CAUSALIDADE ALTERNATIVA INCERTA E RESPONSABILIDADE AMBIENTAL: UMA REFLEXÃO A PROPÓSITO DO AC. TRL DE 10-9-2019 (Proc. nº922/15.4T8VFX.L1-7)

UNCERTAIN ALTERNATIVE CAUSALITY AND ENVIRONMENTAL RESPONSIBILITY: A reflection on AC. TRL OF 9/10/2019 (Proc. No. 922/15.4T8VFX.L1-7)

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SUMMARY

Against a company that produces, imports, exports and markets manures, and whose main manufacturing unit is located in the municipality of Vila Franca de Xira, an action in tort was filed for damages, following the contamination of a person with the bacteria of legionary. The case judged by the Court of Appeal of Lisbon, related to damage caused to a person through lesion to an environmental component, involves complex and particularly interesting dogmatic problems. The article aims to analyze the existence of reasoning paths that, if followed by the court, could lead to a valid decision regarding the intentions of the injured party. The analysis of the arguments applicable to the specific case is intended to contribute to the maturity of tort law institutes resulting from damage to the environment and human health.

Keywords: Responsibility; Contamination; Environment; Causality.

RESUMO

Contra uma sociedade empresária que produz, importa, exporta e comercializa adubos, e cuja principal unidade fabril se localiza no concelho de Vila Franca de Xira, foi proposta uma ação de responsabilidade civil por danos, na sequência da contaminação de uma pessoa com a bactéria do legionário. O caso concretamente decidido pelo Tribunal da Relação de Lisboa, lidando com danos causados a um sujeito por meio da lesão de uma componente ambiental, envolve problemas dogmáticos complexos e particularmente interessantes. O trabalho tem como objetivo analisar a existência de caminhos de fundamentação que, caso percorridos pelo tribunal, poderiam conduzir a uma decisão procedente relativamente aos intentos do lesado. A análise dos fundamentos aplicáveis ao caso concreto em tela tem como intuito contribuir para o amadurecimento dos institutos da responsabilidade civil decorrente de dano ao meio ambiente e à saúde humana.

Palavras-chave: Responsabilidade; Contaminação; Meio Ambiente; Causalidade.

INTRODUCTION

Against the company ADP, S.A., a company that produces, imports, exports and markets manures, and whose main manufacturing unit is located in the county of Vila Franca de Xira, an action in tort was filed for damages, following the contamination of Mr. A with legionnaires' bacteria.

In fact, between the 7th and 21st of November 2014, an epidemic of Legionella occurred in the geographical area of the Municipality of Vila Franca de Xira and neighboring municipalities, and on 21st November 2014, the General Directorate of Health (DGS) and the National Institute of Health (INS), Dr. Ricardo Jorge, issued a joint statement saying that the called outbreak had already caused 336 cases of infection and 10 deaths. As could be read in the statement, "the analysis conducted by the National Institute of Health, Dr. Ricardo Jorge, confirm that the isolation by culture of a strain of Legionella (…) in water samples from cooling towers presents a molecular profile similar to that of clinical strains, obtained from patients with pneumonia proven to be due to Legionnaires' disease. In these terms, a source of contaminated aerosols was identified." It was further stated, "The research work carried out allowed us to exclude other potential sources, such as potable water, large commercial areas and air conditioning systems".

On December 15, 2014, the authorities in this matter reported that the presence of Legionella bacteria had also been detected in some cooling towers of the factories owned by the companies Solvay Portugal – Produtos Químicos, S.A. (a company dedicated to the industry and trade of chemicals and their derivatives, with a manufacturing unit in Póvoa de Santa Iria) and SCC – Sociedade Central de Cervejas e Bebidas S.A. (a company that has a manufacturing unit in the Vialonga area and is dedicated to import, export, exploration, production, preparation, manufacturing and marketing of malt, beer, ciders, wines and spirits, soft drinks, mineral waters, spring and table waters and their derivatives. Both the company ADP, the companies Solvay and SCC, were the subject of investigation, even having their visa suspended the activity of some of its cooling towers, in the respective manufacturing units, as a precautionary measure imposed by public authorities. It should be noted that the presence of Legionella bacteria in the cooling towers of manufacturing or industrial units is common, and did not exist at the time of the outbreak in question, legislation regarding the maximum limits of their presence or concentration in cooling towers, but only "recommendations" or "good practices".

Mr. A, age 63, was admitted to the Health Care Center of Lisbon, Hospital de São José, on November 9, 2014, with symptoms of "acute respiratory failure", and since the previous day 6, he had been suffering from unwell, with body aches, high fever, difficulty breathing, and since the day before,

disoriented, with difficulty in articulating sentences. In the emergency department, he was diagnosed with septic shock, Legionella pneumonia, joint fibrillation, and with a (secondary) diagnosis of chronic ischemic heart disease NOS, obstructive pulmonary disease NOS, morbid obesity and stridor. However, the clinical strain of Legionella pneumonia has not been specifically identified. Due to this situation, which resulted in a prolonged and painful hospitalization and a no less difficult recovery, upon returning home and professional life, the subject suffered various damages (material and non-material).

At the time, ADP and the other Defendant companies complied with all applicable licenses, including the environmental license. In addition, it had hired a specialized and duly accredited cooling tower water management company since 2014, to ensure adequate maintenance and monitoring of the regular controls carried out by ADP.

According to the DGS and the INS, the Legionella emission source was identified as one of the cooling towers at the ADP factory.

The proposed action was based on non-contractual action in tort, with the court of first instance considering that there was no doubt that the injury claimed by the plaintiff – contracting Legionnaires' disease in a given period – originated from an asset operated by the defendant. The central issue would therefore involve unveiling illicitness and guilt. The injured party claimed, in the sense of illegality, that the defendant violated legal provisions protecting the interests of others, contained in DL 79/2006, of April 4, and in the publication "Prevention and control of Legionella in water systems"; Regarding guilt, it mobilized article 493/2 CC, maintaining that the activity carried out by the defendant must be qualified as dangerous for the purposes of triggering the presumption enshrined in the norm.

In view of the allegations, the Lisbon Court of Appeal considered that the rules contained in the document entitled «Prevention and control of Legionella in water systems» "result in no obligations or duties to act, only more or less vague recommendations". In turn, "with regard to DL 79/2006, industrial buildings intended for production activities are exempt from the requirements of the regulation approved by the diploma in question", with its standards addressing "the projects of air conditioning systems, the energy consumption limits, maintenance conditions for air conditioning systems, monitoring and auditing conditions for the operation of buildings in terms of energy consumption and indoor air quality, and the professional training of technicians responsible for design, installation and maintenance of air conditioning systems". In other words, the standards aim to protect the "health and well-being of building occupants", so much so that "whenever the external atmosphere is referred to, it is only in order to ensure that external pollution does not affect air quality interior.

Only indoor air quality (IAQ) is the subject of standards designed to guarantee it, namely those that require audits. The area of protection of the norms of this diploma concerns the well-being of the people who live or work in the properties covered by it". It further adds that "DL nº79/2006 was revoked by DL nº118/2013, of August 20", having "the 2013 diploma, in force at the date of the facts, approved[ed] the Energy Certification System for Buildings, the Regulation of Energy Performance of Residential Buildings and the Energy Performance Regulation of Commercial and Service Buildings, and transpo[s] Directive 2010/31/EU, of the European Parliament and of the Council, of May 19, 2010, on performance energy of buildings. Its purpose, according to article 1, was to ensure and promote the improvement of the energy performance of buildings through the Building Energy Certification System (SCE), which is part of the Energy Performance Regulation for Residential Buildings (REH) , and the Energy Performance Regulation for Commercial and Service Buildings (RECS)". However, "the diploma did not contain any provision aimed at controlling Legionella". In fact, "only with Law 52/2018, of August 20, was a regime for the prevention and control of Legionnaires' disease established, applying to all sectors of activity, and changes were introduced in DL nº118/2013, with the same purpose."

The Lisbon Court of Appeal thus concludes that, "in the case at hand, the defendant did not engage in active behavior that caused the damage", and "at most, it can be concluded that the cleaning necessary for the that the concentration of bacteria that was generated would not be generated. However, there was no standard that imposed cleaning with certain requirements. A possible omission would only give rise to the obligation to repair the damage if, in addition to the verification of other legal requirements, there was, by law, a duty to carry out the omitted act (article 486 of the CC). In this case, at the time, there was no such legal provision." To this extent, "responsibility for violation of a legal provision intended to protect the interests of others is excluded (due to the lack, at the time, of a legal provision aimed at preventing Legionella emissions into the atmosphere from industrial buildings)".

Regarding the invocation of article 493º/2 CC, the Lisbon Court of Appeal orders its path of judicial reasoning on two levels. On the one hand, it considers that, as it is a mere presumption of guilt, its relevance in the case would be null due to the lack of proof of illegality, as explained. It admits, however, that there are authors, among whom we ourselves, following the path of Menezes Cordeiro, are included, who look at article 493º/2 CC in the sense of consecrating the Napoleonic fault and, therefore, the possibility of, by way of preterition, of duties in traffic, which is presumed, if it also reaches a presumption of illegality. Therefore, it would be possible to establish a valid compensation claim, all depending on the establishment of a link of imputation (previously understood as causality),

which would have to be considered. Simply, and on the other hand, the Lisbon Court of Appeal ends up, recognizing the divergence in doctrine, not taking a position on it, since it considers that the assumption of assimilation of the scope of relevance of the case by the scope of relevance does not occur hypothetical of the norm in question. More specifically, the collective understands that it is not facing a dangerous activity. As can be read at the top, "for the rule to operate, it would be essential that the activity that was the origin of the Legionella outbreak was returned to the concept of dangerous activity and (…) it is not being returned".

In fact, taking into account that dangerous activity is, for these purposes, one that involves a high probability of causing harm to third parties, implying an increase in risks, and that the probability of a person contracting pneumonia caused by this bacteria is 1 in 100,000 (i.e., approximately 0.000862%), the appeal court considers that "it can hardly be understood that one of the activities potentially generating high concentrations of bacteria – the operation and maintenance of cooling towers – is an activity dangerous". He further maintains that "what is at stake is not the dangerousness of the activity (whether this is the industrial activity of the defendant that uses cooling towers, or the maintenance activity of the towers), but the danger that may arise from poor use or maintenance of equipment. The danger will arise from the commission of an offense by omission and not from the activity itself."

The appeal was therefore unfounded, confirming the decision of the first instance court.

1. THE DOGMATIC PROBLEMS OF THE SPECIFIC CASE

The case specifically decided by the Lisbon Court of Appeal, dealing with damage caused to a subject through damage to an environmental component, involves complex and particularly interesting dogmatic problems.

From the outset, the issue is the unveiling of illegality, as an objective filter for selecting valid compensation claims. In fact, the Portuguese criminal model, like the German one, is structured around two autonomous categories: guilt must be associated with illegality, which can be seen through the violation of absolute rights, the violation of legal provisions protecting interests of others or the verification of a situation of abuse of rights.

With regard to environmental tort discounting the hypotheses of objective liability, in accordance with article 8 DL no. 147/2008, of July 29, "whoever, with intent or mere guilt, offends the rights or interests of others through the injury of an environmental component is obliged to repair the damage resulting from this offense", the doctrine understanding that, although the nature of the interests of others referred to in the norm is not specified, these must be interpreted as interests subject to protection by a legal norm, in a clear approximation of the two systems (general and special).

The Court of Appeal concluded that, given the lack of legal provisions to protect the interests of others, it would not be possible to reveal the illegality, based, for this purpose, on the exclusion of the compensation hypothesis provided for in article 493/2 CC. The definition of dangerous activity, for the purposes of this paragraph 2 of article 493, is not offered by the legislator, and it is up to the judge to concretize the concept in light of the cases decidendi. The dangerousness of an activity must be assessed according to the rules of experience: an activity is dangerous if, according to those rules, it involves a great propensity for damage to occur, and the dangerousness must be understood objectively, leaving aside mere personal fears of a potential victim, and because all behaviors, actions and objects are potentially dangerous, be by reference to the circumstances of the case decidendum. Jurisprudential experience has densified the notion, offering examples of activities characterized by their dangerousness[1].

[1] Cf. Acórdão da Relação de Lisboa, de 6 de Junho de 1995, *Colectânea de Jurisprudência*, 1995, tomo III, 127; Acórdão da Relação de Lisboa de 4 de Abril de 1989, *Colectânea de Jurisprudência*, 1989, Tomo III, 119; Acórdão de 4 de Novembro de 1990, *Boletim do Ministério da Justiça*, nº400, 715; Acórdão da Relação de Coimbra de 30 de Janeiro de 2001 [www.dgsi.pt]; Acórdão Relação de Lisboa de 30 de Maio de 1996 [www.dgsi.pt]; Acórdão da Relação de Lisboa de 26 de Novembro de 1993 [www.dgsi.pt]; Acórdão da Relação de Lisboa de 18 de Março de 1999; Acórdão do Supremo Tribunal de Justiça de 3 de Fevereiro de 1976, *Boletim do Ministério da Justiça*, nº254, 185; Acórdão do Supremo Tribunal de Justiça de 25 de Janeiro de 1978, *Boletim do Ministério da Justiça*, nº273,26

If some authors maintain that this is a simple presumption of guilt, others admit that the precept also includes a presumption of causality[2]; and still others, such as Menezes Cordeiro, go so far as to consider that it also involves a presumption of illegality, resulting in the penetration of the fault model into our legal system (CORDEIRO, 1997)[3]. When interpreting danger, and taking into account the risky nature of today's societies, it must be a special danger – a risk that exceeds the threshold of normality. Now, in the face of such qualified dangers, the person must adopt all precautionary measures to safeguard others. By not doing so, you are acting in contravention of a principle of precaution or prevention – socially understood –, allowing the abuse of rights to be revealed (the subject's freedom of action is exercised in contradiction with the normative foundation of normativitism itself). Therefore, article 493/2 CC enshrines the fault and implies that said causality is understood in the sense of foreseeability (the damages to which the person should have foreseeably conformed their conduct with respect for their fellow man are to compensate damages). When guilt is presumed, the violation of duties is presumed, which, given the situation in which they arise, cannot be understood other than by reference to an abuse of freedom. This allows the provisions of article 493 CC to be connected with illegality based on a hybrid model. This does not prevent the possibility of there being a violation of an absolute right. It is, therefore, possible to invoke the precept in the sense of presuming guilt and, concomitantly, presuming objective imputation. This is not a double possibility of interpreting the norm, but rather the ability recognized by the injured party to symbiotically mobilize more than one foundation to support their claim for compensation. If this is permitted in the context of the competition for tort modalities, it must also be authorized when criminal tort modalities compete. Therefore, in this case, the restriction of the compensation hypothesis to the verification of an infringement of the absolute right would authorize the fulfillment of liability to go beyond the foreseeable damages.

In turn, the fact that an activity cannot be considered dangerous does not prevent the fact that, if an absolute right is violated, the illegality cannot be revealed in this way, however, it is required that the link be proven. between such violation and the conduct (active or omitted) of the alleged offender, providing a response to the problem of the so-called causality underlying responsibility. To this end, it would be essential to prove the construction of a sphere of responsibility (in the sense of liability), the result of the conversion of a primitive sphere of responsibility (for the other, that is, in the sense of role responsibility), for which it would be extremely relevant the finding of the neglect of duties in traffic,

[2] Henrique Sousa ANTUNES, *Responsabilidade civil dos obrigados à vigilância de pessoa naturalmente incapaz*, UCPE, Lisboa, 2000, 270 s., considerando que ali se consagra uma presunção de culpa e de causalidade; Ana Maria Taveira da Fonseca, "Responsabilidade civil pelos danos causados pela ruína de edifícios e outras obras", *Novas Tendências da Responsabilidade Civil*, Almedina, Coimbra, 2007, 126 s., falando de uma presunção de culpa, de causalidade e de ilicitude. Sobre o ponto, veja-se, ainda, Brandão PROENÇA, "Balizas Perigosas e responsabilidade civil – Ac. do STJ de 26.2.2006, Proc. 3834/05", *Cadernos de Direito Privado*, nº17, 2007, 32 s.

which, once called into question, would also serve to support the judgment of guilt itself, without this being able to be confused with that causality that was mentioned, either because the latter does not presuppose a judgment of ethical-legal censorship, either because the so-called causal inquiry also presupposes a confrontation of the sphere of risk whose external contours are drawn with other spheres of risk (general risk of life, risk of the injured party and risk of action by third parties).

If this construction[3], methodologically imposed by an adequate understanding of the law, allows us to draw important consequences, including in terms of the burden of proof, it must be emphasized that it is only viable once it is established that duties have been neglected in the traffic to which it refers. Now, this seems to be one of the controversial points of the decidendum case, which even involves questioning whether hiring a third party to carry out maintenance and surveillance of the cooling towers is sufficient to consider the duty fulfilled, in an answer that appears to us, if formulated in the abstract, to be negative.

In this regard, two particularly relevant aspects should be highlighted. Firstly, the fact that there is no legal provision to protect the interests of others, as the court of appeal found, imposing a specific duty in this context does not mean that it cannot emerge. In fact, contrary to what was presupposed by positivist thinking, legal norms are not the only sources of duties to act, but these may result from the very sense of responsibility inherent to the person (and not the individual) that structures the legal system. Secondly, the requirements communicated by the criminal model enshrined in article 493/2 CC appear to be superior to those arising in general from article 483 CC. In fact, not only, when a dangerous activity is involved, is guilt presumed (along with illegality and causality), but exoneration proof proves to be particularly difficult, requiring the alleged offender to show that he took all the measures required. circumstances in order to prevent them.

To this extent, depending on the evidence actually produced, there appear to be paths of reasoning that, if followed by the court, could lead to a valid decision regarding the injured party's intentions.

[3] Cf., for other developments, Mafalda Miranda BARBOSA, From the causal link to the imputation link. Contribution to understanding the binary and personalistic nature of the causal requirement at the level of non- contractual tort, Princípia, 2013, chap. 8.

2. THE PROBLEM NOT RESOLVED BY THE COURT (AND NOT EMERGING FROM THE SPECIFIC CASE): UNCERTAIN ALTERNATIVE CAUSALITY

Having adequately understood the contours of the problem in its dogmatic configuration, we realize that the merit of the appeal would imply proof of the guilt of the injured party and also the establishment of the causal link (understood as objective imputation), essential to be able to consider that the disease constitutes a violation of the subject's physical integrity.

Assuming that these requirements could be proven, the compensation claim would be valid.

On the other hand, remembering that, in the case file, it was proven that the disease was caused by the legionnaires' bacteria that was expelled by the cooling tower of company 1, but that it also existed in the cooling tower of the factory belonging to company 2, even at a concentration that would not allow it to cause any harm to health, we are led to remember that, if the concentration levels of the aforementioned bacteria in the second cooling tower were higher, showing themselves capable of causing the disease, it could – as long as it is proven the neglect of duties in traffic, the basis of a judgment of censorship, on the one hand, and the external contours of a sphere of risk, capable of founding the objective imputation – posing a complex problem, namely that of uncertain alternative causality.

The problem did not arise, for the reasons explained, but its theoretical-practical importance justifies making some clarifications about it.

Uncertain alternative causality is problematized whenever we are confronted with two potential causes of injury, and it is not possible to determine, specifically, which one actually caused the damage. More specifically, if there is a concentration of legionnaires' bacteria capable of generating contagion in both cooling towers, how would it be possible to determine which of the towers expelled the microorganism that caused the disease into the damaged concrete?

The problem has received different responses in the various legal systems, although, in Portugal, the authors are still reluctant to grant compensation to the injured party in these circumstances: the analogy with article 497 CC would fail and any attempt to establish the relationship would be frustrated. causal[4]. We do not believe, however, that we have to be stuck with this view of

[4] See, stating the impossibility of applying article 497 CC to situations like the one we call collation, Menezes CORDEIRO, Direito das Obrigações, II, AAFDUL, 2001, 416 s.; Vaz SERRA, "Obligation of compensation. Placing. Sources. Concept and types of damage. Causal link. Extension of the duty to compensate. Types of compensation. Right to abstention and removal", Bulletin of the Ministry of Justice, 84, March 1959, 97 s. (note that the author, considering the possibility of accepting, among us, a solution such as that of § 830 BGB, refers to the issue to the analysis of the institute of tort – thus, cf. note 250 and Vaz SERRA, "Contractual and non- contractual liability",

the problem. In fact, there have been several paths suggested – in the different legal systems – to try to solve the problem, based on the perception of injustice that is granting a benefit to the injured party, without holding him responsible, because someone else could have caused the damage[5].

Bulletin of the Ministry of Justice, 85, 1959, 107 s., denying the application, among us, of the solution provided for in § 830 BGB) and Pereira COELHO, The problem of the virtual cause in civil liability, Almedina, 1998, 24.
In the opposite sense, cf. Calvão da SILVA, "Alternative causality. L'arrêt DES", European Review of Private Law, 2, 1994, 465 s., adhering to a negative formulation of adequate causality, and maintaining that each injured party must be held responsible, simply by proving that both perpetrators were likely responsible. To this end, it invokes the reversal of the burden of proof when that negative formulation is adhered to, with the injured party simply having to prove conditionality. More specifically, it will be enough for the injured party to prove that any cause, or rather one of the behaviors of one of the producers, is conditio sine qua non. Each of these conditions is presumed to be an adequate cause of the damage ("le dommage est la conséquence normale, typique, probable du DES défectueux" – op. cit., loc. cit.), so "the perpetrator of the injury must rebut this presumption, demonstrating exceptional, abnormal, extraordinary or irregular circumstances" that have influenced the situation. Having determined the abstract capacity, it is understood that the injured party can use it to establish his presumption, the serious probability that that one or those producers are responsible. More specifically, "it can even be said that the agent of the damage is not truly a stranger"; Paulo Mota PINTO, Negative contractual interest and positive contractual interest, I and II, Coimbra, Coimbra Editora, 2008, 654, note 1859; Carneiro da FRADA, Civil law. Civil responsability. The case method, Almedina, Coimbra, 2006, 107, note 125.
For further developments, with a systematic construction based on another causal perspective, cf. Mafalda Miranda BARBOSA, From the causal link to the imputation link, chap. 11.

[5] Cf., within the framework of the German legal system, LARENZ/CANARIS, Lehrbuch des Schuldrechts, II, Halbband 2, Besonder Teil, 13 Auflage, Verlag C. H. Beck, München, 1994, 578 s.; DEUTSCH, "Das Verhältnis von Mittäterschaft und Alternativtäterschaft im Zivilrecht", Juristenzeitung, 1972, 105 s.; Theo BODEWIG, "Probleme alternativer Kausalität bei Massenschäden", Archiv für die civilistische Praxis, 185, Heft 6, 1985, 506 s.; BREHM, "Zur Haftung bei alternativer Kausalität", Juristenzeitung, 35, Heft 3, 1980, 585 s.; ASSMANN, "Multikausale Schäden im deutschem Haftungsrecht", Multikausale Schäden in modernen Haftungsrechten (FENYES/WEYERS, hrgs.), 1988, 99 s.; Joachim GERNHUBER, "Haftung bei alternativer Kausalität", Juristenzeitung, 16, heft 5/6, 1961, 148 s..; Thomas MEHRING, Beteiligung und Rechtswidrigkeit bei § 830 I 2 BGB. Zugleich ein Betraig zur Behandlung der Fälle von Anteilszweifeln und Opfermehrheiten, Duncker und Humblot, Berlin, 2003; Tobias MÜLLER, Wahrscheinlichkeitshaftung von Alternativtätern, Ein Beitrag zur Dogmatik des § 830 BGB, Peter Lange, Frankfurt am Main, 2001; DEUBNER, „Zur Haftung bei alternativer Kausalität", Juristisch Schulung, 62, 383 s.; TRAEGER, Der Kausalbegriff im Straf und Zivilrecht, Elwert, Malburg, 1904, 228 s.; Ingeborg PUPPE, „Zurechnung bei mehreren Beteiligten", Jura, 1998, 21 s.; Klaus VIEWEG, „Schadensersatezrecht" /J. Von Staudinger Comment on BGB, 13. Auflage Neubearbeitung, De Gruyter, Berlin, 2005, 398 s.; Christina EBERL-BORGES, „§830 BGB und Gefährdungshaftung", Archiv für die civilistische Praxis, 196, Heft 5, 1996, 491 s.; HEINZE, „Zur dogmatischen Struktur des § 830 I/2 BGB", Versicherungsrecht, 73, 1081 s.; BAUER, "Die Problematik gesamtschuldnerischer Haftung trotz ungeklärlter Verursachung", Juristenzeitung, 71, 4 s.; Brigitte KEUK, "Die Solidarhaftung der Nebentäter", Archiv für die civilistische Praxis, 168, 1968, Heft 2, 175 s.; Gerhard RIES, "Zur Haftung der Nebentäter nach § 830 und § 840 BGB", Archiv für die civilistische Praxis, 177, Heft 6, 1977, 543 s.; Oliver BERG, „La pluralité de responsables en droit allemand", www.grerca.univ-rennes1.fr/digitalAssets/267/267950_oberg.pdf; Thomas WECKERLE, Die deliktische Verantwortlichkeit mehrerer, Karlsruher, Göttingen, 1974. With great importance for the theme, in the Austrian context, cf. BYDLINSKI, "Haftung bei alternativer Kausalität", Juristische Blätter, 1959, 1 s.; ID., "Mittäterschaft im Schadensrecht", Archiv für die civilistische Praxis, 158, 1959, 410 s.; ID., "Aktuelle Streitfragen um die alternative Kausalität", Festschrift für Günther Beitzke zum 70. Geburtstag am 26 April 1979, Otto Sandrock (hrgs.), De Gruyter, Berlin, New York, 1979, 3 s.
Dealing with the problem of damages caused by an unidentified member of a group of determined people, in the French legal system, cf. Hassen ABERKANE, "Du dommage causé par une personne indéterminée dans un groupe déterminé de personnes", Revue Trimestrielle de Droit Civil, 1958, 516 s., considering that the solution of accountability in these terms implies an extension of the idea of moral personality, to the extent in which a sociological reality would have been constituted that cannot be denied, meaning that the figure would not be applied when the group in question emerged fortuitously, without having the minimum level of stability and internal coherence. In fact, only these requirements would allow us to speak of a germ of moral personality – cf. Geneviève VINEY/Patrice JOURDAIN, Traité de Droit Civil, sous la direction de Jacques Ghestin: Les conditions de la responsabilité, 3rd

From the outset, we find positions that present a procedural nature, including the one that has been built around the concept of evidentiary damage.[6] SAccording to her, the injured party would be responsible for the factual indeterminacy of the case, with such uncertainty being attributable to him, so, truly, the damage to be compensated would be that and not that resulting from the injury suffered. The doctrine would be, from the perspective of its heralds, defensible both from the point of view of prevention, since it would increase incentives to reduce direct damage, and from the point of view of commutative justice, since evidentiary damage violates autonomy of the victim, restricting the right to sue the perpetrator of an illicit and harmful act. Its scope of application would, however, be broader than the scope of relevance of cases that have underlying hypotheses of uncertain alternative causality and its intentionality would be seen to be dissonant with the reference frameworks of our legal system, and cannot be be accepted. In fact, not only would we be left without normative support to do so, given that article 344º/2 CC does not authorize such a broad interpretation that would legitimize the compensation of evidentiary damages, but at the fundamental level the underlying basis would fail[7]. It

edition, LGDJ, Paris, 2006, 236 s.. The problem arises, as they clarify, when it is not possible to identify the perpetrator of the damage, but it can be proven that it necessarily comes from certain people who are part of a group. To justify the collective responsibility of the people who may have been at the origin of the damage whose author is not identified, an appeal is made to the idea that the act was carried out in common – an appeal to a faute collective or a faute connexe; other times there is talk of a fait non fautif that engenders liability based on article 1384/1 CC. According to the authors' testimony, "the courts tend to justify the assimilation between the situation of possible perpetrators of anonymous damage and that of co-authors responsible in solidum by the idea of faute collective/faute connexe or by the notion of garde collective or garde en commmum . But this is not enough of an argument. We resort to fiction, forgetting that uncertainty regarding the causal link persists." Therefore, they point out that it is necessary to examine other foundations that support the solution: recourse to an idea of de facto personality, or procedural justification of the solution with the idea of obstructing the evidence (in the case of the hunters' school in which the victim, through simultaneous action of the injured parties, would be unable to carry out their duties in court). In their doctrinal proposal, they speak, however, of the admission of a presumption of causality – cf. P. 246 – and establish limits for the jurisprudential tendency: it is necessary that the identification of the perpetrator of the damage is effectively impossible, since the solution of the obligation in solidum must be seen as a subsidiary resource, which ceases to make sense when effective proof is obtained of causality. Thus, if one of the members proves his non-participation, he must be released from responsibility; If one of the members can prove which of the others was responsible for the damage, all the others are exonerated.

Cf., in this regard, and with preferential reference to the French legal system, Florence G'SELL-MACREZ, *Recherches sur la notion de causalité*, Université Paris I – Pantheon – Sorbonne, 2005., 367 s.

[6] On this occasion, cf. Arial PORAT/Alex STEIN, Tort Liability under uncertainty, Oxford University Press, New York, 2001, 160 s.; ID., "Indeterminate causation and apportionment of damages: an essay on Holtby, Allen and Fairchild", Oxford Journal of Legal Studies, 23, 4, 2003, 667 s.; ID., „Liability for uncertainty: Making evidential damages actionable", Cardozo Law Review, 18, 1997, 1891 s. The evidential damage may be the result of the same illicit act that caused or may have caused the direct damage; or it may be the product of a distinct illicit act, which may not even be concomitant – cf., once again, Tort Liability, 163-164: a car is driven by the injured party; a van approaches from the opposite direction. If a tire comes loose and hits the first vehicle, it will be deeply damaged and will have to be repaired in a specialized garage for this purpose. The mechanics then throw away some parts that were essential to the production of evidence in court, thus causing evidentiary damage, which is equal, in magnitude, to the physical damage to the injured party (cf. p. 165). Simply put, the damage that would be compensated would no longer be that resulting from the offense of the environmental component, but the probative damage, that is, the damage that would occur due to the putative injured parties having obstructed, with their alternative action, the proof of the connection of causality that sought to erect.

[7] Considering that the doctrine of evidentiary damage cannot be transposed into our legal system as it constitutes a

is one thing to seek to support a solution that facilitates the correspondence between the duty to be and the being in the assumption of a sphere of responsibility that calls on the concept of Person, another thing is to base our judgment on a merely adjective idea, although colored with related concerns to the righteous. Furthermore, the arbitrated compensation would always be proportional and would be based on probabilistic data, which may not correspond to a materially adequate solution, leaving uncompensated damages that should be compensated.

Secondly, it is possible to uncover a position that has a dogmatic-conceptual nature and is built on the basis of an idea close to that of a de facto collective personality. If damage could result from the behavior of one or another subject, one would have to ask whether or not it is possible to speak of a specific group within which that group would be prominent. Indetermination would, therefore, only concern the subjects and not the environment in which they acted and the dogmatic construction would imply an extension of the idea of moral personality, insofar as a sociological reality would have been constituted that cannot be denied, so it would not be the figure was applied when the group in question appeared fortuitously, not having the minimum of internal stability and coherence[8]. Truly, the issue of causality is not faced here, which is avoided. Furthermore, we would be restricted, in the practical mobilization of the criterion, to cases in which there is proven internal stability and coherence. An attachment to a traditional conception of the problem of imputation is also evident, which we cannot help but question.

The solution would not, however, be far from a certain hermeneutics of § 830 BGB, a precept that, in the German legal system, provides an answer to cases of uncertain alternative causality. However, in all these interpretations, it is the affirmation of a position of a dogmatic- normative nature, due to the direct assimilation that takes place between the concrete problem that mobilizes it and a norm of the system. In addition to the cleavages between the authors, the majority point towards requiring that all elements of the criminal Tatbestand be completed in relation to each of the alleged offenders, meaning that the uncertainty would only reside in the causal effectiveness of the behaviors[9].

"difficultly justifiable extension of liability", given that it is not possible to apply article 344/2 CC to these situations, cf. Patrícia Cordeiro da COSTA, The damage of lost chances and its perspective in Portuguese law, Coimbra, 2010, polycopied, 99.

[8] Cf., again, Hassen ABERKANE, "Du dommage causé par une personne indéterminée dans un groupe déterminé de personnes", 516 s. Let us also remember the words of Geneviève VINEY/Patrice JOURDAIN, Traité. Les conditions, 236 s

[9] Cf., inter alia, LARENZ/CANARIS, Lehrbuch, 566 s.; Bettina WEIBER, "Gibt es eine fahrlässige Mittäterschaft?", Juristenzeitung, 53, Heft 5, 1998, 230 s.; Theo BODEWIG, "Probleme alternativer Kausalität bei Massenschäden", Archiv für die civilistische Praxis, 185, Heft 6, 1985, 505 s.; Gernhuber, "Haftung bei alternativer Kausalität", Juristenzeitung, 16, heft 5/6, 1961, 151; Some authors understand that the guilt of the participant's behavior only has to be verified (LARENZ, CANARIS), while others maintain that the illegality must also be verified (TRAEGER). Systematizing the point, see, once again, JOACHIM GERNHUBER, "Haftung bei alternativer Kausalität", 148 s.

The big difference would be the formation of the group, which could now be fortuitous, excluding, however, and also, the possibility of defending a similar solution when one of the alternative causes was not human and illicit conduct. In doctrinal terms, the construction would also appear to be disparate, because if, here, hermeneutically one seeks to access the cases capable of assimilation by the intentionality of the norm that provides as a solution the obligatory solidarity between all participants, there, there would be examine the very intentionality of the obligation in solidum, in order to be faithful to the terminology of legal systems where the idea of faute collective or the responsibility of indeterminate members who act within a determined group is used.

But the differences should not be overvalued. In fact, if, in Germany, what was at stake was the interpretation of the notion of participant for the purposes of the aforementioned article, concerns about the arbitrary extension of a norm that is exceptional would determine the establishment of a form of equivalence between the Mittätern and o Teilnehmer: a subjective relationship between the two subjects was required and ihre gemeinsame would be the foundation of solidarity[10].

The interpretation of § 830 I/2 BGB would, however, be far from reaching unanimity. Even when not all participants are responsible, that is, beyond cases in which there is only ignorance of passive legitimacy, it can be understood that the precept assimilates the scope of relevance of the case and that it applies when human behavior is linked, as a possible cause of the damage, chance (Zufall), that is, a natural fact, or the injured party's own behavior[11].

At stake would be a responsibility for possible causality. Many saw it as "a criterion so vague that it alone cannot legitimize the reversal of the burden of proof", so it would have to be "complemented through an additional relationship between the behavior and the damage – such a complement is established, by law, through the notion of participant/Begriff der Beteiligung "[12], so one would have to look at an increased form of possible causality. The criterion of the high probability of damage occurring or, better, the concrete aptitude of the behavior for producing that damage would be taken into account. To this end, and because in general it is not possible to ascertain when it exists, several criteria are developed based on groups of cases: temporal and spatial link between the behavior and the damage that follows the potential injury; degree of danger to legal assets – the higher it is, the more easily it can be argued in favor of said aptitude; harmful conformity of conduct – Schadenskonformität der Handlungen[13].

[10] Cf. Theo BODEWIG, "Probleme alternativer Kausalität", 512
[11] LARENZ/CANARIS, *Lehrbuch*, II/2, 574
[12] LARENZ/CANARIS, *Lehrbuch*, II/2, 574
[13] Novamente, LARENZ/CANARIS, *Lehrbuch*, II/2, 575, que aqui acompanhamos de muito perto.

Others saw in the concrete aptitude of the behavior to generate harm an open door to question to what extent § 830 I/2 BGB could apply when the uncertain alternative competition occurs between human conduct and chance or the behavior of the injured party. Particularly important in this regard is Bydlinski's thought[14]. The analogy with situations of cumulative causality would determine the defense

[14] Cf. BYDLINSKI, "Mittäterschaft im Schadensrecht", 412 s., speaking of a possible causality and the liberation of the injured party from the always dilemmatic test of the liability requirement. For an analysis of the criteria that materialize this possible causality, see the author's "Haftung bei alternativer Kausalität", 12 s. See also Probleme der Schadensverursachung nach deutschem und österreichischem Recht, F. Enke, Stuttgart, 1964 , 77 s. and 87; "Aktuelle Streitfragen um die alternative Kausalität", 30 s. [defending shared responsibility based on probabilities]; "Haftungsgrund und Zufall als alternativ mögliche Schadensursachen", Festschrift für Gerhard Frotz, Wien, 1993, 3 s. (considering that alternative causality is also called to testify when one of the causes is located in the injured party's sphere of risk, which is what § 1304 ABGB calls for). Bydlinski seeks to determine the importance of the concept of causality at the level of tort, for which he analyzes the role that the requirement plays within co-authorship hypotheses. Taking into account that the minimum content of the causal relationship accepted by doctrine and jurisprudence is translated by the formula of conditio sine qua non, the distinguished jurist goes through a series of situations to determine whether or not the requirement is met, despite not doubt that they establish a claim for compensation. Thus, if there are cases of co-authorship that do not prove to be particularly problematic, because the causality of the participants is not doubtful (think of the example of the thief who bypasses a fence while the other enters), there will be others in which the causal course for the damage was not made clear. It is by reference to such areas of concrete relevance that we speak of a possible but unproven causality – cf. P. 413. The majority doctrine resolves such problems by appealing to an idea of joint action (and even to a joint will that has become active, as in the case in which two thieves enter a house and, while one steals gold, the other steals silver, both being responsible for the entire damage caused). But – the author asks – "was the behavior of each agent a condition without which the damage would occur?" Now, Bydlinski tells us, "without their participation, the harmful result would have been, in many cases, the same. It would be different if the agent had not acted without the participation of the other two. But this is not the result of joint will, but must be dealt with at the level of facts. It therefore seems that the requirement of causality fails here." In other situations, in which passive participation is denoted (untätig Teilnahme – think of the case in which a thief breaks into a house, while another stays at the door watching to ensure that he is not surprised), Bydlinski, relying on the most Rumpf's old theory suggests a failure in causality (cf. p. 414), thus rejecting the theory of causality based on the non- determining condition (nicht-entscheidenden Bedingung) as the explanatory root of the legal solution. According to this position, the result would always appear without the condition, but a significant transformation would take place within it. Thus, the causality of the passive behavior of the thief who remained at the door would not be removed from the problematic horizon. Only if the latter knew absolutely nothing about the other's surveillance could it be said that both had not acted together, exonerating the accomplice's responsibility. As Bydlinski rightly notes (cf. p. 415), the thought of the non-essential condition proves to be unfounded. Borrowing the words of the jurist, "according to this theory, the harmful result must be, in any case, influenced in some way by the event (…). This can be described more or less accurately. (…) When the event is described with the inclusion of certain specificities, the circle of circumstances widens and causality can be affirmed". This means that, not only must the influence have been merely psychological, but the very same arguments that lead the authors to doubt the goodness of the configuration of the concrete result, as a salvific expedient of the conditio sine qua non, can here be called to gluing. Furthermore, the impact of psychological causality may not even be able to be calculated in deterministic terms so that, based on it, the solidaristic solution can logically be supported. Therefore, Bydlinski concludes that "responsibility is not based on proven causality that exists, but on the uncertainty of the causal situation" (cf. p. 416), and later states that "the simple suspicion of causality, the mere possibility of existing Such a nexus must be highlighted within the framework of the multiplicity of agents. And it is sufficient, in combination with the degree of negligence in the alternative causality case of § 830 I/2 BGB, to sustain compensation." Thus, the perspective that looked at the problem from the point of view of the "conscious joint action of several agents" is replaced by another point of view, culminating in the idea that each participant is suspected of causality. The problem that traditional doctrine is unable to uncover through the magnifying glass of its vision is whether or not the joint action that justified the compensation of each participant also leads to liability based on an unproven causality (cf. p. 418). Strictly speaking, the legal framework does not allow us to assuage doubts, as § 830 I/1 BGB only tells us about a multiplicity of agents who, through joint action, caused damage. The various actions are taken as an action causing damage (einerschadensursächlichen Handlung), and it is not interesting to ask what relationship each one individually establishes with the damage. According to the normative framework, it is possible to hold a person responsible when,

having not demonstrated the causality of their behavior in relation to a given damage, they acted jointly, and are therefore covered by the concept of Mittäter. Also in the case of § 830 I/2 BGB there is, in line with a certain point of view, a presumed causality (only possible causality). More than that, Bydlinski warns that there are situations in which there is no causality and in relation to which a duty to compensate for losses is still valid (as in situations where parents are responsible for their children's acts – see p. 419). In fact, there are known hypotheses in which the person is not held responsible because they adopted causally relevant behavior in the face of the damage, but due to a causality within their own sphere. Eigenen Ursächlichkeit would be replaced by Kausalität der Sphäre. But this, as the author explains, encompasses the problem of responsibility without one's own fault, that is, responsibility for someone else's act or for damage caused by things. On the contrary, when we deal with the figure of co-authors or accomplices, we are in contact with a responsibility that has at its core the personal guilt of the agent. "The co-author, and the person responsible in terms of the alternative causality of § 830 I/2 BGB, must answer not for the behavior of another, but for his own behavior", i.e. "he answers not because someone else, but because he himself acted in culpable manner", making it impossible to establish a parallel between this responsibility and that which arises from a sphere that is controlled. In the same way, we cannot find in the special danger that can result from the association of several people around the perpetration of the illicit a basis for a responsibility that is not based on causality – cf. P. 421. More continues Bydlinski. In his research path, he rules out other grounds for the solution set out in § 830 BGB. He then tells us "that it is not correct to think that each co-author desires the action of the others and must therefore be responsible for it. Anyone who wants or approves someone else's action cannot, therefore, be forced to compensate. And whoever does not want damage caused by another person, but was at the scene of the action and, being able to avoid it, omitted his duties, may, in certain circumstances, be responsible for the omission". Cf., equally, p. 425 et seq. Bydlinski proposes to investigate the relationship between the two cases, in which the mere causal possibility is sufficient (co-authorship of § 830 I/1 and alternative causality of § 830 I/2 BGB) and the normal cases of liability in which there is a need to demonstrate causality. In this context, he emphasizes that, while in cases of co-authorship (Mittäterhaftung), we may be faced with distant actions, in the case of alternative causality, we should only integrate into the participants behaviors that are appropriate to the harm (schadensadäquat). Thus, in the famous case of shooters who injure a person with a shot from one of the weapons (without being able to identify which one), the person who lent one of the weapons to one of the snipers can hardly be sued. Although he acted in a culpable and possibly causal manner, the behavior being less dangerous, he was less suited to causing the damage. Some voices argue that the concept of participation in a joint unlawful action (Teilnahme an einer gemeinschaftlichen unerlaubten Handlung) implies the presence of an intentional agent, restricting the doctrine of § 830 I/1 BGB to intentional joint action. Bydlinski uses this data to consider the relationship between subjective and objective elements within the framework of criminal construction. He asks, therefore, "why in the cases of Mittäterschaft and alternativen Ursächlichkeit is possible causality sufficient, when in cases of severe guilt and great danger it is necessary to prove it? Why are these situations treated so differently?" (p. 426). The difference cannot be found in the basis of responsibility when it is anchored in behavior that is close to that of another alleged offender, an accidental event or a co-perpetrator. The crux of the issue justifying the cleavage can only lie in the need to reject profits for the injured party (Gewinnabwehrfunktion): he can only be placed in the situation he would have been in if there had not been the injury, so the risk of accidental damage falls on yes. Taking into account two groups of cases (one in which each participant undoubtedly poses a necessary condition for joint damage; another in which the assertion of the individual's causality can only be supported by a conscious joint action and, therefore, on the influence of other participants), Bydlinski maintains that, in the first group, no special rule is mobilized (§ 840 BGB), and it is irrelevant whether the action was intentional or negligent, while, in relation to the second, the need to exist a joint conscious action, which would be the basis for each participant's responsibility for the total damage. Simply put, according to the author, this view is incorrect, and the problem should be viewed from the perspective of suspicion of causality. In short, "together with the severity of the guilt that the legal system places on those who jointly pursue illicit purposes, it is justified that all participants can be considered responsible, without there being a deeper analysis of their causality for the damage".
Cf., To this end, Erwin DEUTSCH, "Begrenzung der Haftung aus abstrakter Gefährdung wegen fehlender adäquater Kausalität? – Bemerkungen zum schadensrechtlichen Aspekt des Urteils des Hessichen V.G.H. v. 16 November 1965", Juristenzeitung, 1966, 556 s. Considering that adequacy appears as a correction to the sine qua non conditionality criterion, Deutsch states, in dialogue with Bydlinski, that the last cited author "joins adequacy and causality into a communicating whole, in which the decrease of one will be compensated by the increase of the other", thus making it viable to speak of possible causality within alternative causality. Stressing that it is "an attractive thought, dictating a solution, taking into account the proportion of danger, when it is not possible to answer with certainty that it was a result of the conduct, Deutsch adds, however, that it cannot be accepted as general foundation of criminal law (cf. p. 557). This is because, and drawing on Roxin's thought of increased risk, Deutsch maintains that, because in the civil world we are not guided by preventive ideas, it is not possible to solve the problem in this way.
See, also, LARENZ/CANARIS, Lehrbuch, II/2, 570 and 572. Questioning whether the provision of a presumption of

causality is being considered and considering that it enshrines only a reversal of the burden of proof and not an imputation completely free from the conduct, not being a specific basis for the claim. It should be noted that the authors state that "possible causality is such a vague criterion that alone it cannot legitimize the reversal of the burden of proof. It must be complemented through a supplementary relationship between the behavior and the harm – such a complement is established, by law, through the notion of participant/Begriff der Beteiligung". They then speak – cf. P. 574, of an increased form of possible causality. The criterion of the high probability of damage occurring or, better, the concrete aptitude of the behavior for producing that damage would be taken into account. To this end, and because in general it is not possible to ascertain when it exists, several criteria are developed based on groups of cases: temporal and spatial link between the behavior and the damage that follows the potential injury; degree of danger to legal assets – the higher it is, the more easily it can be argued in favor of said aptitude; harmful conformity of conduct – Schadenskonformität der Handlungen; cf. P. 575.

Considering the concrete suitability for causing damage, as mentioned, opens the door to a broader reading of § 830 I/2 BGB. Even when not all participants are responsible, that is, in addition to cases in which there is only ignorance of passive legitimacy, it is understood that the precept assimilates the scope of relevance of the case, also making it possible to question its applicability. when human behavior is linked, as a possible cause of damage, to chance (Zufall), that is, a natural fact, or the injured party's own behavior. Bearing witness to this, cf. LARENZ/CANARIS, Lehrbuch, II/2, 579.

Regarding the last aspect focused on, cf. Peter GOTTWALD, Schadenszurechnung und Schadensschätzung : zum Ermessen des Richters im Schadensrecht und im Schadensersatzprozeβ, Beck, München, 1979, 120. The author draws from participation in a feud an argument to the effect that, within the scope of the interpretation of § 830 I/2 BGB, alleviate the burden of proof on the injured party. He further advocates apportioning the damage through the analogous application of § 830 I/2 and 254 BGB to cases in which it is not known whether or not the injured party may have caused his or her own damage.

See also, and to the contrary, MEDICUS/LORENZ, Schuldrecht, Band II, Besonderer Teil, 15. neu bearbeitete Auflage, C. H. Beck, München, 2010, 428, arguing that § 830 I/2 BGB can only apply when there is no doubt regarding the right to compensation. Likewise, v. Theo BODEWIG, "Probleme alternativer Kausalität…", 512. The author teaches that § 830 I/2 BGB assimilates two distinct situations: a) cases in which it is not certain which of the participants caused the damage, but it is certain that only there is a cause; b) cases in which it is certain that all participants put forward a cause for the result and that each was appropriate for the production of the total damage, without knowing which part of this global damage should be attributed to each individual participant. It would thus encompass the situations of alternativ Kausalität and unaufgeklärte Kumulativ Kausalität (alternative causality and uncertain cumulative causality). Fundamental, in this context, is the interpretation of the concept of participant. According to the author's teaching, "the exceptional nature of the provision of § 830 I/2 BGB and the fear that a broad interpretation could lead to an arbitrary extension led to the concept of participation being interpreted in a limited way that was neither justified nor by the meaning of the letter of the law, nor by the purpose of the norm". The attempted restriction led to the establishment of a form of correspondence between the co-author and the participant – Mittätern and Teilnehmer. There would have to be a subjective set between the two alternative agents, that is, a subjective relationship between the two subjects was required and ihre gemeinsame would be the foundation of solidarity. The assumption would later be replaced by another: the requirement for an objektiv gemeinsame Gefährdung, a real nexus that allows the action to be seen as a single event. The current dominant position in doctrine supports, against the position of the BGH, considered as a remnant of the solutions predisposed by the Reichsgericht, that all those who have possibly caused the damage are participants, that is, who may have caused the damage.

See, further, p. 528 s., which addresses the problem of competition between the injured party's behavior and a natural or accidental event. The author tells us that, in all cases in which jurisprudence decided to apply § 830 I/2 BGB, the question was as to which of the various agents caused the damage in full or what degree of contribution each of them had. for the production of that. Faced with the problem, there are two dialoging perspectives: either a) it is understood that the precept should only be mobilized when the responsibility is certain on the basis, without running the risk of attributing the damage to any innocent person; or b) it is understood that the legislator accepted that the agent must also respond that possibly no damage was caused. See p. 539 et seq., for an analysis of arguments that support the attenuation of the proof granted by § 830 I/2 BGB in cases where competition occurs between human behavior and a natural cause.

Also follow the teaching of Joachim GERNHUBER, "Haftung bei alternativer Kausalität", 148 s. Speaking of a möglicher Kausalität, the author seeks to offer an interpretation of the concept of participant, which has to be dealt with within the scope of § 830 I/2 BGB. In relation to their limits, three distinct positions emerge: alongside authors who demand the illicitness of the participant's behavior (cf. TRAEGER, Kausalbegriff, 285 s.), others emerge who are satisfied with guilt (cf. LARENZ/CANARIS, op . cit., loc. cit.). For a third interpretative route, the illegality and/or guilt of the participant's behavior would not be a requirement. Thus, once the uncertain alternative

of this position, based on a form of potential causality. The position can now be considered dogmatic-systematic in nature, since it is based on an intra-systematic analogy that calls for a form of causal overdetermination with which it finds sufficient similarities beyond the differences. Even if it is proven that two or more people jointly caused the damage, there are always doubts about the real contribution of each of them to the damage. Given this step, it also becomes plausible to support the operability of the solidarity regime when the causal competition is between illicit and culpable behavior (attributable to the alleged offender) and a natural fact or any other event that falls within the sphere of responsibility of the injured. The perspective that looked at the problem from the point of view of the "conscious joint action of several agents" is replaced by another prism, culminating in the idea that each participant is suspected of causality. The evidence deficit would then be compensated by a greater requirement in terms of adequacy and could result in a compensation solution that would meet the proportion of the dangerousness of the behavior[15].

Accepting as good the perception of similarities with other situations where, strictly speaking, the proof of causality declines, the non-existence, among us, of a norm such as § 830 I/2 BGB implies an effort of additional justification, which is fulfilled in the presupposition methodologically based on a sphere of responsibility established upstream, which is updated at the moment of neglect of duties of conduct towards our fellow man. The perspective we defend, enabling the joint condemnation of agents

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concurrence of an action that was not culpable and illicit has been verified, the person who behaved justifiably would be exempt from responsibility, with the aforementioned precept of the BGB applying to the rest – cf. p.l50. Adjacent to this issue, another emerges, namely whether or not § 830 I/2 BGB should apply when the injured party is potentially self-harming (an example of this is the situation in which, in a children's game, stones were thrown), supporting the doctrine that in this case § 254 BGB (and not § 830 I/2) must be mobilized, finding here an argument to deny liability). It should be noted that the "old spirit" of the precept was called into question in a decision by the OLG Celle, commented by the author (cf. p. 151), in terms of which, despite the possible self-injury of the injured party, it was granted to a claim for compensation, reduced according to § 254 BGB, against the other participants in a stone fight. As a reason for the decision, Gernhuber tells us, we find the entry into the scene, within the framework of private law, of the thought of the Social State (Sozialstaatlichkeit).
Regarding BYDLINSKI's thought, see, among us, Adelaide Menezes LEITÃO, Norms of protection and purely patrimonial damages, Almedina, Coimbra, 2009, 694, considering that "Bydlinski brings together the elements of adequacy and dangerousness in a mobile system, in which the descent of one is balanced by the ascent of another. If there is truly proven causality of the damage, a very low level of danger is sufficient for responsibility; If, on the other hand, there is increased adequacy, that is, concrete significant danger, the causality of the damage may be reduced to a merely potential/possible causality, without excluding liability" and that "there is responsibility for possible causality in the alternative causality. It is an attractive idea to find the extent of the dangerousness. Compensation for the fact that one must answer for the uncertain consequences of a certain action. Compensation for loss and prevention are linked together in a reasonable way (the measure of prohibited danger determines the reason for imputing the damage that was uncertainly caused)". And further on he adds that "Bydlinski's doctrine manages to illuminate the twilight zone and a possible causality, even without developing a general principle in civil liability law".

[15] Cf., again, Cf. BYDLINSKI, "Mittäterschaft im Schadensrecht", 412 s., speaking of a possible causality and the liberation of the injured party from the always dilemmatic test of the liability requirement. For an analysis of the criteria that materialize this possible causality, see the author's "Haftung bei alternativer Kausalität", 12 s.; Probleme der Schadensverursachung, 77 and 87 (proposing the application of the precept when the conflict occurs between the conduct of the alleged injured party and a natural fact or the conduct of the injured party); "Aktuelle Streitfragen um die alternative Kausalität", 30 s. [defending a shared and probability-based responsibility].

in the hypothesis of uncertain alternative causality, shares a systematic-teleonomological nature. In fact, against what still seems to be the majority opinion in doctrine, we believe that it is possible to jointly condemn the offenders.

Under article 497 CC, joint and several liability is provided for in the case of multiple responsible parties. If there are two actions and two agents that meet the criminal prerequisites, it will not be difficult to conclude that the case is assimilated by the problematic intentionality of the precept. There will be hypotheses, however, in which plurality gives way to uniqueness. There, the application of the rule to cases of co-authorship, instigation or assistance in the practice of the illicit act is determined by article 490 of the same diploma. In addition to the cogent force of positive law, we have to justify the solution by the fact that there is a concertation between the agents that determines the existence of a single (and joint) harmful behavior. With each person assuming their own role, but all being decisive for the emergence of the damage, it would not make sense for only one person to be required to pay compensation. Hence, and without the exception of further explanations regarding solidarity at the level of extra-contractual responsibility, the plurality claimed by article 497 CC harmonizes with the uniqueness of behavior presupposed by article 490 CC through the unveiling of multiple spheres of responsibility, through the which will build the imputation. This means that that norm must be interpreted not in the sense of requiring physically proven plurality of illicit conduct, but in the sense of imposing the existence of more than one person responsible. This then opens the door for, in cases of uncertain alternative causality, because two or more subjects hold a sphere of responsibility, they are considered jointly responsible, except if, according to the imputation scheme outlined by us, one of them comes prove the real cause of the damage.

And if we question ourselves in this way about the possible sacrifice of commutativity, announcing announcing a responsibility for putting people in danger, we will have to conclude that it is only apparent: in risk management, the would-be offender is faced with the difficulty of proving what traditionally was understood by causal link. If it seems to be the plurality of those responsible that justify the approximation of situations, it is not based exclusively on the existence of more than one behavior that naturalistically causes the damage. There are situations in which there is only one behavior, and more than one subject is responsible for it. Now, in these cases, no one doubts that article 497 CC is applicable and, nevertheless, from the point of view of the real, there is only one behavior, although polarized into two subjects. Likewise, within the framework of joint and cumulative causality, it is often unknown what the real contribution of each of the agents responsible for the damage caused is, and, nevertheless, the solution of solidarity between them continues to be accepted. The plurality seen there has deeper roots, rooted in human freedom which, calling for responsibility, will establish

each pole of autonomy in the generating center of conduct, as a requirement for compensation. If this is the case, this means, on the one hand, that, at the level of the concrete realization of the law, the facts are not taken as mere empirical data, but that we pour over them, in a dialectic of an evaluative nature, the axiology that determines their approach; and on the other, that what was traditionally intended to be resolved with sine qua non conditionality not only appears unrealizable in this way, but also appears to be meaningless. The simple observation that the facts are not offered as neutral is such as to make it clear that only in the analogy established by the dialectical coming and going between them and the system can we capture their scope. Now, this allows us to conclude, and now returning to article 497 CC, that what is relevant is not the number of behaviors with a causal effect in naturalistic terms, but the number of spheres of risk that, with the potential to underpin responsibility – taken as a positive update of personal freedom – converge towards the same result[16]. Their comparison then becomes essential, in no way differentiating these situations from others that loom large in the alleged singularity of the event. If the epicenter of the imputation is found in the construction of the aforementioned sphere of risk/responsibility and if we delve into the foundations of the prediction of joint obligation at this level, we will see how the solution to our problems becomes clearer[17].

It is important, however, to look more closely at some obvious problems at the level of uncertain causality. In particular, we believe it is relevant to consider two particular questions. First of all, if causality is uncertain/indeterminate, what are the boundaries of the circle of obligatory solidarity? We believe that the answer to such concerns is doubly defined. Thus, only those who assume and/or increase, that is, who hold, a sphere of risk, from which the imputation is based, can only be considered "participants" in the harmful event; secondly, it is constructed taking into account, in concrete terms, a specific injury to a specific protected legal asset. Greater problems arise, therefore, in cases where the sphere of responsibility is defined in the abstract – e.g. in situations of objective liability[18]. If the

[16] Note that, first of all, the precept does not solve the problem we are dealing with: the interpretation given to it is a result of the way in which we understand the imputation issue and resolve the first segment of the so-called causal question. This does not mean that, looking at the article, we cannot, by mobilizing a series of arguments, draw conclusions that support our perspective.

[17] For further developments, cf. Mafalda Miranda BARBOSA, From the causal link to the imputation link, chaps. 8 and 11, and Civil liability: New perspectives on causal links, Princípia, 2014

[18] Consider, therefore, the problem debated between Zipursky and Geistfeld – cf. Benjamin C. ZIPURSKY, "Evidence, unfairness and market-share liability: a comment on Geistfeld," University of Pennsylvania Law Review, 156, 126 s. It could be argued that the lower value of conduct must be compensated by greater demands at the imputation level, requiring a concrete update of the abstractly designed risk sphere. Note, however, that the core of the problem here seems to be different: it is not a question of knowing who, within a specific group, harmed the owner, but of asking who intervened in the accident. It is not the alternation between agents that increases imputation doubt, but rather the complete lack of knowledge of what happened that makes the situation dilemmatic. Consider, for example, the following situation. A has his car parked and next to him B has parked another car of a different color. When A enters the vehicle, he realizes that it has been damaged. Is the fact that B parks in the space parallel to the dented car sufficient to establish the charge? The sphere of responsibility is not created by the neglect of any duty of

criterion for the solution accepted by us is not found in procedural intentionality[19] of the problem and if it is not derived from any legal norm, then we are free from the dogmatic densification of a group that is created around a so-called causal uncertainty.

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Furthermore, it is important to question to what extent the liability solution based on potential causality is or is not applicable to hypotheses in which evidentiary doubt results from the conflict between the behavior of the alleged offender and a natural cause[20-21]

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care in relation to others, but by the effective control of the vehicle. Simply, participation in the accident must be proven. Especially because we are in a field where the injured driver also has the same sphere of risk. Otherwise, objective imputation would have no limitation.

This is not to be confused with the need to prove that both the real cause of the damage and that the behavior of the alleged injured party were conditio sine qua non of the damage. Once the elements are presented that provide the judge with a concrete outline of what occurred – that is, the harmful event – the functional relevance of the damage to the outlined sphere of responsibility is sufficient for the judgment to be affirmative. However, here, as we are within the framework of objective liability, we do not qualify the harmful event as a simple injury to the absolute subjective right, having to present the accident itself as a disturbing element that updates the previously assumed sphere of responsibility.

[19] Cf., novamente, Mark A. GEISTFELD, "The doctrinal unity of alternative liability and market-share liability", 447 s.

[20] It should be noted that, in a specific situation, it is possible that, in addition to the concurrence of two human behaviors or activities, a natural cause contributes to the production of the damage, increasing the degree of uncertainty.

The complexity of problems can also increase when uncertainty in relation to the offender is accompanied by uncertainty in relation to the victim. Strictly speaking, this uncertainty on the side of the injured party results in causal uncertainty, since what is at stake is knowing whether the putative injured party caused the damage or whether it originated from other types of causes, namely natural causes.

For an awareness of the specificities denoted by the famous cases of mass damage, cf. THEO BODEWIG, "Probleme alternativer Kausalität bei Massenschäden", 543: in them the one-dimensional relationship between injured parties and injured parties (eindimensionele Beziehung zwischen Geschädigten und Tätern) is replaced by a multidimensional relationship (mehrdimensional), in its double uncertainty – for each injured party many alternatives arise injuries (alternativ mehrere Täter); For each agent, many injured alternatives emerge (alternativ mehrere Geschadigte). In other words, it must be taken into account that, in many cases, the alternative Täterschaft of § 830 I/2 BGB becomes more complex through an alternative Opferschaft (relating to victims). Since this is not the point we have indicated, it is still important to consult the work cited.

See also Pier Giuseppe MONATERI, "I mass tort: dalla rc al contratto politico", Responsabilità civile e previdenza, 1/2003, 13 s. (considering that the big problem with mass torts involves the structure of the case itself, which abandons the typical scheme of reference in which A causes damage to B regarding his assets, giving rise to a very long, very dispersed relationship, in which it is difficult return to the injured party the possible consequences that the author invokes in court. Furthermore, the damage is diffuse, and may be a damage to society itself in its complex, with many small damages fragmented by different subjects. Situated "outside the pre -normal understanding inherent to the model of responsibility", these cases present, according to the author's teaching, four essential characteristics: diffusion of the damage, unpacking of the temporal contiguity between the action of the injured party and the damage of the victim, essential problematicity of the causal link, normal inability of the injured party's assets to face liability.For MONATERI, civil liability may, in fact, not be the best remedy, from the point of view of efficiency, to manage a situation like this. It should be noted that, against what many authors testify, and against what was explained by us ab initio, the Italian jurist considers that the causal link rarely appears dilemmatic, so this would be a particularity of mass torts, where the problematicity of the assumption looms large. See also, p. 16, where the typology of mass torts in American doctrine is presented: singular events that simultaneously cause multiple victims (such as air disasters); catena injuries, in which a simple product causes, with a dilated temporal arc, damage to a plurality of distant and unconnected subjects; incidents that cause harm to people or things in a certain area.

[21] Thus, "if the toxicity of polluting waste from an industry increases the rate of cancer in the population, a defect is

Starting from the specific case, in order to highlight it in the light of what must be, we considered it to be the construction of the risk sphere and not the discovery of the real cause that justifies the imputation, which does not prevent the injured party, who thus assumes the risk of an almost presumption that falls upon you, may show that no intervention was involved in producing the injury. With this, we ensure that situations in which the right to compensation would be diminished due to the failure of the but-for test are safeguarded, leaving the burden of identifying the true perpetrator of the violation to the putative victims.

The position defended here, which promotes very important solutions in judicial practice, is dependent on the way we understand the causal problem, or better said, imputation. Let us therefore remember the model proposed by us and already announced on the previous pages.

Responsibility, as we conceive it, is no longer understood exclusively from a dogmatic point of view, but rather from an ethical-axiological point of view[22]. This is a methodological requirement: when interpreting a norm or legal institute, we must refer it to the case and the normative principles in which it is praised. Now, the principle we are confronted with is the principle of responsibility, which calls into consideration the idea of a free and responsible person, absolutely different from the dissolute and solipsistic individual. The person, when acting, because he is free, assumes a role responsibility, having to, in the encounter with his fellow man, fulfill a series of duties of care. Two hypotheses are, then, in theory, viable: either the person acts invested in a special role/function or is part of a concretely defined community of danger and, in this case, the sphere of risk capable of supporting the imputation judgment is designed a priori; or the sphere of risk/responsibility it embraces is not sufficiently defined to guarantee the correctness of that judgment. Therefore, there is a requirement that there be an increase in risk, which can be proven, precisely, by the neglect of those duties of care (traffic duties). These fulfill a double function. On the one hand, they allow guilt to be revealed (there must, for this purpose, be predictability of the injury and demandability of the opposite behavior having the average man as a referent); on the other hand, they support the imputation judgment by defining a circle of responsibility,

established, as well as the damage and the causal link. However, at the level of causality, if it is certain that causality caused the attacks, each individual attack is not certainly caused by the defect, since certain diseases come from other factors." – cf. Christophe QUÉZEL-AMBRUNAZ, Essai sur la causalité, 430. The author calls the theory of the indeterminate victim into consideration, but considers that it does not respect the principles of causality. According to her, if there are 110 victims out of 100, this means that only 9% of the total number of victims owe their illness to exposure. Therefore, victims must be compensated for 9% of their loss, corresponding to the probability of the disease resulting from said exposure. In opposition to this doctrine, Quézel-Ambrunaz maintains that, "in situations where the victim is undetermined, the judge must look at the question of the certainty of the causal link in relation to each victim with the help of the evidence available to him, but not may, under no circumstances, only award partial compensation".

[22] Cf., for further developments, Mafalda Miranda BARBOSA, From the causal link to the imputation link, 890 s. and 1130 s., as well as the other bibliography cited there and which we consider reproduced here. We revisit some of the conclusions we reached in that investigation.

from which it is necessary to subsequently determine whether or not the damage belongs to its core. Culpability should not be confused with "causality". The epicenter of the objective imputation may reside in the established subjective imputation, without, however, the two levels being confused. They condition themselves dialectically, it is true, without going so far as to identify with each other. The dialectical conditioning that we are aware of involves the repercussion of the scope of relevance of guilt in terms of objective imputation. That is, from the moment the agent acts intentionally, leading a sphere of risk, the demands communicated based on what was traditionally understood as the causal link are attenuated. Furthermore, although predictability is relevant at this level, its reference point will be different. Thus, the predictability of a cure must be understood as knowability of the harmful potential of the sphere of risk that it assumes, generates or increases. It does not have to refer to all damage events. In particular, it will not have to refer to subsequent damages or those resulting from the worsening of the first injury. Therefore, when we affirm that, at the level of the first type of illegality, guilt must refer to the result, we follow, among others, authors such as Lindenmaier, Von Caemmerer or Till Ristow, to maintain that the predictability that shapes guilt must retreat , at its reference point, until the moment of construction of the risk sphere that becomes the holder. Thus, for there to be an objective imputation, the assumption of a sphere of risk must be verified, where the judge's first task will be to look for the germ of its emergence. Therefore, in principle, all damages that have their roots in that sphere are attributable to him, from which, a priori, we can establish two poles for revealing the attribution: a negative one, excluding liability in cases in which the damage is shows impossible (impossibility of damage), either due to lack of object, or due to unsuitability of the environment; another positive, affirming it in situations of increased risk. Attribution is excluded when the risk was not created (non-creation of the risk), when there is a reduction in risk and when a fortuitous event or force majeure occurs. Furthermore, it is necessary to consider the problem relating to alternative lawful behavior and, even if in the question of the functional relevance of the violation of the right to the sphere of responsibility that arises and assumes this is wider than the circle defined by guilt, it is necessary to take into account, in the imputation judgment, an idea of controllability of the real data by the agent, understood in the sense of the avoidability of the harmful event, which excludes the possibility of compensation for damages resulting from fortuitous events or cases of force majeure.

In a second moment, we will have to operate a comparison with this sphere of risk with other spheres of risk, opening the second level of the "causal" inquiry of the model we have built. This second level will take place after it is established that the damage-injury belongs to the core of the built sphere. To do so, there must be a possibility of damage and that it must be part of the events that should

be avoided by fulfilling the duty. Only then does it make sense to compare the sphere of potential harm with other spheres of risk/responsibility.

Contemplating, prima facie, the general sphere of risk in life, we will say that the imputation should be refused when the fact of the injured party, although creating a sphere of risk, only determines the presence of the offended good or right at the time and place of the injury. . Comparison with the natural risk sphere allows us to predict that it absorbs the risk created by the agent, as it is always present and broader than the former. The question that guides us is: is a harmful event of the type that occurred distributed in a substantially uniform way in that time and space, or, in a more simplistic way, is it or is it not a risk to which everyone – indifferently – is at risk? exposed?

Confrontation with the sphere of risk held by the injured party is equally necessary. At this level, the traditional hypotheses of the existence of a constitutional predisposition of the injured party to suffer the damage are considered. Dealing with the issue of the injured party's constitutional weaknesses, two hypotheses are possible. If they are known to the injured party, the attribution is generally asserted, except if it is not reasonable to consider that he is, due to this special knowledge, invested in a guarantor position. If they are not known, then the consideration must be different. Starting from the contemplation of the sphere of risk created by the offending party, it will be said that, by acting in contravention of the traffic duties that impose on him, he assumes responsibility for the damages that occur there, so he will have to bear the risk of come across an injured person with idiosyncrasies that worsen the injury perpetrated. However, imputation will be excluded when the injured party, in the face of such atypical and profound weaknesses, should assume special duties towards himself.

The same value structure is mobilized when it is not a constitutive dimension of the injured party that is at stake, but rather his conduct that allows for the erection of a sphere of responsibility, so that, also in cases of behavior not conditioned by his biopsychism, the solution reached by comparison referred to can be intuited, in systematic terms, from the consideration laid out here. In these cases, it is necessary to determine to what extent there is or is not free action on the part of the injured party that invokes an idea of self-responsibility for the injury suffered. The reasoning adopted regarding his constitutional weaknesses is no different, so much so that the imputation is only denied when there is an omission of certain duties that burden us as people to safeguard ourselves.

It is not surprising, therefore, that legal thought – especially cross-border legal thought – has defined the criterion of provocation as a guiding criterion for decision-makers. Ideas such as self-placement at risk or hetero-placement at consented risk also become operative at this level. Equally

relevant will be the criteria of authority and information deficit. This means that, in those situations where there is a duty to provide information that is ignored, the risk that would be incurred by the injured party can be claimed by the injured party, who thus becomes responsible for it. This is what happens, for example, in the case of liability for violating the rules of informed consent, but it is also what happens when the financial intermediary violates its information duties, thereby conditioning the acquisition of a financial product by the investor, which turns out to be a disastrous investment. The criteria are also relevant in cases of dissemination of information by well-known or influential people in an area of activity.

If there is free action on the part of the injured party, we have to see to what extent the duties that burdened the injured party were or were not aimed at obviating the injured party's behavior. With this in mind, as well as the seriousness of each one's actions, we will be able to know which sphere of risk absorbs the other or, alternatively, whether a competition should be established between the two.

The comparative judgment initiated and justified is not significantly different from the fact that the ownership of the second sphere of risk, concurrent with the former, is headed by a third party. The triangular problematic assumption to which we refer implies a prior imputation allocation, since it involves, downstream, determining that his behavior is not a simple means or instrument of action by the first offender. Hence, after all, what is at stake is the distinction between mediate authorship and a true concurrence of spheres of risk and responsibility, reminding us of Forst's lesson, although we do not fully accept it. The second agent, who effectively causes the damage suffered by the injured party, does not have absolute control over his will, either because there was an inducement to commit the act, or because another type of behavior was not required of him, given the conduct of the first agent (the our injured party, to whom we want to attribute the injury). In this case, either the latter appears as a mediate perpetrator and is responsible, or the subsequent harmful conduct is still within the sphere of responsibility established by him and the imputation cannot be denied either.

Greater problems arise, therefore, when there is free action on the part of the third party that leads to damage. There are some aspects that need to be taken into account. From the outset, we must know whether or not the traffic duties that color the sphere of risk/responsibility headed by the injured party had the immediate purpose of obviating the behavior of the third party, as, in this case, the affirmative answer to the imputation question becomes liquid. If there is no such purpose, the judgment will have to be different. The confrontation between the circle of responsibility designed by the injured party and the circle held by the third party – regardless of whether, specifically, the remaining criminal requirements are met – becomes urgent and leads the deciding jurist to consider whether or not there is consumption of one by the other. In other words, the gravity of the third party's behavior may be

such that it consumes the responsibility of the first injured party. But, instead, the obliteration of the duties of respect – duties to avoid the result – by the first injured party, leading to the update of the sphere of responsibility downstream, may imply that the injury perpetrated by the third party is attributable to the third party. As relevant factors for weighing both hypotheses, we find the intentionality of the so-called interruptive intervention and the level of risk that was assumed or increased by the injured party. Between the two, due competition can also be established[23].

The consequences of the proposed understanding are clear. In addition to the advantages in obtaining a response that is sought to be normatively founded and materially fair, they are projected in terms of sharing the burden of proof (understanding, from here on, that the injured party has to prove the occurrence of the harmful event and the involvement of the injured party's behavior in the history of the emergence of the damage. But no more. In fact, when treated as an attributional issue, causality becomes understood as a normative issue, therefore dependent on a judgment of the judge) and in matters of what was previously understood as conditionality. In fact, to verify the involvement of the harmful event in the history of the emergence of the damage, we do not have to resort to any test based on conditionality, it results in pure conditio sine qua non, or it brings us closer to a but-for test or a NESS-test mentioned in Anglo-Saxon doctrine and jurisprudence. On the contrary, we can reach the conclusion that the idea of conditionality, as a judgment prior to causality, is dispensable at this level, with all the consequences that we understand when we deal with hypotheses of uncertain alternative causality.

CONCLUSION

The case decided by the Ac. TRL of 10-9-2019 (Proc. nº922/15.4T8VFX.L1-7)[24] did not allow the problematization of uncertain alternative causality, through effective proof of the lack of causality between the presence of legionnaires' bacteria in one of the refrigeration towers and the disease that occurred. It is important, however, to emphasize that, if the level of concentration were capable of generating the infection – that is, if the requirement of the suitability of the medium to which we referred was met – the issue would have to be resolved. Without this preventing the owner of the second tower from being able, specifically, to prove that he did not cause the damage or to offer proof of the actual cause of the infection. If this hypothesis were to come to fruition, there would no longer be joint and several liability, imposing the compensation obligation on only one of the subjects.

[23] For other developments, cf. Mafalda Miranda BARBOSA, *Do nexo de causalidade ao nexo de imputação*, cap. 8
[24] Rapporteur: Higina Castelo

REFERENCES

ANTUNES, Henrique Sousa. **Responsabilidade civil dos obrigados à vigilância de pessoa naturalmente incapaz**, UCPE, Lisboa, 2000, p. 270.

BARBOSA, Mafalda Miranda. **Do nexo de causalidade ao nexo de imputação**: Contributo para a compreensão da natureza binária e personalística do requisito causal ao nível da responsabilidade civil extracontratual. Princípia, 2013.

FONSECA Ana Maria Taveira da. **Responsabilidade civil pelos danos causados pela ruína de edifícios e outras obras, Novas Tendências da Responsabilidade Civil**. Almedina, Coimbra, 2007, p. 126 s.

CORDEIRO, Menezes. **Da responsabilidade civil dos administradores das sociedades comerciais**. Lisboa: Lex, 1997, p. 469.

PROENÇA, Brandão. **Balizas Perigosas e responsabilidade civil** – Ac. do STJ de 26.2.2006, Proc. 3834/05", Cadernos de Direito Privado, nº17, 2007, p. 32.

SILVA, Calvão da. Causalidade alternativa. **L'arrêt DES. European Review of Private Law**, 2, 1994, p. 465.

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