



## The Expertise between science and law

### A Perícia entre a ciência e o direito

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#### **ABSTRACT**

When it comes to the evidence, three central questions arise. Who should bear the burden of producing them, how much proof is required, and what evidence is admissible. To the extent that advocating for new evidence or presenting it, when permitted by law, is a procedural faculty and therefore subject to estoppel, the answer to the third question changes throughout the process. For this reason, one can even unfold the answer to the third question into which are admissible by law and when each piece of evidence is admissible. Law, jurisprudence and doctrine deal with zeal and attention to these questions, in general and in specific cases or hypotheses. Still, when the analysis is deepened, one perceives in each mode of proof equally curious questions. In the case of expert evidence, it is also frequent to discuss who will produce it, when and how to produce it and how to deal with its product, the report.

**Keywords:** Expertise, Science, Law.

#### **RESUMO**

Ao se tratar das provas, três questões centrais surgem. Quem deve suportar o ônus de produzi-las, quanta prova é necessária e quais provas são admissíveis. Na medida que o pugnar por novas provas ou apresentá-las, quando permitido por lei, é faculdade processual e, portanto, sujeito à preclusão, a resposta à terceira questão muda ao longo do processo. Por esta razão, pode-se mesmo desdobrar a resposta à terceira questão em quais são admissíveis por lei e quando cada prova é admissível. Lei, jurisprudência e doutrina se debruçam com zelo e atenção à estas questões, em geral e em casos específicos ou hipóteses. Ainda assim, ao se aprofundar a análise, percebem-se em cada modo de prova questões igualmente curiosas. No caso da prova pericial, é frequente a discussão também de quem a produzirá, quando e como produzi-la e como lidar com seu produto, o laudo.

**Palavras-chave:** Perícia, Ciência, Direito.

#### **1 INTRODUCTION**

When it comes to the evidence, three central questions arise. Who should bear the burden of producing them, how much proof is required, and what evidence is admissible. To the extent that advocating for new evidence or presenting it, when permitted by law, is a procedural faculty and therefore subject to estoppel, the answer to the third question changes throughout the process. For this reason, one can even unfold the answer to the third question into which are admissible by law and when each piece of evidence is admissible. Law, jurisprudence and doctrine deal with zeal and attention to these questions, in general and in specific cases or hypotheses. Still, when the analysis is deepened, one perceives in each mode of



proof equally curious questions. In the case of expert evidence, it is also frequent to discuss who will produce it, when and how to produce it and how to deal with its product, the report.

Beyond the thematic link, the questions share the dramatic relationship with which rights will be defended and when, which is why it is correct, with correctness, to affirm the existence of a fundamental right to evidence, a<sup>1</sup> corollary of due process. Note that these affect not only those securitized by procedural subjects, but even the choice of which rights will be required 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 the production of expert evidence, it will focus on scientific expertise.

To this end, the expert evidence will be introduced (2), and then the specific issues of the expert evidence and who produces it will be recapitulated (3). Finally, we will proceed to the general questions about the evidence that, necessarily, also affect the expert evidence, recontextualizing it in the current Ordering (4) to, finally, reach the conclusions (5).

## 2 ON EXPERT EVIDENCE

The precise knowledge of facts relevant to the outcome of a given litigation is an object of concern in acting collectively. The action of the State-judge when adjudicating is no exception, and the Ordinance focused on the formation of the conviction, placing to the procedural subjects various instruments for the proof of fact (articles 212 to 232 of the Civil Code - CC - and 369 to 380, Code of Civil Procedure - CPC).

In this scenario, the 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 uncontroversial, the ability to read is sufficient; The witness only acts "narrating what he perceived",<sup>2</sup> with "knowledge about facts that integrate the previous human situation".<sup>3</sup> 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",<sup>4</sup> which goes beyond the law. On these, Alvim Netto comments, referring to the Code of Civil Procedure of 1973 (CPC/73) that:

The circumstance that the law has distinctly used the expressions, technical and scientific knowledge, has its *raison d'être*. Technical knowledge corresponds to a special knowledge of the expert, but not necessarily scientific, in the sense of understanding the latter expression as representative of the

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<sup>1</sup> Corollary of due process. (LUCON, P. H. dos S. Prova Pericial no CPC/15. *In*: Essential Doctrines - New Civil Procedure. vol. 4. São Paulo: Journal of the Courts, 2018. *Online text*.)

<sup>2</sup> COSTA, C. Optional Expertise and Mandatory Expertise. *In*: Journal of Labor Law, vol. 6 (Mar-Apr. 1977), pp. 81-88. São Paulo: Journal of the Courts, 2018. *Online text*. p. 1

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*



knowledge acquired in order through the study of a science, with its own object, organized and systematized, resulting from the accumulation of knowledge and susceptible to communication, today or through time. Technical knowledge, used in this word, *stricto sensu*, may be that of a mason, a shoemaker, a coffee picker, etc., and will be a given type of knowledge, necessary for the clarification and judgment of the cause, in view of the facts discussed, but which, in reality, cannot be erected to the dignity of scientific knowledge, itself, although it can also be transmitted. Scientific knowledge, on the other hand, itself, as we know, is that effectively constructed through a given science<sup>5</sup>

The author goes on to point out that:

When the law alludes to technical or scientific knowledge, it uses broad expressions, in the sense that by technical knowledge we understand all special types of knowledge, such as artistic, those relating to agriculture, livestock, banking market practices, coffee, motoring problems, etc. (...) On the other hand, when it refers to scientific knowledge, it alludes to the knowledge resulting from the accumulated product of a science.<sup>6</sup>

Of less relevance to this study, which intends to dwell on the limits of expertise, but with great emphasis on 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, inspection and evaluation. Examination is the inspection carried out by an expert to ascertain the existence of some fact or circumstance that interests the resolution of the dispute. The examination may have as its object movable, movable things, business books, documents and papers in general, and even people (such as *verbi gratia*, in the medical examination). Inspection is the expertise that falls on immovable property. Finally, evaluation is the examination designed to verify the cash value of something or obligation. It is also called arbitration, a word used by the CPC in the arts. 18, § 2, 606, 607, 627, § 1, and 1.206.<sup>7</sup>

### 3 EXPERT EVIDENCE, THE EXPERT AND THE LIMITS OF SCIENCE

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

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<sup>5</sup> ALVIM NETTO, J. M. de A. Notes on Expertise. *In: Essential Doctrines of Civil Procedure*, vol. 4 (Oct. 2011). pp. 431-464. São Paulo: Journal of the Courts, 2011. Online text. p. 1.

<sup>6</sup> *Ibid.* p. 18.

<sup>7</sup> KRETZMANN, P. A. Accounting Expert Evidence - general and procedural aspects. *In: Essential Doctrines of Civil Procedure*, vol. 4, pp. 631-641. São Paulo: Journal of the Courts, 2011. Online text. p. 1.

<sup>8</sup> It should be noted here that judicial inspection, in the current order, is possible and expressly regulated in art. 481.

<sup>9</sup> 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/113105.htm](http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2015/lei/113105.htm)>. Accessed 4/10/2020.

<sup>10</sup> *Ibid.*



Therefore, the separation imposed by the current Ordinance between judge and expert is crucial. Were it not, one might arrive at the notion that the only objection to the possibility of the judge, personally, carrying out an expert examination, even when armed with the necessary technical knowledge, would be that it would slip into judicial inspection. This notion, however, does not seem congruent with the current ordering, which seems to conform to larger concerns than the problem of technical etiquette 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 are no reasons to object.

This necessary otherness<sup>11</sup> has fulfilled different functions throughout the evolution of procedural technique. Commenting on the previous Code (CPC/73), Cruz states that:

Under the CPC (LGL\1973\5) of 1939, there was an effort of our best doctrine, in a certain direction, under 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, although the case does not require special knowledge. You have to inspect the bottom of a well. This doesn't need technicians. It would not, however, be decent for the judge to come down there, to come out wet and dirty with clay. A roof has to be examined. But the judge is not accustomed to those ascents; it will run the risk of falling or rising awkwardly, and provoking laughter."

The transition of our doctrine, in the face 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 sacrifice or discrediting the judicial functions".

The most recent doctrinal expression highlights the aspect of the lack of preparation on the part of the judge regarding the "other branches of technical knowledge", adding that, "even if he had training for this, he should not dispense with the expert evidence that also has the purpose of documenting in the case files the specialized knowledge, including for examination in the degree of appeal".<sup>12</sup>

Still on the previous Code, Krezman comments:

The expert - the one who experiments, who knows because he is experienced - is the active subject of expertise. It is the one who comes to be the assistant of the judge in the act of rendering the jurisdiction.

This assistance he renders as an expert *percipiendi*, or as an expert *deducendi*, according to the tasks assigned to him (statement of science or affirmation of a judgment). It is in the second function, above all, that he acts predominantly as a technician; In the first, its role is to replace the judge in steps from which he is removed for reasons of convenience or requirements of the judicial service.

As such constitutes a statement of science, it is an act of legal fact, the affirmation of a judgment, translating the specific means of proof.<sup>13</sup>

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<sup>11</sup> In the sense of the expert being necessarily another in relation to the procedural subjects who were already in the relationship, judge, prosecutors and parties, as seen.

<sup>12</sup> 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. 511-524. São Paulo: Journal of the Courts, 2018. Online text. p.1.

<sup>13</sup> KRETZMANN, P. A. Accounting Expert Evidence - general and procedural aspects. *In: Essential Doctrines of Civil Procedure*, vol. 4, pp. 631-641. São Paulo: Journal of the Courts, 2011. Online text. p. 2.



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

The magistrate may not use the particular technical or specialized knowledge, unrelated to the law, that he may hold to substantiate the sentence, without support in the work of the expert, under penalty of violation of the adversarial 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, except, as for these, the expert examination".<sup>14</sup>

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

Some people consider that the expert is closer to the judge than to the witness. In historical terms, the arbitrator of the first two periods of Roman civil procedure was chosen for the trial phase because of his knowledge of certain facts or certain activities.

The distinction between sources and means of evidence, capable of eliminating "the artificial problem of the technical witness" - because the "witness exists not only before, but with total independence from the process, even if it does not occur", while the "expert the judge orders or entrusts him with the task of performing a service" - is as follows: "sources are the evidentiary 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. In the same way, the part and what it knows is a source, whereas the realization of its role or in general its testimony a means. The thing that is to be examined is a source, its inspection by the judge a means. The same will be said when it comes to expert examination (...)".<sup>15</sup>

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

The issue of the production and control of expert evidence in the process is not easy, especially because of the need to use scientific knowledge in the investigation of the facts. The judge is faced with information that he is not able to understand on his own, due to the natural lack of necessary specialized knowledge. This tension between process and science interests us:

"There is no doubt, in this perspective, that trust, to a certain extent indispensable, in impenetrable or difficult-to-access scientific information increases the tension between the freedom to appreciate evidence and the normal cognitive process, calling into question the very principle of free appreciation of evidence."

Thus, the practice 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 process? Undoubtedly, the evidentiary context produced in the case files delimits his aptitude for conviction. However, in the hypotheses where the only available proof is the examination or expert report, we have allowed ourselves to be carried away by the easiest way out: attesting to the expert the solution of fact, the statement is taken as unassailable truth, free of any possibility of doubt, not by the

<sup>14</sup> BODART. B. V. da R. Essay on Expert Evidence in the Code of Civil Procedure 2015. *In*: Essential Doctrines - New Civil Procedure, vol. 4 (2018). São Paulo: Journal of the Courts, 2018. Online text. p. 12.

<sup>15</sup> *Ibid.* p. 2.



performance of the technical assistants who, when present, are necessarily partial subjects. It is in this context that the discussion arises about the possibility of the judicial body transferring, to some extent, its judicial function to the expert, without legitimation for this. Diogo Assumpção Rezende de Almeida brings an interesting perspective of the problem: "Controlling the result of the expertise, which is already an unlikely activity in the hypothesis of appointment of the expert by the judge, becomes something almost unthinkable when the myth is created that all the statements and conclusions obtained in the report must be considered true. More than that. The assertions of the expert are true, because they are based on science, which is infallible<sup>16</sup>.

This scenario is markedly at odds with the requirement of the current Ordinance in the matter. Being the auxiliary expert of justice, the unanimous opinion of the relevant doctrine is that it is not delegated to him the function of deliberating on the facts. The critical analysis by the judge - assisted by the <sup>17</sup> parties, including, in the face of the new cooperative view of the process - of the manifestation of the expert, without prejudice to the fact that it is trusted by the court, is indispensable. This is because the "expert does not replace the judge of the cause in the investigation *of the probandum fact*, but only assists him, providing information to the magistrate so that he can promote the correctness of the factual basis".<sup>18</sup> *A contrario sensu*, the "The expert is not the judge of the facts to which his expert activity refers and his pronouncement in this regard does not bind nor can bind the judge of the case".<sup>19</sup> The limitation of the expert as to the facts, however, is a tenuous point, observing that:

The task of subsuming the facts to the legal system, with authority, is proper and exclusive of the judge (see below, n. 10). It is up to the expert, however, not to act narrowly and merely as an expert to describe the facts, but often he will have 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 malicious, in the exercise of a given profession, in the light of common standards of behavior, for example. It must then provide the judge with a given pattern of behavior, in such a way that in the light of the verification of the standard behavior, in the concrete species, the judge can then decide, whether or not there is guilt.<sup>20</sup>

With this, one perceives the need for critical analysis, but it should be noted that this is not only necessary for the indelegability of the cognition of the facts, but also for the instrument itself at the disposal of the expert. At least in the case of science, his method precisely rejects the pretense of infallibility. "[T]he techniques used by science are changeable and subject to the variations of technological development. Science does not produce a petrified certainty and is in a constant process of development."<sup>21</sup> Commenting on the importance of the scientific method, Popper admits that:

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<sup>16</sup> AVELINO, M. T. The judge and the expert evidence in the new Code of Civil Procedure. *In: Essential Doctrines - New Civil Procedure*. Vol. 242 (Apr. 2015). pp. 69-89. São Paulo: Journal of the Courts, 2018. Online text. p. 9.

<sup>17</sup> LUCON, *Op. cit.* p. 6.

<sup>18</sup> LUCON, *Ibid.*

<sup>19</sup> CINTRA *Apud.* AVELINO, M. T. *Op. Cit.* p. 9.

<sup>20</sup> ALVIM NETTO. J. M. of A. *Op. Cit.* p. 4.

<sup>21</sup> AVELINO, M. T. *Op. Cit.* p. 2.



A very distinct answer will be given by those who tend to see (as I do) the distinguishing feature of empirical assertions in their susceptibility to review - in the fact that they can be critiqued and replaced by better ones; and those who take it as their task to analyze the characteristic ability of science to advance, and the characteristic manner 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 want; but those who hold it dogmatically—believing, perhaps, that it is their business to defend such a successful system against criticism until it is conclusively disproved—are adopting precisely the opposite of the critical attitude which, in my view, is the proper one of a scientist<sup>22</sup>.

If it is evident that in all expert evidence the answer is (must be) given with the exception 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 reservations are inextirpable and incontestable. The judgment that recognizes the need for scientific knowledge, in order 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 expertise as dogma, under penalty of incurring contradiction in its most classical sense<sup>23</sup>.

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

This can lead to a certain perplexity when associated with the definitiveness of *res judicata*. 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 the body of evidence in the case, the judgment also uses scientific knowledge and the best possible cognition at that moment of the facts to definitively resolve a question. It is not by chance that the emphasis on the non-binding of the judgment to the award is not possible.

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

The legislator, forgetting the provisions of article 131 of the CPC (LGL\1973\5), or little convinced of its effectiveness, insists on article 436: "The judge is not attached to the expert report, and may form his conviction with other elements or facts proven in the case".

It stressed the best Italian doctrine that, under no circumstances, "the opinion of the expert can replace the opinion of the judge, that is, legally bind the conviction of the judge".

Even the most specialized expertise is binding on the judge: "In any case, the competence of the expert ends where the proper legal assessment of the material of the case begins, the latter constituting

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<sup>22</sup> POPPER, K. *The Logic of Scientific Discovery [e-book]*. Londres: Taylor & Francis e-Library, 2005. p. 28. Tradução nossa.

<sup>23</sup> 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 elements] contradictory is true, the other is *false and vice versa*, for 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/>>. Access on: 12/11/2022. Our translation.



the judge's exclusive task. But even in the technical question the expert's report cannot replace or bind the assessment of the judge, who is always free to decide according to his conviction, with the sole duty to give adequate motivation to him.<sup>24</sup>

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

From this it is understood that the non-binding to the award does not follow that the judge's position can be random, accepting it or rising against it without any basis. Another element of the alterity of the expert is the necessary, although difficult, control of the result obtained by the expert and its influence on the process by the parties.

In the face of rational persuasion it is possible – and even due – to the magistrate to analyze the evidentiary context of the case to find congruence in the evidence produced. Despite the expertise, if the general result of the evidence leads to a different judgment from the attestation in that one, the judicial body cannot exempt itself from overcoming it. Everything, obviously, through robust reasoning. It is that 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 about the same fact. The procedural debate, involving all the subjects, will demonstrate which is the most credible, that is, which should inform the conviction of the judge<sup>25</sup>.

This opens up the observation that control must be exercised before, during and after the examination. The pre-expert control is intuitive, constituting the choice of professionals who meet the legal requirements and presenting questions that are attached to the area of knowledge foreign to the law<sup>26</sup>. In the case of the court, it remains positive in article 470, CPC, that it is up to not only the formulation of questions (item I), as well as the rejection of pertinent questions (item II).<sup>27</sup> The rejection of impertinent questions, in view of the possibility of formulating additional questions during the diligence (article 469, CPC)<sup>28</sup> persists during the investigation. Finally, after the expertise, as seen, the judicial decision must dialogue with the expert report and the rest of the evidentiary set, both in what reinforces the meaning indicated by the expert

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<sup>24</sup> CRUZ, J. R. G. da. *Op. Cit.* p.5.

<sup>25</sup> AVELINO, M. T. *Op. cit.* p. 12.

<sup>26</sup> At this point, it is worth noting that it may not always be obvious the pertinence of the item presented, or its adstriction to the area of human knowledge under the prism of which the expertise will be carried out. The performance of the parties in the cautious formulation of questions is important to avoid forcing the judge to have to decide on the pertinence of questions that, at least before the expertise, will not necessarily have all the elements to evaluate.

<sup>27</sup> 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/113105.htm](http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2015/lei/113105.htm)>. Accessed 4/10/2020.

<sup>28</sup> *Ibid.*





evidence and in what to invalidate it<sup>29</sup>. More importantly, it should honor the parties and their technical assistants as legitimate announcers, including to criticize the expert report. "Also, the performance of the technical assistant appointed by the parties, contradicting the expert report, serves as an element for convincing the judge, especially with the current valuation of that figure."<sup>30</sup>

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

[a]contrary to the rational ideal that all human decision-making activity would be guided by a primal rationality, the studies of Kahneman and Tversky demonstrated, even in the 1970s, that the human being acts on the basis of instincts, intuitions and emotions.<sup>31</sup>

Focusing on the influence of this on the rational decision, the authors continue, stating that, in the case of intuition, it would be due to the "identification between the momentary situation put under analysis and past information acquired through experience".<sup>32</sup> This, however, is an "automatic cognitive response mechanism,"<sup>33</sup> not a rational analysis of similarities and dissimilarities of situations. This characteristic is called heuristics<sup>34</sup>. In turn, although heuristics can clutter decisions,<sup>35</sup> by not being put under the scrutiny of a rational analysis, it can lead to bias.<sup>36</sup> Pointing out the most common cognitive biases, the authors highlight fifteen, which are not always mutually exclusive. The common point of several of them is the maintenance of the *status quo* or previous decision, or a belief, even if intuitive, in a rationality of its own 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) of his own decisions (articles 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 evidentiary set becomes confused with the assumption of rational decision.

In this aspect, it is suggested that it is possible to use scientific research methods in this confrontation. Although this work 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 arise, the others are not. Next to these are the judge and the lawyers of the parties, specialists in a (legal) knowledge

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<sup>29</sup> AVELINO, M. T. *Op. Cit. Ibid.*

<sup>30</sup> 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.

<sup>31</sup> *Ibid.* p. 50

<sup>32</sup> *Ibid.* p. 50

<sup>33</sup> *Ibid.* p. 51

<sup>34</sup> *Ibid.* p. 56

<sup>35</sup> *Ibid.* p. 52

<sup>36</sup> *Ibid.* p. 62



that, usually, is beyond and outside the knowledge of the expert. One of these subjects, the judge, in order to correct the disputed right, will first need to correct the facts that occurred. Seeing this scenario through the prism of transdisciplinary research becomes difficult to resist.

On this, Gustin begins by recalling that scientific knowledge began and developed the traditional research by logical-formal criteria and experiments that allowed "measurements and quantifications of all kinds".<sup>37</sup> The result, of the fragmentation of knowledge, is reflected in the vision against which it arises: of the specialization of knowledge, which becomes partial, fragmented and, crucially, hinders the analysis of the knowledge of one specialty by specialists in another. Monodisciplinarity does not intend to be a view at all<sup>38</sup>, and attachment to it in a situation in which achieving the best possible cognition of the facts is a matter of justice and risking the aspiration to procedural truth.

On the other hand

In the post-war period, there is a change of course. The reality, increasingly complex, is problematized and the institutionalization of research is experienced. The methodological approach ceases to be monological and, at first, assumes a multidisciplinary aspect, that is, theoretical cooperation between the fields of knowledge previously distanced. From there, no longer, only, to cooperation, but to the coordination of related disciplines or to interdisciplinarity. Currently, transdisciplinarity or the production of a single theory from fields of knowledge previously understood as autonomous is the methodological trend that emerges with the greatest force.<sup>39</sup>

In the case of expertise, there is the advantage that the object of study is necessarily delimited by the assertions of facts of the parties, by virtue of the rules of adstriction 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 stage of a factual settlement necessarily broader and transdisciplinary. More importantly, this recontextualization does not seem to require any alteration of the *lege lata*, since it merely concretizes and gives methodological premise to what is already required, as seen, of the 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 Res Judicata on the litigious matter, and the confessedly falsifiable character of science, one has the very notion of truth. Although the truth is central to the process and its desired product, the satisfaction of the right<sup>40</sup> enunciated in a judgment of merit, there is no search for the truth at any cost in the current system. The truth today is not the real truth, but a procedural

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<sup>37</sup> GUSTIN, M. B. de S. [Re]thinking Legal Research: Theory and Practice. 2nd ed. Belo Horizonte: Del Rey, 2006. p. 8

<sup>38</sup> *Ibid.*

<sup>39</sup> *Ibid.*

<sup>40</sup> Here, the process is understood under the prism of Article 4, CPC, which places the satisfying activity as included in the full solution of the merits, the right of the Parties. (BRAZIL. Law No. 13,105, of March 16, 2015. Code of Civil Procedure (2015). *Op. cit.*).



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

(...) one must bear in mind its instrumental and ancillary character [of the process] to substantive law. And if the parties have not discharged their burden of proof, giving the judge powers to remedy any faults of the parties in a relentless 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 real truth were an absolute goal of civil procedure, there would be no evidence that is not admitted to be used. The inadmissibility of the presentation of evidence considered illegal (CF (LGL\1988\3), art. 5, LVI), as stated by Eduardo Henrique de Oliveira Yoshikawa, makes our system "assume the risk that the truth is not known, if there is no other means of proving a fact relevant to the reception of the request or defense."<sup>41</sup>

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

Moving forward, there are two elements that permeate all that has already been seen: the expertise must be specialized and is necessary. The first pervades 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 an expert from an area other than that whose knowledge is necessary for the cognition of the facts. It is not by chance that article 464, §4§, CPC, establishes that the expert "shall have specific academic training in the area object of his testimony".<sup>42</sup> Here we turn to the problem of specialization previously seen, whose solution also seems to lie in the adoption of methodological premises, by analogy, of transdisciplinary research, as well as the cooperation of the parties. The judge, at least initially, may not have the elements to deprecate the mechanical engineer expert to the mechatronics engineer expert, or the accountant expert to the actuarial expert. The performance of critical dialogue must, therefore, begin with the parties and their technical assistants about which specialty (or specialties, according to art. 475, CPC) are necessary to complement the cognition of the facts. Choosing an expert in an apparently similar area of knowledge, close, but independent and split from that which is effectively necessary to resolve the issue of fact does not seem to satisfy the command of art. 475, CPC.

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<sup>41</sup> SHIMURA, S. S.; LUZ, T. T. The limits to the instructive powers of the judge. *Journal of Process*, Vol. 310, pp. 89-111. (Dec. 2020). São Paulo: *Journal of the Courts*, 2020. Online text. p. 8.

<sup>42</sup>BRAZIL. Law No. 13,105, of March 16, 2015. Code of Civil Procedure (2015). *Op. Cit.*



#### 4 THE EXPERTISE AND LIMITS OF EVIDENTIARY LAW

The second question, on the other hand, inaugurates the part in which it does not address specific issues of expert evidence, but of the evidence as a whole.

By saying that expertise is necessary, it is intended to condense the fact that judicial choice, by law, is not discretionary. Either expertise is necessary, and in this case its realization is imperative, or it is not, and should not even be performed.

The performance of the expert test is conditioned to the necessity, in view of the inexistence of other evidence produced, elucidative of the facts to be proven, as well as to the requirement of technical perception, a hypothesis in which it will be rejected when it does not depend on special technical knowledge, and, finally, the possibility of its realization.

Therefore, no expertise will be made in the hypotheses in which the proof of the fact does not depend on technical knowledge, and the perception of the facts, the verification, can be done by the judge himself. Thus it comes to pass when the object of proof demands no more than ordinary knowledge. On the other hand, if the facts are already proven - understand the facts of the cause - by other means of proof, then this will not be necessary. Finally, the expert test will not be performed when it is admittedly impractical, as in the hypothesis of perishment of the object.

It follows that the judge can, and must, reject the request for expert opinion, when it proves unnecessary to resolve the issue.<sup>43</sup>

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 requires that expertise be carried out, and the others.

In certain cases, the legislature 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 the expertise necessary for the demonstration of certain facts, and it, therefore, has to be admitted and carried out *ex officio*, in order to, according to Mortara, cited by Amaral Santos, more than for utility, for necessity, the judge to avail himself of this evidentiary means, in order to ensure the existence of the facts, or their qualities, or their circumstances<sup>44</sup>.

For this reason, as stated before, expertise is not understood to be possible merely for the convenience of judgment. It escapes legal permission and remains incongruous with procedural economy to establish expertise for a fact that does not require special expert knowledge. In the current Order, it is positive that the judge will reject the expertise when "the proof of the fact does not depend on special knowledge of technician"<sup>45</sup> (art. 464, §1, I, CPC).

The need for expert evidence is assessed, on the one hand, like any other evidence. In this regard, the first relationship they have is between the deal and the object of the expertise.

The dispute and the litigious object lend themselves to identifying what exactly is the disputed point existing between the statements of the parties, in order to extract the possible need for production of

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<sup>43</sup> KRETZMANN, P. A. *Op. Cit.* p. 2.

<sup>44</sup> COSTA, C. *Op. Cit.* p. 5.

<sup>45</sup> BRAZIL. Law No. 13,105, of March 16, 2015. Code of Civil Procedure (2015). *Op. Cit.*



evidence and to establish the appropriate type of evidence for the case. And the disputed point found constitutes the object of the evidence, on which the judge must be guided in the instructive phase of the process, for the purpose of admitting the evidence required by the parties, or producing the missing ones for the elucidation of the facts.

As noted, the object of the evidence must be identified, and only on it will fall the evidentiary instruction<sup>46</sup>.

Moreover, even among the facts that are disputed, the facts "affirmed by one party and confessed by the opposite party" (art. 374, II, CPC) and "in whose favor militates legal presumption of existence or veracity" (art. 374, I, CPC) militates.<sup>47</sup> Still, even after all these filters, it is perceived that the law seems to stagger its preference in the order of accomplishment, indicating the hypothesis of rejection of expertise when "it is unnecessary in view of other evidence produced"<sup>48</sup> (art. 464, II, CPC). If this can be understood as a mere unfolding of the requirement that expertise be given to ascertain facts that require specialized knowledge for its cognition or appreciation, it is undeniable that it reinforces the need as an attribute of expertise. If there is any lawful procedural means of knowing the disputed material fact without the need for intervention of an Expert, the expertise should not be carried out. If there is not, there is, under penalty of curtailment of the right of proof, no possibility of denying the expertise. These means of lawful knowledge include legal presumptions.

Note that the need for expertise was treated at the same time in absolute terms (must be performed, not must be performed) and relative (denied, granted) so far. Nevertheless, without prejudice to the instructive powers of the judge 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 allegation of fact, and it is true to say that, if the party does not undertake to prove the assumption of the accused fact, it will endure succumbence, in the event that the evidentiary set formed in the process becomes insufficient to convince the judge.

This is a rule of judgment for the judicial body, which may decide on the basis of who did not succeed in its evidentiary burdens when the evidence collected is not sufficient for the final formation of the judge's conviction at the time of sentencing. That is why there are cases, e.g., in which a certain claim was dismissed for a particular plaintiff, because he could not prove facts constituting the right alleged, a task that belonged to him, and the evidentiary production collected throughout the process was insufficient for the magistrate to reach his final conviction.<sup>49</sup>

The encumbered party, by not discharging its burden - which requires expert proof - therefore, can engender a situation in which expertise, although necessary to know the existence and extent of the factual

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<sup>46</sup> XAVIER, T. N. The "Activism" of the Judge in the Matter of Evidence. *Essential Doctrines of Civil Procedure*. vol.4. pp. 1233 to 1263 (May, 2008). São Paulo: Journal of the Courts, 2018. Online text. p. 6.

<sup>47</sup> BRAZIL. Law No. 13,105, of March 16, 2015. Code of Civil Procedure (2015). *Op. Cit.*

<sup>48</sup> BRAZIL. Law No. 13,105, of March 16, 2015. Code of Civil Procedure (2015). *Op. Cit.*

<sup>49</sup> 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: Journal of the Courts, 2018. Online text. p. 2.



situation, is unnecessary, in the face of the succumbence of the one to whom it was incumbent to prove the fact.

Despite this, the distribution of these burdens is a rule of instruction, especially in view of the possibility of the court fixing the burden with a party that, by mere exegesis of the criteria in 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 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 suppose that the techniques of facilitating the production of evidence, including the reversal of the *onus probandi*, they should be given only when there is a legal provision. Remember that, in the German procedural system, there is no rule similar to that of Article 333 of the CPC/1973 or that of Article 373 of the new CPC and, moreover, the assumption that the reversal of the burden of proof must always be provided for in law goes back to the liberal postulate that the powers of the judge, when not provided for in the legislation, they would lead to arbitrary decisions. Therefore, the objective dimension of the fundamental right to adequate judicial protection binds the judge who can, in the face of the circumstances present in the concrete case, not ignoring the diabolical burden created for one of the parties, even without legal provision, distribute, through rational and always justified criteria, the dynamic loads of evidence among the litigants<sup>50</sup>.

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

The procedural technique in question also acts for the formation of the judgment of fact by the magistrate, since, better distributed the evidentiary burdens, more conditions the evidence will have to be produced and become sufficient for the judge to reach his conviction to pronounce sentence, so that the intended judicial protection is the most adequate and effective possible.

In this tuning fork, if the evidentiary burdens are not distributed precisely in the concrete case, the fundamental right to proof will be impaired, because any of the parties will not have the possibility of proving to the State-judge the assumptions of fact accused by it in order to influence its judicial conviction, and the judicial protection may be provided unfairly<sup>51</sup>.

Still, the judgment without previous distribution of the evidentiary burden, especially when it requires expertise for its discharge - hypothesis, as seen, involving complex fact, of assessment by expert - will return to prejudice of the right to evidence, this time of the encumbered party.

## 5 CONCLUSIONS

For all the above, it is perceived that the expertise is neither treated by the Order, 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 grant it, without prejudice to the burden to be borne by each party.

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<sup>50</sup>CAMBI, E. Theory of dynamic evidentiary 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: Journal of the Courts, 2018. Online text. p. 5.

<sup>51</sup>AUFIERO, M.V.M. *Op. Cit.* p. 4.



More than that, by requiring specialized knowledge, sometimes unattainable to the judgment *per se*, *the* expert evidence is the moment that the dialogical posture between judge, parties, prosecutors that the process requires gains greater importance. Once the expertise, 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 judgment for its assessment must all be critically analyzed. This is without losing sight of the limits of science and the rest of the evidentiary set.



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