Expertise between science and law

A Perícia entre a ciência e o direito

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1 INTRODUCTION

When dealing with evidence, three central questions arise. Who should bear the burden of producing it, how much evidence is needed and what evidence is admissible. As the request for new evidence or its presentation, when allowed by law, is a procedural option and therefore subject to estoppel, the answer to the third question changes during the course of the proceedings. For that reason, the answer to the third question can even be broken down into which evidence is admissible by law and when. Law, case law and doctrine address these questions with zeal and attention, in general and in specific cases or hypotheses. Still, upon further analysis, equally curious issues are perceived in each mode of proof. In the case of expert evidence, there is also frequent discussion of who will produce it, when and how to produce it and how to deal with its product, the report.

In addition to the thematic link, the issues share the dramatic relationship with which rights will be defended and when, which is why it is right to affirm the existence of a fundamental right to evidence[1] , corollary of due process. It is noted that these affect not only those held by procedural subjects, but even the choice of which rights will be demanded in court.

From this perspective, we seek to contextualize the expert evidence that commonly exerts a strong influence on the formation of judicial conviction. In view, however, of the breadth of knowledge that can serve to produce expert evidence, it will focus on scientific expertise.

To this end, expert evidence will be introduced (2), and then the specific issues of expert evidence and who produces it will be recapitulated (3). Finally, we will move on

[1] Corollary of due process of law. (LUCON, P. H. dos S. Expert evidence in the CPC/15. *In*: Essential Doctrines - New Civil Procedure. vol. 4. São Paulo: Revista dos Tribunais, 2018. *Online text*).

to the general questions about evidence that necessarily also affect expert evidence, recontextualizing it in the current Order (4) to finally reach the conclusions (5).

2 ON EXPERT EVIDENCE

The precise knowledge of facts relevant to the outcome of a particular dispute is a matter of concern in the collective action. The action of the State-judge when adjudicating is no exception, and the Ordinance has focused on the formation of the conviction, placing to the procedural subjects various instruments for the proof of fact (arts. 212 to 232 of the Civil Code - CC - and 369 to 380, Code of Civil Procedure - CPC).

In this scenario, expert evidence is distinguished from the others by focusing on matters that require special technical knowledge (art. 464, CPC). To appreciate the fact documented in a document whose authenticity and veracity is incontrovertible, the ability to read is sufficient; the witness only acts "narrating what he perceived"[2] , with "knowledge about facts that integrate the previous human situation"[3] . The facts of the world that remain can be inspected by the judge, but the facts demonstrable by expertise are those that, for appreciation and understanding, require "scientific, artistic and technical knowledge"[4] , which go beyond the law. On these, Alvim Netto comments, referring to the Code of Civil Procedure of 1973 (CPC/73) that:

> The fact that the law has used the expressions technical and scientific knowledge distinctly has its raison d'être. Technical knowledge corresponds to a special knowledge of the expert, but not necessarily scientific, in the sense that the latter expression is understood as representing the knowledge acquired in an orderly manner through the study of a science, with its own object, organized and systematized, resulting from the accumulation of knowledge and susceptible to communication, at the present time or through the ages. Technical knowledge, as this word is used stricto sensu, may be that of a bricklayer, a shoemaker, a coffee picker, etc., and will be a given type of knowledge, necessary for the clarification and judgment of the case, in view of the facts discussed, but which, in reality, cannot be elevated to the dignity of scientific knowledge, properly speaking, although it can also be transmitted. Scientific knowledge, properly speaking, as we know, is that which is effectively constructed through a given science[5]

The author goes on to point out that:

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[2] COSTA, C. Perícia Facultativa e Perícia Obrigatória. *In*: Journal of Labor Law, vol. 6 (mar-abr. 1977), pp. 81 to 88. São Paulo: Revista dos Tribunais, 2018. Online text. p. 1
[3] *Ibid.*
[4] *Ibid*.
[5] ALVIM NETTO. J. M. de A. Notes on the expertise. *In:* Essential Doctrines of Civil Procedure, vol. 4 (Oct. 2011). pp. 431 to 464. São Paulo: Revista dos Tribunais, 2011. Online text. p. 1.

> When the law refers to technical or scientific knowledge, it uses broad expressions, in the sense that technical knowledge includes all special types of knowledge, such as artistic knowledge, knowledge relating to agriculture, livestock farming, banking practices, coffee, motoring problems, etc. (...)
> On the other hand, when it refers to scientific knowledge, it alludes to knowledge arising from the accumulated product of a science.[6]

Of less relevance to this study, which intends to focus on the limits of expertise, but with great emphasis on the doctrine is the distinction between the types of expertise. On this, based on the previous Code, Krezmann summarizes:

> The expert evidence, generically treated in the Code of Civil Procedure, in art. 420, consists of three species, namely: examination, survey and evaluation. Examination is the inspection carried out by an expert to ascertain the existence of some fact or circumstance that is of interest to the resolution of the dispute. The examination may be of movable or semi-movable property, commercial books, documents and papers in general, and even of persons (as verbi gratia, in medical examinations). An inspection is an examination of immovable property. Finally, appraisal is the examination aimed at verifying the value in money of something or obligation. It is also called arbitration, a word used by the CPC in articles 18, § 2, 606, 607, 627, § 1, and 1,206.[7]

3 EXPERT EVIDENCE, THE EXPERT AND THE LIMITS OF SCIENCE

When necessary, this evidence necessarily introduces a third party[8] , since art. 156, CPC, does not leave room for choice of the court as to expand the number of procedural subjects. On the contrary, determining that the "judge will be assisted by an expert when the proof of the fact depends on technical or scientific knowledge"[9] . In the same sense, art. 144, I, CPC, prohibits the judge from exercising his functions in the process in which he intervened, among other roles, as an expert[10] . In turn, art. 148, CPC, makes it clear that the grounds for suspicion (which are understood to include those of art. 144, CPC) also apply to the auxiliaries of justice, among which is the Expert.

Therefore, the separation imposed by the current legal system between judge and expert is crucial. If it were not, one could come to the notion that the only objection to the possibility of the judge personally conducting an expertise, even when equipped with the necessary technical knowledge, would be that it would slip into judicial inspection. This

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[6] *Ibid*. p. 18.
[7] KRETZMANN, P. A. Accounting Expert Evidence - general and procedural aspects. *In*: Essential Doctrines of Civil Procedure, vol. 4, pp. 631 to 641. São Paulo: Revista dos Tribunais, 2011. Online text. p. 1.
[8] It should be noted here that judicial inspection is possible under the current legal system and is expressly regulated in Art. 481 of the Civil Code.
[9] BRAZIL. Law No. 13.105, of March 16, 2015. Code of Civil Procedure (2015). Brasília, DF: Presidency of the Republic. Available at: <http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2015/lei/l13105.htm>. Accessed on 10/04/2020.
[10] *Ibid*.

notion, however, does not seem congruent with the current legal system, which seems to be more concerned with technical etiquette than the problem might suggest. This is stated, in any case, without prejudice to the possibility of an expert opinion and a judicial inspection carried out - by different subjects - on the same object and even simultaneously, against which there is no reason to object.

This necessary alterity[11] fulfilled different functions throughout the evolution of the procedural technique. Commenting on the previous Code (CPC/73), Cruz states that:

> Under the CPC (LGL\1973\5) of 1939, our best doctrine was committed in a certain direction, under the German influence, which also saw the need for expertise regardless of the lack of "technical preparation" of the judge: "decorum, convenience and danger often lead the judge to resort to examination by others, even though the case does not require special knowledge. You have to inspect the bottom of a well. That does not require technicians. However, it would not be decent for the judge to go down there, only to come out wet and dirty with mud. A roof should be examined. But the judge is not used to such ascents; he will run the risk of falling or climbing clumsily and causing laughter".
> The transition of our doctrine, in view of the provisions of the current CPC (LGL\1973\5), still includes "certain cases" in which the judge "could not and should not personally reap without sacrificing or discrediting the judicial functions".
> The most recent doctrinal expression highlights the aspect of the lack, on the part of the judge, of preparation regarding the "other branches of technical knowledge", adding that, "even if he had the training to do so, he should not dispense with the expert evidence that also has the purpose of documenting specialized knowledge in the records, including for examination on appeal"[12] .

Still on the previous Code, Krezman comments:

> The expert - the one who experiences, who knows because he is experienced - is the active subject of the expertise. He is the one who becomes the judge's assistant in the act of providing jurisdiction.
> He provides this assistance as an expert percipiendi or as an expert deducendi, depending on the tasks assigned to him (declaration of knowledge or affirmation of a judgment). It is in the latter role, above all, that he acts predominantly as a technician; in the former, his role is that of substituting for the judge in proceedings from which the latter is relieved for reasons of convenience or the requirements of the judicial service.
> As such it constitutes a statement of knowledge, it is an act of legal fact, the affirmation of a judgment, representing the specific means of proof. [13]

[11] In the sense of the expert necessarily being another in relation to the procedural subjects who were already in the relationship, judge, prosecutors and parties, as seen.
[12] CRUZ, J. R. G. da. The expert evidence before the reform of the CPC. *In:* Essential Doctrines of Civil Procedure, vol. 4 (Oct/2011). pp. 511 to 524. São Paulo: Revista dos Tribunais, 2018. Online text. p.1.
[13] KRETZMANN, P. A. Accounting Expert Evidence - general and procedural aspects. *In*: Essential Doctrines of Civil Procedure, vol. 4, pp. 631 to 641. São Paulo: Revista dos Tribunais, 2011. Online text. p. 2.

Although, as will be seen below, it is not clear how the inconvenience or "discrediting of judicial functions" could serve in the current legal system as a basis for expertise, the necessary otherness of the expert remains.

> The magistrate cannot use the particular technical or specialized knowledge, unrelated to the law, that he may have to support the sentence, without support in the work of the expert, under penalty of violation of the contradictory and procedural good faith, in its aspect of prohibition of surprise (art. 10 of the CPC (LGL\1973\5)/2015). In the same vein, article 375 of the CPC (LGL\1973\5)/2015 provides that the "judge shall apply the rules of common experience provided by the observation of what ordinarily happens and, also, the rules of technical experience, with the exception of expert examination"[14].

This third party occupies a position that has been the subject of debate in the doctrine. On the one hand, it has been compared to the witness. On the other, to the judge himself. Seeking to distinguish the expert from the witness, Cruz summarizes:

> Some consider the expert to be closer to the judge than to the witness. In historical terms, the arbitrator in the first two periods of Roman civil procedure was chosen for the trial phase on the basis of his knowledge of certain facts or activities.
> The distinction between sources and means of proof, which is capable of eliminating "the artificial problem of the technical witness" - because the "witness exists not only before, but completely independently of the process, even if it does not take place", while the "expert is commissioned by the judge or entrusted with the task of performing a service" - is as follows: "sources are the evidential elements that exist before the process and are independent of it: not only the document, but also the witness, and, above all, the litigious thing, the litigant while he knows what happened. But not the expert, nor the judicial inspection (...) nor the statement of the witness or the party (...) the means are the judicial actions by which the sources are incorporated into the process. The witness is a source, his statement a means. Similarly, the party and what he knows is a source, while the performance of his role or in general his testimony is a means. The thing to be examined is a source, its inspection by the judge a means. The same is true of expert examination (...)[15] .

In turn, its distinction from the judge is more evident, and more difficult to implement in its entirety. According to Avelino:

> The issue of the production and control of expert evidence in proceedings is not an easy one, especially given the need to rely on scientific knowledge in the investigation of facts. The judge is faced with information that he or she is unable to understand on his or her own, due to the natural lack of specialized knowledge required. This tension between process and science is of interest to us:
> "There is no doubt, in that perspective, that the reliance, to a certain extent indispensable, on impenetrable or difficult-to-access scientific information increases the tension between the freedom to assess evidence and the normal

[14] BODART. B. V. da R. Essay on expert evidence in the 2015 civil procedure code. *In*: Essential Doctrines - New Civil Procedure, vol. 4 (2018). São Paulo: Revista dos Tribunais, 2018. Online text. p. 12.
[15] *Ibid*. p. 2.

> cognitive process, calling into question the very principle of the free assessment of evidence."
> Thus, the practice has brought to light a problem: how to control the evidence produced through the application of technical knowledge unavailable to the judge and the parties to the proceedings? Undoubtedly, the evidentiary context produced in the case file delimits its suitability for convincing. However, in cases where the only evidence available is the examination or expert report, we have allowed ourselves to be led by the easiest way out: the expert attesting to the factual solution, the statement is taken as an unshakable truth, free from any possibility of doubt, except for the performance of technical assistants who, when present, are necessarily partial subjects. It is in this context that the discussion arises regarding the possibility of the judicial body transferring, to some extent, its judging function to the expert, without legitimization to do so. Diogo Assumpção Rezende de Almeida brings an interesting perspective on the problem: "Controlling the result of the expertise, which is already an unlikely activity in the event of the appointment of the expert by the judge, becomes something almost unthinkable when the myth is created that all statements and conclusions obtained in the report must be considered true. More than that. The expert's assertions are true because they are based on science, which is infallible[16] .

This scenario deviates markedly from the requirement of the current Ordinance on the matter. As the expert is an auxiliary of justice, the unanimous opinion of the relevant doctrine is that he is not delegated the function of deliberating on the facts. The critical analysis by the judge[17] - assisted by the parties, including, in view of the new cooperative vision of process - of the expert's manifestation, without prejudice to the fact of being trusted by the court, is indispensable. This is because the "expert does not replace the judge of the cause in the determination of the *fact probandum,* but only assists him, providing information to the magistrate so that he can promote the settlement of the factual basis"[18] . *A contrario sensu*, "The expert is not the judge of the facts to which his expert activity refers and his pronouncement in this regard does not and cannot bind the judge of the case"[19] . The limitation of the expert as to the facts, even so, is a tenuous point, noting that:

> The task of authoritatively subsuming the facts into the legal order is the judge's alone (see below, n. 10). However, the expert should not act merely as an expert describing the facts, but often has the task of tracing the social significance of such facts, in the sense of saying whether they are normal or abnormal; in the sense of establishing whether someone has been negligent, reckless or unskillful in the exercise of a given profession, in the light of common standards of behavior, for example. It should then provide the judge with a given standard of behavior, so that in the light of the verification of the

[16] AVELINO, M. T. The judge and expert evidence in the new Code of Civil Procedure. *In*: Essential Doctrines - New Civil Procedure. Vol. 242 (Apr. 2015). pp. 69 to 89. São Paulo: Revista dos Tribunais, 2018. Online text. p. 9.
[17] LUCON, *Op. Cit.* p. 6.
[18] LUCON, *ibid.*
[19] CINTRA *Apud.* AVELINO, M. T. *Op. Cit.* p. 9.

> standard behavior, in the concrete species, the judge can then decide, for the existence, or not, of guilt.[20]

This highlights the need for critical analysis, but it should be noted that this is not only necessary because of the non-delegability of the cognition of facts, but also because of the very instrument at the expert's disposal. At least in the case of science, its method precisely rejects the claim of infallibility. "[T]he techniques used by science are changeable and subject to the variations of technological development. Science does not produce petrified certainty and is in a constant process of development"[21] . Commenting on the importance of the scientific method, Popper admits that:

> A quite distinctive response will be given by those who tend to see (as I do) the distinctive feature of empirical claims in their susceptibility to revision - in the fact that they can be criticized and replaced by better ones; and those who take it as their task to analyze the characteristic ability of science to move forward, and the characteristic way in which a choice is made, in crucial cases, between conflicting systems of theories.
> (...)
> A system like classical mechanics can be "scientific" to any degree you like; but those who hold it dogmatically - believing, perhaps, that it is their business to defend such a successful system against criticism as long as it is not conclusively disproved - are adopting precisely the opposite of the critical attitude which, in my view, is the proper one of a scientist[22] .

If it is evident that in all expert evidence the answer is (must be) given with the proviso of being in accordance with the current state of the art of knowledge, the method applied and the premises exposed, at least in the expertise based on scientific knowledge these provisos are inextirpable and incontestable. A court that recognizes the need for scientific knowledge to resolve a given issue must accept the limitations of science, including its irrevocable falsifiability. The judgment that accepts the aid of scientific cognition, therefore, cannot take the result of the expertise as dogma, under penalty of incurring in contradiction in its most classical sense[23] .

With this, it can be said that, in the current procedural system, expert evidence expands the number of subjects of the procedural debate and introduces methodology of

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[20] ALVIM NETTO. J. M. de A. *Op. Cit.* p. 4.
[21] AVELINO, M. T. *Op. Cit. p.* 2.
[22] POPPER, K. The Logic of Scientific Discovery [*e-book*]. London: Taylor & Francis e-Library, 2005. p. 28. our translation.
[23] Here, contradiction is taken as the relationship between two assertions, one major and one minor, incompatible with each other, in which "if one [of the contradictory elements] is true, the other is false and *vice versa*, since nothing can be simultaneously true and false". (HORN, L. R. Contradiction. *In*: ZALTA, E. N. (ed.) The Stanford Encyclopedia of Philosophy (Winter 2018 Edition). Available at: <https://plato.stanford.edu/archives/win2018/entries/contradiction/>. Accessed on: 11/12/2022. Our translation.

knowledge external to the law. Its result cannot replace judicial cognition of the facts, nor can it be taken as incontestable, especially in the case of expertise based on science.

This can lead to some perplexity when associated with the definitiveness of the Judged Thing. If science does not intend, and is fundamentally incompatible with the notion of an irrefutable and definitive answer, how could it substantiate an answer that is intended to be definitive? In part, the answer lies in the fact that, by critically analyzing all the evidence on the record, the court also uses scientific knowledge and the best possible cognition at that moment of the facts to definitively resolve an issue. It is not by chance that the emphasis is on the non-binding of the court to the report.

This concern with the non-binding of the court, which is not exempt from facing the analysis of facts with the mere reference to the report, is old. Commenting on the CPC/73, Cruz asserts:

> The legislator, forgetful of the provisions of art. 131 of the CPC (LGL\1973\5), or unconvinced of its effectiveness, insists in art. 436: "The judge is not bound by the expert report, and may form his conviction with other elements or facts proven in the case file".
> The best Italian doctrine has pointed out that, in no case, "the expert's opinion can replace the judge's opinion, that is, legally bind the judge's conviction".
> Not even the most specialized expertise is binding on the judge: "In any case, the expert's competence ends where the proper legal assessment of the material of the case begins, the latter being the exclusive task of the judge. However, even in technical matters, the expert's report cannot replace or bind the judge, who is always free to decide according to his conviction, with the sole duty to provide adequate motivation for it"[24] .

The current wording seems to emphasize more the dialogical relationship that must exist between the judicial decision and the expert report, consisting of the analysis and critical confrontation of the expert's considerations. It remains positive in the current art. 471 that: "The judge shall assess the expert evidence in accordance with the provisions of art. 371, indicating in the judgment the reasons that led him to consider or fail to consider the conclusions of the report, taking into account the method used by the expert". The characteristic of dialog, which could even be presumed, given the alterity required of the expert, is expressly stated.

It is understood that the non-binding nature of the report does not mean that the judge's position can be random, accepting it or opposing it without any grounds. Another element of the alterity of the expert is the necessary, albeit difficult, control of the result obtained by the expert and its influence on the process by the parties.

[24] CRUZ, J. R. G. da. *Op. Cit.* p.5.

> In the face of rational persuasion, it is possible - and even due - to the magistrate to analyze the probative context of the case file to find congruence in the evidence produced. Despite the expertise, if the general result of the evidence leads to a different judgment from that attested in that, the judicial body cannot refrain from overcoming it. Everything, obviously, through robust reasoning. The truth in the process is not absolute, but based on conviction. It is common to find two or more versions, including technical ones, perfectly plausible regarding the same fact. The procedural debate, involving all subjects, will demonstrate which is the most credible, that is, which should inform the conviction of the judge[25] .

This opens the observation that control must be exercised before, during and after the expertise. The pre-expert control is intuitive, consisting in the choice of professionals who meet the legal requirements and presenting questions that are restricted to the area of knowledge foreign to the law[26] . In the case of the court, it is stated in art. 470, CPC, that it is not only the formulation of questions (item I), but also the rejection of relevant questions (item II)[27] . The rejection of impertinent questions, in view of the possibility of formulating supplementary questions during the diligence (art. 469, CPC)[28] persists during the expertise. Finally, after the expertise, as seen, the judicial decision must dialog with the expert report and the rest of the evidentiary set, both in what reinforces the sense indicated by the expert evidence and in what infirms it[29] . More importantly, it must give prestige to the parties and their technical assistants as legitimate speakers, including to criticize the expert report. "Even the performance of the technical assistant indicated by the parties, contradicting the expert report, serves as an element for the conviction of the judge, especially with the current valorization of that figure" . [30]

It is clear that this control would be compromised either by confusing the figures of expert and judge or by reducing the judge to ratifying a kind of prior cognition of the expert. At this point, we take a step back to recapitulate the influence of biases and heuristics. According to Nunes, Lud and Pedron:

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[25] AVELINO, M. T. *Op. cit.* p. 12.
[26] At this point, it is worth noting that the relevance of the question presented, or its adherence to the area of human knowledge from the perspective of which the expertise will be carried out, may not always be obvious. The role of the parties in the careful formulation of questions is important to avoid forcing the judge to decide on the relevance of questions that, at least before the examination, he will not necessarily have all the elements to evaluate.
[27] BRAZIL. Law No. 13.105, of March 16, 2015. Code of Civil Procedure (2015). Brasília, DF: Presidency of the Republic. Available at: <http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2015/lei/l13105.htm>. Accessed on 10/04/2020.
[28] *Ibid.*
[29] AVELINO, M. T. *Op. Cit. Ibid*.
[30] NUNES, D. LUD, N. PEDRON, F. Q. Distrusting the Impartiality of Procedural Subjects: a study on cognitive biases, the mitigation of their effects and debiasing. Salvador: JusPODIVM, 2018. p. 49.

> contrary to the rational ideal that all human decision-making activity would be guided by a primal rationality, the studies of Kahneman and Tvensky demonstrated, still in the 1970s, that human beings act based on instincts, intuitions and emotions.[31]

Focusing on the influence of this on rational decision, the authors continue, stating that, in the case of intuition, it would be due to the "identification between the momentary situation under analysis and past information acquired through experience"[32] . This, however, is an "automatic mechanism of cognitive response"[33] , not a rational analysis of similarities and dissimilarities of situations. This characteristic is called heuristics[34] . In turn, although heuristics can shortcut decisions[35] , if not put under the scrutiny of a rational analysis, they can lead to biases[36] . Pointing out the most common cognitive biases, the authors highlight fifteen, which are not always mutually exclusive. A common point of several of them is the maintenance of the *status quo* or of a previous decision, or a belief, even if intuitive, in one's own rationality superior to that of others. The judge already fights (must fight) against his own biases, under penalty of abandonment of the duty to substantiate (here taken as rational justification) his own decisions (arts. 93, IX, CF and 11, CPC). In cases where expert evidence is necessary, therefore, the analysis of the report critically, confronting its conclusions with the entire body of evidence becomes confused with the assumption of rational decision.

In this respect, it is suggested that it is possible to use scientific research methods in this confrontation. Although this paper deals with expert evidence, as seen, its production introduces a new procedural subject to the relationship, a specialist in an area that, with the exception of technical assistants, when they appear, the others are not. Alongside them are the judge and the parties' lawyers, specialists in a (legal) knowledge that is usually beyond and outside the expert's knowledge. One of these subjects, the judge, in order to get the disputed right right, will first need to get the facts right. Viewing this scenario through the prism of transdisciplinary research becomes difficult to resist.

On this, Gustin begins by recalling that scientific knowledge began and developed traditional research by logical-formal criteria and experiments that allowed

[31] *Ibid*. p. 50
[32] *Ibid*. p. 50
[33] *Ibid*. p. 51
[34] *Ibid*. p. 56
[35] *Ibid*. p. 52
[36] *Ibid*. p. 62

"measurements and quantifications of all kinds"[37] . The result, of the fragmentation of knowledge, is reflected in the view against which he rails: of the specialization of knowledge, which becomes partial, fragmented and, crucially, makes it difficult for specialists in one specialty to analyse the knowledge of another. Mono-disciplinarity does not aim at a vision of the whole[38] , and the attachment to it in a situation where achieving the best possible cognition of the facts is a matter of justice means risking the aspiration to procedural truth.

On the other hand,

> The post-war period saw a change of direction. The increasingly complex reality is problematized and the institutionalization of research is experienced. The methodological approach ceases to be monological and, at first, takes on a multidisciplinary aspect, that is, theoretical cooperation between fields of knowledge that were previously distanced. From there, it is no longer just cooperation, but the coordination of related disciplines or interdisciplinarity. Currently, transdisciplinarity or the production of a single theory from fields of knowledge previously understood as autonomous is the methodological trend that is emerging with the greatest force.[39]

In the case of expertise, there is the advantage that the object of study is necessarily delimited by the parties' assertions of fact, by virtue of the rules of adherence and congruence. In this context, the production of evidence, in cases where expertise is required, takes parties, lawyers, assistants, judge and expert as co-investigators. Expert diligence is a step in a necessarily broader and transdisciplinary factual settlement. More importantly, this recontextualization does not seem to require any change to the *lege lata*, since it merely concretizes and gives methodological premise to what is already required, as seen, of expertise and its analysis.

On the other hand, still in the perplexity that brings the interaction between the definitiveness that the process aims to achieve, with the settlement of the Judged Thing on the litigious matter, and the confessedly falsifiable character of science, there is the very notion of truth. Although the truth is central to the process and its desired product, the satisfaction of the right[40] enunciated in sentence of merit, there is a search for truth at any cost in the current system. The truth today is not the real, but a procedural truth that

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[37] GUSTIN, M. B. de S. [Re]pensando a pesquisa jurídica: teoria e prática. 2ª ed. Belo Horizonte: Del Rey, 2006. p. 8
[38] *Ibid.*
[39] *Ibid.*
[40] Here, the process is understood under the prism of art. 4, CPC, which places the satisfactory activity as included in the integral solution of the merit, right of the Parties. (BRASIL. Law No. 13,105, of March 16, 2015. Code of Civil Procedure (2015). *Op. Cit.*).

is that possible to be demonstrated within the limits of the law. On the problem of truth in the process when the parties do not discharge their burden of proof, Shimura and Luz comment that:

> (...) one must bear in mind its instrumental and ancillary character [of the process] to the substantive law. And if the parties have not discharged their burden of proof, giving the judge powers to remedy any failures of the parties in a tireless search for the real truth would give the process a character that would make it cease to be instrumental.
> (...)
> Not enough, if the search for the real truth were an absolute objective of civil procedure, there would be no evidence that is not admitted to be used. The non-admissibility of the presentation of evidence considered illicit (CF (LGL\1988\3), art. 5, LVI), as stated by Eduardo Henrique de Oliveira Yoshikawa, makes our system "assume the risk that the truth will not be known, if there is no other means of proving a fact relevant to the acceptance of the request or defense."[41]

Evidently, by delving into the problem of the procedural burden, it turns to the problem of the limit of possible cognition in a system that the law restricts (by setting preclusions, burdens, presumptions, among others) the investigative activity. The suggested application of transdisciplinary research methodology does not alter the fundamental distinction between the procedural subject in court and the scientist. The scientist can normally afford to face the issue when he is confident of the tools he has to investigate it and is ideally disinterested in any particular outcome. The scientist tries to have his right recognized, in a relationship and process that, in an ethical, legal and efficient way, will give him the tools to make the facts known.

Moving forward, there are two elements that permeate all that has already been seen: expertise must be specialized and is necessary. The first permeates both the already seen and the second.

Not only is it not up to the judge to rely on the opinion of a third party for facts that are attainable by common knowledge, but there is no point in inviting a specialist from an area other than that whose knowledge is necessary for the cognition of the facts. It is no coincidence that article 464, paragraph 4, CPC, establishes that the expert "must have specific academic training in the area of his testimony"[42] . Here we return to the problem of specialization already presented, whose solution also seems to be the adoption of methodological premises, by analogy, of transdisciplinary research, as well as the

[41] SHIMURA, S. S; LUZ, T. T. The limits to the judge's instructional powers. Revista de Processo, Vol. 310, pp. 89 to 111. (Dec. 2020). São Paulo: Revista dos Tribunais, 2020. Online text. p. 8.
[42]BRAZIL. Law No. 13.105, of March 16, 2015. Code of Civil Procedure (2015). *Op. Cit*.

cooperation of the parties. The judge, at least initially, may not have elements to prefer the mechanical engineer expert to the mechatronic engineer expert, or the accountant expert to the actuarial expert. The critical dialogue must therefore begin with the parties and their technical assistants as to which specialty (or specialties, according to art. 475, CPC) is necessary to complement the cognition of the facts. Choosing a specialist from an area of knowledge that is apparently similar, close, but independent and split from that which is effectively necessary to resolve the factual issue does not seem to satisfy the command of art. 475, CPC.

4 EXPERTISE AND THE LIMITS OF EVIDENTIARY LAW

The second question opens the part that does not address specific issues of expert evidence, but evidence as a whole.

By saying that the expertise is necessary, it is intended to condense the fact that the judicial choice, by law, is not discretionary. Either the expertise is necessary, in which case it must be carried out, or it is not, and should not be carried out at all.

> The performance of expert evidence is subject to the need, in view of the absence of other evidence produced, elucidating the facts to be proven, as well as the requirement of technical perception, in which case it will be rejected when it does not depend on the special knowledge of a technician, and, finally, the possibility of its realization.
> Therefore, expertise will not be used in cases where the proof of the fact does not depend on technical knowledge, and the perception of the facts, the verification, can be made by the judge himself. This occurs when the object of the evidence does not require more than ordinary knowledge.
> On the other hand, if the facts - meaning the facts of the case - are already proven by other means of proof, then it will not be necessary. Finally, neither will expert evidence be carried out when it is recognized as impracticable, as in the event of perishing of the object.
> It follows that the judge may, and must, reject the request for expertise when it is unnecessary to the outcome of the matter.[43]

There are no elements to propose an optional expertise to the court, in the Current Order. This does not diminish, in any case, the distinction between those situations in which the law already determines that expertise be carried out, and the others.

> In certain hypotheses, the legislator imposes the obligation of expertise, given the specificity of the issue and the presumption, de jure, that the judge does not have sufficient technical knowledge of the subject. There, the law considers expertise necessary for the demonstration of certain facts, and it must therefore be admitted and carried out ex officio, so that, according to Mortara, quoted by Amaral Santos, more than for utility, by necessity, the judge uses this probative

[43] KRETZMANN, P. A. *Op. Cit.* p. 2.

> means, in order to ensure the existence of the facts, or their qualities, or their circumstances[44] .

For this reason, as stated above, it is not considered possible to conduct an expert opinion merely for the convenience of the court. It escapes the legal permission and remains incongruous with the procedural economy the establishment of expertise for fact that does not require special knowledge of expert. In the current legal system, it is established that the judge will reject the expertise when "the proof of the fact does not depend on the special knowledge of a technician"[45] (art. 464, §1º, I, CPC).

The need for expert evidence is assessed, on the one hand, like any other evidence. In this respect, the first relationship is between the dispute and the subject matter of the expertise.

> The dispute and the object of litigation are used to identify exactly what is the controversial point existing between the parties' statements, in order to extract the possible need for the production of evidence and to establish the type of evidence appropriate to the case. And the controversial point found constitutes the object of proof, on which the judge must be guided in the instructional phase of the process, for the purpose of admitting the evidence requested by the parties, or producing those missing for the elucidation of the facts.
> As can be seen, the object of the evidence must be identified, and only on it will the evidentiary instruction fall[46] .

Moreover, even among the facts that are disputed, the facts "affirmed by a party and confessed by the opposite party" (art. 374, II, CPC) and "in whose favor there is a legal presumption of existence or veracity"[47] (art. 374, I, CPC) are independent of proof. Still, even after all these filters, it is perceived that the law seems to stagger its preference in the order of realization, indicating a hypothesis of rejection of expertise when "it is unnecessary in view of other evidence produced"[48] (art. 464, II, CPC). If this can be understood as a mere unfolding of the requirement that the expertise be given to ascertain facts that require specialized knowledge for their cognition or appreciation, it is undeniable that it reinforces the need as an attribute of the expertise. If there is any lawful procedural means of knowing the relevant disputed fact without the need for expert intervention, the expertise should not be performed. If there is not, there is no possibility

[44] COSTA, C. *Op. Cit.* p. 5.
[45] BRAZIL. Law No. 13.105, of March 16, 2015. Code of Civil Procedure (2015). *Op. Cit*.
[46] XAVIER, T. N. O "Ativismo" do Juiz em tema de prova. Essential Doctrines of Civil Procedure. vol.4. pp. 1233 to 1263 (May 2008). São Paulo: Revista dos Tribunais, 2018. Online text. p. 6.
[47] BRAZIL. Law No. 13.105, of March 16, 2015. Code of Civil Procedure (2015). *Op. Cit*.
[48] BRAZIL. Law No. 13.105, of March 16, 2015. Code of Civil Procedure (2015). *Op. Cit*.

of denying the expertise, under penalty of curtailment of the right to evidence. These means of lawful knowledge include legal presumptions.

It should be noted that the need for expertise has been treated at the same time in absolute terms (must be performed, must not be performed) and relative terms (denied, granted) so far. Nevertheless, without prejudice to the judge's instructional powers enshrined in art. 370, CPC, the space for determining evidence is also limited by the burdens.

> The onus probandi then acts to define who is responsible for proving a given factual allegation, and it is certain to state that if the party fails to prove the factual assumption argued, it will bear the loss, in the event that the probative set formed in the process becomes insufficient to convince the judge.
> This is a rule of judgment for the judicial body, which may decide based on those who have not succeeded in their evidentiary burdens when the evidence gathered is not sufficient for the final formation of the judge's conviction at the time of the sentence. That is why there are cases, e.g., in which a certain claim was dismissed for a certain plaintiff, because he was unable to prove facts constituting the alleged right, a task that belonged to him, and the evidentiary production gathered throughout the process was insufficient for the magistrate to reach his final conviction. [49]

The burdened party, by not discharging its burden - which requires expert evidence - can therefore engender a situation in which the expertise, although necessary to know the existence and extent of a factual situation, is unnecessary, in view of the loss of the party who was responsible for proving the fact.

Despite this, the distribution of these burdens is a rule of instruction, especially in view of the possibility of the court setting the burden with the party who, by mere exegesis of the criteria in the law, did not have it beforehand. This possibility, although positive in the current Code, did not arise with it.

> As the burden of proof must be in accordance with the specificities of the substantive law, in order to give maximum effectiveness to the fundamental right to adequate judicial protection (CF, art. 5, XXXV), there is no reason to assume that the techniques of facilitating the production of evidence, including the reversal of the onus probandi, should only take place when there is legal provision. Remember that, in the German procedural system, there is no rule similar to art. 333 of the CPC/1973 or art. 373 of the new CPC and, moreover, the assumption that the reversal of the burden of proof must always be provided for by law goes back to the liberal postulate that the powers of the judge, when not provided for in the legislation, would lead to arbitrary decisions.
> Therefore, the objective dimension of the fundamental right to adequate judicial protection binds the judge who may, in view of the circumstances present in the specific case, not ignoring the diabolical burden created to one

[49] AUFIERO, M.V.M. Dynamization of the burden of proof and duty to pay for it. *In:* Essential Doctrines - New Civil Procedure, vol. 4. São Paulo: Revista dos Tribunais, 2018. Online text. p. 2.

> of the parties, even without legal provision, distribute, through rational and always justified criteria, the dynamic loads of evidence among the litigants[50] .

It should be noted, moreover, that the question of the burden of proof may end up being confused with the right to proof.

> The procedural technique on the screen also acts for the formation of the judgment of fact by the magistrate, since, better distributed the probative burdens, more conditions the evidence will have to be produced and become sufficient for the judge to arrive at his conviction to pass sentence, so that the intended judicial protection is as adequate and effective as possible.
> In this regard, if the evidentiary burdens are not distributed fairly in the specific case, the fundamental right to evidence will be undermined, as some of the parties will not be able to prove to the State-judge the factual assumptions argued by it in order to influence its judicial conviction, and the judicial protection may be provided unfairly[51] .

Even so, the judgment without prior distribution of the burden of proof, especially when it requires expertise for its discharge - a hypothesis, as seen, involving a complex fact, to be assessed by a specialist - will return to the prejudice of the right to proof, this time of the burdened party.

5 CONCLUSIONS

For all the above, it is realized that the expertise is not treated by the Ordinance, nor should it be treated in practice with triviality. Its determination is only possible when there is no other lawful means of resolving the factual issue and in this case, it will not be possible not to defer it, without prejudice to the burden to be borne by each party.

More than this, by requiring specialized knowledge, sometimes unattainable to the court *per se,* the expert evidence is the moment when the dialogical posture between judge, parties, attorneys that the process requires gains greater importance. Once the expertise is inaugurated, the expert or experts, and the technical assistants are added to this dialogue, whose fruits, report and technical opinions and the elements that each party brings to the court for its appreciation must all be analyzed critically. This without losing sight of the limits of science and the rest of the body of evidence.

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[50] CAMBI, E. Theory of dynamic probative loads (dynamic distribution of the burden of proof - Exegesis of art. 373, §§ 1 and 2 of the NCPC. *In:* Essential Doctrines - New Civil Procedure. Vol. 4/2018. São Paulo: Revista dos Tribunais, 2018. Online text. p. 5.
[51] AUFIERO, M.V.M. *Op. Cit.* p. 4.

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