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LEVELS AND TIERS IN ARGUMENTATION

This paper focuses on approach with distinguished two levels of argumentation connected to object-arguments and meta-arguments. In addition, I differentiate three tiers of argumentation (logical, dialectical and rhetorical). Levels and tiers of argumentation are considered from a standpoint of informal logic, a discipline located in the borderland between logic and epistemology. I look at levels and tiers of argumentation, aiming to figure out key features of real argument, which is a subject matter of informal logic.

Keywords: informal logic, real argument, level of argumentation, tier of argumentation, critical question.

1. INTRODUCTION

Argumentation theory has a long history. In my view, the best way to describe its contemporary developments is by considering various theoretical perspectives and approaches. Now, researchers working in various areas investigate the issues of argument. Among them are philosophers, logicians, psychologists, linguists, political scientists, and lawyers. In this regard, it can be presented different opportunities in argumentation studies: theoretical and empirical; analytical and practical; normative and descriptive; formal and informal, etc.

For my present purposes, it is important to stick to the last point on this list, in particular to the informal approaches. The key reason of appearance such approaches was the criticism of formal logic in the late 20th century and their preconditions can be allocated. These are Toulmin's concept of the 'working logic' (Toulmin, 1958) and Perelman's concept of the 'new rhetoric' (Perelman and Olbrechts-Tyteca, 1958).

Toulmin believed that the key problem of formal deductive logic is that it reduces arguments, used in different situation, to universal standards even though the procedure must depend on the realm of knowledge in which they are used. In his opinion, it is necessary to create a new logic similar to epistemology, which has broader subject matter including argumentative process in various spheres of human life and primarily in law. In this respect, he identified formal logic as the 'ideal logic' while informal one is the logic which operates or the 'working logic.'

Perelman believed that rapid development of mathematical logic became the reason why logicians developed mainly the theories of mathematical proof and did not pay attention to the problem of proof in liberal arts. Natural sciences deal with the obvious statements or statements, which may be deduced from their combinations. Unlike them, arts deal with the values. Thus, we cannot use the same proof scheme in natural science and liberal arts. In order to highlight this distinction, Perelman used 'proof' for natural science and 'argument'— for humanities. He held the position that formal logic is the 'logic of proof' and informal logic is the 'logic of argument.'

As a result Toulmin and Perelman concluded that most areas of intellectual and practical activities cannot be limited to formal-logical thinking and require creating a new logic as a theory of argument. Following this idea, Toulmin came up with 'working logic' while Perelman developed 'new rhetoric.'

Nowadays studies in informal theory of argument are topical within the scientific community. A number of different streams can be identified as informal: American tradition of communication studies and rhetoric, linguistic approaches, pragma-dialectical approach, informal logic, etc. I would like to note that my research in argumentation relates to informal logic.

It should be pointed out that various approaches to informal logic have been offered in literature.

"The term *informal logic* does not refer to one well-delineated approach. It rather refers to a collection of attempts to develop and theoretically justify a method for the analysis and evaluation of natural language arguments in different context of use that is an alternative to formal logic (van Eemeren et al., 2015: 374)."

Moreover, there are various suggestions on using other labels as a title for this discipline. For example, 'practical logic', 'philosophy of argument', 'theory of argument', 'applied epistemology', 'theory of reasoning', 'theory of critical thinking', etc.

Because of this, one can occur many interpretations of what informal logic is. The closest to my viewpoint would be the definition, established by Blair and Johnson. It looks as follows.

"Informal logic is the best understood as a normative study of argument. It is the area of logic, which seeks to develop standards, criteria and procedures for the interpretation, evaluation, and construction of arguments and argumentation used in natural language (Blair and Johnson, 1987:148)."

However, I would like to clarify it by considering informal logic as a normative study of such type of argument as real argument.

2. WHAT IS REAL ARGUMENT?

In definition of informal logic I use the term 'real argument' because informal logicians focus solely on this kind of reasoning. Thus, it can be claimed that such argument is a subject matter of informal logic.

Unfortunately, in spite of numerous papers, books, and textbooks published over the last thirty years, consensus as to what a real argument is has not been achieved so far. We can only point out the fact, that the informal logicians unit around the idea that a real argument is a kind of reasoning which are not a subject matter of formal logic.

This point could be illustrated with Johnson's quote about of one of the vices of formal logic as "virtual disappearance from the mandate of logic of the focus on real argument (Johnson, 2000: 105)." Govier also part companies with Johnson and claims that "what should be obvious: that the understanding of natural arguments requires substantive knowledge and insight not captures in the rules of axiomatized systems (Govier, 1987: 204)."

Let's try to clarify the term 'real argument'. First, it should be pointed out that researchers use various words for this term in informal studies. Among them are real, natural, everyday, actual, real-life, ordinary, mundane, marketplace argument. By now we have witnessed many attempts to produce definition of real argument. However, in my view, none of them is clear enough.

For example, according to Blair and Johnson real argument is: "actual natural language arguments used in public discourse, clothed in their native ambiguity, vagueness and incompleteness. […] arguments that have actually been used to try to persuade people, the sorts of arguments the student will encounter outside the classroom (Johnson and Blair,1994: 6)."

Groarke thinks that real arguments are: the arguments found in discussion, debate and disagreement as they manifest themselves in daily life (Groarke 2016).

Even though it seems that I have provided more than enough definitions for now, still, in my view none of them is clear enough. That is why I will proceed with analyzing real arguments.

With regard to clarifying this term I consider it as complex kind of argument, which is used in argumentation as a form of dialogical interaction, where arguers aim is to resolve a conflict of opinions expressed by verbal means.

In my view, we can highlight the key features of such arguments and it can be described in the following way.

(1) Unlike formal logic, which uses artificial language, real argument is expressed by natural language.

(2) Real argument is a dialogical argument. Here arguing requires at least two arguers. They express to each other divergent points of view on certain question and at the same time should keep in mind objections, which they may have.

(3) Real argument relates to everyday communication. In this regard the artificial reasoning from textbook on logic are not relevant to real arguments.

(4) Real argument mostly is a defeasible argument.We can see that some arguments, which we take to be good, are not sound by reflecting on examples of perfectly acceptable arguments whose premises are not all true, or whose inferential step is not deductively valid.

(5) One of the key features of real argument is its incompleteness. Arguers often do not use all premises and conclusions in such arguments. Some of them do it on purpose of confusing the opponents, but sometimes this case occurs when arguers do not have sufficient skills to express their thoughts clearly.

(6) Real argument is dependent on the context of utterance.

3. LEVELS OF ARGUMENTATION

In my view, based on the analogy from formal logic where object language differs from meta-language, real argument can be analyzed on two levels: object level and meta-level. Let us look closer at both of them.

Begin with explication term 'object level'. Generally, it refers to reasoning about such objects as historical events, social events and politics, news in mass media and social networks, advertising, corporate and governmental communications, personal exchange and practical problems. Such reasoning can be called object-argument.

I see object argument as set of statements that seeks to justify a conclusion by supporting it with premises; to defend it from objections; or both goals.

With regard to the components of object argument, I believe that we can use the traditional approach here: object argument can be considered as a system composed of premises and a conclusion. Conclusion is a statement that is based on other statements, called 'premises'. Both notions are mutually interdependent and hang upon the context of argumentation. Thus, it can be stated that object argument is a claim-reason complex.

The next item on our agenda is to explain the term 'meta-level'. Here I use it with the following meaning: meta-level of argumentation relies on meta-arguments. Meta-argument I see as a reasoning about one or more object-arguments. Object argument in particular discussion is a subject matter of certain meta-argument.

I consider two types of meta-arguments. The first is interpretation of object argument. It can be seen as a description of construction or reconstruction of object argument details in order to ensure their understanding. While we talk about own argument, we concentrate on its construction. In case when we analyze arguments of others, we focus on its reconstruction. Another type of meta-argument is object argument's evaluation, namely the assessment of its merits. Method of critical questions can be used in the construction of such arguments.

Meta-arguments represent such tiers of argumentation as logical (LT), dialectical (DT), and rhetorical (RT).

3. TIERS OF ARGUMENTATION

Let us now focus on the issue of defining each of argumentation tiers. Begin with logical tier.

From my point of view it is a neutral-oriented tier of argumentation, which includes meta-arguments about inferential structure of object arguments.

You can ask me why is it neutral-oriented tier? Due to the fact that here argument is considered isolated from arguers, audience and context of argumentation. Remember examples from textbooks on logic. Sometimes they seem so artificial because for training purposes we take them out of context. We are not interested in person who produced these examples and people for whom they were produced. It could even be said that we consider them in some technical sense. As for me in case of logical tier, we do the same.

For further clarifying it could be point out that in case of such tier scholars try to use the meta-arguments for analyzing the object arguments with standpoint of formal logic.

Unlike the previous tier dialectical one is an arguer-oriented tier of argumentation. Here I rely on Johnson's treatment of such term. He defines it in his book "Manifest Rationality" as follows: "In addition to this illative core, an argument possesses a dialectical tier in which the arguer discharges his dialectical obligations (Johnson, 2000:168)."

It is not difficult to find out various clarifications of Johnson's definition that have been proposed by Johnson himself, Finocchiaro (2013), Govier (2000), Hichcock (2002), Hansen (2002), and others. However, generally speaking, dialectical tier in their investigations is connected with the key function of argumentation – rational persuasion.

In the present context the point I would like to stress is that I follow Johnson's idea, however, suggest the following elaboration. First, I consider the dialectical tier as a tier of argumentation, which relate to the interpretation and evaluation of object argument with standpoint as well as argument's defence from possible criticism of other arguers. It can be objections, observations, counterarguments, refutations, etc.

Rhetorical tier of argumentation analysis is connected with the audience. It is an audience-oriented tier of argumentation, which includes meta-arguments related to the audience reception of argumentation.

Thus from my point of view there are three tiers in argumentation.

(1) Logical tier (LT), which is a neutral-oriented.

(2) Dialectical tier (DT), which is an arguer-oriented.

(3) Rhetorical tier (RT), which is an audience-oriented.

Moving on, let us turn now to further analysis of argumentation tiers. Now I propose to focus on meta-arguments in logical and disputing tears. As the types of such arguments are interpretation and evaluation of object argument.

Interpretation meta-arguments have common features in logical and dialectical tears. They relate to the replies on at least the following critical questions.

(1) How object argument is expressed and stated?

(2) What are its premises?

(3) What is its conclusion?

(4) What missing premises can be included in its reconstruction?

However, interpretation meta-arguments differ in using artificial (formal) language in logical tier and natural one in dialectical tier. Because of this, scholars use various methods for construction or reconstruction of object argument.

In this regard there are critical questions, which are different for logical and dialectical tiers. For example, interpretation in case of logical tier (LT-interpretation) relate to such issues:

(1) What is logical form of object argument?

(2) What is its logical type (deduction, induction, analogy etc.)?

In case of dialectical tier (DT-interpretation) we can notice the following question.

(1) What is the structure of object argument? (serial, linked, independent etc.)

(2) How this structure may be pictured in a structure diagram?

Another aspect of meta-argument is object argument's evaluation, namely the assessment of its merits. Let us turn to criteria approaches.

Here it was suggested by different points for distinction a good argument from a bad one using in logical and dialectical tiers (LT-evaluation, DT-evaluation) . For instance, speaking of traditional logical criteria we can talk about 'soundness' and 'validity.' In general it could be expressed the following way: *an argument is good if and only if it is formally valid and its premises are true*.

By the way it should be noted that only validity is a pure logical criterion because we can identify validity of argument by logical methods. It is not possible to establish whether its premises and conclusion are true or not within logic.

Thus from my point of view criterion of logical evaluation of object argument is validity and hence the LT-evaluation includes the reply first of all on such questions:

(1) Is an object-argument valid/invalid?

(2) Is an object-argument invalid?

The fact that by following validity criterion all the good arguments are being reduced to deductive ones proves how strong it is.

However an argument is good not only it is valid in this technical sense. We can see that some arguments which we take to be good are not sound by reflecting on examples of perfectly acceptable arguments whose premises are not all true, or whose inferential step is not deductively valid. This fact implies that we can use other criteria on dialectical tier of argumentation.

For instance, in this regard informal logicians often are based on a triad of relevance, acceptability and sufficiency (RAS criteria) as a popular set of criteria for evaluation. According to them: *an argument is good if and only if its premises are acceptable, relevant to the conclusion and sufficient to support it.*

I suggest that DT-evaluation at least includes the replies on the following questions:

(1) Are the premises of certain object-argument relevant to the conclusion?

(2) Are the premises of certain object-argument acceptable?

(3) Are the premises of certain object-argument sufficient to support the conclusion?

Concerning meta-argument of rhetorical tier, which as stated above is focused at the audience, it could be noticed that it should include the replies at least on such critical question.

(1) Who is that audience?

(2) What are its values?

(3) How the arguer's argument takes into account the values of the audience?

(4) What rhetorical devices for that do the arguers use?

Here we can talk about rhetorical evaluation of object-argument. For my view this meta-argument (RT-evaluation) refers to value criterion. Generally it could be expressed the following way: *an argument is good if and only if it takes into account the value of the audience.*

4. CONCLUSION

In this paper I have presented my reflections on levels and tiers in argumentation within informal logic. In conclusion I would like to summarize the main points of my paper.

I consider informal logic as a collection of attempts to develop a theory of real argument in different context. Real argument is a complex kind of argument, which is used in argumentation as a form of dialogical interaction, where arguers aim is to resolve a conflict of opinions expressed by verbal means.

In my view the key features of such argument can be described in the following way. It is expressed by natural language; it is a dialogical argument; it relate to everyday communication; it mostly is a defeasible argument; one of the key features of real argument is its incompleteness; it depends on the context of utterance.

Real argument can be analyzed on two levels: object level and meta-level. Object level relies on object arguments, meta-level – meta-arguments. Meta-arguments represent such tiers of argumentation as logical, disputing, and rhetorical. The first is a neutral-oriented, the second is an arguer-oriented, and the third is an audience-oriented.

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РІВНІ ТА ВИМІРИ АРГУМЕНТАЦІЇ

Ця стаття фокусується на підході, у якому розрізнюються два рівні аргументації, пов'язані з об'єктними міркуваннями та мета-міркуваннями. Крім того, я розрізняю три виміри аргументації (логічний, діалектичний та риторичний). Рівні та виміри аргументації розглядаються з точки зору неформальної логіки – дисципліни, яка знаходиться на межі логічного та епістемологічного знання. Я аналізую рівні та виміри аргументації з метою уточнення ключових рис аргументативних міркувань, які є предметом вивчення неформальної логіки.

Ключові слова: неформальна логіка, реальний аргумент, рівень аргументації, ряд аргументації, критичне питання.

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УРОВНИ И ИЗМЕРЕНИЯ АРГУМЕНТАЦИИ

Эта статья фокусируется на подходе, в котором различаются два уровня аргументации, связанные с объектными рассуждениями и мета-рассуждениями. Кроме этого, я различаю три измерения аргументации (логическое, диалектическое и риторическое). Уровни и измерения аргументации рассматриваются с точки зрения неформальной логики – дисциплины, находящейся на границе логического и эпистемологического знания. Я анализирую уровни и измерения аргументации с целью уточнения ключевых характеристик аргументативных рассуждений, которые являются предметом изучения неформальной логики.

Ключевые слова: неформальная логика, реальный аргумент, уровень аргументации, ряд аргументации, критический вопрос.

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SEMANTIC REPRESENTATION OF INCONSISTENT INTUITIONISTIC THEORIES

In this paper I propose a new method of semantic modeling for intuitionistic logic and provide an intuitive justification to this method. I put in the focus of consideration a concept of intuitionistic theory which is the basic concept of the whole analysis.

Keywords: Intuitionistic logic, state descriptions, constructive truth.

1. Intuitionistic theory

Originally intuitionism has been conceived and usually is treated as a special direction in the foundations of mathematics. Accordingly, one interprets intuitionistic logic as a logic of intuitionistic mathematics. Under this interpretation an intuitionistic theory can only be a mathematical theory, namely a mathematical theory constructed in accordance with the principles of intuitionism. However, one may try to extend the sphere of possible applications of these principles. Why not consider a possibility of a physical or chemical intuitionistic theory?[1] In what follows I understand under an intuitionistic theory *any* theory that fulfills some basic principles of intuitionism and is developed by means of intuitionistic logic. Among these principles are:

(1) interpreting truth as constructive provability (a sentence is intuitionistically true if and only if it is constructively proved);

(2) the principle of preservation for true propositions (a sentence once proved remains such in the future):

(3) rejection of the abstraction of actual infinity and acceptance of the abstraction of potential infinity.

One usually defines a theory as a set of sentences closed under the logical consequence. However, this definition is formulated within a paradigm of classical logic and does not correspond neither to intuitionistic concept of theoretic (scientific) activity nor to the above mentioned general principles of intuitionism. This definition presupposes evidently the abstraction of actual infinity and brings to naught the concept of truth as *constructive* provability.

Thus, it would be more suitable to define an intuitionistic theory as a set of sentences that *should* be closed under the logical consequence. That is, a sentence belongs to an intuitionistic theory (to some moment *a*) if and only if it is *actually* proved within this theory (to this moment). In this way we obtain a possibility to reflect the process of development of our knowledge and to distinguish between different stages of a theory.

2. The statements *of* a theory and the statements *about* a theory

Consider some intuitionistic theory. We should strongly distinguish between the statements of this theory itself and the statements by which we describe a state of the theory to some moment. This distinction corresponds to distinction between an object language and a metalanguage. Take some sentence formulated in the object language, say

A. We have the following criterion – *A* belongs to our theory (to some moment) – *A* is true – if and only if *A* is proved within this theory (to this moment). Using the expressions of a metalanguage, we may describe the situation that takes place in the given theory. There are only two kinds of such expressions possible – either *positive* or *negative*. Namely, relative to any sentence *A* we may state either "*A* is proved in the given theory" or "*A* is not proved in the given theory".

Note that the negation in the later metadescription is not a negation of the object intuitionistic language. Moreover, this negation is essentially of classical character. The statements of the metalanguage do not obey generally the principle of truth-preservation, in particular the negative statements do not. In fact, a sentence can be not proved now, but the proof we need can be found later. Unlike this, the negative statements of intuitionistic theories should be of constructive type subject to the principles (1) – (3) above (and maybe some other principles).

Thus, we have *two* different kinds of negation – the object language negation which is applicable to the sentences of an intuitionistic theory and the metalanguage negation dealing with the statements by which we describe the theory. Consider our sentence *A* again. The object language (intuitionistic) negation of such a proposition has to be expressed in the form "*A* is refuted", or – as it is generally accepted in intuitionism – "assertion of *A* leads to a contradiction". A metalanguage negation of the proposition is, as against, simply "*A* is not proved".

3. The factual negation. Intuitionistic state-descriptions

The above distinction between two kinds of negation is a generalization of Heyting's distinction between "mathematical" and "factual" negations that can be found in [Heyting 1956]. Below is the full length corresponding passage from that work (italics are mine):

"Strictly speaking, we must well distinguish the use of 'not' in mathematics from that in explanations which are not mathematical, but are expressed in ordinary language. In mathematical assertions no ambiguity can arise: 'not' has always the strict meaning. 'The proposition *p* is not true', or 'the proposition *p* is false' means 'If we suppose the truth of *p*, we are led to a contradiction'. But if we say that the number-generator r which I defined a few moments ago is not rational, this is not meant as a mathematical assertion, but as *a statement about a matter of facts*; I mean by it that as yet no proof for the rationality of r has been given. As it

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[1] Remember in this connection the "constructive theory of science" by P. Lorenzen and W. Kamlah ("Erlangener Schule").