



# Theoretical and Philosophical Criteria of the Standards of Evidence Applicable to Expert Opinion; “from Corroborability to Evidential Reliability”<sup>1</sup>.

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**Abstract:** This article is a reflection based on scientific criteria, seeking to highlight the factual and philosophical relevance criteria that pertain to the so-called standards of evidence, particularly when applied to scientific evidence, especially expert opinions. Expert testimony is not a mere type of evidence that can be evaluated at the discretion of its interpreters (the judge and the parties). On the contrary, scientific evidence must guide the interpretative and argumentative process of both the parties and the judge when issuing a ruling, which must necessarily be based on the scientific criteria provided by the expert evidence, when it is complete and relevant.

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## 1. Introduction

The evidentiary freedom and the coexistence of means of proof, understood as applicable criteria in jurisdictional processes in our environment, invites us to reflect on how these means should be understood, applied, and materialized, particularly when they are framed by scientific and technical criteria. These criteria limit the evaluation of the means of proof to the context provided by these instruments, as is the case with expert opinions. Due to this rule of formal logic applied to law, it is necessary to reflect on the scope and correct understanding of how these means of proof are materialized and used, especially when they involve technical and scientific instruments. This evaluation is made from philosophical and theoretical perspectives, with the aim of shedding light on the criteria of effective material justice that should guide the handling of these means. After all, this is the fundamental reason for using means of proof in jurisdictional processes.

This paper aims to address a concise research problem. Although it may seem simple, it is not. It intends to offer a reflection on the correct way expert opinions should be understood, as the only means of evidence characterized by its technical and scientific scope. This aspect lends it forcefulness within the process, serving as a marker of effective material justice, as presented in this article.

To conclude this brief introduction, it is important to clarify the basic objective of this article, which is to outline and identify, from theoretical and philosophical perspectives, the material and functional requirements that have been incorporated into expert opinions presented in judicial process. This is regulated by Article 226 of the General Code of Procedure, and the article aims to delineate its main

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implications concerning evidentiary standards.

### **Law And Language, A Sine Qua Non Relationship.**

The subject of evidentiary standards cannot escape the inalienable relationship between legal institutions and language, as it is through words that any legal institution is constructed. This also applies to expert opinions, whose content is integrated into jurisdictional processes, endowing them with such nature.

To begin this assessment, it is appropriate to refer to the approaches of Friedrich Nietzsche, who in his text *The Will to Power* stated: "(...) *there are no facts, but interpretations* (...)". Let us delve a little deeper into the Nietzsche's argument, as he contextualizes his statement by indicating:

*"(...) Is it only a language the mechanism to indicate the internal world of the facts, a world that holds a certain amount of will, that fights and wins? All hypotheses of mechanism, matter, atom, gravity and collision are not "facts in themselves" but interpretations made with the help of psychic fictions. Life, as the form of being known to us, is, specifically, a will to accumulate force; all the processes of life have in this case their lever: nothing wants to be preserved, everything must be added and accumulated. Life, as a particular case (the hypothesis that, starting from a determined reality, rises to the general character of existence). (...)"* (Nietzsche & Castrillo Mirat, 2001, p. 463).

Language, which has been understood as the medium in which ideas have materialized and articulated in order to be transmitted to others, is without a doubt the only mechanism to construct law, both in its theoretical spectrum and especially in its practice or realization. This makes it pertinent to highlight that from the Nietzschean position, it can be affirmed that law and literature share a common nature, as indicated by Ronald Dworkin in his text *How is law like literature?* (Hart & Dworkin, 1997) to the point of considering that all legal practice entails a reinterpretation, at least in its basic structure (García, 2022, p. 157-179).

These relational criteria, between language and social institutions, in which the creations that are proper to law must necessarily be integrated, in all its meanings, forms and means, form the conceptual basis necessary to reflect on the nature and the predictable scope of the so-called evidentiary standards adaptable to expert opinions.

In accordance with the above, it is imperative to make clear that the interest of legal discourse is to achieve fully proven truth (probatory truth), therefore, we cannot move away from positions such as that of Professor Jürgen Habermas, who maintains; "(...) that science is developed driven by three interests, namely: empirical analytical, historical hermeneutic and social critical. (...)" (Habermas & Husserl, 1997).

If for a moment, it is admitted that legal discourse is made up of a specific interest, at least an interest of a party (in civil cases), or a public interest (for cases of public law), consequently, in all cases seen from the legal perspective, the existence of an interest is clear and marked, whether it is of a party (creditor or debtor) or of the State (inspection, surveillance, control, sanctioning, persecution, etc.).

In context, it is valid to affirm that in all cases, materialized under structures of a legal nature, independently of the interest that is represented and pursued, whether it is a party interest or that of the state organization, this must be proven, that is, have the means that inexorably justify a legal position and interest, which allows its general acceptance, as required by article 167 of the General Code of Procedure, "(...) It is up to the parties to prove the factual assumption of the norms that establish the legal effect that they pursue (...)" (Colombia. et al., 2012).

Indeed, it is the same General Code of Procedure, which allows to prove through any of the means regulated there the interests contained in a determined legal position. However, in order to achieve the objective outlined in this article, related to the theoretical and philosophical assessment that can be predicted of the transformations incorporated in the expert opinion, which as has been indicated is regulated among many other aspects by the content of article 226 of the General Code of Procedure.

### **The Expert Opinion (Scientific Evidence) As An Expression Of Proven Truth.**

The importance of the expert opinion is unquestionable when it comes to verifying the facts that require scientific, technical, artistic knowledge and that are of interest to the process, as it is the determining factor for the resolution of the legal equation contained in a process of a jurisdictional nature.

To delve into the thematic development of the article, it is necessary first of all address the issue comprised by the relationship between science and the process.

The discussion on the relationship between science and process (for the purposes of our reflection, emphasis is being placed on the jurisdictional process) must be based on the assumption that it is not a peaceful terrain, although some reasonable agreements can be found that allow progress in both scientific development and the jurisdictional process; here we do not intend to satisfy the definitions of science or process, but rather, to highlight those criteria that are considered useful to achieve our objective.

Let us begin this part of the reflection, demarcating the basic definition of science, which has been commonly understood as; "(...) *Science is the set of organized, hierarchical and verifiable knowledge, obtained from the observation of natural and social phenomena of reality (both natural and human), and also from the experimentation and empirical demonstration of the interpretations we give them.* (...) (Cabanellas de Torres Guillermo, *Dictionary of Legal Sciences*).

It can be stated that the structural elements of this definition are clearly incorporated when establishing the different guidelines that make up a process destined to produce knowledge that is labeled as scientific, or applied under predefined rigid formal standards, as occurs with the results obtained from the application of the procedures that are integrated into the different manifestations in which the law is materialized.

In the jurisdictional process, matters pertaining to the epistemology of science are hardly discussed, at least in the approaches of authors such as Kuhn, Lakatos or Feyerabend (Briones, 1996), however, if it is discussed whether the same -jurisdictional process- is or is not an instrument for constructing truth, three positions are already well disseminated in our environment (García, 2022, p. 166) a cognitivist conception (Dworkin, 2012), a non-cognitivist one (Guastini, 1990) and an intermediate one (Hart, 1983) (Romeu & Moreso, 2018).

The cognitivist position tends to defend the idea that the interpretation of law provides results by means of true or false interpretative or propositional statements; On the contrary, the non-cognitivist conception defends that the interpretation of law allows for results such as non-propositional interpretative statements lacking truth value; finally, as an intermediate theory, it is held that, according to the circumstances, each interpretative activity can be cognitive in some cases and a decisive activity in others, that is, some interpretative statements are susceptible to truth or falsehood and others simply are not (Mendonça, 2008). These postulates recognize that in matters specific to law in its jurisdictional aspect, the evidentiary positions are not identified with the material truth, but with its efficiency to resolve a position or interest, in the development of a jurisdictional or administrative process.

It is a consequence of the factual vision indicated, that the most relevant thing in a process of a jurisdictional nature is not to determine or not the truth given in the decision, but rather to identify the instruments used by the judge to reach this -decision- in the case at hand, said instruments are concentrated in the expert evidence of the expert opinion regulated in article 226 of the General Code of Procedure.

First of all, it is necessary to estimate that although the General Code of Procedure allows a probative freedom, it is not therefore a matter of proving in any way, but rather, for the case at hand, the means to prove relevant aspects in the case, through a scientific, technical or artistic means that does not admit discussion. "(...) *The expert evidence is appropriate to verify facts that interest the process and require special scientific, technical or artistic knowledge* (...)" (Colombia. et al., 2012).

Additionally, it is considered pertinent to point out that, with regard to science itself, it is necessary to differentiate between scientific and non-scientific knowledge, in other words, what is scientific from what is pseudoscientific, which may consist of reading coffee grounds, tea leaves and even chocolate, or as

Professor Taruffo told us, “(...) many people trust in the use of methods [reading coffee grounds] of this type to discover even very important facts (...)” (p. 463) (Taruffo & Calle, 2009), but which undoubtedly do not interest or should not interest the process.

Now, it is necessary to refer to another relationship that we consider necessary to highlight, such as that existing between Science, scientificity and truth.

As an initial criterion, the importance of having scientific knowledge that clarifies the aspects that feed the jurisdictional process is highlighted, it is a value that is becoming more relevant every day in the Colombian environment. Legislative changes, such as those that have been made to the Code of Criminal Procedure or the General Code of Procedure (an example of this is article 226 of the General Code of Procedure), which depreciate due to the creation of an evidentiary activity, characterized by technical and scientific rigor that is achieved, among other means, with the participation of experts within the process, through the use of the so-called expert opinion, which has the purpose of achieving a well-formed and well-founded conviction by the trial judge.

It is undeniable that in the development of a process of a jurisdictional nature, on many occasions when the matters to be dealt with are not of full right, it is necessary to have the intervention of an expert who professes scientific and technical knowledge, which must be integrated into the jurisdictional process, allowing the judge to overcome the conceptual limitations that his little knowledge and lack of expertise in specific matters would not allow him to reach a valid decision from any valid perspective. This is required by at least article 405 of the Code of Criminal Procedure and 226 of the General Code of Procedure.

The aforementioned legal requirement constitutes in itself a guarantee for the parties, since only evidence on which scientific, technical or artistic criteria can be applied will be incorporated into the judicial process, which must be constructed and rationalized by that person who, in technical and professional terms, knows about the subject, hence the requirement of article 226; “(...) *Every opinion must be clear, precise, exhaustive and detailed; it will explain the examinations, methods, experiments and investigations carried out, as well as the technical, scientific or artistic foundations of its conclusions*(...)” (Bejarano, 2012).

This requirement allows the party acting as a counterparty in a jurisdictional process to challenge the expert evidence or at least have the opportunity to try to do so and oppose the expert's opinion; under such a structure it is possible to preach procedural equality between the parties in a jurisdictional process, they can provide the elements of conviction they deem necessary, in order to get the judge to lean in their favor by making the most reasoned and pertinent decision, among the possible ones.

Now, if we look at each of the demands that can be made to the technical-scientific expert, it is valid to conclude that their participation will be centered on the rules of the scientific method. Hence the importance of having judges and magistrates with extensive knowledge in scientific research methods, so that the content of the expert evidence of a scientific nature will not be strange to them, this will allow to effectively qualify the guarantees that they can grant to the parties.

When one has basic scientific training and acts in accordance with the requirements of the administration of justice, the interveners take as an initial action, to discard all non-scientific knowledge, since it does not have the appropriate methodological construction, which allows corroborating whether the construction of said knowledge has been in accordance with the rules of science, and of the pertinent discipline in particular, for which these cannot serve as a basis for a decisive jurisdictional pronouncement.

Secondly, the use of at least one scientific method from the universe of these must be verified, as well as the acceptance criteria of these by the scientific community in particular, today there is a broad classification that allows determining with certainty the method used. (Díaz Vásquez and Valencia Jiménez 2020).

An example of such classification is included in the following reference:

“(...) 4. The list of publications, related to the subject matter of the expert report, that the expert has made in the last ten (10) years, if any. (...) 8. Declare whether the examinations, methods, experiments and

investigations carried out are different from those used in expert reports rendered in previous processes dealing with the same subjects. In case it is different, the justification for the variation must be explained.<sup>9</sup> Declare whether the examinations, methods, experiments and investigations carried out are different from those used in the regular exercise of his profession or trade. In case it is different, the justification for the variation must be explained. (...)” (*Bejarano*, 2012).

The criteria and institutions referred to were not contemplated or permitted in the text of the old Code of Civil Procedure. The functional novelty brought by the current regulatory provisions is what, in our opinion, raises the standard of proof that can be predicted by expert evidence, or as Dr. Carmen Vázquez puts it, “the scientific nature of scientific evidence in the judicial process” (*Vázquez-Rojas*, 2014).

In accordance with the approaches presented, it is appropriate to indicate that in the construction of the arguments contained in the judicial decision, it is imperative to establish criteria that lead to criteria of conviction of a scientific nature that inspire and guide the intellectual process of the judge. In more concrete terms, this corresponds to the judge's duty to duly motivate, that is, indicating how he arrived at his conclusions and on what legal-scientific criteria he based them (information provided by the expert, in the case of using the expert opinion), to affirm the reasons for his conviction (truth-decision) (*Palacios-Valencia & Valencia-Jiménez*, 2022).

### **On The Assessment Of Scientific Evidence.**

Another of the structural criteria that are integrated into this dissertation is the subject related to the appropriate form that should be given to the assessment of scientific evidence; this part of the reflection focuses on the form in which the judge must carry out the intellectual process of assessment and/or appreciation of the scientific evidence or the expert opinion. To refer to this issue we turn to the approaches discussed several years ago by Professor Taruffo who indicated:

“(...) In common language, the object of the evidence is constituted by the “facts of the case”, but it is clear that these are not empirical events, given that, being in the great majority of cases events that have occurred before and outside the process, the judge cannot perceive them directly. (...)” (*Taruffo*, 2008, p. 251).

From these postulates, it is valid to indicate that at least two extremes of an evidentiary nature must necessarily arise, which correspond to the interests of the so-called procedural extremes, a phenomenon that is simply called from the perspective of jurisdictional action, as the evidentiary activity, which provides the input for the intellectual activity of the judge, hence the issue of the means of proof, of their relevance to the arguments put forward by the procedural extremes, are fundamental to understanding the actions of the judge in his provisions, which at least in theory must conform to the law and is expressed by what has been called the constitutional guarantee of due motivation of acts. (*Cruz Mahecha*, 2023)

Returning to Taruffo, who indicates that the Carnelittian conception present in the three editions of civil evidence and law (*Taruffo*, 2016) has demarcated that the plaintiff, who presents the facts and concomitantly the evidence related to them, creates the fact constituting the claim, is the direct witness who resorts to his knowledge or to the support provided by experts, in order to get the judge to affirm in the sentence if said fact and its probative force is compelling enough to transform reality, with the mandates that are generated by his act.

Another aspect that can be argued based on the above criteria is related to the broad argumentative possibilities of the person who must act as a plaintiff, that is, the initial manager of a judicial process, who by this simple fact freely presents arguments, legal positions and evidence with which he intends to highlight the factual relevance of his position, thus establishing the raw material for both his counterparty, as well as the judge, to begin their argumentative constructions, which must necessarily inspire the resolution given to the litigation presented. This procedure demands the existence of evidence that contains scientific criteria applicable to the subject matter that allow the judge and the parties to assume the resolutions of the jurisdictional process. (*Cruz Mahecha* 2020).

The aforementioned argumentative criteria must have the necessary evidentiary postulates so that some

degree of feasibility and relevance can be predicted from them, thus responding to the rule established by Taruffo, in his work, who argued that these criteria of part necessarily have to have a legal or linguistic, semantic, technical or cultural nature. Thus, the described statement refers to or raises on the basis of the causal link, referring to the category of the cause (Taruffo, 2008) in short, for Taruffo; "(...) *causality can be thought of as a mental model that we use to interpret the data of experience* (...)"<sup>2</sup>

In short, by complying with Taruffo's proposal, regarding the application that should be given to expert evidence or expert evidence, the question would be answered, How and why to consider the knowledge of an expert?, since the work of the judge is not a simple corroboration, since it must be taken into consideration that as warned by (Taruffo, 2008) that for the case of testimony, "(...) *causality could be nothing more than a psychological phenomenon*" and ultimately for expert evidence "*causality could be nothing more than a scientific phenomenon*" and should be assessed as such.(...)" (p. 253).

It is known by the generality of the legal community that there is a standard in evidentiary matters called "the prevailing probability", by which it is understood that there is a significant and functional prevailing that is inferred from the rational premises that are presented in a jurisdictional process, which in turn help in the construction of the judicial decision.

But this almost operational vision is not generated by very personal criteria of conviction, contrary to this, this prevailing probability is argued from the material and specific content of the means of proof that are intended to be used, therefore the expert opinion is the means that best reflects this principle, since due to its scientific and technical nature, its interpretation and use must be subject to its material content and any action to the contrary is delegitimized by itself from the factual and of course legal perspective. (Cruz Mahecha, 2020).

Our reflection cannot escape the analysis of the obligation, which is applicable to all means of proof, which is that they must profess their validity and relevance, beyond any reasonable doubt.

To construct this analysis, we must start from the point that expert opinions require the professional, technical and/or scientific qualification of their issuer and their specific content is a professional expression that escapes the subjective criteria and personal positions of the author.

Therefore, the maxim that the evidence must go beyond all reasonable doubt in the matter of an expert opinion is subject to the content of the scientific, professional and/or technical statement, and in case of doubt, it will be those established by these means, in the face of which, the judge has only one way, to formally accept that the opinion cannot serve as evidence due to the degree of doubt and uncertainty that can be professed about it, this makes the expert opinion the only means of evidence that once it presents any type of doubt, must be rejected without any additional reference to it, since it does not serve as a means to make a valid and pertinent argumentative criterion. (Cruz Mahecha, 2020).

Now, it is also considered pertinent to make a reference to the criteria relating to the standards of proof, which must also be applied to expert opinions, as scientific evidence, in the development of a judicial process, in the work of Carmen Vásquez, reflections are presented on the standards of proof relating to scientific means of proof, a work in which it was indicated;

"(...) *Standards of proof the analysis, and even the awareness of the need, of the standards of proof, unfortunately, is very uncommon in the systems of Roman-Germanic tradition. It seems that under the so-called system of free evaluation of evidence all that matters is whether, having heard all the elements of judgment admitted and practiced, the mere belief of the judges of the facts is firm and solid.* (...)" (Vásquez Carmen, 2013).

From this position, the author in question asks: "(...) *in what situation is the citizen who is part of a process if, although he is guaranteed a right to due process (in itinere) and to evidence, he ends up being convicted or*

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<sup>2</sup> In essence, following HUME - for whom, as is known, the causal link is nothing other than the result of the psychological habit of seeing a regular connection between events - causality could be nothing more than a psychological phenomenon; in this regard, see JONSON and LAIRD, 1999: 67 ff.

*declared responsible when the judge considers that he is persuaded, firmly convinced, etc.? (...)”.*

Both the argument of context, as well as the question raised by the author in reference, mark the importance of the standards of proof in jurisdictional matters, especially when these standards are related to specific means of proof such as scientific evidence, in which one of its most forceful expressions is the expert opinion.

Carmen Vásquez points out that it is necessary and indispensable to demarcate that there is a need to demarcate the guiding line that measures the degree of relevance to prove an aspect within a process of a jurisdictional nature, using scientific criteria that are autonomous and make use of the methods of these standardized procedures, which by such nature cannot be refuted by the parties, but based on the means and content that these elements of proof are considered pertinent from the technical and scientific spectrum<sup>3</sup>.

## Conclusions

Rather than building a conclusion to the present reflection, we will dedicate a few lines to demarcate the significance of the subject dealt with and the importance that this has for the materialization of the law and especially the criteria of effective material justice. It is no secret that judicial work necessarily involves the existence of evidentiary materials that give relevance to the decisions of the judges, the parties and the judicial investigator. They can only create arguments, legal reasons and therefore sentences, only from legal criteria duly founded and increased by means that impose the relevance of each of these arguments and do not allow those of the other procedural subjects to have any criterion of factual and legal relevance.

For this reason, the subject of scientific evidence takes on so much value, because denying its relevance requires the use of technical criteria as forceful as those contained in the same medium. When use is made of technical scientific knowledge applied to the postulates of a jurisdictional process, related to the legal position of each of the subjects involved in this type of proceedings, the relevance of these positions must necessarily be limited to the material reality that can be professed from the aforementioned means of proof. Therefore, the expert opinion, or the pronouncement of technical and scientific experts, must be valued as a means whose content must be assessed and understood within the discernment of applied science, for which reason the criteria of sound criticism must conform to these postulates, since they cannot be subject to subjective assessments that distort the object of the means of proof (expert opinion).

It is important to highlight that law is an intellectual construction, even more so when it is a matter of its material realization, through a process of a jurisdictional or judicial nature, in which such construction must respond to the criteria that the arguments and evidence presented by the parties may profess. But this process is widely limited to the content of scientifically created evidence, since use has been made of criteria proper to a science in use of technical criteria that necessarily force legal reasoning on the prevalence of the concepts and inferences that are proper to these means.

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<sup>3</sup> “(...) A efectos de situar mejor la discusión sobre los estándares de prueba es necesario resaltar dos cuestiones. Primera, no se trata de una especie de regreso a las reglas de prueba tasada, pues los estándares de prueba suelen plantearse principalmente en la valoración del conjunto de pruebas a efectos de la toma de la decisión final; no afectan a elementos de prueba concretos estableciendo su valor a priori, como sí lo hacen las reglas de prueba tasada y sustituyendo en gran medida la actividad evaluativa o los criterios del juzgador (actuando, en este sentido, como una especie de presunción iuris et de iure) 8. Segunda, el estándar de prueba presupone una decisión de política pública sobre el beneficio de la duda que se pretende dar a cada una de las partes implicadas y, con ello, la distribución de errores entre las mismas que se busca conseguir en un proceso judicial. En este sentido, a la epistemología sólo le corresponde la construcción del estándar de prueba, mas no determinar el grado mínimo indispensable, i. e., epistemológicamente se podría decir el cómo pero no el cuánto. (...)”, Vásquez Carmen, 2013, pág. 16

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