http://dx.doi.org/10.18623/rvd.v15i33.1351

OCCUPATIONAL ENVIRONMENTAL RISKS AND THEIR LEGAL PROTECTION

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ABSTRACT

The sophistication of the risks arising from the current stage of industrial development combined with the dismantling of the labor system in the global society increases the relevance of the issue of occupational environmental risks, insofar as the prevention of labor accidents depends on compliance with environmental norms directed to evaluation, control and management of these risks. In the Federal Constitution of 1988, the employer's duty to promote the reduction of occupational environmental risks is cumulated with the obligation to pay compulsory insurance against labor accidents, at the expense of social insurance, without excluding civil liability. Brazilian law follows the trend of socializing labor risks, using the insurance technique, in order to guarantee a basic indemnity by the collectivity based on the average salary of the worker. The same logic of reparation pricing was adopted by the labor reform when setting limits for compensation of moral damage.

Keywords: Risk Society. Working environment. Occupational environmental risks. Legal Protection.

RISCOS AMBIENTAIS LABORAIS NA SOCIEDADE GLOBAL E SUA PROTEÇÃO JURÍDICA

RESUMO

A sofisticação dos riscos advindos do atual estágio do desenvolvimento industrial combinada com a desestruturação do sistema trabalhista na sociedade global aumenta a relevância da temática dos riscos ambientais laborais, na medida em que a prevenção de acidentes do trabalho depende do cumprimento de normas ambientais direcionadas à avaliação, controle e gestão desses riscos. Na Constituição Federal de 1988, o dever do empregador de promover a redução dos riscos inerentes ao trabalho é cumulado com o dever de arcar com o seguro obrigatório contra acidentes laborais, a cargo do seguro social, sem prejuízo da responsabilidade civil. O direito brasileiro segue a tendência de socialização dos riscos no trabalho, utilizando-se a técnica do seguro, por meio do qual é garantida uma indenização básica pela coletividade, com valores tarifados a partir da média salarial do trabalhador. A mesma lógica da tarifação da reparação foi adotada pela reforma trabalhista ao fixar limites para indenização do dano extrapatrimonial.

Palavras-chave: *Sociedade de risco. Meio ambiente do trabalho. Riscos ambientais laborais. Proteção jurídica.*

INTRODUCTION

The theme of risks gained prominence in the social and juridical field from the contribution of the German sociologist Ulrich Beck, author of the work *Risk Society: Towards a New Modernity*, 1986. According to this author, industrial society, in the period known as the *first modernity*, characterized by the production and distribution of goods, by the confidence in the progress and the scientific and technological development, by the search for full employment and by the control of nature, evolved to the *society of risk* in the so-called *second modernity* phase, in which the development of science and technology does not guarantee control of the ecological, chemical, nuclear and genetic risks produced at the most advanced stage of the productive forces.

Beck argues that social scientists, faced with the evolution and universalization of the risks of modernization, must position themselves critically in the face of the threats caused by the natural sciences and the modernization process, shaped and directed by economic forces, science and technology and legitimized by political and legal bodies. Consequently, the natural sciences are of political importance, since the safety and health of people depend on greater knowledge about the risks inherent in the most diverse aspects of scientific work.

Taking into account some aspects of the theory of risk society, notably as regards the consequences of the risks generated by the current phase of modernity on the environment and labor regulation, this article has been divided into three parts and will address, in the first, the work environment in the global risk society; the second, the environmental labor risks under Brazilian legislation; and, third, the theoretical foundations for the institution of insurance against accidents at work, without prejudice to the civil liability of the employer.

From a legal point of view, the main reference for the subjects covered is the constitutional guarantee of cumulation of the duty also imposed on the employer to prevent accidents at work, reducing *risks* by complying with health, hygiene and safety standards [CF/88, art. 7, XXII], with the obligation to cover compulsory insurance without excluding civil liability (CF/88, art. 7, XXVIII].

The methodology used was the bibliographical review, developed from the bibliographical research oriented to the specialized literature in

national and international scope, having adopted the deductive method.

1 THE ENVIRONMENT OF WORK IN THE GLOBAL RISK SOCIETY

A society of risk is understood as the *stage of modernity* characterized by the *threats produced up to that time in the path of industrial society.* (BECK; GIDDENS; LASH, 1997, p. 17) The reflexivity of modernity, *on the other hand, consists in the fact that social practices are constantly examined and reformed in the light of renewed information about these practices.* All aspects of human life, including technological intervention in the material world*,* are subject to revision.(GIDDENS, 1991, p. 39)

In the evolving of the reflections involving postmodernity, an expression that designates a sociol-historical context, which is based on critical reflections on the overcoming of the paradigms instituted by Western modernity, the theoretical construction of the *risks* was preceded by the thought about the *dangers* from the technological civilization expressed in the 1979 work of Hans Jonas [1903-1993], German philosopher, who argues for a duty to the future humanity, or a duty of responsibility towards posterity, since *the dangers that threaten the future way of being are, in general, the same ones that, on a larger scale, threaten existence, so avoiding the former means avoiding others.* (JONAS, 2006, p. 91-92).

The distinction between *hazards* and *risks* is deduced by Beck (2003, p. 113-115) from a historical point of view.He maintains that the *dangers are present at all times when we are unable to interpret the threats as conditioned by man, that is, as conditioned by human decisions.* These threats are seen as *a collective destiny imposed by natural disasters or as punishment of the gods etc. and, as such, are considered unavoidable.* It asserts that the concept of risk was constructed in the attempt of a civilization to *foresee the unforeseeable consequences of the decisions taken, to control the uncontrollable, to subject the side effects to conscious preventive measures and to the appropriate institutional arrangements.*

Beck (2011, p. 49-53) warns that many risk industries have been relocated to countries with cheap labor. In such countries, like nations in Asia and Latin America, such as India, Sri Lanka, Trinidad Tobago, and

Brazil, protection and security regulations have not been sufficiently developed. The local population, with little education, is not able to recognize and protect itself from the risks caused by the industrial activity of these companies, which in the face of a lack of safety regulations, transfer, with a clear conscience and low costs, the*responsibility for accidents and death cases to cultural "blindness" of the population in relation to risks.* Beck concludes that the poverty of these countries *adds to the horror of the impetuous destructive forces of the advanced industry of risk,* but warns of what he calls *the boomerang effect*, through which the effects of the empoverish of risks end up infecting the rich countries that reimport the cheap food contaminated by pesticides used in peripheral countries.

It points out that environmental problems are - *in the origin and in the results - social, human problems, in their history, their living conditions, their relationship with the world and reality, their economic, cultural and political constitution.* (BECK, 2011, p. 99).

Beck (2011, p. 205-218) also addresses the effects of ongoing transformations in society on the employment system, giving rise to what he calls the *scamming of wage labor*, through liberalizations of three pillars of support - labor law, place of work and working day - which promote the spread of flexible and plural forms of underemployment. The flexibility of the place and the work day, at least in some sectors [administration, office, management, service], occurs through the spatial organization of work by electronic means, such as electronic work at home, and in a decentralized manner, diffuse and independent.

In addition, with the advancement of information technology, social and legal changes in the employment system are introduced in labor law [temporary contracts, shared work, custom work, part-time work, work leasing], threatening the continuity of current employment system. In this new scenario, he warns that the gains of autonomy obtained by workers with spatial flexibility are combined with the *privatization of the risks that the work offers to physical and psychological health,* as transcribed below:

> *[...] Nor do workplace safety standards escape public control over decentralized forms of work, and the costs of disregarding or suspending them are transferred to workers (just as companies end up saving the costs of the central organization of wage labor, to the protection of electronic equipment).* (BECK, 2011, p. 209)

The structural change in wage labor is consummated in the following transition process:

> *[...] a unified socio-industrial system of full-time, life-long, factory-organized work associated with the looming imminence of unemployment towards a decentralized, risk-punctuated system of flexible and plural underemployment [...]* (BECK, 2011, p. 209)

Thus, it reveals a process of erosion of the old and development of a new labor system. The old system, which developed from the beginning of the twentieth century, was characterized by the adoption of three managerial innovations: the use of *Taylorism* in the factories, an administration model developed by the American Frederick Taylor, which advocates the division of labor by tasks, aiming at increasing operational efficiency; the expansion of the use of electricity, with all its new possibilities for the productive system; and the use of organizational techniques to *balance the centralization and decentralization of large*, *spatially dispersed enterprises*, so that potential and effective productivity gains were obtained at this early stage *through the rationalization of information, technology and organizational management*. (BECK, 2011, p. 213)

The new labor system, in turn, is characterized by a complete *reversal of the previously valid "managerial philosophy"*. This is due to the replacement of labor in the industrial sector by automated production equipment, *resulting in supervision, direction and maintenance tasks concentrated in a few jobs with a high level of technical qualification*. (BECK, 2011, p. 214)

At the same time, in the service sector, there is a *metamorphosis of labor relations, from full-time to part-time schemes*. Thus, companies can flexibly assess the volume of work required by orders and transfer part of the employer's risks to workers in the form of part-time underemployment. In this new system, labor relations are not based on the combination of work and machine, *but on the temporal limitation, in the legal (un)safety and contractual pluralization of the use of labor*. (BECK, 2011, p. 214)

Beck (2011, p. 217) points out that it is not possible to *make any prognosis about which sectors of the industrial society's labor system*

will be affected by this substitutive process or which will be spared, but warns that the new system of plural and flexible subemployment and decentralized forms of work will surely bring productivity gains, which gives you a certain advantage over the previous system.

This is because, according to the perspective adopted in his theory about the self-subversion of the sociol-industrial system in its most advanced evolutionary phase, the *continuity and cessation of social development intertwine, they condition one another: continuing to prevail* the *logic of a profit-oriented rationalization*. (BECK, 2011, p. 217)

It is noted that the most advanced evolutionary phase of the capitalist sociol-industrial system is linked to the progress of the globalization process, hence also *the global risk society*.

Globalization, in a generic way, corresponds to the process of intensification of economic, social, political and cultural interactions in the last three decades.

In the definition of Santos, B. (2011, p. 11) globalization:

> *[...] is a complex process that crosses the most diverse areas of social life, from the globalization of the productive and financial systems to the revolution in information and communication technologies and practices, the erosion of the national state and the rediscovery of civil society to the increase of exponential growth of social inequalities, large cross-border movements of people as migrants, tourists or refugees, the role of multinational corporations and multilateral financial institutions, new cultural practices and identities of globalized consumer styles.*

For Giddens (1991, p. 65), economic globalization is one of the four dimensions of globalization, understood as the intensification of relations of production in the capitalist world economy, with the other three dimensions involving the military order, the nation-States and the international division of labor. This fourth dimension concerns industrial development based on divisions of work, not only division of labor, but also *regional specialization in terms of industry type, training and production of raw materials*. As a consequence of this process, *changes* occurred *in the global distribution of production, including the de-industrialization of certain regions in developed countries and the emergence of the "Newly Industrialized Countries" in the Third World.* (GIDDENS, 1991, p. 70)

Giddens (1991, p. 71) also warns of the negative effects of the current phase of industrial development on the environment and people's health, particularly those involved in the production process, because new technologies affect not only production, but also the relation of the man with the working environment. He points out that the *diffusion of industrialism has created "a world" in a more negative and threatening sense than what has been mentioned - a world in which there are actual or potential ecological changes of a harmful type that affects everyone on the planet. [...]*

In the theoretical perspective of globalized risk society, Bedin (2010, p. 20-21) addresses the new risks that affect the work environment:

> *The greater flexibility with the means of production brought about by the development of microelectronics and the new communication technologies related to the globalization process of the economy also had effects on workers' health. On the one hand, the worker was exposed to a greater variety of products and environmental conditions of the processes in alternating times and frequencies and subject to a greater occurrence of accidents due to frequent changes of products and processes. On the other hand, the communication of international trade and its competition have created new requirements, new concepts, new values and commitments for governments, companies, unions and consumers in general, creating an awareness of concern and preservation of the environment in all its forms, including work and no longer thinking about an individual in isolation.*

The sophistication of the risks arising from the current stage of industrial development combined with the de-structuring of the labor system increases the relevance of the issue of occupational environmental risks, to be dealt with sequentially, since the prevention of accidents at work depends on compliance with environmental standards aimed at the evaluation, control and management of these risks.

2 LABOR ENVIRONMENTAL RISKS IN BRAZILIAN LEGISLATION

According to Sirvinskas (2008, p. 38), *Environmental Law is transmigrating from the Right of Damage to the Right of Risk*, which means

that it *must act more intensely in the preventive sphere, since reparation of damage can not always reconstitute the degradation*.

In the definition of Brilhante (2004, p. 39-40), environmental risk is what *occurs to the environment, whether internal environment - in the case of an industry, for example - or external*, and can be classified *according to the type of activity (explosion, continuous discharge); exposure (instantaneous, chronic); probability of occurrence; severity, reversibility, visibility, duration and the ubiquity of its effects.*

Brilhante (2004, p. 37-41 and 51) makes it clear that eliminating all risks is impossible, so the best thing to do at first is *risk assessment in* order to make *risk management* viable. The risk assessment is defined as the identification of the hazard, the location of its causes, the estimation of the extent of its damage and the comparison of these with the benefits. If it can be assumed that the benefits outweigh the risks for most people involved in the activity, the risk is considered *acceptable*. In this sense, the author cites as an example the inherent risk of air transport, since, based on the number of flights and accidents with victims per year, the estimated probability of a harmful event is considered acceptable and the means of transport considered safe. On the other hand, it exemplifies that asbestos fiber or asbestos can cause fatal lung disease, affecting mainly factory workers who use such fiber in the composition of their products, such as tiles and brakes, so the annual probability of deaths, in this case, even if it is considered small, should not be considered acceptable.

Risk management is the process that includes selection and implementation of preventive and most appropriate protective measures, based on the results of the risk assessment process, the available control technology, the cost-benefit analysis and cost effectiveness, the acceptable risk and concerns about possible environmental impacts.

From the perspective of risks to the internal environment, Brilhante (2004, p. 44) points out that protecting the work environment must be a *common and permanent objective of all sectors of the company*, contemplated in priority actions *and translated into environmental health and safety throughout all industrial operations, with effects on selected raw materials, products, processes, facilities and work practices.*

In order to achieve this, it is indispensable that there be perception of the environmental risks and impacts arising from the activity of the

company.

The Federal Constitution confers on workers the right to reduce the *risks* inherent to work by means of health, hygiene and safety standards [art. 7, XXII].

Brazilian labor legislation [CLT, art. 155] conferred on the Ministry of Labor the competence to establish complementary norms for the application of the legal precepts, which resulted, from Administrative Rule MTb No. 3.214, of June 8, 1978, in the approval of the Regulatory Norms [NRs], which were drafted mainly based on the guidelines on health and safety at work emanating from the conventions of the International Labor Organization [OIT].

NR-9 establishes the obligation for all employers and institutions that admit workers as employees to prepare and implement the Environmental Risk Prevention Program [PPRA], in order to preserve the health and integrity of workers through anticipation, recognition, evaluation and consequent control of the occurrence of existing and/or capable of existing environmental risks in the work environment, taking into account the protection of the environment and natural resources [item 9.1.1].

Physical, chemical, biological, ergonomic and mechanical agents that exist in work environments are considered *as occupational environmental hazards* that, due to their nature, concentration or intensity and time of exposure, are capable of causing harm to the health of the worker. As a rule, the prediction of mechanical and ergonomic hazards is not mandatory in the PPRA [item 9.1.5].

Physical agents are the various forms of energy to which workers may be exposed, such as noise, vibration, abnormal pressures, extreme temperatures, ionizing radiation as well as ultrasound and infrasound [Item 9.1.5.1].

Chemicals agents are substances, compounds or products that can enter the body through the respiratory route, in the form of dusts, fumes, clouds, mists, gases or vapors, or by the nature of exhibition activity, may have contacts or be absorbed by the body through the skin or by ingestion [item 9.1.5.2].

Biological agents are bacteria, fungi, bacilli, parasites, protozoa, viruses, etc. [Item 9.1.5.3].

While the *ergonomic agents* are provided for in NR-17 and consist of the set of parameters that must be studied and implemented in order to allow the adaptation of the working conditions to the psychophysiological characteristics of the workers in order to provide maximum comfort, safety and efficient performance in the work environment [item 17.1].

Examples of ergonomic agents are: monotony at work, body position, rhythm and work day, repetitive work, sleep, fatigue, excessive concentration, characteristics of furniture and tools, conflicts, among others. Ergonomic agents can generate psychological and physiological disturbances and cause serious damage to workers' health because they produce changes in the body and emotional state, compromising their productivity, health and safety. The application of knowledge of ergonomics allows the necessary adjustment between the man and the working conditions under the aspects of practicality, physical and psychic comfort.

The *mechanical agents* originate from mechanical activities involving machinery and equipment responsible for the appearance of injury to workers upon the occurrence of accidents. Mechanical hazards are very diverse and may be present in defective tools and equipment, unprotected machinery, improper handling or storage of machinery or materials, heated materials [causing burns], puncture-causing materials, materials or installations energized [causing shocks], among others.

NR-9 states that the PPRA's actions must be developed within the scope of each company's establishment, under the responsibility of the employer, with the participation of the workers, and its extent and depth depend on the characteristics of the risks and the control needs [item 9.1.2].

The PPRA is an integral part of the company's broader set of initiatives to preserve the health and physical integrity of workers, and should be articulated with other NRs [item 9.1.3], in particular with NR-4, which addresses of the Specialized Service in Safety Engineering and Occupational Medicine [SESMT], the NR-5, which provides for the Internal Commission for the Prevention of Accidents [CIPA] and NR-7, which establishes the Medical Health Control Program Occupational [PCMSO], mechanisms aimed at promoting health and protecting the physical integrity of workers.

In the elaboration and development of prevention actions in

health and safety at work, these NRs must be fulfilled in an integrated way. The NR-4 specifies the size of the technical personnel. The NR-5 measures the representation of workers in the labor risk management process, through the CIPA. The NR-7 focuses on the ability of workers to face hazards in the workplace. NR-9 outlines the standards for the elaboration and implementation of the PPRA, which integrates all the data collected in the other NRs of the group.

Specific environmental programs for certain economic activities, which involve higher risk and high accident rates, should also be developed and implemented in conjunction with the NRs cited, such as the Work Environment and Conditions in the Construction Industry Program - PCMAT [NR18, item 18.3.1.1], and the PPRA of slaughter houses and meat processing refrigerators [NR-36, item 36.11.6, letter*b*], which must also observe the ergonomics norms of NR-17 [item 36.12.1].

The preparation, implementation, monitoring and evaluation of the PPRA may be done by SESMT or by a person or team of persons who, at the employer's discretion, are able to develop the provisions of NR-9 [item 9.3.1.1].

It is the employer's responsibility to establish, implement and ensure compliance with the PPRA as a permanent activity of the company or institution [item 9.4.1].

On the responsibility of the employer, as the main maintainer of the work environment, explains Zimmermann (2012, p. 75-76):

> *Employers are responsible for the detection and evaluation of risks arising from the development of their activities, whether they are inherent or acquired through the chosen mode of production; the preventive and precautionary actions aimed at the treatment of risks; the implementation of collective protection equipment (EPCs) and the provision, in the last case, of PPE with the proper orientation and supervision of its effective use by employers; informing workers of the risks they are exposed to and training for the development of the activity in order to reduce risks and finally, scheduling emergency measures to be used in the event of individual or collective damages.*

In drawing the distinction between *inherent* and *acquired* labor environmental risks, the author asserts that all occupational activities

generate some risk, some of which are more pronounced than others. Activities framed as typically dangerous, such as those involving permanent contact with flammable, explosive or electrical energy, carry *inherent risks*, which must be reduced *to the limits permitted by the current stage of the technique, only exempting the maintainer of the work environment from personal, material and social damages arising from the activity when effectively proven compliance with the security duty*.(ZIMMERMANN, 2012, p. 98).

However, *the way in which the work is exercised, usually determined by the entrepreneur, can increase the risks inherent or even create other risks*, which are the *risks acquired* by the activity*, whose damages are entirely the responsibility of who created them,* as occurs, for example, in the use of agrochemicals in agriculture, since such activity could be carried out without the worker's contact with chemical agents. (ZIMMERMANN, 2012, p. 98-99)

Workers can and should collaborate and participate in the implementation and execution of the PPRA, submitting proposals, receiving information and guidelines on the environmental risks present, including the data included in the Risk Map, which is prepared by CIPA after listening to workers from all sectors under the guidance of SESMT and following the guidelines contained in Annex IV of NR-5.They should also follow the guidelines received in the training offered by the program and if they report to their immediate superior the occurrences that, in their judgment, could pose a risk to their health [items 9.4.2, 9.5.1, 9.5.2, 9.6.1 and 9.6.2].

In the case of an event that imports in a situation of serious and imminent risk in the work environment, the employer must guarantee to the workers that immediately interrupt their activities, communicating the fact to the hierarchical direct to the due measures [item 9.6.3].

In addressing the reduction of risks inherent to work, Oliveira (2010, p. 121) clarifies that there is the desirable reduction [elimination] and the acceptable reduction [neutralization], the first purpose being the maximum reduction, by eliminating the preliminary ruling. *However, where this is technically unfeasible, the employer must at least reduce the intensity of the agent harmful to the territory of the tolerable aggressions.*

In this sense, the author refers to item 4.12 of the NR-4, which

deals with the duty of SESMT professionals to apply their knowledge to the work environment and all its components, including machinery and equipment, *in order to reduce until eliminating the existing risks to the health of the worker* and, where elimination is not possible and the risk persists, determine *the use by the worker of personal protective equipment (EPI), as determined by NR-6, provided that the concentration, intensity or characteristic of the agent so requires.*(OLIVEIRA, 2010, p. 121)

As long as the risks persist, the activity can be characterized as unhealthy due to the exposure of workers to agents harmful to health, above the limits of tolerance fixed by reason of the nature and intensity of the agent and the time of exposure to its effects [CLT, Art.189].

NR-15, which provides for the classification of activities characterized as unhealthy, defines as *limit of tolerance* to aggressive agents the maximum or minimum concentration or intensity, related to the nature and time of exposure to the agent, which will not cause harm to the health of the employee during their working life [item 15.1.5].

Oliveira (2010, p. 122-123) warns that scientific studies published by international organizations, such as the International Labor Organization and the World Health Organization, have shown that the limits of tolerance hitherto regarded as acceptable cause injury to the worker's health term. Noteworthy when considering aspects related to the duration of the journey, which in Brazil is usually extrapolated, while the tolerance limits are established based on a normal eight-hour journey and the presence, as a rule, of several harmful agents simultaneously, since the fixed limits observe only one aggressive agent in isolation, failing to observe Conventions N. 148 and N. 155 of the OIT in this regard.

In order to avoid exposures to environmental agents exceeding tolerance limits, NR-9 defines a *level of action* from which preventive actions should be initiated, including periodic monitoring of exposure, information to workers and medical control [item 9.3.6.1]. The level of action should be determined by SESMT professionals, through the definition of the timetable and methods of intervention in work environments for risk control, which characterizes the effective management of environmental risks.

As stated, the protection of the work environment depends on the perception of the risks and environmental impacts arising from

the company's activity. So far, the risks have been addressed and, with a view to closing the second part of this article, we will briefly discuss the environmental impact study and its impact report to the environment, known as EIA/RIMA abbreviations.

The EIA/RIMA is an important environmental policy instrument designed to identify and assess impacts and environmental degradation both in the implementation phase and in the operation of the activity or work. It is mandatory for the installation of a work or activity potentially causing environmental impact, as determined by the Federal Constitution [art. 225, § 1, IV], Law 6.938/81 [art. 9º, III] and Resolution N. 01/86 of the National Council of the Environment [art. 5, II].

The EIA/RIMA is prepared by a multidisciplinary team, based on the need to consider the environmental impacts of the activity on the various aspects of the environment: nature, cultural heritage, historical heritage and the work environment.

However, it is still little used in the labor field, but should *be encouraged and investigated by the competent authorities of the Ministry of Labor and Employment, as a way of effectively preventing environmental risks and consequent damages to the health and physical integrity of workers.* (MELO, 2006, p.79)

In this sense, the Brazilian legislation establishes that the beginning of the company's activities must be submitted to the previous inspection and approval of the respective facilities by the MTE inspection, which could certainly contribute to the prevention of occupational accidents and diseases [CLT, Art. 160, § 1 and 2].

Therefore, the elaboration of the EIA/RIMA should also include the participation of workers, who will provide adequate information of the environmental conditions of work, in order to prevent the impacts of potentially degrading activities on their health or physical integrity.

Since the prevention of risks is not effective and the damage occurs, even with all the mechanisms available to employers and employees in the Brazilian legal system, it is necessary to repair them, a topic that will be discussed below.

3 ACCIDENTAL RESPONSIBILITY OF THE PUBLIC INSURER AND CIVIL LIABILITY OF THE EMPLOYER IN BRAZILIAN LAW

As opposed to risk, particularly the *risk environments* that collectively affect individuals, Giddens (1991, p. 37) presents the concept of *safety as a situation in which a specific set of hazards is neutralized or minimized.* For this author, the *security experience is generally based on an acceptable balance of confidence and risk*, which is understood to be the consciously calculated risk, which varies in different contexts, and may refer to a large collective of people or even include global security.

In the legal arena, Cavalieri Filho (2012, p. 155-156), in addressing objective liability based on the theory of risk, warns that *no one answers for anything merely because it carries on risky activity, often even socially necessary.* The liability stems from a breach of a legal duty, which will normally be the *duty of safety that the law establishes, implicitly or explicitly, for those who create risk for others.* Risk and safety *are factors that work together in modern life, whose primary activity is to avoid risks. Where there is a risk, there must be safety* and the *greater the risk, the greater the safety duty.* Thus, on the one hand, the legal system guarantees freedom of action and free initiative and, on the other hand, guarantees the protection of the human being, giving it the subjective right to security.

According to Cavalieri Filho (2012, p. 165-167), the trend of socialization of risks at work has been accentuated in recent decades by the increase in the number of accidents, *often rendering the damage irreparable, not only by the amount of compensation, but also for the lack of equity of the party that caused it.* Thus, through what the doctrine calls *collective reparation, autonomous or social indemnity,* a basic indemnity is guaranteed for any type of personal accident. *The damage, by this new approach, ceases to be only against the victim to be against the collective itself, becoming a problem of the whole society.* In order to achieve the socialization of the damage, the insurance technique is used, as *it is possible to distribute the risks among all the insured persons*, so that damages can be guaranteed by the collective, through collective insurance, *by the employers, by which the burden of paying the indemnity is transferred to the insurer.*

For Beck (2003, p. 115-116), a case of work accident, based on the interpretations proposed by sociologists from the nineteenth century and the beginning of the twentieth century, as opposed to market-dependent liberalist ideology, should not be seen as misfortune to be borne by the individual in isolation, but must be considered as a social fact. Therefore, it is the responsibility of the legal and political institutions to provide answers to the question of causality through financial compensation for damages resulting from the accident and distribution of responsibilities.

In this regard, Beck (2003, p. 117-118) talks about the institution of state accident insurance to cover workers, given the risks generated by industrial activity, as occurred in Germany after the law of Bismarck in the nineteenth century. It points out that it is essential that the insurance be implemented, since it is an instrument for the creation of the internal order of the national State, which has the task of mediating conflicts, institutionalizing the distribution of consequences and costs in risk prevention among members of society. According to the author, only after this institutionalization was the *development* of a *developmental optimism possible.* This is because *only against the background of the fact that the side effects would always be somehow offset by an institutionalized program is that this optimism could spread and thereby accelerate progress.*

In objection to the project outlined in state insurance, it is highlighted the impossibility of controlling the *collateral effects* generated by the progressive radicalization of industrialization processes, understood as risks associated with certain social facts that cause environmental problems, whose consequences are not spatially, temporally and socially measurable, which *erode and call into question this institutionalized program for calculating side effects*. (BECK, 2003, p. 118-119)

In the historical context of social and economic relations intensified by the process of globalization, the idea of institution and maintenance of the security system against labor misfortunes based on social risk theory is strengthened. Costa (2013, p. 52) argues that globalization has made it possible to accept the sharing of responsibilities between different social and productive segments, since, in addition to the author of the injury, society also takes advantage of the goods and wealth resulting from the process of production, and must support a system that protects those who are victims, resulting in the *passage of individual risk*

to the collective, given the social character of the misfortune. It is the so-called socialization of risks, which leads *to coverage of labor misfortunes through social insurance.*

The Brazilian legal system adhered to the idea of social insurance, establishing that the responsibility of the public insurer, in accident matters, will always be objective, subject to art. 7, XXVIII, of the Federal Constitution.

This means that the payment or provision of the accident benefit [service or benefit] by the National Social Security Institute [INSS] occurs regardless of whether or not there is any environmental risk or the existence of guilt or fraud by the employer or company of the facts, it being *sufficient to the misfortune, the causal link with the work developed, the resulting damage and the condition of beneficiary (insured or dependent) with social security.* (ZIMMERMANN, 2012, p. 115)

Thus, accident insurance is characterized by objective collective liability, based on *social risk* theory, ensuring that the victim is indemnified, even if the cause of the damage can not be individualized, reflecting the application of the *integral risk* theory, according to which the duty to indemnify is made present, even in cases of exclusive fault of the victim, third party act, fortuitous event or force majeure.

In fact, under the aegis of the Federal Constitution, the normative discipline of Occupational Accident Insurance or Environmental Risks of Work (SAT/RAT) is contained in Laws 8.212 and 8.213, of July 24, 1991, which instituted, respectively, the costing and benefits plan of the General Social Security System. These laws were regulated by Decree No. 3048/99, which approved the Social Security Regulations.

In the magisterium of Sette (2005, p. 217), Law 8.213/91 *adopted the theory of social insurance, which is based on social solidarity* and the *phenomenon of socialization of risks*.

The cost is allocated to the company or employer, including the domestic employer, as well as by the borrowers and the special insureds, by means of the monthly payment of the social contribution destined to the SAT/RAT, in order to cover the costs with the payment of accidental benefits.

In the lesson of Santos, M. (2008, p. 147), inspired by the *principle of risk-sharing, Law 8.213/91 has adopted the principle of tariff*

repair, limiting itself to the payment of the patrimonial effects of personal injury.

In the conception of the author (SANTOS, M., 2008, p. 132-137), by equating the accidental benefit with the social security, without taking into account the extent of the damage in each case, the labor accident regime incorporated grounds of assistance law, the transfer of responsibility and costs of work accidents caused by the company's risk to the whole community, aggravating the crisis of autonomy of the accidental regime, which was diluted in the social security system.

However, the insurance against accidents at work does not relieve the employer of civil damages, as expressly provided for in art. 121 of Law 8.213/91. In this case, reparation is established based on the legal institute of civil liability, as Oliveira (2011, p. 77) teaches:

> *Where there is damage or loss, civil liability is invoked to substantiate the claim for compensation on the part of the person who suffered the consequences of the misfortune. It is, therefore, an instrument of maintenance of social harmony, insofar as it helps the injured, using the property of the cause of the damage to restore the broken equilibrium. Thus, besides punishing deviance and supporting the victim, it serves to discourage the potential violator, who can anticipate and even measure the weight of the replacement that his act or omission may entail.*

Before the current Constitution, Supreme Court Summary [STF] 229 stated: *Accident compensation does not exclude Common Law in the case of intent or gross negligence on the part of the employer*. The requirement of *fraud or serious guilt* foreseen in the summary was superseded by subsection XXVIII of art. 7 of the constitutional document, which refers to the indemnity, to which the employer is obligated, *when incurring fraud or guilt*. Based on this norm, part of the doctrine admits the subjective responsibility of the employer for the work accident, provided that he acted with any portion of guilt, even if a small amount, contributing to the occurrence of the accident.

There is also a doctrinal trend that advocates the objective responsibility of the employer, based on art. 225, § 3 of CF/88 and art. 14, § 1, of Law 6.938/81, since the work environment is an integral part of the general environment, accidents resulting from environmental imbalances or unsafe working conditions attract the rules of objective responsibility.

A third chain supports objective liability after the validity of the Civil Code of 2002, subject to art. 927, sole paragraph, applicable to the accident caused by the exercise of risk activity, which corresponds to the exceptional or marked risk to workers who engage in unhealthy or dangerous activities, based on the theory of *professional risk,* or other theories such as *risk benefit* or the *risk created*.

According to the *risk benefit* theory, the person responsible for repairing the damage is one who takes advantage or advantage of the injury. Cavalieri Filho (2012, p. 153) warns that the great difficulty in this theory lies in the identification of profit, because if profit has a sense of profit or economic advantage, the liability is restricted to merchants and industrialists, *not being applicable to cases in what is causing the damage is not a source of gain*.

Cavalieri Filho (2012, p. 154) also addresses the theory of *created risk*, in which reparation of harm results from the exercise of activity or profession that creates a danger to individuals. Based on Caio Mário's doctrine, he affirms that the distinguishing feature between the two theories is that in the *created risk,* the duty of reparation results from the activity itself, *regardless of the good or bad result that comes from it.*

Regarding the incorporation of the objective liability rule in the Civil Code of 2002, Gschwendtner (2006, p. 113) points out that the *relevant flexibility of subjectivity, brought to light by the 2002 Code, gives the judge some discretion to assess the risk involved in the activity and thus the specific incidence of the objectivist rule.*

Dallegrave Neto (2008, p. 232) points out the distinction between the infortunistic reparation provided by the public insurer and the indemnity resulting from the employer's liability.

> *To our opinion, the distinction is also made in the fact that INSS covers all accidents at work without distinction, since the focus is not to leave the insured unprotected, especially in the misfortunes arising from fatalities in which there is no employer guilt. If the employer is guilty or in the event of an accident arising from an activity in which the risk is foreseeable from the company's own normal activity, the agent shall indemnify the victim without any compensation with the benefit amount, in addition to the social security benefit. Yes, otherwise the simple monthly cost of the SAT would exempt the employer from any indemnity, opening a spurious space*

> *to encourage noncompliance with the norms of medicine and occupational safety, which is unacceptable, especially in a world record-breaking country of work-related accidents.*

Cavalieri Filho (2012, p. 167, apud MONTENEGRO, 1992, p. 367-368) also manifests itself in the sense of making social security reparation compatible with the indemnity due in case of individual responsibility, since cumulation *is better suited to ideals of a commutative justice, when configured the harm of the injured or when that indemnity proves insufficient to cover all the damage sustained by the victim*.

Theodoro Junior (1989, p. 169-170), from a historical-evolutionary perspective, analyzes the competition of the accident liability attributed to the public insurer with the civil responsibility of the employer:

> *The evolution of accident law has historically been based on a clear separation of grounds between common civil liability and liability arising from the risk of work.*
> *As the specific risk of work was extended to the extreme, by giving the worker and his family the greatest possible guarantee, the employer also became protected in a different way, since after paying the compulsory insurance the employer was freed from any other responsibility for the same event, as if it were preserving the company and its economic safety in the face of sometimes exaggerated and unbearable risks.*
> *In this way the spirit of the laws that, throughout the history, covered the risk of the work, was manifested in the direction of avoiding the accumulation of the actions of accident indemnity with the ones of accidental civil liability.*
> *However, laws exist for life, not life for laws. Therefore, positive law felt the need to conform to the reality of life, leaving aside the purism of structures that are solid and perfect only in doctrinal elaboration, but which, in practice, resent unavoidable shortcomings and, therefore, intolerable.*
> *In view of this, and for compulsory insurance not to be an incentive to increase the specific risk of work caused by the employer's negligence with the necessary security measures, and even to prevent the employer's malice or bad faith, special provisions providing for the exclusion, from the field of misfortune, of damages caused by intentional or inexcusable misconduct were developed.*

It is worth mentioning that the jurisprudential orientation to admit the cumulation of the accidental benefits with the indemnification for civil liability of the employer was built over several decades in the Common

Court. With the advent of EC no. 45/2004 and subsequent pronouncement of the STF in the judgment of conflict of jurisdiction No. 7.204, on June 29, 2005, it was once recognized the competence of the Labor Court to judge the actions of indemnification for work accident against the employer.

The transposition of jurisdiction has provoked controversies in the labor sphere of issues that were already pacified in the jurisprudence, as, for example, the compensation of the amounts paid by the INSS in the indemnity owed by the employer, that quickly was also overcome, prevailing the positioning that insurance accident protects the victim and his/her dependents, without replacing the employer's obligation to repair the damage caused, obligations that have different facts.

Santos, M. (2008, p. 139) opposes the combination of social insurance and civil liability systems for the accumulation of indemnities (CF/88, art. 7, XXVIII], together with the duty to prevent accidents [CF/88, art. 7, XXII], arguing that it is *necessary to reconstruct a new paradigm that* guarantees autonomy to the special regime of work accidents, under the impulse of the company risk theory, discarding the theory of social risk. For the author, *the dominant thought - in favor of the coincidence of regimes of the accumulation of indemnities - must be removed, since it does not resist logical-systematic and teleological interpretations.*

It is a fact that the majority doctrine and ruling jurisprudence in the Labor Court have gone on to admit the accumulation of indemnities, notably for the lack of vocation indemnity of the benefits contemplated in the social insurance, as extracted from the lesson of Simm (2005, p. 105-106):

> *It is worth noting that social security has no indemnity nature or purpose, in the sense of reimbursing or compensating for damages suffered by the individual, but rather of providing him with means to satisfy the necessities resulting from life events, giving him the necessary (at least the minimum) coverage to face the vicissitudes of life, to cover the so-called "social risks", that is, unforeseeable events, at least inevitable, that put him in a state of need.*

On the subject, see the position of Santos, M. (2008, p. 148):

> *On the other hand, the payment of damages, typical of Social Security systems, is*

> *necessary to enable their payment through social insurance. However, the value of the compensation for personal injury guaranteed by the SAT should be calculated based on actuarial criteria that approximate full compensation, including off-balance, moral, aesthetic and health care expenses.*
>
> *It is clear that the tariff system can never be adjusted to the concrete case in the same way as in judicial liquidation, in which the court has the power to adjust the indemnity by means of equity criteria. Even so, this possibility of the actuarial technique to approximate the value of the benefit to the integral reparation satisfies the requirements of internalization of the costs of activity while at the same time guaranteeing to the worker a more worthy indemnity.*

It is interesting to note that the recent reform promoted in the CLT, through Law No. 13.467/2017, and later through the MP 808, of short duration, introduced the technique of charging for the reparation of non-party labor damages. Thus, if interpreted in a literal way, which is not the best way and technique, will prevail the understanding that no longer applies the judge's ability to adjust the compensation due in the concrete case *by criteria of equity*, as mentioned in the above lesson, and the court shall determine the indemnity to be paid to each of the offended persons, applying the parameters established in art.223-G, § 1, I to IV, of the CLT, ranging from 3 to 50 times the value of the last contractual salary of the offended, as the offense varies from light to very serious nature. In the event that the offense is directed to the employer, the indemnity will be calculated with the same parameters, but observing the contractual salary of the offender.

Tariffs have created anti-isonomic treatment in cases where workers with different functions and remunerations are victims of the same harmful event, allowing a repair that leaves the centrality of the human person and focuses on his income. On the other hand, the provision in question also goes against Article 5, V, of the Federal Constitution, which elects the proportionality criterion in reparations for material and off-balance damages.

In the view of civilian doctrine (ROSENVALD, 2018), it is serious the failure of the labor legislature to impose a table for the compensation of the off-balance, as it reads:

> *[...] If for many, the table would be praiseworthy in terms of legal security, we have to understand that in the twenty-first century, legal certainty no longer means the sole protection of the conservation of patrimonial situations, however, its adequacy with the guarantee of access to fundamental rights, among which we can include the prohibition of a priori categories that reduce an infinity of antijuridic behaviors to mere tabulated prices, which not only "qualifies" the human being, as specifically in the reform of the CLT, allows the employer to be able to calculate in advance the value from injury to personality rights and "internalize" them in the productive process. MP 808/17 changed the referred parameter, replacing the victim's remuneration criteria with maximum limits linked to multiple of the benefits of the General Social Security System. However, criticism persists regarding the "imprisonment" of reparatory values and their deleterious consequences.*

It is also important to note that in the current legal system, in addition to the indemnity due to the worker, the employer can also be held liable for social security on the way back, as can be seen from Zimmermann's contribution (2012, p. 116).

> *Thus, it is the insurance-insured relationship that is covered by objective liability, since it must have a easier life, considering that when it seeks the one to obtain a benefit, it is in a situation of fragility. Such objective collective responsibility assumed by the insurer vis-à-vis the insured, however, does not represent an exemption from liability of the cause of the damage when it is duly identified. On the contrary: for the benefit of the whole community, which bears the burden of indemnity of the victim, the agent of the damage must respond for the wrong caused or for the created risk that was unduly borne by the worker.*

In order to hold the party responsible for the damage before the community, the INSS must handle the procedural instrument known as accidental regressive action, based on Article 120 of Law 8.213/91.

Thus, it can be seen that the reparation provided by the accidental insurance does not exclude the individual responsibility of the person who causes the harm, against the worker and the public insurer itself, in the cases covered by the legislation and admitted by the doctrine and jurisprudence of the country.

FINAL CONSIDERATIONS

At the present stage of modernity, risk factors at work are constantly altered by technological advancement and new techniques of division of labor. At the same time, there is a process of erosion of the labor and wage system of industrial society and the development of a new system of plural and flexible sub-employment and decentralized forms of work.

Globalization, in a generic way, corresponds to the process of intensification of economic, social, political and cultural interactions in the last three decades. It is the result of the consolidation of the capitalist economic model, combined with the establishment of a global communications system and technological development, which promoted a new organization of the world market and a new international division of labor.

In Brazilian law, the Federal Constitution of 1988 granted urban and rural workers, as well as others who seek to improve their social condition, the right to reduce the risks inherent in work, through health, hygiene and safety standards [art. 7, XXII] and the insurance against accidents at work, at the expense of the employer, without excluding the indemnity to which he is obliged, when incurring deceit or guilt [art. 7, XXVIII].

There is therefore a duty to prevent accidents combined with a system of compulsory insurance and civil liability, leading to the interpretation that the cost of the SAT/RAT does not exempt the employer from any indemnity, especially when it is shown that the accident was caused by noncompliance towards health and safety measures in the workplace.

The financial regime adopted in Social Security is based on simple distribution, which means that the payment of accidental benefits is distributed throughout society. Theoretically, public systems are considered the most suitable to provide adequate social protection to workers, since they were conceived in the light of the principle of collective insurance, through which the risks of misfortunes and their consequences are distributed among the members of society.

Brazilian social insurance grants a basic indemnity, since the only

indemnification benefit provided for in the scheme, the accident allowance, is of a continuous nature and fixed in a single percentage over the average salary of the worker. Hence, because social security coverage does not exclude the civil liability of the employer, however, civil reparation for off-balance-sheet damage has recently been tabulated by the new labor legislation, which is not the most appropriate option, since if interpreted in a literal way, the possibility of the judge fixing the indemnity observing the criteria of equity in each case that appears.

In the context of the labor reform, it is important to raise the discussion about the improvement of the accident coverage in the scope of the SAT/RAT, which is possible to be achieved, provided a differential legal treatment is given to the occupational risk, which has a source of specific costing, in relation to other social risks covered by social security, so that the costs arising from labor claims are fully covered by the originators of damages and not distributed throughout society.

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