

FISSURES IN CRITICAL SOCIAL THEORY AND PATHS FOR THE RENEWAL OF GEOGRAPHY

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Abstract

This critical-interpretative and descriptive text analyzes the main weaknesses of critical social theory and critical Marxist geography. It aims to explore theoretical and methodological references that offer alternative explanations for rethinking central themes of Economic and Urban Geography: unequal development and the peripheralization of the economy. The study is based on reflections upon the relationship of Karl Popper's philosophy of science with the work of the Austrian School of Economics and the theses of the Institutional School. Karl Popper's theory of scientific knowledge has two pillars: the concepts of falsifiability and open societies, which are more susceptible to the development of a science capable of getting rid of dogmas. Popper's ethical analysis warns that the capacity for self-criticism is the basis for the development of science. By associating such ethical behavior with open and democratic societies, Karl Popper made profound epistemological criticisms of Marxism, a tradition of thought that still exercises a profound influence in Brazilian geography. We conclude that Karl Popper's scientific conceptions are relevant to the epistemological criticism proposed and exploring new paths of scientific investigation of economic-spatial phenomena.

Keywords: Critical Geography; Epistemology; Economic Development; Austrian School; Institutionalism.

Resumo / Resumen

FISSURAS NA TEORIA SOCIAL CRÍTICA E ALGUNS CAMINHOS PARA A RENOVACÃO DA GEOGRAFIA

O texto de natureza crítico-interpretativa e descritiva analisa as principais fragilidades da teoria social crítica e da geografia crítica marxista, um de seus ramos geográficos. Tem como objetivo explorar referenciais teórico-metodológicos que oferecem explicações alternativas para repensar temas centrais da Geografia Econômica e da Geografia Urbana – o desenvolvimento desigual e a periferização da economia. Fundamenta-se na reflexão sobre as relações da filosofia da ciência de Karl Popper, com os trabalhos da Escola Austríaca de Economia e com as teses da Escola Institucionalista. A teoria do conhecimento científico de Karl Popper se apoia em dois pilares: o conceito de falseabilidade e a concepção de sociedades abertas, que são mais suscetíveis ao desenvolvimento de uma ciência capaz de se livrar de dogmas. Com sua análise de natureza ética, o referido filósofo advertiu que a própria capacidade de autocritica é a base para o desenvolvimento da ciência. Ao associar este comportamento ético às sociedades abertas e democráticas, Karl Popper teceu profundas críticas epistemológicas ao marxismo, tradição de pensamento que exerceu e ainda exerce forte influência na geografia brasileira. Conclui-se que, as concepções científicas de Karl Popper são relevantes para conduzir a crítica epistemológica proposta e a exploração de novos caminhos de investigação científica para a problemática dos fenômenos econômico-espaciais.

Palavras-chave: Geografia Crítica; Epistemologia; Desenvolvimento Econômico; Escola Austríaca; Institucionalismo.

FISURAS EN LA TEORÍA SOCIAL CRÍTICA Y ALGUNOS CAMINOS PARA LA RENOVACIÓN DE LA GEOGRAFÍA

El texto de naturaleza crítico-interpretativa y descriptiva analiza las principales fragilidades de la teoría social crítica y de la geografía marxista, uno de sus ramos geográficos. Tiene como objetivo explorar las referencias teórico-metodológicas que ofrecen explicaciones alternativas para repensar temáticas centrales de la Geografía Económica y de la Geografía Urbana – el desarrollo desigual y la periferización de la economía. Basado en la reflexión acerca de las relaciones de la filosofía de la ciencia de Karl Popper, con los trabajos de la Escuela Austríaca de Economía y las tesis de la Escuela Institucionalista. La teoría del conocimiento científico de Karl Popper se apoya en dos pilares: el concepto de la falsabilidad y la concepción de las sociedades abiertas, que son más susceptibles al desarrollo de una ciencia capaz de librarse de dogmas. Con su análisis de la naturaleza ética, el referido filósofo advirtió que la propia capacidad de la autocritica es la base para el desarrollo de la ciencia. Al asociar este comportamiento ético a las sociedades abiertas y democráticas, Karl Popper tejió profundas críticas epistemológicas al marxismo, tradición de pensamiento que ejerció y aún ejerce fuerte influencia en la geografía brasileña. Se concluyó que las concepciones científicas de Karl Popper son relevantes para conducir la crítica epistemológica propuesta y la exploración de nuevos caminos de investigación científica para la problemática de los fenómenos económico-espaciales.

Palabras-clave: Geografía Crítica; Epistemología; Desarrollo Económico; Escuela Austríaca; Institucionalismo.

INTRODUCTION

Austrian-British professor Karl Raimund Popper (1902-1994), one of the greatest philosophers of the twentieth century, made outstanding contributions to the philosophy of science but is practically ignored by contemporary Brazilian geography. This is because, when developing his theory of scientific knowledge, which underpins the hypothetical-deductive method, Popper made profound epistemological and ethical criticisms of Marxism, a tradition of thought that exercised and still exercises a profound influence on Brazilian geography. In actual fact, the concept of falsifiability (refutability) is a central element in Popper's philosophy of science. It requires ethical behavior on the researcher's part when attempting to delimit experience (the meaning of the observation), as, above all, this demarcation process is deductive (Popper, 2013).

Popper emphasized that criticism and self-criticism are the basis for developing science, associating these behaviors with open societies. Science, in its conception, should test falsifiable theories, thus eliminating the myth of unquestionable truths, to reveal other forms of production and application of its scientificity using more flexible standards of action (SILVA, 2019, p. 16).

The Jewish philosopher Hannah Arendt, a contemporary of Popper, pointed out that the phenomenon of Nazi-Fascism developed precisely in societies that reduced scientific theories to dogmas, where criticism of the official scientific model or official state policy was inadmissible. Popper (2012) places both Marxism and Nazi-Fascism in the same historicist current, whose theoretical foundations launch their utopias into future time, hoping to obtain safe conduct exempting them from judging the present. In this sense, the author also highlights the similarity between the Nazi-Fascist categories of elected people and Marxism's elected class.

Marx's historical philosophy "replaces the elected class, an instrument to create a classless society and, at the same time, a class destined to inherit the Earth. [...] The law is economic: the whole story has to be interpreted as a class struggle for economic supremacy" (POPPER, 2012, p. 29). The works Marx by Marxists / Friedrich Engels ... [et.al], organized by Albert (2019) and Marx and the critique of the capitalist mode of representation, by Grespan (2019) present relevant texts and arguments on the trajectory of Marx's revolutionary thought.

The critical and radical geography that became hegemonic in Brazilian human geography, approximately between the mid-1970s and the second half of the following decade, focuses on rejecting the principle of neutrality of method, the criticism of capitalism, and the search for social utopias. Thus, although from the beginning this current of geographic thought has demonstrated a high theoretical and methodological heterogeneity, Marxism was and continues to be its primary epistemological, ethical and political reference (Diniz Filho, 2002; 2003; 2013).

Consequently, recovering Popper's ideas is a very fertile starting point for criticizing current geography and exploring theoretical and methodological references that offer alternative explanations for key geographical phenomena, such as unequal development and the peripherization in large cities in middle or low-income countries.

Given the dual objectives of critical analysis and exploration of new paths, this article begins with a brief synthesis of how critical or radical geography addresses the category of space. Next, five significant theoretical weaknesses in critical social theory and its geographic branch are presented, followed by a reflection on the relationship between Karl Popper's thought and the Austrian School of Economics' work. Finally, there is a synthesis of the fundamental theses of the Institutionalist School of Economics, which enables reconsidering some central themes of Economic Geography and Urban Geography.

THE SPATIAL DIMENSION OF CRITICAL SOCIAL THEORY

Modern rationalism originates from the thinking of René Descartes (1596-1650), who criticized traditions and customs and aimed to construct a new social moral, juridical and legal order.

It is the wellspring of a series of modern ideologies that have arisen against the spontaneous social

order, such as radical, illuminist, positivist, scientific, utilitarian, historicist, and socialist lines of thought (RANQUETAT JÚNIOR, 2017).

The modernization projects promoted by the modern right and left are similar precisely because "every political project of centralized planning aims to concentrate all knowledge and all information" because it uses this concentration of power to "coerce individuals to carry out certain activities" (RANQUETAT JÚNIOR, 2017, p. 145). However:

No social actor, no human group, no single mind has a complete, infallible, and perfect knowledge of reality; our knowledge of social life is always partial, scarce, and insufficient, so the task of radically altering and transforming the social world through reason is illusory (RANQUETAT JÚNIOR, 2017, p. 144).

Nevertheless, the development of modern social sciences has been guided by this Cartesian rationalism, first in defense of a state-centric perspective, and more recently through the critical social theory. From the latter emerged names like Edward Soja (1993), who became known among geographers for defending the need to include the spatial dimension of social processes into dialectical materialism. In other words, he proposes developing a critical social theory that considers space as an active social instance. Similarly, in the theoretical effort to value space as a social instance, Soja's contemporary David Harvey (1993) has developed a postmodern political economy to understand the spatialization of the new flexible accumulation regime emerging from the moribund Fordist regime.

Unquestionably, the geographer Milton Santos was the most prominent Brazilian author writing on critical social theory. The first phase of his work (1977) is marked by the transposition of Lenin's concept of Economic-Social Formation, adapted for Geography as Socio-Spatial Formation. However, the problems faced by socialism in real life came to be perceived in academia as a limitation of the Leninist concept of "socialism in one country," leading to the rehabilitation of Trotskyist theses. Santos' second phase precisely reflects this change in the scale of the praxis; globalization is analyzed as "the last stage of capitalism" (SANTOS, 1994) and represents the new basis (another globalization) of the fulfillment of human emancipation (SANTOS, 2000).

What do Soy, Harvey, and Santos have in common? The historicist and materialistic analysis of capitalist society that the authors propose comes with a vague and distant promise of human emancipation¹. As Revel (2001, p. 30) emphasizes, "Utopia is under no obligation to present results. Its only function is to allow its followers to condemn what exists in the name of what exists". Popper (2012) points to the impossibility of proving this unscientific and dogmatic feature of critical social theory because its synthesis is placed in a future that has failed to occur anywhere where attempts have been made to implement it. In short, the problem of both classical or postmodern Marxist-based critical social theory is that "when the ideal superimposes the real, and the becoming dreamed of in utopia takes precedence over being, the door is open to all forms of dogmatism and totalitarianism" (RANQUETAT JÚNIOR, 2017, p. 47).

THE FISSURES IN MARXIST CRITICAL SOCIAL THEORY

Identifying spatial theories based on Marxism rests on the methodological assumption that economic infrastructure (global added value, the international division of labor, social classes, and others) is the starting point of the dialectic analysis of cultural and political systems (superstructures). Marxist-based Critical Geography has this same reductionism to the economic (*homo economicus*), neglecting or relegating political autonomy and the importance of cultural values to the background, both of which pave the way for economic exchanges and the functioning of other institutions.

Interestingly, this "Political Spatial Economy" by critical geographers ended up limiting the active role of geographic space, which it had claimed to promote. Despite these geographers' efforts to affirm space as a social instance, in practice, factors such as geographical location, territorial extension, and each territory's physical characteristics have been reduced to the condition of obstacles or assets in the movement of capital. The autonomy of geographical space, the object of Geography, was denounced by these critical geographers as a fetish, as they simultaneously transformed geographical science into an

auxiliary discipline of Political Economy.

The first fissure. The Marxist historical perspective believes that human societies evolve linearly and progressively. Nevertheless, revolutionary socialist movements did not emerge victorious in the more industrialized nations, which had the highest number of workers, but in the backward periphery. The Marxist justification is that, in the end, once the historical process (the class struggle) is unveiled, the "labor pains" of the transition from capitalism to communism can be abbreviated through revolutionary processes.

However, the distribution of property to workers did not occur in this real-life socialism, given the option to continue economic monopolies and implement an even greater concentration of property by nationalizing all the means of production (CHESTERTON, 2013). Socialists use the same excuse as liberals for employing this economic concentration: the gain in efficiency associated with the automation of productive systems can only be achieved in large-scale industry. However, in real-life socialism, these gains have never surpassed the results obtained in liberal economies. This may be because, in the latter, some degree of competition persists even in oligopolized economic structures. In turn, liberal economies were able to reinvent themselves with each economic crisis, resorting to temporary State intervention and continuing to promote improvements in their societies' standard of living, especially when compared to socialist experiments worldwide.

Another issue that socialists refuse to address is the impossibility of distributing national income on an egalitarian basis without harming or favoring certain social groups. Let us think of the case of employees of a particular company whose social capital far exceeds the capital arising from that group of employees' work. What would be the fair proportion to be distributed to these workers and the agents of social capital? The Brazilian state-owned Petrobras is a pertinent concrete example. The capital invested by the government (taxpayers' money) and by shareholders from all corners of the world represents much more considerable savings than those generated by the company's workers. Thus, there is no way to fairly compute the share of profits destined to the select group of Petrobras employees and Brazilian society in general, let alone the foreign investors who range from European and American workers' pension funds and Japanese and Chinese banks). A State that overly intervenes in the process of distributing the company's profits and dividends will only make the contribution of social capital unfeasible.

In summary, the banner of egalitarianism that has enchanted generations of revolutionaries has not meant social justice in any socialist country. In practice, in open societies, social inequality, as long as it is contained within specific parameters, has promoted social justice by facilitating social mobility and improving societies' material standards, contrary to revolutionary belief. Studies such as those from the Heritage Foundation demonstrate a clear positive correlation between economic freedom and human development².

Therefore, one of the central theses of Marxist Critical Geography is unsustainable as there is no empirical evidence of the association between socio-territorial inequality and hunger. The OECD nations have eradicated poverty, and they have done so by maintaining a certain degree of social inequality as a stimulus to the training and dedication of workers. On the other hand, more egalitarian societies like Venezuela live with unacceptable degrees of misery in the face of enormous oil wealth. In Cuba, whose revolution has lasted sixty years, the minimum wage and the salaries of teachers, health workers, engineers, and others are less than the amount paid by the Bolsa Família in Brazil³.

The second fissure. Marx's theory of value revolves around surplus value, which is the difference between the final value of the goods produced and the sum of the means of production and labor employed. Thus, it disregards the commodity's subjective value, as demonstrated by the Austrian economist Carl Menger, founder of the Austrian School of Economics, who formulated the concept of marginal utility during the 1870s, linked to the satisfaction of human desires⁴.

According to Thomaz Woods Jr. (2014), the works of the Franciscan friar Pierre de Jean Olivi show that since the twelfth century, it has been recognized that the price arises from the interaction between buyers and sellers in the market, manifest by the very act of buying or abstaining from buying a commodity for a specific price. Three centuries later, but still long before C. Menger, the Jesuit cardinal Juan de Lugo resumed this economic concept by stating that prices vary according to their usefulness for human needs. The natural price rises when buyers and money are abundant and drops due to the

opposite factors.

Thus, the fame of economists like Ludwig von Mises and Friedrich A. Hayek from the Austrian School of Economics was achieved on the backs of these two Catholic giants (WOODS JR., 2014). Another prominent Austrian economist was Eugen von Böhm-Bawerk (1987), who reestablished the relational power between capital-labor, arguing that capitalists do not necessarily exploit their workers because by providing them with an advanced income from the revenue of the goods they produce may even be helping them. In this view, capitalist agents are only users of the capital anticipated by the financial system; they take on the risk of paying the amount borrowed and the interest for the time that capital is at their disposal.

The third fissure. The international division of labor is not as deterministic or rigid as Marxists think. Even a Marxist author like Alain Lipietz (1988) strongly criticized the mechanistic views of the international division of labor present in Marxist writings. Furthermore, although he intended to return to the centrality of the dimension of the State in Marxist theory, the author did not fail to note territorial changes, including the center-periphery relationship, even in an increasingly globalized economy.

The fourth fissure. By reducing consumption to use value and exchange value, Marxist political economy limits the usefulness of exchanges to the sphere of reproduction of capitalist corporations. This reduction of exchange value to corporate gain ends up absurdly disregarding that the soy that enriches the multinational Cargill is precisely the same that feeds Japanese and Chinese people on the other side of the world. The exchange allows small producers to escape the limitations of the subsistence economy to buy what they do not produce in the market. It is up to them and not a technocrat to decide whether or not to specialize in what they do best.

For similar reasons, but on a different scale, exchanges also permit specialization in what each community or nation is most productive and provides nations with greater food security to endure the periods of scarcity caused by either political or natural causes.

The fifth fissure. Religion's condemnation of usury influences the Marxist concept of capital. However, the Church started to admit fair profit in transactions, which St. Thomas Aquinas writes about from 1265 to 1273 in the *Summa Teológica*, while Marxism persists in its radicalism, remaining attached to the old idea of interest as a sin, thus disregarding the cost of money, as in financial operations. It is evident that nowadays, nobody will produce or sell something without the prospect of making a profit. Expecting someone to lend their savings without making a compensatory profit margin from the operation would be crazy.

THE AUSTRIAN SCHOOL OF ECONOMICS

Austrian economists at the Vienna School were the first to understand the intimate relationship between market and price and the importance of an open society to obtain more efficient markets and disseminate knowledge. Both prices and knowledge result from thousands or perhaps hundreds of thousands of decisions made by individual autonomous agents, which cannot be replaced artificially by a central planning power without causing deviations and losses. In common with the Austrians, Karl Popper also presents himself as a staunch critic of Marxism and its bureaucratic state machine.

However, César Ranquetat Júnior (2017) notes that the liberal thinking of the Austrian School does not break entirely with the Enlightenment's revolutionary ideal committed to modern individualist and rationalist ideology. In this sense, Popper also seems to have the same perspicacity when he extends his criticisms to the philosophy of modern rationality, including the totalizing concepts present in deductive methods and positivist inductivism. This dual criticism does not prevent him from clearly opting for open societies, which are more susceptible to developing a science capable of getting rid of dogmas.

Since it nullifies other worldviews and geographical reflections, Critical Geography, supported by the Marxist totalizing theory, is opposed to the notion of an open society. On the other hand, the controversial Marxist thesis that capitalism's contradictions would lead to the system's downfall has not been confirmed, despite the most profound crises of capital accumulation and / or consumption, which have always been resolved. As Popper points out, it is precisely this inability to deal with empirical evidence that undermines the foundation of Marxist theory, demonstrating its dogmatic or theologizing

character.

It is not a question of invalidating all historicist criticisms of capitalism, especially corporate capitalism's environmental and ethical impacts. Nevertheless, it is striking that by calling itself an absolute Truth, Marxism has induced an embarrassing silence from its organic intellectuals in the face of the continued failure of socialist regimes to solve these same problems. Criticism of socialist governments seems to be banned in academia across the West.

THE INSTITUTIONALIST SCHOOL OF ECONOMY

Institutionalist theory explains how the economy works and how institutional change affects people's way of life in the organization of production. North (1920-2015), one of the founders of the new institutional economics, developed the theory of institutions, focusing on property rights that:

[...] stimulate productive investments, reduce future uncertainty, guarantee innovators' incomes, and, thus, stimulate an increase in the stock of physical and human capital, the advance of knowledge, productivity, and finally economic development (North, 1994).

[...] Institutions, whether political or economic, form the structure of society's incentives. Therefore, performance becomes a result of institutions and incentives for innovation and efficiency (LOPES, 2013, p. 622).

In *The rise of the western world: a new economic history*, North and Thomas' (1973) historical-comparative study analyzed the phenomenon of the rise of the Western world. Institutional organization, property rights, the origins of civil rights with private property in the man-land relationship were all relevant to the advancement of institutional theory. The West's prosperity is explained by studying the previous causes of growth variables. The economic problem does not lie in technological advancement or the accumulation of capital but in the rules or institutional arrangements that stimulate or inhibit activities (NORTH; THOMAS, 1973).

The explanation proposed by the authors is based on the success of the western economies, Western Europe and the United States, which developed institutions and achieved long-term economic growth. Contracts such as *commenda* and *societas* (cooperation of an investing partner and a "traveling" partner), the resurgence of deposit banks, creation of incipient forms of bills of exchange and insurance meant great advances in terms of the organization of the production process (GALA, 2003, p. 91).

According to Piaia (2013), North divided current societies into two groups:

- Those that favor change - most European countries, the United States, Japan, and some Asian countries have overcome economic stagnation due to political competition, technology, and institutional structures. Institutional matrices in these countries have created organizations that stimulate successful individuals, rewarding them for their work and productive investment (PIAIA, 2013, p. 268).

- Those that privilege stability – they are unable to generate incentives for agents and organizations to increase productivity. African countries and Latin America need institutional infrastructures to surmount social, political, and economic organizations centered on family ties. They need to promote organizations and institutions that end the insecurities associated with extreme interdependence (PIAIA, 2013, p. 268).

In this sense, growth is associated with change and innovation. Therefore, competitors overtake a country that does not know how to detect changing patterns and paradigms and is not capable of continuous innovation and renewal in the face of changes through systematic exploitation of its competitive advantages and, like a company in the Schumpeterian scenario, loses the provisional monopoly of innovation (PIAIA, 2013, p. 270). Institutional change is:

A change in the Institutional Matrix imposed by human interaction, in a broad context, to produce beneficial and innovative results for society. [...] Institutions interact with organizations, causing changes in the Institutional Matrix, to establish the right institutions, as these are largely responsible for economic development. (PIAIA, 2013, p. 270).

In Piiaia's (2013) assessment, North, the leading theorist of institutional theory was right, in stating that institutional changes may be more important than technological ones.

THE THEORY OF GLOBAL INEQUALITY

The authors of *Because nations fail: the origins of power, prosperity and poverty*, analyze that "economic growth and prosperity are associated with inclusive political and economic institutions, while extractive institutions tend to cause stagnation and poverty" (ACEMOGLU; ROBINSON, 2012, p. 71-72). Accordingly, the theory of inequality

[...] deals with the effects of institutions on the success and failure of nations - and therefore the economy of poverty and prosperity; it also deals with how institutions are determined and transform over time and how they end up being unable to change when they create poverty and misery for millions - and, therefore, the politics of poverty and prosperity (ACEMOGLU; ROBINSON, p 33-34).

For the authors, "institutional differences are what explain global inequalities" (ACEMOGLU; ROBINSON, 2012, p. 45). In this sense, institutional theory illustrates the breadth of the phenomena it covers, from the origins of the Neolithic Revolution to the collapse of various civilizations. Acemoglu and Robinson analyzed how inclusive institutions were born out of the interrelation of the critical circumstance produced by Atlantic trade and the nature of existing English institutions.

Using historical and comparative analysis, they explain how these institutions persisted and strengthened to the point of laying the foundations of the Industrial Revolution, thanks, in part, to the virtuous circle, and other fortunate occurrences. Their findings show that through history, many regimes dominated by absolutist and extractive institutions have resisted the diffusion of new technologies sparked by the Industrial Revolution. The Europeans themselves overruled any possibilities of economic growth in the many regions they conquered. The vicious circle and the iron law of the oligarchy generated an irresistible tendency for the extractive institutions to persist.

Their findings indicate that countries with inclusive institutions, such as Japan and France, and those which prevented extractive institutions, like the United States and Australia, and even England in the face of challenges, leaped ahead in their receptiveness to the Industrial Revolution. Extractive institutions influenced the failure of some countries.

Peruvian economist Hernando De Soto's research contributes significantly to rethinking topics of new importance to geographers, especially after the advent of critical or radical geography, for instance, underdevelopment, the informal economy, and the urban periphery. His central thesis, however, completely reverses critical geographers' point of view on these themes.

According to De Soto, these problems are not caused by the supposedly contradictory and exploitative nature of capitalism, but by the deficiencies of the formal system of representation of property rights, or even the absence of such systems in Third World countries and former socialist republics. In this sense, he affirms that Marx's mistake was to consider the institution of private property merely as a means to appropriate goods and resources. He argues that the right to property is an institution that acts as an incentive for individuals to produce, invest, exchange, and manage capital:

[...] Marx's mistake was not to fully understand that property is the indispensable process that fixes and disposes of capital; that without property, humanity cannot convert the fruits of its labor into fungible and liquid forms that can be differentiated, combined, divided, and invested to produce added value. (DE SOTO, 2000, p. 55).

When examining the idea in detail, it is evident that, according to De Soto, the institution of private property produces six effects that are crucial for development, namely:

1. "Fixing the economic potential of assets." Representing an asset's economic and social qualities in a written document transforms a physical property into "living capital." For example, a properly registered and authenticated property can serve as a loan guarantee, an address for debt, taxes, and fees

collection, a location that identifies individuals for commercial, judicial, or civic purposes, and a terminal for receiving public services, such as treated water and electricity.

2."The integration of information dispersed in a single system." The integration of property representation systems based on local customs or supported by provincial or municipal public authorities in a unified national system permits greatly expanded business opportunities for all citizens. Moreover, the multiplication of opportunities allows assets to fully realize their potential for generating surplus value and capital accumulation.

3."People's accountability." Proper legal and formal representation of properties in nationwide institutional systems allows public authorities to hold owners accountable for legal infractions and dishonest contracts; these authorities may suspend services, remove ownership and / or withdraw privileges from registered properties. Even more importantly, the function of private property is no longer to guarantee the possession of an asset but also to guarantee economic transactions backed by that asset.

4."The transformation of assets into fungible goods." The institution of private property is a conceptual reality based on physical assets, and representations of that reality make it possible to expand economic transactions related to a property because such representations can be easily combined, divided, mobilized, and used to stimulate business agreements. In this way, formal ownership systems in Western countries have considerably reduced the costs of asset mobilization transactions.

5."The integration of people." A market economy based on formal unified property representation systems turns individuals into economic agents with a wide availability of information about assets and their potential for generating surplus value. Companies also have information about the owners' assets, verifiable addresses, and property value records. Thus, credit records can be drawn up, which, together with integrated legal instruments, make risks more manageable by instituting devices such as insurance and property junctions in debt guarantees.

6."Transaction protection." Western countries' formal property systems stimulate economic growth because they are based on a network of institutions, such as private transaction registration entities, public notaries, deposit-guaranteeing organizations, certificate and valuation agencies, securities insurers, mortgage agencies, and private signature recognition and original document retention services. These institutions follow strict operating standards to protect property ownership, allow securities to be traced, and ensure the security of transactions.

De Soto uses a historical and comparative method to build this theory of development, analyzing in-depth the institutional transformations in countries with different degrees of development to identify the common elements that explain both the success of developed countries and the problems faced by Third World and ex-socialist countries. His research shows that, in the past, currently developed countries had systems of representation of property on a regional and local scale, which coexisted with traditions and customs that shaped extralegal forms of property rights regulation. However, from the middle of the nineteenth century, the USA, some countries in Western Europe, and later, Japan managed to incorporate extralegal agreements into legislation and integrated all representation systems into unified national systems.

Notably, empirical evidence supports De Soto's conclusions, as, until the mid-nineteenth century, there was no significant difference in per capita income between currently developed countries and the rests. Furthermore, his studies of the history of the United States particularly illustrate the importance of the institutional changes in that country from that period onwards. Originally a colonial country, the USA had a long period of an abundance of land in relation to the population size.

Property laws, copied from England, emphasized tenure protection but could not prevent a series of conflicts over land arising or local traditions and customs emerging that configured informal social agreements to regulate property rights. From the mid-nineteenth century onwards, however, lawyers and politicians began to understand that the best way to deal with these conflicts was to incorporate local customs into the legal system. Thus, in states like Kentucky and Virginia, legal provisions have emerged that, without violating the property rights of large landowners, recognized the fruits of squatters' labor as properties to which they were entitled. Thus, laws such as the "corn right" and the "hut right" emerged, which guaranteed squatters the right to receive cash values for harvests and the dwelling built by them if the owner required the land for another use or sale. Over time, squatters also received the priority right

to purchase the land they occupied (DE SOTO, 2000).

Thus, an institutional system gradually emerged that fully includes the poor in the market economy by legally recognizing their properties, consequently allowing these properties to become capital, and emphasizing the protection of transactions between economic agents, instead of emphasizing tenure protection. However, Third World countries and former socialist republics have not followed the same path, so the formal representation of property excludes the poor from the market economy by failing to recognize their properties (such as housing) and placing a heavy burden on small businesses, pushing hundreds of millions of people into an informal economy dominated by extralegal social agreements.

CONCLUSION

Karl Popper's theory of scientific knowledge is based on two pillars: the concept of falsifiability and the concept of an open society. This theory serves as the basis to refute theoretical-methodological and ethical assumptions that inform critical social theory and critical or radical geography, acting as a starting point for exploring strands of thought hitherto ignored by geography.

The Austrian School of Economics approximates the ethical dimension of Popper's ideas, viewing the free market and democracy as fundamental pillars to construct a free and prosperous society. The Institutionalist School also values democracy, especially in the role that Acemoglu and Robinson attribute to democratic political institutions, preventing excessive income concentrations based on State-granted privileges.

Institutionalist theories also respect the principle of falsifiability or refutability, as the same historical-comparative method employed by their proponents can be used to test their predictions. If more in-depth historical studies using research methods that, although equally in line with the principle of falsifiability, demonstrate that nations exist that have developed without the institutional changes cited by institutionalists, then these theories will be refuted.

The purpose of this article was precisely to indicate the usefulness of Popper's conceptions in the dual task of criticizing critical geography and exploring new theoretical and methodological paths.

NOTE

1 - When the revolutionary utopia gains power and implements egalitarian policies, it invariably embarks on totalitarian collectivism. As Ranquetat Júnior (2017, p. 75) states, the left proposes leveling political systems that discourage moral competition and individual effort, resulting in "In an egalitarian world, a person would completely lose their individuality." Furthermore, the author continues, inequality is not always perverse, as long as it seeks to value the "intellectual skills, [...] willpower and capacity for action and initiative" different in each human being (RANQUETAT JÚNIOR, 2017, p. 133).

2 - The results of two decades of research that form the Heritage Foundation's Economic Freedom Index can be consulted at: <https://www.gazetadopovo.com.br/instituto-politeia/por-que-a-liberdade-economica-importa/> Accessed on September 12th. 2019.

3 - To consult the Cuban salary structure, see SILVA, Marcos. Cuba and the eternal Cold War. Dourados: Ed. UFGD, 2012.

4 - The Austrian or Vienna School also highlighted the spontaneity of the price mechanism resulting from voluntary contractual agreements between economic agents. Ludwig von Mises demonstrated the impossibility of a planned economy like the socialist states to manage all the calculations to rationally allocate economic resources without producing generalized scarcity (CONSTANTINO, 2009). In the same sense, Friedrich Hayek argued that knowledge is also dispersed in society (including economic knowledge) and that any attempt to establish centralized planning would fail (CONSTANTINO, 2009).

5 - Although using a Marxist theoretical framework, Jorge Caldeira (2009) also finds that Brazilian per capita income resembled the United States until the middle of the nineteenth century. After

that period, there was a separation between Brazil and the USA's trajectories of economic growth.

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