

Concepts of region and regionalization: aspects of its evolution and possible uses to health regionalization

Os conceitos de região e regionalização: aspectos de sua evolução e possíveis usos para a regionalização da saúde

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Abstract

This article aims to discuss some of the main definitions of region and regionalization established in human geography throughout the twentieth century, in order to find parameters for its use in the current debate on the regionalization of health. This reinterpretation allowed the proposition of three ways to understand the interface between region/regionalization and health: 1. A critical reconsideration of some concepts linked to the man/environment geographical tradition, to understand the current phase of “epidemiological transition”; 2. Reinterpretation of the geography of “urban networks” as an element in thinking about today’s health care networks and the use of the “health industrial complex” as a mechanism to improve regional development; 3. and lastly, the use of the concepts of region and regionalization originated from Marxist tradition to emphasize the material and immaterial aspects that underlie the formation of regions in the current period of globalization. From the methodological point of view, the main resource used in this article was a review of the literature on these issues.

Keywords: Region; Regionalization; Health; Human Geography.

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Resumo

O presente artigo resgata algumas das principais definições dos conceitos de região e regionalização estabelecidos ao longo do século XX na geografia humana, no sentido de encontrar parâmetros para seu uso no atual debate da regionalização da saúde. Essa releitura permitiu que se propusessem três possíveis caminhos para entender a interface entre região/regionalização e a saúde: 1) o resgate crítico de conceitos ligados à tradição da relação homem/meio na atual fase da “transição epidemiológica”; 2) a releitura da geografia das “redes urbanas” como elemento para se pensar as atuais redes de atenção à saúde e para o uso do “complexo industrial da saúde” como mecanismo de desenvolvimento regional; e 3) por fim, a utilização dos conceitos de região e regionalização com origem no marxismo para enfatizar os aspectos materiais e imateriais que estão na base da formação de regiões no atual período da globalização. Do ponto de vista metodológico, o principal recurso utilizado para a consecução do artigo foi a revisão bibliográfica sobre os temas abordados.

Palavras-chave: Região; Regionalização; Saúde; Geografia humana.

Foreword

A lot of difficulties are associated with the rigorous treatment of the region and regionalization concepts, particularly in geography. The first difficulty, of a more general character, comes from the simple fact that the term region, for allowing reference to various scales, can serve to indicate and locate any kind of concrete “extension”, from a “region” of the human brain to a neighborhood, a province or a group of countries (Beaujeu-Garnier, 1971).

The term also has a long tradition of interdisciplinary treatment (Claval, 1987), with common application in biology, anthropology, psychology, sociology, public administration, history and economy, each discipline proposing the same way their own definitions and meanings “appropriate” to that concept.

Within this context, this paper seeks to rebuild some approaches on the region and regionalization concepts from human geography which can bring contributions to its current use in the debate of “health regionalization”. As shown by Mello and Viana (2012), the issue of regionalization figures as a central axis of progressive thought in the health field, as also are the themes of entirety, coordination, decentralization and universality. We tried to resume the concepts of region and regionalization from three important debates that have been on the geography and health interface: 1) epidemiological studies and the “influence of the geographical environment” in the health / disease process; 2) the importance of networks towards the formation of regions and the regionalization of health services; and 3) recent definitions of region and regionalization, which may provide new contributions to the understanding of contemporary problems of health regionalization. Despite being an essential aspect of geography / health interface, the associations between the norms / laws and health regionalization were not analyzed, given the significant amount of fine studies that already exist in this field (Guimarães, 2005; Machado, 2009; Lima et al., 2012). From a methodological point of view, this paper drew on mainly the use of literature review for its achievement.

Although the regionalization theme leads us to

think about the possibilities of its practical implementation, the paper has tried to focus on the more theoretical aspects that concern some qualitative definitions of the concept in the twentieth century, since these settings end up foregoing in importance, the practical dimension of the discussion on regionalization (McDonald, 1966). Operational methods for defining the regions which were not associated to a dense and qualified discussion of a more theoretical character, turn out to be challenged or outdated faster (Dumolard, 1975).

Regionalization as a result of man/environment relationship: natural regions and human regions

Before becoming the target of systematic concerns, regional studies sought, above all, to identify specificities, curiosities and descriptions of the most different parts of the globe (Claval, 1974). From the mid-eighteenth century several forms of description, classification and analysis techniques have been created without the intention to develop a more “scientific” point of view about the term region. These concerns have become more common in the early twentieth century, when the systematization of a “regional geography” began to take its first steps, both in Europe and in the United States (Whitlessey, 1954); three were the main authors who developed the first theoretical definitions on the regional phenomenon: Alfred Hettner, in Germany, Vidal de la Blache, in France, and A. J. Herbertson, in Great Britain (Duarte, 1980).

The first systematic definition of the notion of region was made by Herbertson, in an article dated 1905. With regard to its more methodological aspects, it can be said that the purpose of this author is to create a “systematic geography”, and seeks to find “[...] geographical divisions orders [...] on the globe” (Herbertson, 1905, p. 301). Said text opens

the concern to define regionalization as a classification process (Dickinson, 1976). It makes explicit reference to the biology classification procedures (especially with regard to the division of the hierarchy of living beings in kind and gender)¹, thus demonstrating a deductive bias, based on the prior definition of the regions’ demarcation criteria for then “[...] divide the world into major natural regions” (p. 302). Herbertson (1905) proposes four “classes of phenomena” for such regions, in the following order of importance: 1) configuration (mainly the elements of geology and geomorphology of earth); 2) climate (air masses, temperature and precipitation levels); 3) vegetation; and 4) population densities².

Setting natural regions would be, in this sense, “[...] the necessary step for the final solution of the problems of geography” (Dryer, 1915, p. 121), as these definitions would allow the establishment of sound and lasting cuts on the earth’s surface even to understand the economic functions which each portion of the space would fulfill, since it was believed that the productive activities had clear causal relationships with natural elements such as climate, geology, landform, vegetation and soil of each area. This true “physical regionalization” of the world at the time was followed by several similar attempts, mainly conducted by Russian geographers (Grigg, 1974). Paul Claval (1974, p. 63) shows that in this period “[...] the region was a fact of physical geography, a fact of nature [...]”, in virtually all that was written on the subject. Gomes (1995, p. 55) also noted that “[...] the concept of natural region is born from this idea that the environment has some ownership on the orientation of the society development.” Most of these definitions had a deterministic or “environmentalist” Bias.

In France, the first systematic study of the concept of “natural area” was conducted by the geographer Lucien Gallois, in his book *Regions naturelles et noms de pays*, 1908 (Roncayolo, 1986). According to

1 According to the author, “While we may not be able to dissect our natural region or terrestrial macro-organism into the organs, tissues, and cells of the vital organism, we can find in this idea a useful hint” (Herbertson, 1905, p. 303).

2 According to the author’s definition: “In the determination of natural regions, climate and configuration must both be considered. Climate, because it not merely affects the physical features, but also because it summarizes the various influences acting on the surface. (...) A natural region should have a certain unity of configuration, climate and vegetation. The ideal boundaries are the dissociating ocean, the severing mass of mountains and the inhospitable deserts” (Herbertson, 1905, p. 309).

the original definition of Gallois ([1908] 2013, p 222.):

In summary, if the consideration of climate allows distinguishing the earth's surface, only a certain number of large regions, in turn the altitude and the geological soil formation introduce differences and justify a subdivision into smaller regions, more or less well-defined, whose characteristic is more highlighted the simpler are the elements that constitute it. For such large and small units, but all of physical order, it is appropriate to reserve the name of natural regions. [...] I believe, in fact, that it is necessary to find the beginning of all geographical division in nature itself.

Concurrently to the studies of Lucien Gallois, Vidal de La Blache erected, in several works, all his explanatory building geography, seeking to unite "natural" and "human" aspects in their regional monographs for explanation of geographic phenomena. Also having a history degree, the author gives great emphasis to the long time periods required for the formation of regions, and thus decreases the emphasis which was given to the determination of natural factors in the configuration of different forms of the earth's surface. To join the physical framework, human action and history, La Blache proposed the concept of *genre de vie*, which would be a synthesis of the relationship between the physiographic availability of each part of the world and the active and slowly adjustments made by societies to use such availabilities. Grigg (1974: 27) reminds one of the famous La Blache's metaphors to explain the meaning of the concept of *genre de vie*: man and nature "shape" each other "[...] like a snail and its shell [...]" ; "[...] the two form a complicated amalgam".

So, La Blache is proposing the concept of "geographical region" to refer to those portions of the earth's surface which have certain homogeneity characteristics, derived from the combination of elements of the natural environment and human action. As shown by Meri Lourdes Bezzi (2004: 65-66), "[...] it was not the natural area anymore - physi-

cal - the privileged object of geographical analysis [...]", but the different combinations of natural and cultural elements that were held in each geographic region. This proposed definition for geographic region, from a theoretical point of view, composed a true "system of concepts" with the notions of "*genre de vie*", "*pays*" and "landscape", and the occurrence area of a homogeneous landscape would set the limits of such regions. The homogeneity of such landscape, in turn, would be reflected both in their physiographic aspects as a uniformity of human arrangements: the styles and forms of housing, modes of transportation, the agricultural cropping systems and settlement patterns (density or rarefaction) in each portion of the space.

In the mid-twentieth century, the main systematizing of such concept of region in the French geography was certainly André Cholley (1940, 1951). According to the author, "[...] the geographical facts are essentially complex; they respond to convergence, the combinations of factors" (1951, p. 18). The factors to be combined in the earth's surface would be threefold: 1) physical factors; 2) biotic factors; and 3) human factors. It would be a task for geography to find ways that these factors are combined in each portion of the earth's surface, and identify the existing "orders" and "units" which derive from these combinations³. With this reasoning on the regional phenomenon, Cholley opened the possibility of combined study of these three factors (physical, biotic and social), as was later developed by Jacques May in the proposal of the so-called "*geogens*" (i.e. the environmental factors that interfere in the diffusion of the "pathogens") which precisely divide themselves into the "physical", "organic" and "social" (Bousquat; Cohn, 2004).

This period of development for such regional concept is characterized, first, as an overrun in the region settings from the predominance of natural factors in its composition. If Herbertson allowed the construction of the first major regionalization of world space from the data of "configuration",

3 "It is precisely in the performance of major life activities in society, agriculture, farming, etc. industry, that we see them appear (the "secrets" of such combinations). They express a true convergence of physical, biological and human factors. But it is the human group with its technique, its work (*g nie*) of organization that puts them on foot; we see them born, last, evolve and disappear, replaced by a new combination" (Cholley, 1951, p.17)

“climate” and “vegetation” of parts of the globe, all other authors who were analyzed tried to work the regional concept from smaller scales, mainly the “mesoescales”, given by space portions set within the territorial limits of countries.

In this context, Max Sorre determines one of the most important definitions of region in human geography, showing that “[...] it comes to these restricted areas individualized by the uniformity of physical conditions within its limits and a particular *genre de vie*, or at least the nuances of a way of life” (Sorre 1952, p. 445), and the “elementary” regions would be those in which “[...] a human group practices a consolidated *genre de vie* in harmony together with the geographical conditions and relatively stable” (Sorre 1952, p. 449). We also owe to Max Sorre the proposition of the concept of “pathogenic complex” in the same period, which allowed considerable explanatory improvements to the study of the spread of infectious diseases in different areas of the globe (Ferreira, 1991; Costa, Teixeira, 1999).

It should be noted that the region is, to this generation of scholars, a reality “itself”, independent of the researcher. In the words of Roberto Lobato Correa (1986, p. 28-29), “[...] the geographic region so conceived is considered a concrete, tangible entity, a fact with life, so assuming an evolution and an equilibrium stage”. To Paulo Cesar Gomes (1995, p. 57),

The region [under this definition] is a concrete, physical reality, it exists as a frame of reference for the population living in there. As a reality, this region is independent of the researcher in its ontological status. It's the geographer work to unravel and uncover the combination of factors responsible for such configuration.

Even in its most general aspects, we can say that these conceptions of region and regionalization are guided by a geographical tradition of man-environment relationship studies, which reinforced the use of concepts such as “*genre de vie*”, “landscape”, “habitat”, “ecumene”, among many others that bring geographical knowledge near to the human ecology, and give significant emphasis to the weight of the “natural” phenomena as a defining element of the terms region and regionalization.

The region and regionalization as a result of formation of urban networks

Along with the development of all these new methods and concepts for regional analysis, a number of proposals was developed in Europe after the World War II that put the formation and development of urban networks, or urban networks, into the center of the debate. The cities, accordingly, will then be considered as the “[...] *centro rector de la región en donde están ubicadas*” (Dickinson, 1961, p. 203).

In the genesis of such introduction of cities network in the regional thought there are the works of the German geographer Walter Christaller, especially his book *Central places in Southern German* (Christaller, 1966). According to the author, the “complementary regions” would be the result of systemic functioning of cities, which in turn would have their organization led by the importance of each city as offering goods and services - more or less - complex. The more complex the trade activities and services in the city center in question, the greater the “range of goods” offered by that point in the territory, and the greater the relative position of this “central place” in the city system hierarchy to which it belongs. As noted by Bousquat (2001, p. 74), “[...] it is clear the relationship of this theory to the guidelines of regionalization and hierarchy of the clientele, as extensively used in the health sector.”

Although already found in Max Sorre (1952) the cities' consideration - and especially the metropolis - in the regionalization process, the definitive incorporation of urban networks, for understanding the formation of regions, was made by the French geography work in the late 1960's. More generally, this geography sought both to establish a more critical understanding of the regional phenomenon as to expand the geography intervention capacity in state action, through urban and regional planning.

Among other important authors of this generation (who can largely be clustered in what is conventionally called as the “active geography”), it should be noted the names of Jean Tricart, Jean Dresch, and Pierre George (together with their students Bernard Kayser, Raymond Guglielmo, Yves

Lacoste, Raymond Dugrand and Michel Rochefort). These new prospects opened up in France, from a “engaged geography” (Bataillon, 2006) aiming to recover elements of geographical tradition of man / environment relationship, but also advance to identify the factors related to the influence of historical processes of state and economic organization of space to define the phenomenon of regionalization.

With regard to the evolution of the concept of region, as shown by Michel Rochefort (1961, 1960) in his pioneering studies, cities are “pillars of life relationships” which animate the urban networks, and the cohesive set of operation of this “life relationships” (*vie de relations*) between the cities is what configures a “regional armature”, or is simply what forms that “regional urban networks”. To Kayser (1980, p. 300), “[...] the knowledge of the urban network leads directly to the geographical understanding of the regional situation.” According to Etienne Juillard (1971, p. 23), it can be considered as well, “[...] the cities, the urban armature, are the engine of regionalization.” This approach from the urban networks detours some basic ideas that shaped the *lablachean* geography, as the search for determinations of regional formation in “man / environment relationship” or that the region is only an “extension area of a landscape”, one of the main La Blache’s definitions for regions (Correa, 1986).

Michel Rochefort (1960) framed the concepts of “life relationships” (*vie de relations*) and “urban network” as the main tools to identify regions of the earth’s surface. Each portion of the geographical space would have a set of cities working in cohesion, and those cities which had a more complex range of services would have a more extended “zone of influence”, and would be the command center of the concerned region; i.e., it will be a “regional metropolis”. The “regional armature” of each urban network presents three main components: 1) a “regional metropolis” or “regional capital”; 2) some “intermediate centers”; and 3) a wide range of “local centers” of lower economic complexity, “local centers” that are tributaries of the “intermediate centers” and the commanding of cities in such region.

It is important to note, therefore, that there is a hierarchy between urban centers, according to the type of central activity engaged, and that “[...] from there it shall not be possible to study a city alone, as a form of activity: the unit should be the ‘urban network’” (Rochefort, 1961, p. 3). It still follows from his original study another concept that would be very important for understanding urban networks - and regions - in their contemporary forms. This is the concept of “rare tertiary sector” or “upper tertiary”, developed in the author’s text with Jean Labasse. In sum, it can be said that

By the power of decision, the rarity of services, or on its power, certain higher tertiary equipment form the basis of the polarization of regional life and its location provides the best definition of the upper level of the urban armature of a certain country (Rochefort; Labasse, 1965 p. 58).⁴

In the same period, in France, the studies of Bernard Kayser (1966; 1980) are highlighted on the issues of region and regionalization. According to the author, for the effective formation of such regions, what he called “liberal” processes and “voluntary” procedures both would exist (Kayser, 1980). The first type of process is intertwined with the slow and spontaneous differentiation of areas, mainly derived from the increased complexity of urban and industrial life of the country. Five factors would interfere in this liberal process:

1. *natural factors*: never considered as “early” factors - the human action / occupation always are - natural factors (such as landforms, climate, soil fertility etc.) can contribute as “brakes” and also as “catalysts” in forming regions;
2. *history factors*: all those elements that relate to collective representations and identities created on specific portions of the space can be considered as “history factors” in the formation of such regions; Kayser says the “value systems”, “psychological attitudes” and “collective reactions” among other phenomena that shape a certain

⁴ According to Jean Labasse (1982), the more complex hospitals would be essential elements of the “upper tertiary” sector both for its rarity (and, consequently, by its capability of polarization of large areas) as the economic dynamism given to the city and region in which they are installed.

‘regionalism’, that is, collective behavior based on the historical evolution of different terms of geographical space;⁵

3. the *polarization*: the entire region develops itself from a major urban center, and the greater the importance of industrial relevance and services of such center in relation to its surroundings, the greater its ability to “perform” the region (Kayser, 1980, p. 286); according to the author, “[...] in the contemporary era, it is not therefore the region that created its capital, it is the city that has forged its region”.
4. the *communications*: transport equipment (especially the road and rail networks) are *sine qua non* conditions for regional formation; they can both strengthen the centralization of certain cities - over others - as to make the countries regional development more “balanced”;
5. the *administration*: Last but not least, the achievement of institutional mechanisms for “control” of such regions, is a central element of their formation; administrative functions should represent, according to Kayser, the hierarchical division of urban life in the region in question. In addition to being essential for the good economic development of such regions, the possibility of control of political decisions at the regional level is essential to maintain internal coherence of such regions.

These are, in general, the processes by which regions are formed, and the analysis of these five elements attribute soundness and effective explanatory power to the regional approach in human geography. It is the consideration of these factors, moreover, that would grant the geographical study of such regions a more concrete character, as opposed to the abstract proposals coming from the regional economic theory (Kayser; Guglielmo, 1980). Regarding the difference between “liberal” and “voluntary” formation of such regions, Kayser also shows us that in socialist countries - as in “develop-

ing” countries - all these factors are more strongly controlled by the state and is more appropriate to talk about “voluntary” or “planned” formation of such regions in these cases (Kayser, 1966). Under this approach, the region is a concrete reality, and its existence depends crucially on all “factors” as mentioned above. In the author’s words,

The regions are living, complex organisms. They arise, that is, take crystallize body and - develop themselves, that is, they structure themselves in an increasing steadily, gain cohesion. They may also suddenly die, due to the action of an external agent, or by slow disintegration (Kayser, 1966, p. 283).

It would be up to the researchers of such regional phenomenon to unravel the “vital mechanisms” behind the structuring of regions. It is worth noting, finally, that for Kayser, the regionalization concept serves both to identify the formation of such regions - thinking of their “liberal” (or spontaneous) evolution - as to “build” new regions - thinking of their “voluntary” (or planned) formation. Along this second form of definition (the voluntary regionalization) all state attempts would be inserted to form “administrative regions”, as well as those proposals that François Perroux and Jacques Boudeville termed as being “pilot regions” or “planned regions.” In the Kayser words (1971, p. 83), “[...] the regionalization is the way, ensuring the best possible use of space, to contribute to development.” This generation of geographers also eventually consolidate a “normative” view for region and regionalization, making both concepts fundamental instruments of state action (Haesbaert, 2010).

Marxism and the recent views of regional phenomenon

Since the early 1970s, the regional studies in the described manner have come under harsh criticism, coming from all areas of knowledge, which ques-

⁵ Remember that the first two factors approach the theoretical model of Kayser’s proposals on French classic regional geography. According to the author, “[...] neither natural factors nor history factors of regional formation may be overlooked, they often play a premier role to the limits. But they are not the engines. What explains the region, its dynamism, its living mechanism and definitely its formation, are their organs, heart and arteries: their centers, and their lines of communication” (Kayser, 1966, p. 285).

tioned the validity of these approaches (“natural regions”, *lablachean region*, economic, “planning” approaches etc.) and the very epistemological status of the region and regionalization concepts. In general, these criticisms were based on the philosophy of historical materialism, and saw the region as “[...] a local response to capitalist processes” (Gibert, 1988, p. 209).

One pioneer of such criticisms, Hugo Zemelman (1972) advocates the idea that, without incorporating the “totality” and “praxis” categories, just as the “perspective of social classes” on regional analysis, one does not come to a concrete definition in any approach. José Luis Coraggio (1972) makes heavy criticism to the model of “polarized development” of François Perroux, proposing that the poles, in peripheral countries, end up becoming real “enclaves” and that serve as installation mechanisms of a foreign capitalist domination than effective development of these nations. There are four more well finished criticisms of the regional approach which were made in this context of introduction of Marxism into human geography, respectively held by Yves Lacoste (1989), Milton Santos (1990; 1991), Doreen Massey (1979) and Ann Markusen (1981).

The Lacoste criticisms have a determined address: the “traditional” regional French geography, especially the one proposed by its main articulator, Vidal de La Blache. According to Lacoste, it would be necessary to point out the “[...] huge depoliticization of discourse that it imposed” (Lacoste, 1989, p. 60): despite the classical geography had structured itself according to the French colonialists interests, and had allowed the spread of a series of ideologies (especially when used in school education), it was taken - by geographers themselves, who practiced it - as a “scientific” geography⁶.

In addition to these more political issues, Lacoste (1989) also suggests a number of epistemological problems in these proposals. The definitions of such regions in La Blache become “powerful obstacle-concepts”, and as he had not explicitly worked out

for the methodological assumptions of his regional geography, the author produces “hidden axioms [...] [and] let the essential economic, social and political phenomena arising from the recent past into the gloom” (Lacoste, 1989, p. 62-63). The author adds that being the regions “[...] evident facts (and not the result of a choice), nothing more can be done, it seems, that observe this portion of space endowed with certain peculiarities that make it different from the territories that surrounds it” (p. 73). Regarding the definition of such a region, Lacoste shows that

While it would be politically healthier and more effective to consider the region as a spatial form of political organization (etymologically, the region comes from *regere*, that is, to dominate, govern), geographers believe in the idea that the region is almost a given eternal fact, product of geology and history. Geographers, somehow, eventually naturalize the idea of region: do they not speak about limestone regions, of granitic regions, cold regions, forest regions? They use the concept of region, which is fundamentally political, to designate all kinds of spatial sets, whether topographical, geological, climatic, botanical, demographic, economic or cultural (Lacoste, 1989, p. 65-66).

In his vast work, Milton Santos takes over the treatment of regional issue at various times, and the first major synthesis by the author on the subject is in his book *O trabalho do geógrafo no Terceiro Mundo* (Santos, [1971] 1991). Santos there draws attention to the fact that the development conditions of capitalist system - increasingly internationalized - as well as the contemporary forms of displacement of goods, people and information, beat to death those existing regional arrangements, with empirical and theoretical repercussions to the regional debate. To enlarge and give impetus to regional analysis, the author speaks of the need to be incorporated the category of “totality” in geography - and in the regional studies - also taking into account the notions of

6 According to Aloisio Duarte (1980), Lacoste would mainly emphasize the ideological character of such region concepts produced in France, as these proposals for regional delimitation would have served much more to enhance the central state dominance over the territory of that country, and establish a series of judgments that hide latent social contradictions (allowing a greater domination of regional ruling classes on the local workers arrangements).

structure, process, function and form (Santos, 1990) The “driving force” of regional formation processes - and organization of space and place - would be the “social totality” which is both a “[...] state, but also the totalization in motion. It is a situation, and a situation in change “(Santos, 1990, p. 177).⁷

From the point of view of the empirical implications of this approach, if it was difficult to talk about regions like “*lablacheans*” (whose main logic should be sought in their own local human-environment relationships) in the current conditions of globalization, it is impossible to understand the region but from the “internal” and “external” vectors that form it. Upon Santos definition (1991, p. 9-10)

The progress in the field of transport and communications, as well as the expansion of the international economy - which has become “widespread” - explains the crisis of the classical notion of region. [...] In the current conditions of world economy, the region is no longer a living reality, with its own internal coherence. Defined as mainly from abroad, their limits change with the criteria we set it. Therefore, the region does not exist by itself.

This dynamic understanding of the regional issue derives from a whole series of contemporary definitions towards the phenomenon. According to the author, the region would be so, from a theoretical point of view, “[...] the locus of certain functions of the total society at a given time” (Santos, 1985, p. 66), and would define itself “[...] as the result of the possibilities linked to a certain presence, on it, of fixed capital exercising a given role or given technical functions and conditions of its economic functioning “(Santos, 1985, p. 67).

One can recently highlight two main ways to address the regional issue in the work of Milton Santos. A first dimension of his approach is more

concerned with identifying “material” factors in defining regions and the analysis of the diffusion of what he called “technical-scientific informational *milieu*” (Santos, 1994, 1996). This type of geographical environment comprises those parts of the territory in which they intensely - and contiguously - appear central features of the current period of globalization: modern telecommunications and transports, automated production systems, high-tech companies, the “most advanced” universities, skilled labor, “scientific” agriculture, etc. All these activities and support-networks with huge densities of “science”, “information” and “technology” are the direct result of modernity imposed by globalization, and are a constituent part of the “technical-scientific informational *milieu*” The spread of this new type of geographical environment, however, is extremely selective, especially in peripheral countries: there are portions of territories that have higher technical and informational densities and plots in which these elements appear less intense or in a “linear” or “punctual” form. The other areas, impregnated whether of a more “obsolete” technical *milieu*, would be the locus of life of the non-hegemonic actors and those poorest people.⁸

A second dimension of such regional analysis proposed by Santos (an inseparable dimension of the “material basis” mentioned above) concerns to the “immaterial” aspects forming regions, that is, the logic and the intentions of organizations (public or private) which give cohesion and systematic to the regional arrangements. The main concept that helps to identify these more “immaterial” logics is the “geographical solidarities”, which exactly corresponds to the result of social and territorial division of labor installed in different portions of the geographic space, at every historical period. That is, as many as important than the physical infrastructure, the “immaterial” factors, the “intel-

7 According to the author (Santos, 1990, p. 177), “The spatial totality, which is one of those structures of society, should also be treated in terms of substructures (they are substructures for society as a whole; for the spatial totality, they are simply structures). Here it’s possible to talk of places and subspaces, areas which, in the traditional language of geographers, are most frequently called *regions*”.

8 In the case of Brazilian territory, these definitions were very important to support the proposal for a “concentrated region” made by the author in his book written together with the geographer Maria Laura Silveira (Santos; Silveira, 2001). The “concentrated region” would be that part of the southern portion of our territory that includes the south and southeast regions, defined by IBGE, in which the “technical-scientific informational *milieu*” occurs more intensively, almost ubiquitous, creating a series of external economies which are *sine qua non* conditions for installation of the most dynamic capitalist activities.

ligence” or teleology are those that unify places and regions. This unification is primarily guided by the vicissitudes of hegemonic agents (and the instrumental rationality), as in the case of large corporations that shape the different areas of the globe in their favor. According to Milton Santos (1994, p. 92), consequently,

In the current definition of such regions, we are far from that organic solidarities which was the very heart of the very definition of a regional phenomenon. What we have today are organizational solidarity. The regions exist because they are imposed by organizational arrangements, creating organization cohesion based on rationales of distant origin, but which become the foundation of the existence and definition of these subspaces.

As they are always “functionalizations of the totality” - and because changes in times of globalization are increasingly accelerated - the regional arrangements no longer have the “historic” stability they had: nothing would be more anachronistic than working with the categories of the old classic French tradition, in which regions were considered as a result of lasting process of formation of the “*genres de vie*” and “landscapes” resulting therefrom. Besides not having more the “absolute territoriality of a group” - as it was the case in periods previous to the twentieth century - the number of factors which focuses today on regional formations is much larger, and more complex. The control of these mediations, in the limit, is given by the logic of big businesses, with the main nexus of regional organization in today’s world starting from them. Thus, “[...] now, exactly, is that one can not fail to consider the region, although we recognize as a space of convenience and even if we call it by another name” (Santos, 1996, p. 196) .

The region is therefore the result of the dialectic between two types of logic: one that is given by the internal arrangements of each regional division of work (which is more the result of historical formation, spontaneous of such regions) and other that is expressed by the influence of increasingly acute external vectors (whether norms, information flows,

capital, goods, investments etc.) that install on these pre-existing combinations of “organizational” linkages. To the most “internal” arrangements, Santos gives the name of “horizontalities”; to the external vectors, “verticalities”. It is from the analysis of these two approaches that one can understand and define the contours of such regional entities of territories in the contemporary world. Or, as shown by Maria Laura Silveira (2010, p. 77), “[...] the region can be understood as a continuous and heterogeneous tissue of modernities and inherited forms, tangible and intangible, that constitute horizontalities.”

Final considerations

Although some recent theoretical discourses have decreed the “end” of the region, it is, in fact, the result of the advance of globalization itself, since at each progress of dissemination of global modernity vectors, a corresponding differentiation of spaces on earth surface is created: nonetheless though it may be that globalization tries to homogenize the space, it ends up fragmenting it and further the regionalization (Santos, 1996). As shown by Rogério Haesbaert (2010), by the very importance that the concept of region (and of regionalization) has acquired throughout the history of the twentieth century, it suffered back and forth, constructions, rejections and reformulations by different authors, approaches and theoretical-philosophical affiliations.

The region and regionalization definitions in certain approaches were seen as given phenomena or concrete facts, with autonomy of existence, and at other times as mere theoretical facts, creations of the “human spirit”. The most recent approaches are less believers of that autonomy - or ontological status - of regions. This is the case of all the Marxist literature, which further enhances the definition of regions as a result of “social totality”. According to these definitions, beyond the regions be a form derived from human intelligence and design - as a framework for action of states and companies - this creation is still “manipulated” in an ideological form, as to expand political gains with uses of such concept (Markusen, 1981; Moraes, 1988).

Although in an exploratory manner, it can be said

that the rescue of the region and regionalization concepts in human geography allows reflecting on some of the key contemporary debates of “health geography.” In addition to the approaches to the geographical *milieu*, that focuses on the “natural determinations” of regions, the use of the concept with updated definitions (such as the technical-scientific informational *milieu*) seems to be very operational to deal with the problems of the current “epidemiological transition” that Brazil has been living (Achutti; Azambuja, 2004; Mendes, 2010), as the chronic diseases and mortality linked to external causes are directly related to the daily life of people who live and work in a urban geographical environment quite complex, more - or less - impregnated with “science”, “technology” and “information”.

The treatment of regionalization from the urban networks perspective, in turn, allows comprehensive analysis of at least two important dimensions of access to health services in contemporary society: 1) the more equitable distribution of equipment and health care actions from the level of complexity of services and its relationship with its own hierarchy of regional urban networks - as also sought to be shown by Duarte, Balbim and Contel (2013); 2) the use of distribution of such equipment as a means of regional development, both by pursuing policies that improve the quality of life / health of the population (in areas of low density service supply) and the use of “health industrial complexes”(Gadelha et al, 2011). - or “[...] health productive space circuits” (Antas Jr., 2013) - in order to increase the local and regional economic dynamism.

These interface elements between the problems of health and human geography can certainly help in one of the main challenges for resumption of regional debate in the contemporary period, which is to seek new forms of “democratic territorial planning” as defined by Jacques Scheibling (1976) for its time. Or as recently showed by José Luis Coraggio (2004), the full human development goes through the democratization of the state and the political system and shall be directed to activation of own resources of such regions to meet the people needs from the places where they live.

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