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## ON THE QUESTION OF LOGICAL ANALYSIS OF ARGUMENTATION IN LEGAL DISCOURSE

*The article highlights the main problems that arise during the logical analysis of argumentation in legal discourse. Based on the author's approach to understanding the logical analysis of legal argumentation, the possibilities of overcoming them are proposed. According to the author, in the process of conducting a logical analysis of argumentation in legal discourse, the following interrelated problems arise: the first is a problem associated with an ambiguous understanding of the meaning of the word "logic" when it is used in research on legal argumentation (logic as a science or a certain logical theory, logic as a model, formal or informal logic); the second is a problem related to the existence of different interpretations of the concept of "logical analysis", as a result of which there is uncertainty in the use of methods and means of conducting such an analysis. The following possible steps to overcome these problems are proposed: firstly, in research on legal argumentation, when conducting a logical analysis of argumentation in legal discourse the meaning of the word "logic" should be noted (logic as a science or a certain logical theory, logic as a model, formal or informal logic), used in this context; secondly, in the process of such an analysis, clearly define the meaning of the used concepts "analysis", and "model"; thirdly, to proceed from the fact that taking into account that formal and informal elements are connected in legal thinking, the logical analysis of legal argumentation can be understood as the application of methods, techniques, means of all logical knowledge in solving its problems.*

**Keywords:** analysis, logic, logical knowledge, logical analysis, logical analysis of legal argumentation, argumentation, legal discourse.

### Introduction

In the late XX – early XXI century, in the field of logic, research related to the application of logical theory in practice has become relevant. Given this, in the framework of logical knowledge, the study of argumentative issues becomes especially relevant. Modern scientific studies that study argumentation are fundamentally interdisciplinary. This also applies to developments related to the analysis of legal argumentation. The existing latest achievements of a logical approach to the analysis of argumentation can be considered especially appropriate and useful in the field of legal activity.

There are a large number of scientific papers that analyze the problems of the theory of argumentation, the relationship between logic and legal argumentation, and the possibility of using the means of logic (both formal and informal) to solve the problems of the latter. However, the specifics of reasoning in the field of law, the peculiarity of the use of certain legal concepts during court proceedings for the cases, become increasingly interesting for logicians, theorists of argumentation, theorists of legal argumentation, researchers of computer science and artificial intelligence, which, in turn, leads to important results in the area of logical analysis and modeling of argumentation in the field of law. In this article, I want to focus on the problems of logical analysis of argumentation in legal discourse.

The purpose of the article is to highlight the main problems that arise during the logical analysis of argumentation in legal discourse, as well as, based on the author's approach to understanding the logical analysis of legal argumentation, to suggest ways to overcome them.

### Literature review

Problems of analysis, in particular logical analysis, the question of possibility and relevance of using the logical methodology to study legal problems, have been the subject of consideration by logicians and philosophers throughout the development of logical knowledge. In addition to logicians and philosophers, the question of the relationship between logic and law, as well as the application of logical methods to the processes of

construction and analysis of legal reasoning have attracted the attention of lawyers.

In the article "Analysis" and the Supplement to it, M. Beaney provides a bibliography that contains sources that investigate the interpretation of the concept of "analysis", various types of analysis, conceptions of analysis in analytic philosophy. As M. Beaney notes: "Analysis has always been at the heart of philosophical method, but it has been understood and practiced in many different ways. ...The dominance of 'analytic' philosophy in the English-speaking world, and increasingly now in the rest of the world, might suggest that a consensus has formed concerning the role and importance of analysis" (Beaney, 2014). M. Beaney's article "Conceptions of Analysis in Early Analytic Philosophy" is interesting for this study. In this article, the author, by referring to the basics of analytic philosophy, both historical and philosophical, performs a comparative analysis of different conceptions of analysis that arose during the formative years of analytic philosophy (Beaney, 2000). Different approaches to understanding analysis and logical analysis are considered by S. Petrina (Petrina, 2019).

There is a lot of modern research on the use of logical analysis to solve certain problems in a particular field of knowledge. Thus, the application of the method of logical analysis in sociology, comparing it with statistical analysis was the subject of consideration in the work of R. G. A. Williams (Williams, 1981). Among such works is the article "Logic analysis: testing program theory to better evaluate complex interventions" by the team of authors, in which logical analysis is considered a type of evaluation that allows us to look critically at the program's theory using available scientific knowledge. The authors set out the principles of logic analysis, and then illustrate its use with an actual evaluation case (Rey, Brousselle, Dedobbeleer, 2011).

Investigating the problems of interpretation of the method of logical analysis and the peculiarities of its use for the analysis of argumentation in legal discourse, I was interested in modern scientific developments, which consider approaches to the interpretation of legal discourse, its characteristics, and functions. Among these developments is

the collective monograph "Legal Discourse across Cultures and Systems" (2008); the work "Legal Conversation as Signifier", the authors of which, characterizing the legal discourse, note that such a discourse involves any activity in legal language, i.e. written legal documents, various types of oral communication of lawyers, judges, legislators (Broekman, Fleerackers, 2017).

### Methods

Methods of terminological and comparative analysis were used to identify and investigate the difficulties that arise during the logical analysis of argumentation in legal discourse. They became the methodological basis for interpreting the concepts of "analysis", "logical analysis", "logical analysis of legal argumentation", and "logical knowledge". The subject of this study was the method of logical analysis, in particular the features of its application to the consideration of argumentation in legal discourse.

### Findings

During the review of works that investigate legal problems by means of logic, in particular, demonstrate the specifics of the application of logical methods of analysis of legal argumentation, I identified two problems that arise in the process of logical analysis of argumentation in legal discourse, that I consider to be the main ones. In my opinion, one of such problems is related to the ambiguous understanding of the meaning of the word "logic" when used in research on legal argumentation. The point is that this word can mean either the science of logic or a certain logical theory. In addition, it should be borne in mind that since the second half of the 70s of the twentieth century, such a direction of research as informal logic is formed, which is an attempt to build logic that could be used to identify, analyze and improve informal reasonings in various fields of human activity. The second problem related to the logical analysis of argumentation in legal discourse is the existence of different interpretations of the concept of "logical analysis". Due to this, there is uncertainty in the use of methods and means of conducting such analysis. It is clear that these problems are interrelated.

Researching historical-philosophical works on the method of analysis, one realizes that there is a wide range of concepts of analysis. Analysis as a method was understood and practiced in different ways. "Perhaps, in its broadest sense, it might be defined as a process of isolating or working back to what is more fundamental by means of which something, initially taken as given, can be explained or reconstructed. The explanation or reconstruction is often then exhibited in a corresponding process of synthesis. This allows great variation in specific method, however. The aim may be to get back to basics, but there may be all sorts of ways of doing this, each of which might be called 'analysis'" (Beaney, 2014). Such a kind of analysis as logical analysis has always depended on the development of modern logic. "Various forms of logical analysis suggest, then, is that what characterizes analysis in analytic philosophy is something far richer than the mere 'decomposition' of a concept into its 'constituents'" (Beaney, 2014).

Examining the literature on logical analysis, one realizes that there is no single understanding, hence the definition of logical analysis. Thus, in C. S. Peirce's work, we find: "Logical analysis is not an analysis into existing elements. It is the tracing out of relations between concepts on the assumption that along with each given or found concept is given its negative, and every other relation

resulting from a transposition of its correlates. The latter postulate amounts to merely identifying each correlate and distinguishing it from the others without recognizing any serial order among them" (Peirce, 1931: 294). According to B. Russell: "The business of philosophy, as I conceive it, is essentially that of logical analysis, followed by logical synthesis". In this context, Russell considered logical analysis as "consists in criticizing and clarifying notions which are apt to be regarded as fundamental and accepted uncritically. As instances I might mention: mind, matter, consciousness, knowledge, experience, causality, will, time. I believe all these notions to be inexact and approximate, essentially infected with vagueness..." (Russell, 1988: 176). "In response to Stebbing, in a paper read to the Aristotelian Society on 24 April 1933, entitled 'Philosophical Analysis', Max Black argued that logical analysis, properly conceived, did not have any metaphysical presuppositions at all, but was simply concerned to reveal the structure of our propositions" (Beaney, 2003: 341). M. Black, seeing Russell's theory of descriptions as a paradigm, considers logical analysis to be a part of applied mathematics. He believes that, by a testing process of replacement and translation, logical analysis clarifies the logical form of expressions (their multiplicity, type, level) (Black, 1932: 238-250). F. Waismann proceeds from the fact that analysis means division and dismemberment. Thus, the logical analysis seems to mean the following: the division of thought down to the last logical elements. According to F. Waismann, logical analysis is perhaps a more accurate and complete presentation of the grammatical use of linguistic expressions (Waismann, 2015: 98, 121).

The foundations of the method of logical analysis were laid in the works of G. Frege and B. Russell. Later, this method became widespread in the works of representatives of logical positivism, who proclaimed that the main task of philosophy is the logical analysis of the language of science. A trend in modern philosophy has emerged, namely, the philosophy of logical analysis. In the domestic "Philosophical Encyclopedic Dictionary" the meaning of "logical analysis" is considered in the context of revealing the meaning of the philosophy of logical analysis as a trend in modern analytical philosophy, which sees a single goal and method of philosophy in logical analysis of the language of science by the means of mathematical logic. "Representatives of this trend see the task of logical analysis in the construction of artificial model-languages as a means of reconstruction of natural languages (including "languages of science")" (Philosophical Encyclopedic Dictionary, 2002: 341). Logical analysis in the "strict" sense, that is, the application of the means of modern mathematical logic to solve philosophical and methodological problems, suggests that if the problem is expressed in formalized language, it will give it clarity. The latter can make it easier to find a solution. Doesn't the so-called clarity of its formal expression create the illusion of solving a certain problem? The difficulties of formal representation of a particular analyzed problem, and concerns about the adequacy of the mentioned representation can lead research towards the discussion of technical issues. In this case, the constructed logical formalism will be considered an end in itself, because the logical analysis will not be a method of investigation of certain problems in a field, but will be considered the final result.

How optimal is the application of such a methodology for the analysis of legal argumentation? If the conceptual apparatus, tools, and style of research, which are accepted

in the basics of mathematics, are fully extended to the humanities, it is unlikely to be useful for the latter. After all, a set of concepts and methods of mathematical logic was developed in connection with the solution of the questions of the basics of mathematics. Such logic can not reflect the peculiarity of the system of concepts of the humanities, as well as the research techniques, and methods of reasoning used in them. All of the above also applies to legal science, in particular, when conducting a logical analysis of argumentation in legal discourse. However, this does not mean that in general the means of mathematical logic, at least in part, can not be used to analyze reasonings in the field of law. This is possible by establishing clear functional relationships between thought structures, which is required by the rapid development of algorithmization of analytical procedures based on computer technology. It is important to demonstrate the technology of practical use of these tools during the teaching of courses in logic and special courses in legal argumentation for students of law faculties of higher education establishments. This, I believe, will provide an opportunity to intensify the reasoning of future lawyers. Relevant application of modern formal logic (both classical and non-classical) can be useful in the logical analysis of legal argumentation.

Logical analysis of reasoning in a particular area has features related to the specifics of this area. This also applies to the field of law. As H. Prakken points out: "A legal rule connects the factual world with the normative world" (Prakken, 2005: 306). The mentioned above forces to conduct legal considerations in conditions of incomplete information, vague wording, and conflict of positions. If in the study of argumentation in legal discourse one will single out four levels of argumentation: logical, dialectical, procedural, and strategic (the idea of allocating these levels of argumentation belongs to H. Prakken (Prakken, 2005)), the use of formal-logical means to analyze the first of these levels when it comes to a set of time-ordered sentences will be relevant and effective. Here, for a deeper study of the form of reasoning, determining the logical relationships between statements, etc., it makes sense to analyze them as complete static constructions. In this case, the logical analysis of argumentation in legal discourse can be conducted at the levels: concepts/names, judgments/propositions, reasonings. However, when focusing on the understanding of argumentation as a specific activity, given the complex nature of the phenomenon of argumentation, these sentences can not be considered outside the role they play in this process. In addition, it becomes important to study the tactics used by participants of the argumentation process. In this case, it is hardly possible to limit the analysis of legal argumentation exclusively by means of formal logic. After all, in argumentations of this kind, often the relation between arguments and thesis is not reduced to a logical sequence or confirmation. Therefore, there is a need to analyze not only such argumentation, which in the form of reasoning is deductive or plausible. Other argumentation schemes should be taken into account, not just those that are usually called logical.

I believe that in the question of determining the role of logic in law, in particular, the use of the tools of formal/informal logic in the analysis of argumentation in legal discourse, we should talk about logical knowledge in general. The latter refers to formal and informal logic and those techniques that rhetoric considers as those used in argumentation. Each of mentioned areas of this knowledge can be used in legal theoretical and practical activities for

different purposes, and therefore provide different methods and techniques for its study. Then the concept of "logical analysis" in relation to the field of legal argumentation should be understood as the use of methods, techniques, and means of logical knowledge in solving its problems.

Solving the problem of ambiguous understanding of the meaning of the word "logic" in its use in research in the field of legal argumentation may include: firstly, consideration of logic (or logical knowledge in general) as a method for analyzing legal argumentation; secondly, the consideration of logic as a model (approach) in constructing the theory of legal argumentation. Regarding the first of these considerations of logic, I note that, in my opinion, logical knowledge, in general, is a methodology (a set of approaches, ways, methods, techniques, and procedures) for the analysis of legal argumentation. Exploring the question of how formal and informal elements are connected in legal thinking, defining it as quite complex, J. Woleński identifies three points of view in this regard: "(A) Formal logic is the only logic; (B) Logic in its proper sense, although labelled as "formal" has formal as well as informal aspects; (C) The view that legal logic is specific consists in confusing both mentioned aspects of logic". He emphasizes that the idea of special legal logic mixes different aspects of legal thinking (Woleński, 2010: 74).

In my opinion, due to the ambiguity of understanding the term "legal logic", the definition of the subject of legal logic, it is better to talk about the specifics of the use of the science of logic in legal theory and practice. Accordingly, we can talk about the peculiarities of the use of methods and means of logic in the process of logical analysis of argumentation in legal discourse, taking into account the specifics of real legal controversy. Regarding the second of the mentioned above meanings of the word "logic" in research on legal argumentation, I note that formal logic is one of the main methodological approaches (along with rhetorical and dialogical) to the analysis of legal argumentation. Within this approach, the use of particular logical theories, and methods of formal logic to build models of real arguments can lead to the construction of so-called "logical" (formal) models for analysis and evaluation of specific situations of legal argumentation. It is in this latter sense that we can speak of formal logic as a model for analyzing legal argumentation. This can be the creation of formal models (formal theories), i.e. those that use the methods and results of symbolic logic, to model real arguments in the field of legal argumentation. In this case, the appeal to the logical analysis of argumentation in legal discourse can take place in the context of the formalization of non-monotonous reasonings. It is a question of the development of the logic of defeasible reasoning, the creation of the systems intended for the analysis of the process of decision-making.

### Conclusions

So, in my opinion, in the process of logical analysis of argumentation in legal discourse, appear two interrelated problems that I consider the main: 1) the problem associated with ambiguous understanding of the meaning of the word "logic" when used in research on legal argumentation (logic as a science or a certain logical theory, logic as a model, formal or informal logic); 2) the problem associated with the existence of different interpretations of the concept of "logical analysis", as a consequence – with the uncertainty in the use of methods and means of performing such analysis.

I believe that possible steps in overcoming these problems may be as follows: 1) in research on legal argumentation, during conducting a logical analysis of argumentation in legal discourse one should indicate the meaning of the word "logic" (logic as a science or a certain logical theory, logic as a model, formal or informal logic) used in this context; 2) in the process of such analysis clearly define the meaning of the terms "analysis", and "model" that one uses. After all, the word "model" in research on legal argumentation can be used in the meaning of the general scheme of analysis of the whole procedure of argumentation, or a specific part of it. If the creation of such a model (scheme) is based on the methods of formal logic, then one talks about the use of logic as a model for analysis and evaluation of legal reasoning; 3) proceed from the fact that given that formal and informal elements are related in legal thinking, the logical analysis of legal argumentation can be understood as the use of methods, techniques, and means of all logical knowledge in solving its problems. Logical knowledge will mean formal and informal logic and those techniques that rhetoric considers as those used in argumentation. Each of these areas of logical knowledge has different methods and techniques that can become a tool for logical analysis of argumentation in legal discourse. The objectives of the study influence the choice and question of the ratio of different tools used in the process of such analysis. The specifics of understanding the field of logical during the formation of the concept and algorithm of logical analysis of argumentation in legal discourse and the level of investigation of argumentation are interrelated with this.

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### ЩОДО ПИТАННЯ ПРО ЛОГІЧНИЙ АНАЛІЗ АРГУМЕНТАЦІЇ В ЮРИДИЧНОМУ ДИСКУРСІ

У статті виділено головні проблеми, що виникають під час проведення логічного аналізу аргументації в юридичному дискурсі. Грунтуючись на авторському підході до розуміння логічного аналізу юридичної аргументації, запропоновано можливості їх подолання. На думку автора, у процесі проведення логічного аналізу аргументації в юридичному дискурсі виникають такі взаємопов'язані проблеми: перша – проблема, пов'язана з неоднозначним розумінням сенсу слова "логіка" при вживанні його у дослідженнях з юридичної аргументації (логіка як наука чи певна логічна теорія, логіка як модель, формальна чи неформальна логіка); друга – проблема, пов'язана з наявністю різних витлумачень поняття "логічний аналіз", як наслідок – невизначеність у використанні методів і засобів проведення такого аналізу. Запропоновано такі можливі кроки у подоланні зазначених проблем: по-перше, у дослідженнях з юридичної аргументації, під час проведення логічного аналізу аргументації в юридичному дискурсі слід зазначити сенс слова "логіка" (логіка як наука чи певна логічна теорія, логіка як модель, формальна чи неформальна логіка), використовуваний у даному контексті; по-друге, у процесі такого аналізу чітко визначити значення використовуваних понять "аналіз", "модель"; по-третє, виходити з того, що, враховуючи, що формальні та неформальні елементи пов'язані у правовому мисленні, під логічним аналізом юридичної аргументації може розумітися застосування методів, прийомів, засобів всього логічного знання при розв'язанні її проблем.

Ключові слова: аналіз, логіка, логічне знання, логічний аналіз, логічний аналіз юридичної аргументації, аргументація, юридичний дискурс.