

# Scientific Truth and Judicial Truth: Philosophy and Method

Massimo Mancini\*

*Italian Society of Philosophy of Law, Italy*

**Abstract:** A synthetic *excursus* of modern epistemology across some methodological contributes of Aristotle, Descartes, Galilei and Freud, with special regard to alethic and verisimilar knowledge in law sciences and legal reasoning, in order to analyse dialectic opposition of involved parts in legal argumentations and verdict's rational motivation in trials.

**Keywords:** Thruth, epistemology, method, hypothesis, hermeneutics.

The principles and method of the epistemology of the so-called natural sciences cannot be alien to legal science, precisely as a science: the concept of procedural truth represents perhaps the most obvious example of the application of the criterion of maximum likelihood and reliability, the only aim achievable by judicial proceedings, often proceeding by abduction<sup>1</sup>. Once it is accepted that certainty beyond any reasonable doubt is a concept however limited to the particular circumstances in which a judicial procedure takes place, circumstances that also impose the limits of conclusion, the methodological rigor to reach any decision assumes a central role, constituting the maximum achievable degree of approximation to the truth, precisely in the same terms set forth by Aristotle and, subsequently, also reaffirmed by René Descartes precisely concerning the natural sciences: "And I will believe that I have done enough if the causes that I have explained are such, that all the effects that they can produce are similar to those that we see in the world, without worrying whether it is through them or others that they have produced themselves. Indeed, I believe it to be so useful for life to know causes so imagined, that if one knew the true ones: for medicine, mechanics, and generally all the arts, to which the knowledge of physics can serve, have for their end only to apply some sensible bodies to one another, that by the series of natural causes, some sensible effects are produced; which we will do equally well considering the series of some causes so imagined, though false, that if they were true, for this series is supposed to be similar, as far as the sensible elements are concerned. And for lest one think that Aristotle ever pretended to

do anything more than this, he says at the beginning of the seventh book of his *Meteors*, that as regards things which are not manifest to the sense, he believes to demonstrate them sufficiently, and as much as one can reasonably desire, if he only shows that they can be as he explains them" [1, 2, 3]<sup>2</sup>.

Descartes' use of the analogical argument, to assimilate the unique and incontrovertible truth<sup>3</sup> to a plausible explanation (ultimately based on the opinion) of any event, making full reason, based on the corpus of knowledge of all its aspects available at the time, is particularly significant, being a scheme of argument largely dealt with both Aristotelian and Ciceronian topic: nothing could have been found more suitable to support the importance of topic in dialectical reasoning.

Descartes himself defines the probable truth or verisimilitude obtainable by a rigorous dialectical procedure as a moral certainty, no less important than absolute truth<sup>4</sup>. Dialectical syllogism, unlike demonstrative or apodictic syllogism, takes place when there is precisely a dialectical confrontation on any question, that is to say in the presence of at least two different reasoning that lead to different possible solutions and not to universally provable truths: it is the

\*Address correspondence to this author at 41, via Giovanni Senzatterra, Rome, 00166, Italy; E-mail: massimomancini@inwind.it

<sup>1</sup>The abduction proceeds from distant elements (i.e. from a ἀπαγωγή, or *abductio*, an estrangement), like the effects, to come to define the most probable causes.

<sup>2</sup>Such a refutation of the dogmatic interpretation of Aristotelian teachings is immediately mitigated by the philosopher with an act of submission comparable to the last restorative scene, inserted by J.-B. Poquelin (Molière), in his *Le Tartuffe*, opera of 1664, publicly represented only in 1669, thanks to his revision carried out by the author with the same intent. With this act of humility, defined by Carl Schmitt as "moral par provision", by which Descartes adhered to the traditional faith". Thus the *Principia Philosophiae* conclude, placing Descartes at the shelter of the fate suffered by Galilei: "However, since I do not want to trust myself too much, I assert nothing here, and submit all my opinions to the judgment of the wisest and to the authority of the Church. On the contrary, I beg readers not to give any faith to everything they find written here, but only to examine it, and not to admit that as much as the strength and wisdom of reason can force them to believe". R. DESCARTES, cit. CCVII, p.310.

<sup>3</sup>Knowable and evident in abstract sciences, such as mathematics and geometry: "The other sort of certainty is when we think that it is in no way possible that the thing is different from how we judge it [...] Thus this certainty extends to all that is demonstrated in mathematics: for we clearly see it impossible that two and three joined together make more or less than five, or that a square has only three sides, and things like that". R. DESCARTES, cit. CCVI, pp.309.

<sup>4</sup>R. DESCARTES, cit. CCV, pp.362-363.

proper condition of judicial, civil or criminal proceedings, in which juridical science is called to provide the tools to achieve the most verisimilar of decisions and, like any other science “No longer reaches [...] the apodictical truth of mathematics, it no longer implies the impossibility of the opposite” [4] in universal terms, but the evaluation of a multiplicity of verisimilar arguments, among which to identify the most valid or, more correctly, the one most resistant to any possible refutation.

The importance of the Aristotelian practice of “[...] having enumerated the opinions of the majority” [5] as a rigorous preliminary methodology of all science is lucidly highlighted, in the twentieth century, also by Sigmund Freud, moved precisely by the need to define the scientific dignity of the nascent psychoanalytic discipline like any other: “Suppose it is a question of how the interior of the earth is constituted. Famously, we know nothing for sure about this subject. We assume that it is composed of heavy metals in the incandescent state. Let us now say that someone advances the assumption that the interior of the earth is made of soda water. We will certainly say that this is very far-fetched, which contradicts all our expectations, not taking into account all those scientific reference points that led us to formulate the hypothesis of metal. Nevertheless, it is not inconceivable; if someone points us to a way to prove the hypothesis of the water of Seltz, we follow him without resistance. But here comes another, which gravely claims that the earth's core is made up of jam! In front of him, we will behave very differently. We will tell ourselves that jam is not present in nature, being a product of human culinary art, that moreover, the existence of this matter presupposes the presence of trees and their fruits, and that we would not know how to place vegetation and culinary in the interior of the earth. The result of these intellectual objections will turn our interest in another direction: instead of investigating to see if the earth's core is composed of jam, we will ask what kind of man is ever the one who has come up with such an idea [...] We realize that prejudices are not always reprehensible, that they are sometimes justified, opportune, and spare us an unnecessary effort; for they are only deductions drawn by analogy with other well-founded judgments” [6].

Freud offers some fundamental ideas for the understanding of the Aristotelian dialectical method: first of all, he shows the irreplaceable function of the topic even in the so-called natural sciences, often defined too hastily and absolutely exact, like the

mathematical sciences. In reality, the heuristic function of hypotheses represents an indispensable requirement and a continuous practice in scientific research, as well as in judicial rhetoric and dialectics.

Where it is not possible to reach an incontrovertibly demonstrable truth, it is necessary at least to be able to grasp the maximum degree of reliability among the probable hypotheses, excluding any refutable option or alternative, taking into account all the knowledge available and accredited as valid (even if only limited to the contingent state of the knowledge itself) by the scientific community.

Such a definition also corresponds perfectly to the requirements of juridical science and the scientific community of law, which, in judicial decisions, ordinarily in the absence of indisputable truths, is called upon in science and conscience, based on the available elements and arguments, often extremely thin and questionable, to reach the most verisimilar conclusions possible beyond a reasonable doubt, by observing and studying only the effects, formulating hypotheses to arrive at the causes<sup>5</sup>.

The achievement of the greatest possible verisimilitude is closely linked to the methodological rigor of Aristotle himself who, immediately after having outlined the characteristics of the demonstrative syllogism, clearly defines, precisely in dialectics, the importance of the ability and the (no less scientific) process of discernment of opinions: “We shall possess the method completely when we are in a position similar to that in which we are with regard to rhetoric and medicine and other such faculties; that is to say, when we carry out our purpose with every available means. For neither will the rhetorician seek to persuade nor the physician to heal by every expedient; but if he omits none of the available means, we shall say that he possesses the science in an adequate degree”<sup>6</sup>.

The Aristotelian formulation constitutes one of the fundamental pillars of all professional ethics and, in particular, of the forensic one, that is to say, the

<sup>5</sup>The Galilean method and the entire scientific revolution of the seventeenth-century are also placed in this Aristotelian perspective: “[...] a principle is proven by bringing it back to another higher principle, an effect is explained by the cause. This is absolute knowledge. A demonstration that explains the cause with the effects is only hypothetical. Aristotle places them among the dialectical reasoning in the Topics: such reasoning does not decide on the essence of things (κατὰ φύσιν), but only on circumstances, on accidents (κατὰ συμβεβηκός) of relations between things”. G. MORPURGO-TAGLIABUE, cit. p.38.

<sup>6</sup>ARISTOTLE, cit., I, A, 101b, II, 5-10, p.279.

commitment to lavish and exerting the maximum of one's abilities, regardless of the result achieved, since the most complete dedication and full respect for the same ethics cannot certainly and invariably guarantee the healing of the sick or a favorable sentence to those who turn to the doctor or the lawyer, but only ensure the use of all their ability, knowledge, and methodological rigor.

The definition of prejudice (and its function in reasoning) provided by Freud also offers the opportunity to examine some twentieth-century theories of particular importance in the philosophy of law and the theory of argument: the instance of comparison with the body of consolidated notions that leads to the hypothesis on the metallic composition of the Earth's core represents the same need formulated by Chaïm M Perelman as the principle of inertia [7].

The general sharing of notions, principles and hypotheses by the scientific community contributes to the definition of the so-called paradigms, in the sense understood by Thomas Kuhn [8], that is to say, the keys of interpretation, the horizons of each scientific discipline, including the legal sciences, which preserve and consolidate the guidelines until they are refuted and replaced by further paradigms more grounded and more convincing or probable.

Even the new paradigms, however, replacing the previous ones, are subject to the same risk, remaining valid and accepted only until the arrival (by revolutionary discoveries or technological innovations or fundamental variations of methodological perspective) of further substitutions. This procedure bestow on any scientific discipline, on the one hand, a notional rigidity that protects it from excessive, pretentious, and unfounded criticism, and on the other hand, the possibility of introducing innovations and thoughtful variations, while maintaining an openness to the development of knowledge.

The balance between these tendencies is ensured through the imposition of burden of proof on those who introduce criticisms or hypotheses that involve the variation or substitution of widely accepted notions [9].

The acceptance of prejudice as a guiding element of the researcher who, ignoring it, would fail to the rigor necessary in his activity, is defined by Josef Esser as a pre-understanding [10], reworking the hermeneutic theory of Hans Georg Gadamer [11], with particular attention to the application of interpretative activity in the domain of law.

The ideas offered by Freud's exposition also anticipate a critical view of these forms of argument, outlining their limits (it is, mainly, an argument by analogy) and framing them in a historical perspective: "Yet the thing is not so simple. The similarity chosen by me proves nothing or as little as the similarities in general. It remains questionable whether it fits, and it is clear that in my choice I have already been conditioned by an attitude of dismissive rejection. Prejudices are sometimes opportune and justified, but other times erroneous and harmful, and you never know when they are the one thing or the other. The history of science itself is rich in examples that must warn against hasty condemnation. For a long time, it was considered an absurd assumption that the stones we now call meteorites fell to earth from celestial space, or that the rocks of the mountains that enclose the shell remain once formed at the bottom of the sea"<sup>7</sup>.

The allusion to hastily condemning hypotheses based on prejudices or assessments independent of their content appears particularly appropriate to the legal dimension, if related to the prevalence, in judicial dialectic, of similar considerations leading to a refutation of the theses supported by a party in the case, above all in the case of a criminal court's judgement.

This is a fundamental methodological question for any kind of scientific research: even the warning addressed to the transitory status of much scientific knowledge, considered too often definitive and immutable, seems to adapt precisely to Aristotelian notions, which have undergone a process of stiffening through the centuries to reach a rank of indisputability, as in the emblematic case of the well-known physical and astronomical disputes that saw Galileo Galilei opposed to a sclerotized and immobile vision of Aristotelian teachings, perspective irreconcilable precisely with the method of Aristotle himself, marked by continuous research and verification of his formulations. In every age, in scientific research, the most reliable knowledge obtained from time to time is certainly considered valid (a need, however, unavoidable in the legal sciences, to issue judicial decisions, but also to enact laws at predetermined times), but the constant openness to further developments is an essential element, indispensable. Thus Galilei, reconciling the need to proceed in his reasoning for investigative models a priori (that is to

<sup>7</sup>S. FREUD, cit.. Vol.15, Vorl.30: *Traum und Okkultismus*.

say of the verisimilar research hypotheses conceived and elaborated only theoretically, ideally) [12]<sup>8</sup> with experimental practice, through the arguments exposed in the discourses of the character of Salviati, criticizes the rigid Aristotelianism Paduan, irreducible even in the face of the empirical experience of the new astronomical observations possible by means of the telescope [13]<sup>9</sup>: “Do you have any doubt that when Aristotle saw the new discoveries, it was not to change opinion and to amend his books and to approach the most reasonable doctrines, discarding from itself those poor brains who too pusillanimously lead to want to support every saying of his, without understanding that when Aristotle became such as they appear, it would be an indocile brain, a stubborn mind, a soul full of barbarism, a tyrannical will, who, considering all the others as stolid sheep, wanted his decrees to be put before the senses, to experiences, to the same nature? They are his followers who have given authority to Aristotle, and it is not that him usurped or taken it [...] But when you also want to continue in this way of studying, put down the name of philosophers, and call yourself either historians or doctors of memory; for it is not fitting that those who never philosophize, usurp the honorable title of a philosopher” [14].

<sup>8</sup>To such an extent that his method is defined by Alexandre Koyré more Platonic than Aristotelian.

<sup>9</sup>“The negative proof, the refutation, is apodictic; the positive proof is hypothetical, probable, possible: and this is the maximum limit of truth. It seems to read a statement of Popper”. G. MORPURGO-TAGLIABUE, cit. p.64. Cf.

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