

# TERRITORY, WORK AND WORKER'S HEALTH: A NECESSARY APPROACH

TERRITÓRIO, TRABALHO E SAÚDE DO TRABALHADOR:  
UMA APROXIMAÇÃO NECESSÁRIA

TERRITORIO, TRABAJO Y SALUD DEL TRABAJADOR:  
UNA APROXIMACIÓN NECESARIA

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## Abstract

In the last few decades, important overcoming efforts from disciplinary trenches have been implemented in different learning areas, like the Geography cases, the labor studies and the health sciences. In this context, this paper aims to highlight the space dimension of the worker's health, proposing an approach of dialectical-materialist bias centered in the territory concept focused in reveal unseen traits of the domination and capitalist exploration and its corollary, the precariousness and the work degradation in different places and labor activity sectors. In methodological terms, we appealed, fundamentally, to the bibliography review in different sources and areas of knowledge, featuring Geography and the worker's health.

Keywords: Territory, work, worker's health, labor injuries.

## Resumo

Nas últimas décadas, importantes esforços de superação das trincheiras disciplinares têm sido implementados, em diferentes áreas do conhecimento, como são os casos da Geografia, dos estudos do trabalho e das ciências da saúde. Nesse contexto, o presente artigo objetiva ressaltar a dimensão espacial da saúde do trabalhador, propondo uma abordagem de viés dialético-materialista centrada no conceito de território e focada para revelar traços invisibilizados da dominação e da exploração capitalista e de seu corolário, a precarização e a degradação do trabalho, em distintos lugares e setores da atividade laboral. Em termos metodológicos, recorreremos, fundamentalmente, à revisão bibliográfica em diferentes fontes e áreas do conhecimento, com destaque para a Geografia e a Saúde do Trabalhador.

Palavras-chave: Território, trabalho, saúde do trabalhador, agravos do trabalho.

## Resumen

En las últimas décadas importantes esfuerzos de superación de las trincheras disciplinarias han sido implementados en diferentes áreas de conocimiento, este es el caso de la Geografía, de los estudios del trabajo y de las ciencias de la salud. En este contexto, el presente artículo tiene por objetivo resaltar la dimensión espacial de la salud del trabajador, proponiendo un abordaje materialista-dialéctico centrado en el concepto de territorio, enfocado para dar importancia a los trazos invisibles de la dominación y la explotación capitalista y su corolario, la precarización y la degradación del trabajo en diferentes lugares y sectores de

actividad laboral. En términos metodológicos, recurrimos fundamentalmente a la revisión bibliográfica de diferentes fuentes y áreas de conocimiento, con énfasis para la Geografía y la Salud del Trabajador. Palabras clave: Territorio, trabajo, salud del trabajador, daños a la salud.

## Introduction

Over the last few decades, relevant efforts have been undertaken to overcome the disciplinary “trenches” once built on the positivist foundation of the fragmentary paradigm of industrial modernity (Moreira, 2009), in the most diverse knowledge areas. A good example derives from the crossing between the geography, work studies, and health sciences.

The growth of interest, on the part of scientists non-geographers, in categories and concepts of spatial stamp is a phenomenon already pointed out by several researchers<sup>1</sup>. This fruitful approximation has not been left out the studies in the area of Collective Health conducted by medical doctors, sociologists, economists, psychologists, and in between many researchers for whom the spatial dimension has become central, at the same time in which Health geography field is consolidated in Brazil, insofar as increasingly geographers have also begun to share with other professionals the concern with the broader health agenda (Vaz; Remoaldo, 2011).

Concomitantly, the theme of work became prominent in Brazilian Geography in the wake of the critical renovation movement of the 1980s, which has been made possible by the dialogue with the Marxism and assimilation of the dialectical and materialist method to the geographical studies. Thus, Geography of Work is born, not as a nomenclature or subarea internal to Geography, but as a reaffirmation of the ontological and political centrality of the work and, consequently, a central category to understand the geographic space (Thomaz Junior, 2002). In light of this context, in recent years, investigations and approaches aimed at unveiling the links between territory and worker's health are increasingly being strengthened<sup>2</sup>. This intersection should not be seen as something fortuitous, since, far from being remitted to the past of capitalism, the imposition of aggravations on the health of workers continues to be a current problem and powered by recent changes in the working world, in the global and Brazilian contexts<sup>3</sup>.

Motivated through this opportunity, this paper aims to highlight the space dimension of the worker's health, proposing an approach of

dialectical-materialist bias centered in the territory concept focused in reveal unseen traits of the domination and capitalist exploration and its corollary, the precariousness and the work degradation in different places and labor activity sectors. In methodological terms, we appealed, fundamentally, to the bibliography review in different sources and areas of knowledge, featuring Geography and the worker's health.

The text is structured in three sections, besides this introduction and final considerations. In the first, we briefly present the current panorama of worker's health in Brazil, with emphasis on the main gaps and problems in this field. In the second part, we will present elements to conceptualize the territory from the point of view of the dialectical-materialist method. In the third and final section, we outline our understanding of the territorial approach of the aggravations to the worker's health, through the idea of territories of the connection capital/work.

### Job-health relation in Brazil

The recognition that the dimension of the work is important in the health-disease process of large part of the men and women throughout their entire life cycle (Silveira, 2009) is not recent, date back to the studies of Hippocrates (460-375 B.C.) and later appears in the works of Georgius Agricola (1556), Bernardino Ramazzini (1700), Karl Marx and Friedrich Engels (Agostini, 2002; Lourenço, 2008). However, if such consideration dates back to Ancient Age, when it comes to pondering the leading role of the working class, while the active subject in the building of a health policy, the efforts are very recent.

According to Lacaz (2007), it is from the consideration of the social determination of the health-disease process, originating from the Latin American Social Medicine, of the programmatic aspect of Public Health and the approach in Collective Health on the suffering, sickness and death of classes and social groups inserted in productive processes, which arises the real intention in build a field of practices and knowledge in Work's Health. Their emergence occurs because of the need of overcome the traditional Occupational Health centered in the natural history of disease, in the precepts of classical epidemiology and in the practices and knowledge of the clinic, which social, historical, political and economic

dimensions are neglected in the analysis of exposure to risks, accidents, and occupational diseases. In historic terms, the field is structured at the end of the 1960s and early 1970s, when the union movement, especially in Latin America, demands changes in attention and promotion of worker's health (Lourenço; Bertani, 2008).

As a result of the long fighting of both social and union movements, the formal acknowledgement of this link and the legitimization of Worker's Health by the State occurred late in Brazil, only with the 1988 Federal Constitution, in the scope in which work and health were institutionalized in the form of citizenship and social rights, becoming part to public health policy, a right for all and a duty to the State. (Lourenço; Bertani, 2008). However, as states Lourenço and Bertani (2008, p. 179), "the social rights expanded by 1988 Constitution become more remote of the enjoyment of all workers."

Unfortunately, just as it does Silveira (2009, p. 43), it must be acknowledged that "the workers share with the non-workers ways of falling ill and dying which are a result of the lifestyle, gender, age, genetic profile and the environmental risk factors to which all are exposed". In addition, it should be noted the indelible links between the work activity they carry out and the most diverse types of injuries suffered by workers in Brazil, a country where work injuries get the vexatious status of public health problem (Binder; Cordeiro, 2003). Similarly to the environmental destruction, we can affirm that the degradation of work takes on a truly systemic character in the country (Thomaz Junior, 2017a).

According to data from the Brazilian National Social Security presented by Observatório Digital de Saúde e Segurança do Trabalho<sup>4</sup>, between 2012 e 2017 occurred approximately 14,900 deaths in work accidents in Brazil, a total of more than 3.9 million registered occupational accidents, losing 307 million of working days. In this same period, the expenses with accident benefits were already close to R\$ 25 billion. It is therefore not astonishing that Brazil is considered by International Labour Organization (ILO), as the fourth worst country in the entire world in terms of occupational safety and health, behind only China, India and Indonesia<sup>5</sup>.

This shocking picture represents, however, only the tip of a much larger iceberg, due to an extensive series of problems involving the identification, registration, and the own understanding of the causality

of the diseases. The massive and generalised<sup>6</sup> underreporting is the most popular, but it is not the only among them. Same when are reported, the statistical data are partial<sup>7</sup> and the information are disconnected, once the sources are related to each other and do not cover all workers (Binder; Cordeiro, 2003; Waldvogel, 2011). In addition, the workers have great difficulty to prove the link between the diseases they suffer, the work activity that they performing, and the lack of political will on the part of the managers responsible for the actions of health surveillance of the worker, especially at the municipal level (Lourenço, 2011).

Nevertheless, the gravest of problems is not situated in the field of registration and quantification of injuries, but in the interpretation that is made on most of them. The so-called “accidents at work”, as are officially appointed by the Social Welfare, are phenomena socially determined (Binder; Cordeiro, 2003), once involves a multiplicity of factors and present various aspects (Vilela; Iguti; Almeida, 2004; Lourenço, 2011), being predictable in the majority of occurrences related to the productive process (Pignati; Machado; Cabral, 2007). However, according to Vilela, Iguti e Almeida (2004), its analyses are always influenced by the analyst’s view or understanding, which allows the authors to assert that the

[...] predominates, in Brazil and in the world, the understanding that the accident is a simple event, with origin in one or few cases, chained linearly and deterministically. This approach privileges the idea that the accidents arise from operator failures (actions or omissions), of interventions in which occurs a disrespect to the rules or safety requirements, in short, ‘unsafe actions’ originating in the psychological aspects of the workers (Vilela, Iguti, Almeida, 2004, p. 571).

In this way, by means of the hegemonic, biological and uni-causal paradigm, of behavioral stamp, with emphasis to the positivist and empiricist view from clinic that takes the worker as a patient/ object of the technique and centered on the absolutely fallacious idea of a free and conscious individual, the blaming passes to the accident victim, in a complete reversal of reality reinforced by the prevailing class prejudice prevalent in several institutions and organizations in Brazil (Jackson Filho et al., 2013). The own official nomenclature seems to reinforce some of these premises, once the term “accident” refers to an idea of a fortuitous and unexpected event. This is also the reason for the unfounded belief,

however, rooted and widespread, that the use of Individual Protection Equipment (IPE) by the workers, allied with the adoption of strict safety rules by companies, are effective measures to mitigate or even eliminate the problem.

This analytic perspective more circumscribes to the traditional practices of the Occupational Health, is generated from the ahistorical and decontextualized point of view of the economic, political-ideological and social relations that influence the links between the work and social determination of health-disease process. As a result, the analyses of Occupation Health cannot understand the work as a dialectical category and, for this reason, end up conferring greater capacity of control of the capital on the working men and women. The search to understand the object/problem from this analytical perspective of Occupational Health cannot be anything other than the mere technical suitability of the work environment, compliance with Regulatory Regulations, use of IPE etc. Thus, Occupational Health starts from out the Cartesian idea of the body as a machine that is exposed, unavoidably, to agents/risk factors (physical, chemical, biological, mechanical) in the work environment (Lacaz, 2007).

These theoretical and epistemological limits of the Occupational Health strengthen the understanding of the health problems of workers in the 21st century because its causality is increasingly complex and involves the forms of organization of the work process and its relation with the subjectivity of workers. For this reason, it is important to print a historical and multidisciplinary character to the studies of the relations between work, health and diseases, to understanding them in its social dimension and related to the implications of the way labor processes are organized in the most distinct economic sectors and places, under the aegis of capital. Likewise, urges make clear that the degradation of worker health is not limited only to the health deteriorating consummation (accident, illness, injury, etc.), but manifesting daily in different degrees of fear, anxiety e dissatisfaction in and outside the workplace, which, although they can hardly be measured, are real and affect the life of the workers.

In this context, we are right that the field of Worker Health represents an advance to the understanding of the relation work-health, by incorporating the dimension of the social determination of diseases and claim a historical perspective for understanding the health problems of workers. Nevertheless, without denying some advances,

we understand that a critical territorial approach, fully referenced by dialectical materialism method, can help the studies in worker health. Thus, geographers have much to say on this subject.

#### For a dialectical materialism concept of territory

Territory is one of those words present in the most varied contexts (from science to popular knowledge, passing by politic and planning of State), and sometimes is used with different meaning. Etymologically, its origin is linked to a double meaning: on one side with land and another on terror/terrorize, that is, it has to do with land domination and with the inspiration of fear and terror (Haesbaert, 2007). Historically, the word has been used both to refer to the domain space of human peoples and societies, as well as of a particular animal, group or species.

Incorporated by human sciences, the word territory founded in Geography its field of discussion more systematic, earning distinction of key concept, that is, a concept able to sintetize the angle from which this discipline examines the spatial dimension of reality (its primordial object), next to the geographical space (the widest among them), the region, the place and the landscape (Corrêa, 1995).

Incorporated by human sciences, the word territory has found in Geography its field of discussion more systematic, earning distinction of key concept, that is, a concept able to summarize the angle from which this discipline examines the spatial dimension of reality (its primordial object), next to the geographical space (the widest among them), the region, the place and the landscape (Corrêa, 1995). While its semantic content may have presented nuances in each chain and in the most varied national schools of the geographic thought, since the 19th century, the concept of the territory was confused with the idea of governance space and sovereignty of the modern national states. Furthermore, this has not happened by chance, because as shown by Lacoste (1988), while an institutionalized discipline, the Geography emerged from the promiscuous bowels of European imperialism, becoming, from its dawn, an instrument in the service of the State.

The concept of power passed for a similar reduction, a key component of the territory, regardless of the meaning. As demonstrated by Raffestin (1993), a short time ago, the power was synonymous with

the institutionalized power of the State, which facial expression is the territory of the countries. From the 1960s and 1970s, nonetheless, is experienced a true revolution in the plan of philosophical thought and social theory, engendered, especially by new and richer readings on the power and by the valorization of the space and of the role of the social subjects in the build of reality.

On the one hand, thinkers like Foucault (1988, 2002) have come to argue in favor of a broader conception of power, also applicable to the comprehension of phenomena unrolled above and below the State, which provoking resistance and are exercised through technologies and mechanisms produced historically, in the scope of social relations. On the other hand, exponents of the own Marxism, like Thompson (1998), put in check the old mechanistic and economic paradigm, generalizing and reducing individuals to mere "data of the structure", confronting it with living subjects, situated, actives elements of the history, holders of identity, experiences, subjectivity and ipso facto able to fight and transform the reality.

In this context, also is renewed the concept of territory since a *relational* and *multiscale* perspective of the power, thus, is inaugurated a new territorial approach of the social phenomena which extrapolates the Geography to irrigate other fields of knowledge and political action. In the geographic field, this renewed concept gives breath to the nascent Brazilian Critical Geography of Marxist inspiration, showing an indispensable instrument in the antagonism and social conflicts analyses, a fact that practically coincides with the first rudiments of a geography centered on work.<sup>8</sup>

However, the theoretical, political and ideological spectrum of the ongoing inflection has been comprehensive enough to contemplate, in its extremes, from the more remarkable critics of the current model of society, until theorists admittedly committed to the maintenance of bourgeois order and supranational bodies, passing for formulators of public policies in different levels. The territorial approach has become a kind of panacea when elevated to the paroxysm, doing proliferate simplifying and reducing readings of the inherent complexity of reality and, more precisely, to the territory (Souza, 2008). In many analyses, the territory has been emptied of its content more characteristic and boosting of the radical and forceful social criticism, appearing sometimes as a synonym of region, sometimes of environment or simply of clipping or area.



In the approach defended here, the territory is understood as a fraction of the geographical space<sup>9</sup>, simultaneously, taken from the point of view of the/ and delimited by power relations that characterize the metabolic interchange of men with each other and with external nature through work (Mészáros, 2006). In being a fraction of space, the territory is equally a product of the society and also produces it (Santos, 1988), constituting itself by objects and relations (of power) that animate them and act, concurrently, while the medium of production and control (domination), although it serves to conceal the real relations and existing conflicts (Lefebvre, 1991).

Different ways of metabolic interchange substantiate *territorialities* (that is, particular forms of constituting and maintaining territories) also different and often absolutely antagonists with each other, originating a situation of insoluble conflict, because in essence contradictory, within the narrow limits of capitalist logic. Based on this interpretation, it is possible to conceive because social class and distinct metabolisms have different and conflicting territorialities, produce opposed territories and appropriate, use and represent by several forms its resources (Perpetua, 2016a).

In addition to the centrality of the work and power relations and, therefore, of the permanent conflict between different territorialities, there are also other important components to think the concept of territory in the way that we have tried to develop it:

- a. The *relational character*. Even not adopting the dialectical materialism method, the relational perspective advocated by Raffestin (1993) finds in the dialectical materialism method full correspondence, insofar as one of the founding characteristics of this method is its relational character (Prado Júnior, 1976). The territory is a product of the power relations and all territory is in relation (synchronic, diachronic and generally conflicting) with other territories.
- b. The *multi-escalarity*. The social relations define the territories, but not on a single scale (of the nation-state, for example,) but in different scales superposed in relation with each other, which amounts to admitting that one territory on a scale is always part of another territory on another scale. If by its action, from the state to the individual, every subject (individual or

- collective) produces territory, the territories overlap, often not harmoniously, second to the scope of power relations. It is worth reminding that the scalar game is the geographic way of seizing the totality, central category of Marx' method (Netto, 2011).
- c. The *multidimensionality*. While it might be affirmed that the territory is, essentially, a politic fact, it is a mistake not consider it, concomitantly, as an economic, cultural fact, etc. As a mediation of the real (unity of the diverse and synthesis of multiple determinations, as Marx would say), the territory is in itself a totality in which all the complexes forming the human and social existence are related.
  - d. The *multiplicity*. Braudel (1992) said that men and women experience multiple and contradictory times and temporalities in their everyday life. The same can be said in relation to the territories and territorialities of everyday life. The principles previously explained induce to the conclusion that, invariably, a determined portion of the space will be always constituted by multiple territories and territorialities.
  - e. The *processuality*. The time and temporality also represent a fundamental dimension of the territories, because they have an extension and duration, there being no eternally fixed and perennial territory. The territory of "long-term" of a national state also was one day the result of a territorialization process, which may change its limits due to a broad set of factors. Furthermore, the territorial fact always demands a procedural vision in order to be well understood in its doing – undoing – redoing itself, that is, in its territorialization – deterritorialization – reterritorialization movement. According to Thomaz Junior (2017b), this movement can be reconsidered to apprehend the dynamics of work, therefore, while a territorial movement of labor and, at a deeper theoretical level, territorial class movement.

The aim of this brief conceptual incursion was to prepared the way to we understand that the social, historical and productive relationship between capital and work, bases of the issues imposed on the workers, also substantiating through a certain territoriality, supporting and producing a certain type of territory hegemonized by capital in detriment of work.

## The territories of the capital/work relation: precarization and health problems of workers

The starting point to understand the territories of the capital /work relation is the understanding of the dialectic of work, culminating in the alienation theory of Marx's work. Dialectical because assume the sense of affirmation and negation at the same time, and second Marx (2013, p. 255), the work "is, first of all, a process between man and nature, a process in which man, due to his own action, mediates, regulates, and controls his metabolism with nature." Furthermore, it is "[...] the natural condition of human existence, the condition, independent from all social forms of interchange of matter between man and nature. In this condition of producers of value in use for the satisfaction of legitimate human needs, the concrete work can be understood as a humanizing and emancipatory element par excellence.

However, in a capitalist society, the work assumes a strange form, appearing as an abstract work focused on the production of exchange values, whose purpose is the extraction of surplus labor (more value) for the increased accumulation of capital (Marx, 2013). Mészáros (2006, p. 99, our translation) claims that this results in the alienation of work, the "unconscious condition of humanity" <sup>10</sup> instituting the loss of control on the part of human beings in four essential and interconnected aspects of their existence: in relation to the outer nature; in relation to its own productive activity; as to its generic being, therefore, in relation to the consciousness of its species; and in relation to the other human beings. This is the fulcrum of the domination of capital over work.

Although the domination and exploitation of work are phenomena completely evidenced by the Marxian and Marxist theory, they are not perceived by most people in their daily lives, since they are invisible and reversed by the ideology of the ruling class. In practice, however, the existence of capitalist domination and exploitation of work has a dense mystifying veil that makes them invisible and reverses, making them appear before the workers themselves as the ultimate condition of equality and freedom. This is because, differently from the reality of other social regimes (slavery and feudalism, for example), in which domination was essentially political and therefore exterior to the individuals, under the aegis of the capital it is given as by "invisible threads", insofar as "the

coercion changes, exercised for economic relations seals the dominance of the capitalist over the worker” (Marx, 2013, p. 808). In effect, such a subterfuge can only be successful if, and to the extent that, substantive inequality between people is covered by a formal equality (Mészáros, 2011).

Like every other social phenomenon, domination and exploitation of the worker have a spatial dimension which can be interpreted from the point of view of power relations and therefore of the “lens” of the territory. The territory where the capital is reproduced by means of the unpaid work extraction is the territory of domination and the derealization of the work, which the corollary is the degradation of the subject that work not as an exception, but as an objective tendency related to the social determination of the health-disease process.<sup>11</sup>

Laurell (1982) corroborates with this argument when advocating the existence of a close conjunction between the work process and health-disease process. A process that assumes distinct characteristics second to the form of insertion of each group/class in the production and is determined by the way man appropriates nature at a given moment. Marx (2013, p. 342) also clarifies that in the capitalist work process, “the capital has not [...] a minimum concern for the health and duration of the worker’s life” because the attacks on health and the physical and psychological well-being of workers are inherent in the mode of being of capital, since the laws of production impose themselves on the capitalists (or their ad hoc managers) as coercive laws, tough and external to their consciousness.

Foucault was one of the first authors to identify the spatial dimension of capitalist domination and theorize about it. When examining the nature of relations and mechanisms of power, the French philosopher appointed to the fact that the bourgeoisie historical ascension also meant the ascension of a new form of power, the “disciplinary power”, in on counterpoint to the “sovereign power” in place until then. While the first was sat on the land and in its products, the second aimed the bodies and their acts, in a nutshell, the work and its potency. In *Vigiar e punir* (1988), Foucault does not restrict the disciplinary power only to the capitalist production, demonstrating as it passes to be present in the diverse forms of domination existing in the whole social body, from mental hospital to prison, from hospital to army, acting as a kind of model to domination. But Foucault warns that “[...] it is, in good proportion, as a force of production

that the body is invested by relations of power and domination [...]", because "the body only becomes a useful force if it is at the same time a productive and submissive body<sup>12</sup>."

The same author is categorical to say that the discipline "in the first place distributed the individuals in the space<sup>13</sup>" (p. 130), thus producing a *disciplinary space* that relies, above all, on the exercise of power. The fencing in, the immediate location, the functionalization, the alignment and the total and permanent vigilance are the basic principles of this space.

In this way, the work capitalist relation is a power relation marked by the domination of the person who works for another, that is, by the leader of the valorization process. This relation takes place on and through a spatial substrate shaped in its image and similarity and constitutes a specific territory: the workplace, locus of capital hegemony and before anything else, a place of disputes, tension and class antagonisms; a space where domination and resistance is unfolded, with the resistance assuming implicit or explicit forms; a territory in which the individual personalities assume, almost always unconsciously, rigid social roles, transforming themselves into personifications of the social relations of production.

As indicated by Barreto and Heloani (2013), when an individual enter into a determined work organization, he finds a ready and materialized reality, with its implicit and/or explicit norms and rules, as well as procedures that it must develop and that are imposed on it. This means that even if it resists in various forms and permanently - because all domination generates resistance - the worker is governed by a territoriality that is foreign to him and contrary to his will. In the Brazilian case, this becomes even more evident, because the work environment is usually governed by rigid hierarchical relations and essentially authoritarian work relations (Vilela; Iguti; Almeida, 2004).

The territory of the relationship capital/work is composed by the permanent interaction between material conditions and the forms of organization and work control. Dejours (1992) acknowledge such indissociability relation between the working conditions and working relations, although the author does not develop a properly territorial approach. The working conditions are formed by the physical, chemical and biological environments and by the conditions of hygiene, safety and

the anthropometric characteristics of the workstation. While the working relations pertains to the division of labor, to the content of the tasks, to the hierarchical system and to the modalities of command, that is, to the relations of power.

However, the territoriality of the capital subordinates the worker, putting him in contact with the risk agents (physical, chemical, ergonomic, mechanical, biological and organizational), which generally act in combination and may directly or indirectly affect the health of workers (Agostini, 2002). Not to mention that the numerous factors of suffering and the imminent risk of mental illness triggered by work activity, as well delineated by Dejours (1992). It means that the traditional approach, based on the unbalanced working environment and the use of individualized solutions and that depends on the performance of the worker, simply does not fit the reality.

Nevertheless, just as organizational forms of production, the forms of control (domination) in the work change over time and differ in space, which directly affects the types of diseases characteristic of each period and productive regime. In the field of the production typically Taylorist-Fordist, whose zenith was reached in the first half of the 20th century, reigned the fragmentation, the division of tasks, the division between conception and execution and the imposition of a rigid hierarchy on the workers. Already under the validity of the flexible regime, conceived on the inside of the transformations of post-1970 capitalism, becomes predominant the polyvalence and multifunctionality of the workers, the systemic and combined administration of the Toyotist type, the rapprochement between conception and execution, the work in "cells" or "islands" of production, the demands of direct involvement of the workers with the productive process under the command of self-control, and the brutal intensification of the pace of work.

Marked by flexibilization (working day, contracts, remuneration, etc.) which led to the extreme precariousness of working relations, the transition between these two models altered the profile of the risks and predominant health dangers. From physical and chemical risks to accidents related to various types of injuries, such as cuts and torsions, and intoxications, there is a much more subtle, subjective and invisible risk, such as moral harassment (Braz, 2013; Barreto; Heloani, 2013). The result is the current epidemic of mental disorders and repetitive strain lesion (RSI/WRMD).

It should be noted that Brazil experienced the flexible or Toyotist regime even before the Taylor-Fordist model was able to consolidate itself, mixing pre-capitalist working relation with what is most modern in terms of production and work management (Braz, 2013). Thus, characteristic damages of each period/model are also amalgamated, sometimes in the same territory and in the same productive sector (Silveira, 2009).

It is also necessary to clarify, at least *en passant*, that the territorial approach of the workers' health should not be limited to the local level of the workspace itself, also taking into account the power relations deployed at other scales. Once the same principles which fragment, hierarchize and make men unequal in capitalist society are present in the capitalist production of space, in a way that the capitalist space is essentially fragmented, polarized, unequal and combined (Smith, 1988; Brandão, 2007). Thus, it is very important to consider a much broader geographical context, especially in the context of the globalization of capital, in which particular production processes around the world are linked, tuned by the tuning of the global financialized economy, to understand what goes on in a specific geographically localized work process.

### Final considerations

The purpose of this theoretical-epistemological essay was demonstrate the possibility of analysis the issues referring to the worker's health stressing its intrinsic spatial dimension by means of a critical approach of dialectical-materialism nature centered in the concept of territory. We have tried to highlight how capitalist production engenders forms of control and domination historically modified and projected spatially as territories of the hegemony of capital over labor, which are expressed in the most distinct economic sectors, in the countryside, and in the city.

This perspective allows considering both the working conditions constituting the spatial substratum of all workplaces and the forms of organization and control of work that interact with them continuously. But under the insupportable imperative of the expanded capital accumulation, that makes the imposition of situations which affect the health of the workers, an inherent objective condition and not something fortuitous or residual. A condition elevated to the umpteenth power in a country of a

dependent capitalism, as in Brazil. That is why is inconceivable to limit the perspectives of analyses – and practical proposals for the solution of problems arising from them – to Occupational Health, centered in the behavior of workers and/or in the risk agents as if everything were nothing more than a question of appropriateness and refinement. Hence, equally, the recovered importance for Worker's Health, while a multidisciplinary field capable of referring critical perspectives averse to reformism, whose ultimate purpose is to ensure the continuity of the expanded reproduction of capital.

By its very self-expanding and uncontrollable nature, the reproduction of capital is incompatible with the health and well-being of the workers, just as it cannot be reconciled with the preservation of nature. In other words, from the perspective here adopted and defended, the degradation of work should be seen as the rule and not the exception, assuming, more and more, a systemic character (Thomaz Junior, 2017a). Far more than just a theoretical postulate, we hope that this is also a principle capable of contributing to the political action of those who, in different spaces, fight for the fundamental rights of workers.

## Notes

1 See, inter alia, Soja (1993) and Smith (2000).

2 In this respect, see, for example, the works of Bezerra (2012), Heck (2013), Perpetua (2016a) and Thomaz Junior (2017a). See Perpetua (2016) for a dialogue between Geography of work and others branches of Works Studies.

3 According to survey data submitted by International Labor Organization (ILO), every year, 2.3 million people die and about 300 million are injured due to work-related accidents and illnesses. It means that every five minutes, five employees are killed and 3,000 accidents occur. When such accidents are mensuared in economic terms, they cost around 4% of world GDP, on lost labour days, health spending, pensions, rehabilitation and reintegration. However, the own agency recognizes that the data are far from reflecting the real magnitude of the problem because the majority of the accidents and illness are not reported. Available at: <<https://news.un.org/pt/audio/2017/04/1203771-acidentes-de-trabalho-matam-23-milhoes-de-pessoas-por-ano>>. Accessed on: 20 Jan. 2017.

4 Available at: <<https://observatoriosst.mpt.mp.br/>>. Accessed on: 10 Jan. 2018.

5 Available at: <<http://agenciabrasil.ebc.com.br/geral/noticia/2016-04/brasil-e-quarto-do-mundo-em-acidentes-de-trabalho-alertam-juizes>>. Accessed on: 10 Jan. 2018.



6 Based on available literature about the theme, Pignati e Machado (2005) considers that the underreporting of Social Welfare data reaches 80%. In the case of intoxications caused by pesticides products registered by National Disease Notification System (SINAN/SUS), the experts admit the existence of 50 cases not registered for each registered case (Rodrigues, 2012).

7 The Social Welfare data, for example, cover only formal workers, leaving out a significant part of the PEA.

8 Two seminal texts on the subject were presented by Moreira (2002) and Thomaz Junior (2002). A few years ago, in 1996, this last author had already created the Centro de Estudos de Geografia do Trabalho (CEGeT), based in UNESP - Presidente Prudente campus.

9 In line with this definition, we counterpose the theories that the territory is posterior to space (Raffestin, 1993) and that the territory is composed only of power relations, and not the spatial substratum that behaves them. With regard to the second affirmation, it must be admitted that even if the forms of the spatial substrate do not change when another territoriality appropriates them, its content necessarily changes.

10 (Raffestin, 1993, p. 99).

11 This has been empirically evidenced by various studies developed undertaken within the Geography of Work, in different geographic clippings and activity sectors, for example, the works of Mendonça (2004) on issues related to the production of export crops with an emphasis on soybeans; Barreto (2012) and Thomaz Junior (2002, 2009, 2017b), about sugar and alcohol production; Bezerra (2012), about fruit farming; Heck (2013), about slaughtering sector for pigs and poultry; Perpetua (2016), production of pulp, among others.

12 *Ibid.*, p. 28.

13 *Ibid.*, p. 130.

Note: This text is product of the research activities performed in the scope of two research projects financed by CNPq: 1) "Expansão Territorial do Agrohidronegócio e os Impactos para o Trabalho e Movimentos Sociais no Século XXI". Chamada: UNIVERSAL (Processo: 458711/2014-4). 2) "Movimento Territorial de Classe, Plasticidade do Trabalho e os Impactos na Saúde do Trabalhador no Século XXI (conflitos territoriais e luta pelo acesso à terra e à água)". Chamada: PQ-1/CNPq (Processo: 304514/2015-2), and of a Project, financed by FAPESP: 3) "Mapeamento e análise do território do agrohidronegócio canavieiro no Pontal do Paranapanema - São Paulo-Brasil: Relações de trabalho, conflitos, formas de uso da terra e da água, e a saúde ambiental". Projeto Temático/FAPESP (Processo: 2012/23959-9). Valid from 01/08/2013 to 31/07/2018.

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## Authors Contributions

All authors offered substantial scientific and intellectual contributions to the study. The conceptional tasks and design study, writing and preparation manuscript, as well as critical review, were developed in the group. The author Guilherme Marini Perpetua was especially responsible for the initial theoretical-conceptual development. The second and the third author made fundamental additions and corrections from their research experiences. The final text is a result of a collective work carried out over years of coexistence and discussion among the authors.

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