments from the subject of empirical cognition represented usually by the author themselves with the help of the "if... then" structure.

The same type of inference can acquire an *objectified pragmatic mode* with the help of a generalised inclusive *we-subject* or an indefinite-personal subject ("man" in German). This type of inferences with an affirmative (assertoric) mo-

dality is a logical means of *objectifying* the obtained knowledge, since it implies the presence of previous argumentation stages and according to Kant, postulates a priori the universal voice of reason. For example:

11. Accordingly, *when we* know in experience that something happens, *we* always presuppose that something precedes, whereupon it follows in conformity with a rule [2, S. 285].

The *pragmatic mode* of inferences of understanding and reason emerges in that case when they are formulated *from the addressee*. i.e. the author offers the addressee to make the inference. This method makes it possible to give logical arguments maximum persuasiveness and forcefulness and, hence, vividness and expressiveness. For example:

12. *Let one assume* that the world itself, or something in it, is a necessary entity (Being), then in the series of its changes there would be a beginning which was unconditionally necessary and consequently without cause... Or else the series itself would be without a beginning... [2, S. 539].

At the *level of expression and assessment*, Kant as an author uses the above mentioned inference from exclusive I- and we-subjects, for example:

13. Accordingly, in the expectation that there may perhaps be conceptions which relate a priori to objects, not as pure or sensuous intuitions, but merely as acts of pure thought (which are therefore conceptions, but neither of empirical nor aesthetical origin) — in this expectation, I say, we form to ourselves, by anticipation, the idea of a science of pure understanding and rational cognition, by means of which we may cogitate objects entirely a priori [2, S. 13–131].

Thus, we can arrive at a conclusion that inference of understanding and reason in Kant's discourse are of *complex propositional (textual) character* and represent the *composite form of organisation of textual material* and all three elements of the inference structure (main premises and the conclusion) can "develop" in the text different auxiliary propositions and forms of speech, the addition of which seems inevitable to the author as a result of their aspiration to the clarity, lucidity, soundness, and apodicticity of the propositions put forward. Such syllogisms could be called *propositional* and *contextual*, while the two- and three-element structures could be called *factors of textuality in Kant's discourse in general*.

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