

UDC 340.12  
DOI: 10.56215/0122272.99

## Ancient Origins of the Methodology of Modern Evidence Law

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■ **Abstract.** The course towards Ukraine's European integration provides for the harmonisation of national and European law, starting with the cultural and traditional foundations of the latter, laid down in the era of antiquity. In addition, according to the analysis of current issues in the field of modern evidence law, the main sources of methodological contradictions in approaches to its solution go back to their historical roots in this particular era. Accordingly, it seems appropriate to study the ancient origins of both the methodology of legal argumentation itself and the modern technique of its effective application. Moreover, these issues are still insufficiently investigated. Therefore, the purpose of the study is to identify those logical foundations of evidentiary reasoning that are the property of ancient thought and can be effectively used in the development of modern methods of legal evidence. Hermeneutical and comparative analysis methods were used to critically evaluate classical and modern methodological concepts in the field of evidence law, and to identify fundamental differences in the interpretation of goals, means, and methodological approaches to the construction of evidentiary procedures. When searching for ways to resolve contradictions between alternative methodological paradigms, each of which reveals both its own constructive points and some functional limitations, the method of dialectical synthesis is applied, which provides for rational integration of oppositely oriented approaches based on the principles of their relevant involvement and complementarity. Methods of deductive and logical analysis, as well as inductive generalisation, probabilistic and statistical estimates, and analogy were used to substantiate the results and formulate the conclusions of the study. Scientific originality. It is proved that the appeal to the logical and methodological foundations of rational thinking, formulated and systematised by ancient Greek scholars and technically used in the system of Roman law, opens up wide opportunities in terms of solving a number of topical problems of modern theory and practice of legal evidence. To solve the actual problems of the modern methodology of evidence law, it is advisable to retrospectively analyse its previous historical development, since this makes possible, first, to find out the essential causes of such problems from their very origins. Second, the proposed approach, being aimed at studying the logical and methodological foundations of the theory of legal argumentation, provides for the search for solutions to these problems at a fundamental level. In particular, turning to ancient sources of proof methodology will help solve many debatable issues of its modern development, among which the dilemma of the deductivist or probabilistic and statistical paradigm, the problem of criteria for the sufficiency of evidence, etc., are distinguished. The use of argumentative strategies based on basic logical criteria of rationality and evidence will help increase the degree of objectivity in the practice of making legal decisions, being an effective means of countering subjectivism in the course of their development

■ **Keywords:** evidence; methodology of law; legal argumentation; criteria of evidentiary value; sufficiency of evidence

### ■ Introduction

The determining influence of ancient culture on the vector of development of the entire European civilisation has long been considered an indisputable

scientific fact. Therefore, the study of the historical dynamics of any socio-cultural phenomenon in the context of this development involves, first of all, tracking its ancient sources, where its primary foundations and basic guidelines for further evolution were laid. In this regard, the legal culture, of course, is no exception. Accordingly, when investigating the directions of reforming Ukrainian jurisprudence in line with the European integration measures, priority should be paid to finding ways to harmonise Ukrainian and European law as closely as possible, starting from

#### ■ Suggested Citation:

Vandzhurak, R.V. (2022). Ancient origins of the methodology of modern evidence law. *Scientific Journal of the National Academy of Internal Affairs*, 27(2), 99-107. doi: 10.56215/0122272.99.

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■ Received: 05.04.2022; Revised: 18.05.2022; Accepted: 16.06.2022

historical traditions to modern forms of their normative consolidation and mechanisms of functioning.

As even a cursory analysis of modern scientific literature shows, this problem is the subject of numerous and multidimensional studies aimed at studying the genetic connections of European legal institutions with the conceptual foundations established in ancient Greek philosophy and Roman law. At the same time, there is an extremely small number of studies devoted to the identification and effective application of the fundamental foundations of legal evidence developed in ancient times, in particular, by scholars of Ancient Greece. This circumstance is mainly conditioned by the fact that Athenian democracy, admittedly, did not have what is now associated with the concept of “evidence law”: court decisions were made exclusively by voting. However, the logical and methodological foundations of the theory of argumentation in general and legal in particular were quite carefully formulated and systematised by Aristotle [1], and their “spontaneous” use was quite clearly traced in the analytical reasoning of sophists, Protagoras, Socrates, Plato [2] and many other prominent representatives of this historical era. Therefore, the main purpose of the study is an attempt to identify those logical foundations of evidentiary reasoning that are the property of ancient thought and can be effectively used in the development of modern methods of legal argumentation and solving some topical problems of the theory of evidence (in particular, criteria for the sufficiency of evidence [3-5], contradictions in the concept of standards of evidence [6; 7], competition of alternative methodological paradigms in evidentiary practice [3; 8], etc.).

## ■ Materials and Methods

During the preparation of the paper, the authors worked out both some primary sources that indicate the genesis of the foundations of evidence-based methodology in Ancient Greece (in particular, in the works of Plato, Aristotle, etc.), and the latest publications of Ukrainian and foreign authors that investigate the influence of the ancient intellectual tradition on the development of European legal culture and legal methodology [1-3]. The main attention was focused on the paper devoted to the investigation of the role of the logical foundations of rational analysis initiated by ancient Greek scholars for the further development and improvement of the methodology of legal evidence. Hermeneutical and comparative analysis methods were used to critically assess the conceptual content of such studies, and to identify fundamental differences in the interpretation of the goals, means, and methodological approaches to the construction of evidentiary procedures.

When searching for ways to resolve contradictions between alternative methodological paradigms,

each of which reveals both its own constructive points and some functional limitations, the method of dialectical synthesis is applied, which provides for rational integration of oppositely oriented approaches based on the principles of their relevant involvement and complementarity. This allows, on the one hand, compensating for the disadvantages of each of them, and on the other – to optimally using their advantages in such an integrated application.

In addition, methods of deductive and logical analysis, inductive generalisation, probabilistic and statistical estimates and analogies were used to substantiate the results and formulate the conclusions of the study.

## ■ Results and Discussion

*Ancient Greek philosophy as a source of European legal methodology*, describing in the most general and concentrated terms the worldview of the ancient era, can be called cosmocentric, which, in turn, determines its ontological and mainly rationalistic orientation. This refers to the fact that the main cognitive object in this era was the universe as a single, integral system with universal laws inherent in it, from which the fundamental principles of organisation and functioning of all its subsystems and elements (including human society and any human individual) were derived. Accordingly, in the ideological sphere, there is a transition from myth to logos, which implies a strict distinction between real and imaginary, knowledge and fiction, truth and fiction. The explanation and justification of certain phenomena can no longer be reduced to anthropomorphic or zoomorphic mythological interpretations: “logos” is based on the idea of explaining the world by its own means, without resorting to any fantastic images and “intermediaries” between the subject and the object, since only in this way can the objectivity, “impartiality” of human knowledge about the world be ensured. In the plan under consideration, it is not what seems possible can be considered true, but only what is *proven*, that is, logically derived from the fundamental laws of universal world existence (Cosmos). That is why ancient philosophy is marked by a dominant ontological orientation, and its rationalism is conditioned by the priority of the logos – the justification of knowledge based on the laws of reason that correlate with the laws of being. Just as nothing can be recognised as true without logical proof, nothing can be dismissed as false without a corresponding logical refutation. It is precisely in these features that a rational (philosophical) worldview primarily differs from a mythological and religious one.

At the same time, despite the mentioned progressive changes in the field of philosophical worldview and its logical and methodological foundations, at these times there is a rather contrasting dissonance

between philosophical and legal culture: if the former, as noted above, acquired the features of objectivist and rationalistic orientation, the latter remained “captive” of subjectivist and emotional and psychological paradigms. For example, already in the 6<sup>th</sup>-5<sup>th</sup> centuries BC, Pythagoras and Parmenides used strict logical schemes to prove their positions, not relying solely on intuition or arguments such as “majority opinion” or “authoritative position” [9]. For example, people are unlikely to still use the famous Pythagorean theorem, if the latter was recognised as true on the basis of the results of voting of the People’s Assembly (Ecclesia) – the highest authority in the system of Athenian democracy or the Council of Five Hundred (Boule), elected by simple drawing lots from men at least 30 years old and intended to conduct current affairs in between the convocation of the People’s Assembly. After all, Pythagoras proved that the square of the hypotenuse of any right triangle is equal to the sum of the squares of its legs, demonstrating that, regardless of the dimensions of such a triangle, the area of a square with a side equal to the mentioned hypotenuse, *with necessity* it will be equivalent to the sum of the areas of two squares constructed on the basis of these legs. The guarantee of this necessity was that Pythagoras did not consider a specific right triangle, showing on it the validity of his guess (since in this case the proof procedure would never have been completed due to the infinity of potential options for constructing this type of triangle), but by abstracting from the specific values of the length of its sides and justification *universal* (and, consequently, the natural) nature of their correlation due to the independence of the latter from the values of variables. Therefore, despite the fact that at that time there was no logical theory of argumentation, Pythagoras, so to speak, “spontaneously” applied a strict logical scheme for direct proof of general judgments, formulated much later in this theory. The mentioned scheme involves obtaining a constant inference based on the variables of the initial bases, without introducing any assumptions (for example, how to prove the universality of the equation:  $a^2 - b^2 = (a + b)(a - b)$  by opening parentheses and reducing similar terms on the right side of this equation, as a result of which it will be reduced to the left side of it, which will prove their identity regardless of the values of variables).

Similarly, long before the formulation of the logical scheme of argumentation by the method of reducing to absurdity, Parmenides refuted the thesis of atomist philosophers that the world consists of a combination of atoms (as the smallest particles of matter) and emptiness (that is, the position on the unity of “being” and “non-being”) [10]. Based on the argument that “non-existence” is something that does

not exist, which is absent in reality, even a hypothetical assumption about the existence of “non-existence” leads reasoning to an insurmountable logical contradiction (that is, to the absurd), namely, to the conclusion that “the existence of the non-existent”. Hence, he made a well-founded conclusion about the impossibility of the existence of a void that is not filled with matter. This conclusion was empirically confirmed more than 2500 years later by modern research in the field of quantum physics, according to the results of which the basic form of existence of matter is a continuous quantum field, and the particles of matter represent only certain perturbations of the latter [11].

As for the ancient Greek legal culture, in particular, the methods of legal argumentation, they were usually reduced to formal voting procedures, which were preceded not so much by a competent discussion aimed at finding a rational solution to the case, but by an appeal to the emotional and psychological inclinations of the voters in the direction of maintaining a verdict corresponding to certain lobbied subjective interests. Admittedly, this paradigm turned out to be quite tenacious. Its application is still quite common today, since the desire for objective truth, unfortunately, is not always competitive in relation to the subjective interest and mood of the persons authorised to make such decisions.

Quite significant in this respect is the trial of Socrates, accused of corrupting young people by warning his students against blind faith in socially recognised gods and contributing to the formation of their skills of independent intelligent thinking, thereby “erasing” the authority of state rulers and official laws. According to the results of voting by the Council of five hundred with a slight margin of votes, an initial decision was made on the application of the death penalty in relation to the defendant. But after Socrates, refusing to defend himself, easily and convincingly refuted all the accusations against him, stating in the end, according to Plato’s memoirs, that ‘the will of the law or the court must be tolerated in the same way as the will of his parents; it can be unfair, but it is subject to unconditional execution’ [12, p. 784], the number of supporters of his execution, paradoxically, increased significantly during the final vote. This was conditioned, firstly, by a surge of envy on the part of judges in relation to mental, analytical, and argumentative abilities of Socrates, and, secondly, the prosecution applied tactics of influencing the parental emotions of members of the judging panel, while appealing to the argument that Socrates, inclining young people to independent thinking, instilled in them the idea of disobedience to parental will (which quite obviously contradicted the last words of Socrates before he, confirming their sincerity, drank poisonous hemlock).

Such extreme subjectivism in the resolution of this court case caused widespread indignation, which went far beyond the borders of Athens and for quite a long time stimulated the area of cognitive activity in the communities of the intellectual elite to develop methodological foundations and criteria for rational thinking. At the same time, only such thinking was considered rational, the fundamental organisation of which was consistent with the universal laws of being. Only under this condition could its results claim to be objective truth and be called *knowledge*, and not just a subjective opinion. As Plato emphasised, only “the knowledge that is built according to nature deserves to be called wisdom” [2, p. 117]. Accordingly, “prudence” in relation to thinking to natural existence “is similar to a certain consonance and harmony” [2, p. 119].

The first attempts to generalise and systematise the logical and methodological foundations of evidentiary reasoning were made by Aristotle. They set universal criteria for the rationality of both human thinking and any systematic organisation of its results (be it a system of knowledge, legal laws, social norms, etc.) and were based on two axiomatic principles: 1) “prohibition of contradiction” and 2) “excluded third”. These principles appeared as basic rational restrictions on the freedom of thought, adhering to which humanity will not fall into the inherent mythological thought arbitrariness and keep their thinking in line with the ordering of real existence.

The first of them, in the formulation of Aristotle, is as follows: “it is impossible that the same thing simultaneously was and was not inherent in the same thing in the same relation” (“*Metaphysics*”, IV, 1005 b 19) [13, p. 22]. That is, rational thinking cannot contain contradictions, since reality does not imply the possibility of the simultaneous presence and absence of any state of affairs; accordingly, the simultaneous affirmation and denial of the same thought will always be a mistake. By the way, in modern textbooks on logic, the Aristotelian reservation about the prohibition of contradictory statements is quite often omitted, *taken in the same relation*. However, it is very significant, since it is taken from the *different* in relation to a moving train, contradictory judgments can be simultaneously true: for example, in relation to a moving train, its passenger does not move; at the same time, in relation to the platform, it moves with the train. However, relative to the same coordinate system, “move” and “do not move” are not possible at the same time.

The second is the principle of the “excluded third”, which provides: “in the same way there can be nothing in the middle between two judgments that deny each other, because something must be affirmed or denied about one” (*Metaphysics*, IV, 7, 1011 b 23) [13, p. 22-23]. In other words, two contradictory judgments (thesis and antithesis) cannot be false at the same

time; therefore, the refutation of one of them is the basis for recognising the validity of the other. It was this axiom that formed the basis for formulating the principle of bivalence, on which almost all legal systems are based, starting with Roman law. According to this principle, any court verdict can be either guilty or acquitted; the third is not given.

The mentioned axiomatic laws are also the logical and methodological basis for such criterion measurements of the rationality of constructing scientific theories and normative systems (including legal ones) as consistency and completeness. These criteria are also applicable to the assessment of any systems of arguments (in particular, the evidence base for all types of legal argumentation). Therefore, the adoption of rationally justified legal decisions on the basis of a particular legislation and the available set of evidentiary materials in the case provides that both the system of this legislation itself and the mentioned materials meet the above-mentioned criteria. This means, firstly, that the system of legislative norms should not contain mutually exclusive provisions (according to the criterion of consistency) and should ensure that the lawful or illegal nature of any action is determined (according to the criterion of completeness). As for the evidence base, these criteria provide for the absence of incompatible evidence in it and the ability to prove or refute the existence of the composition of the offense under consideration on its basis. At the same time, the completeness of the regulatory system is usually guaranteed by the principles: “everything that is not prohibited is allowed” (for private law), or, conversely, “everything that is not allowed” is prohibited (for public law). The completeness of the evidence base (that is, its sufficiency for making one of the two alternative decisions) is ensured by the presumption of innocence: a person is considered innocent until the opposite is proved [13].

Although Aristotle does not find the formulation of the laws of identity and sufficient basis as fundamental axioms of rational thinking (and, accordingly, the principles of certainty and validity), he nevertheless outlined them as technical means of constructing evidentiary reasoning. Thus, for example, describing the laws of prohibition of contradiction and the excluded third, the ancient Greek scholar also notes that it is impossible to think anything if you do not think one thing every time, which actually corresponds to the principle of certainty reproduced in the law of identity (according to which any thought should be fixed in a logically unambiguous language form and not change its logical content during reasoning [14, p. 225]). It is in order to comply with this criterion of rationality that modern legislation formulates not only regulatory prescriptions, but also regulatory definitions, which must be strictly observed in all legal procedures. As for the law of sufficient



reason and the principle of validity of thought fixed by it, it is known that Aristotle, without formulating them in a general form, instead proposed the first system of very specific logical rules, on the basis of which the evidentiary value of reasoning is ensured. In other words, such rules are criteria for the sufficiency of available grounds for a reasonable conclusion on the subject of analytical research. And these rules are still used to distinguish between evidentiary and unsubstantiated arguments.

***Intellectual tradition of antiquity and topical issues of modern evidence law.*** Thus, modern evidence law (that is, a law based not so much on the results of subjective expression of will by voting, but on the logical justification of legal decisions made, based on verified evidence and factual materials) has its origins in the ancient intellectual tradition. At the same time, it is worth noting that there are still very heated discussions about some aspects of the application of the described logical and methodological foundations.

First of all, this concerns the question of the meaningful relationship between the concepts of “proof” (adopted in exact theoretical sciences) and “evidence” (used in relation to argumentative procedures in legal practice). “If the term “proof” refers to a strict logical operation that provides for justifying the truth of a certain thesis (hypothesis, theory, version, etc.) by demonstrating its necessary inference from existing arguments (grounds whose truth is either actually obvious or proved earlier), then the content of the term “evidence” generally provides for *beliefs* participants of the discourse in the expediency of making a particular conclusion. In the latter case, it is not just about *objective data* grounds for a final decision, but above all about the possibility’s *subjective* declension of the parties to it” [15, p. 6]. The difference between logical proof and legal evidence is also that the latter is not always intended to establish the truth. Often, for example, a judicial process is aimed at resolving disputes between conflicting parties; “at the same time, the verdict of the court provides not so much for identifying the “true picture” of the conflict (objective conditions, causes and mechanisms of its occurrence and deployment), but for making a decision in favour of one of these parties. Although such a decision must be justified, its reasoning is usually based on the principle of competition, according to which the case can be won not only by providing sufficient and irrevocable evidence, but also because of the comparable weakness of the opponent’s position” [15, p. 8-9]. Therefore, such conceptual differences between “proof” and “evidence” often lead to mutual distancing of the logical foundations of argumentation, on the one hand, and legal evidentiary procedures, on the other. Moreover, it is even quite common that in the current conditions “in the process

of investigating crimes, instead of past archaisms such as dialectics, analytics, evidence-based syllogism, modern specialists use technical innovations, including chemistry, biology, genetics, fingerprinting, automatic facial recognition system, spectral and other analyses. The object of interest is broad databases, analogue comparisons, that is, what gives not philosophy, but chemistry, biology, genetics, computer technologies, etc.” [16, p. 81]. Accordingly, new specialised methods and techniques of investigative and forensic activity are being developed [17-19].

Indeed, to date, the importance of these investigative tools cannot be overestimated. However, these funds are exclusively a source of facts, which, firstly, despite their obvious nature, can be ambiguously interpreted (for example, the fact that a murder weapon was found during a search of a suspect’s home can mean not only that he is the culprit of the crime under investigation, but also that someone benefits from such a version). Secondly, the facts themselves do not prove or refute anything. It is only on their basis that the relevant authorised person should build their argument, the evidentiary value of which is determined precisely by the logical and analytical criteria that the cited author attributed to the “archaisms of the past”.

Also, quite controversial in modern jurisprudence is the question of criteria for the sufficiency of evidence (especially if we dissociate ourselves from the logical and methodological foundations that were laid in ancient times). Thus, Article 79 of the Criminal Procedure Code of Ukraine provides for: “1. Sufficient evidence is evidence that, in its entirety, allows for the conclusion that there are or are not circumstances of the case that are included in the subject of proof; 2. The question of the sufficiency of evidence to establish the circumstances relevant to the case, the court decides in accordance with its internal belief” [20]. At the same time, however, many key issues remain open. First, it is a question of what exactly is there *objective*; secondly, the conclusion about the presence or absence of the circumstances of the case that are included in the subject of proof should also not be the result solely of the subjects’ own discretion of the evidentiary process, but should be based on certain general criteria, regardless of anyone’s will or interests. Thirdly, in the above normative provisions, it is not difficult to identify a “circle in justification” that is unacceptable from the standpoint of the logical foundations of argumentation: it turns out that the court can make a certain decision *justified* the solution is only provided that *sufficiency* evidence, while the latter is considered sufficient if they allow the court to make a particular decision on the case. At the same time, the court itself is authorised to qualify evidence as sufficient or insufficient at its own discretion (in the absence of clearly defined criteria

for measuring such an assessment) [3]. Thus, the form of normative determination of the conditions for the sufficiency of the evidence base in a case presented in the current Code of Criminal Procedure of Ukraine implies an almost unlimited range of subjective freedom in making court decisions. Therefore, “without solving this problem, the very idea of justice can be very easily replaced by the idea of judicial arbitrariness. Moreover, judicial practice increasingly certifies cases of such an opportunity” [3, p. 63].

Analysing possible ways to solve this problem, A. Khmyrov [21, p. 211] comes to the conclusion that there are no other grounds to consider the evidence sufficient, except that “sufficiency of evidence is determined by the possibility of making an appropriate decision in criminal proceedings based on their available totality”. However, as already mentioned, the decision in the case under consideration is made in any case: if there is sufficient evidence, it will be accusatory, and if there is insufficient evidence, it will be acquitted [4, p. 239]. Therefore, according to this criterion, the study comes to a somewhat paradoxical conclusion: if a decision on a case must necessarily be made, then the evidence is always sufficient, even if it is insufficient.

Moreover, it is hardly possible to agree with such proposed criteria for the sufficiency of evidence as “the possibility of obtaining a correct decision based on them” [22, p. 126-127], “the subject’s conviction in the reliability of justified circumstances” [5, p. 72], etc., since “correctness”, “conviction”, etc. are too subjective characteristics. As for the objective factors of “inner conviction” in making exactly the “correct” conclusion, they are precisely predetermined *logical unambiguity* inference of such a conclusion from the existing system of evidence. Only such schemes of reasoning since the time of Aristotle are considered “correct” (evidentiary, demonstrative), which provide for no more than one version of the conclusion acceptable on the basis of available arguments. After all, if there are more than one such options, then the “source of doubt” about the truth of any of them will be the non-exclusion of the possibility of confirming alternative versions of the conclusion. It follows that “evidence sufficient to justify the intended conclusion must be just as sufficient to refute all its other alternatives” [3, p. 65].

The above information should not be understood in such a way that we must first anticipate all possible scenarios for the development of the events under study, and then, alternately checking them for compatibility with the available evidence, “filter out” the only one among them that will not be excluded by this evidence. This would be too cumbersome and irrational procedure. But by recalling two trivial Aristotle axioms, this criterion can be simplified as much as possible. If, for example, it is necessary to

establish the sufficiency of the available evidence to support version V, then since its statements and its objections cannot be simultaneously false (according to the law of the excluded third), if it is possible to establish the falsity of the denial of this version (i.e., its antithesis), this evidence will be considered sufficient to recognise the truth of V. In turn, the establishment of the falsity of the antithesis of the considered version is carried out by the method of its “reduction to absurdity” (that is, to mutually exclusive logical consequences), since, according to the law of prohibition of contradiction, such consequences are a universal logical “detector of falsity” of the hypotheses from which they follow. If, on the contrary, the assumption about the truth of V gives contradictory consequences at the output, but the assumption about its falsity does not, then the evidence will be sufficient to refute this version. If neither the statement nor the denial of V is irreducible to the point of absurdity (that is, when neither the assumption of the truth of this version nor the assumption of its falsity can be rejected as incompatible with the existing system of evidence), then the latter will be considered insufficient to prove or refute V. Ultimately, the refutation of both of these alternative assumptions will mean that there is false information among the evidence collected.

However, it is worth noting that the described criteria for the sufficiency of evidence “work” exclusively in deductive models of argumentation, where the most basic grounds must be unquestioningly true and provide for an unambiguous conclusion. At the same time, “legal argumentation has its own specifics. It is conducted in conditions of incomplete information, unclear wording, clash of interests of the parties, conflict of views” [23, p. 39], which significantly narrows the possibilities of applying such a model in legal practice. Accordingly, in modern research of the problem under consideration, an alternative branch is clearly outlined, aimed at developing a probabilistic and statistical approach to determining evidence-based standards [6, 8, 24]. The latter are based on the established “threshold” values of probabilistic coefficients for evidence in various branches of procedural law. For example, in civil procedure disputes, the standard is the “probability balance” (or “preponderance of evidence”): each proof must be “true rather than false” (i.e., cross the 50% probabilistic threshold). In criminal cases, this index should be significantly higher than 50% (that is, it should be “beyond reasonable doubts”) [25, p. 1193].

The described approach is often quite fairly criticised. After all, first of all, the dubious point that can hardly be considered evidence of a certificate whose truth is less than 100% is striking, since this means that it is improperly verified and cannot claim the status of a confirmed legal fact. In addition, this

approach is subject to a number of insurmountable paradoxes related to determining the probabilistic value of a set of several proofs. Thus, for example, if the probability of an “eagle” falling out when tossing a coin is 0.5 (50%), then the “eagle” falling out twice in a row will be  $0.5 \times 0.5 = 0.25$  (25%). Similarly, when a civil claim contains elements A and B, each of which has a “pass-through” probabilistic indicator of evidence for this sphere of law (for example, 0.6 and 0.7), then the probability of their simultaneous confirmation will be  $0.6 \times 0.7 = 0.42$ , which is below the “pass-through threshold” [7, p. 267-268].

It seems that the way to resolve such contradictions in determining the criteria for the sufficiency of evidence is to turn to the very logical and semantic foundations of the concept of “sufficient foundation”, studied by Aristotle. In general, the basis A is sufficient for inferring B if the scope of definition a (i.e., the set of cases in which A is a true opinion) does not extend beyond the scope of definition B (i.e., it is either a subset of it or identical to it) [3]. Why, for example, is knowing that a person works as a lawyer (A) sufficient to conclude that they have a higher legal education (B)? Because the set of all existing lawyers is a subset of lawyers; therefore, it is impossible to fall into the set A and be outside the set B. But not the other way around: the fact that a person has a higher legal education is not sufficient to conclude about his legal activity, since, being a lawyer by training, a person can find themselves both within and outside the set of lawyers.

Thus, the logical condition for the sufficiency of evidence for a certain conclusion is that the cross-section of the regions of their definition does not extend beyond the scope of the definition of this conclusion.

At the same time, each individual proof may not be sufficient for such justification, but in their totality (determined by the cross-section of the areas of confirmation of each of them), the sufficiency condition may become met. Therefore, in the context of evidence law, it is more appropriate to develop deductive models of argumentation, since only they have evidentiary power; while probabilistic and statistical approaches are quite effective in investigation, since they allow rationalising the procedures for formulating and evaluating investigative versions. For this purpose, computer programmes are currently being actively developed (in particular, the so-called “Bayesian networks”) designed for algorithmic estimates of the dependencies of the developed versions on the available factual information in the case [26].

## ■ Conclusions

Summarising the above, it can be reasonably argued that to solve the actual problems of the modern methodology of evidence law, it is often advisable to retrospectively analyse its previous historical development, since this makes possible, first, to find out the essential causes of such problems from their very origins. Secondly, the proposed approach, being aimed at studying the logical and methodological foundations of the theory of legal argumentation, laid down by ancient Greek scholars, involves the search for solutions to these problems at a fundamental level, and not by “superficial smoothing” them. In particular, turning to ancient sources of proof methodology would help solve many debatable issues of its modern development, among which the dilemma of the deductivist or probabilistic and statistical paradigm in this area, the problem of criteria for the sufficiency of evidence, and so on are distinguished.

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## Античні витоки методології сучасного доказового права

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■ **Анотація.** Актуальність статті полягає в тому, що курс на євроінтеграцію України передбачає гармонізацію національного та європейського права, починаючи з культурно-традиційних основ останнього, закладених ще в епоху Античності. На підставі вивчення проблематики у сфері сучасного доказового права констатовано, що методологічні суперечності в підходах до її вирішення сягають своїм історичним корінням саме цієї епохи. Досліджено античні витоки як власне методології юридичної аргументації, так і сучасної техніки її ефективного застосування. Метою статті є виявлення логічних підвалин доказового міркування, які є надбанням античної думки та можуть бути ефективно використані під час розроблення сучасних методів юридичного доказування. Для критичної оцінки класичних і сучасних методологічних концепцій у сфері доказового права, а також для виявлення кардинальних розбіжностей у тлумаченнях цілей, засобів і методологічних підходів до побудови доказових процедур використано методи герменевтичного та порівняльного аналізу. У межах пошуку шляхів подолання суперечностей між альтернативними методологічними парадигмами застосовано метод діалектичного синтезу, що передбачає раціональне інтегрування протилежно орієнтованих підходів на засадах їх релевантного залучення та взаємодоповнення. Для обґрунтування результатів і формулювання висновків проведеного дослідження використано методи дедуктивно-логічного аналізу, а також індуктивного узагальнення, ймовірно-статистичних оцінок та аналогії. Доведено, що звернення до логіко-методологічних засад раціонального мислення, сформульованих і систематизованих давньогрецькими мислителями й технічно використаних у системі римського права, відкриває широкі можливості для розв'язання низки актуальних проблем сучасної теорії та практики юридичного доказування. Зазначено, що вирішенню актуальних питань сучасної методології доказового права сприятиме ретроспективний аналіз її попереднього історичного розвитку, що уможливіє з'ясування сутнісних причин виникнення таких проблем. Запропонований підхід спрямований на дослідження логіко-методологічних першооснов теорії юридичної аргументації, а отже, передбачає пошуки шляхів розв'язання цих проблем на фундаментальному рівні. Наголошено на тому, що звернення до античних джерел методології доказування сприятиме вирішенню багатьох дискусійних питань її сучасного розвитку, серед яких – дилема дедуктивістської чи ймовірно-статистичної парадигми, проблема критеріїв достатності доказів тощо. Практична значущість дослідження полягає в тому, що застосування аргументаційних стратегій, побудованих на базових логічних критеріях раціональності й доказовості, сприятиме підвищенню ступеня об'єктивності в практиці прийняття правових рішень, слугуватиме дієвим засобом протидії суб'єктивізму в процесі їх вироблення.

■ **Ключові слова:** докази; методологія права; юридична аргументація; критерії доказовості; достатність доказів