

## LÉON METCHNIKOFF AND THE BUILDING OF A GEOGRAPHICAL EVOLUTIONARY MODEL: THE GREAT HISTORICAL RIVERS<sup>1</sup>

LÉON METCHNIKOFF E A CONSTRUÇÃO DE UM MODELO EVOLUTIVO DO MEIO GEOGRÁFICO: OS GRANDES RIOS HISTÓRICOS

LÉON METCHNIKOFF Y LA CONSTRUCCIÓN DE UN MODELO EVOLUTIVO DEL MEDIO GEOGRÁFICO: LOS GRANDES RÍOS HISTÓRICOS

### ABSTRACT

This article, for which a contextual approach has been adopted as a method, analyzes the *La Civilisation et les grands fleuves historiques*, written by the anarchist geographer Léon Metchnikoff, which proposed a geographical and historical model for interpreting human evolution. Based on clear theoretical assumptions, many of which are common to É. Reclus and P. Kropotkin, Metchnikoff divided his interpretive model into three major evolutionary stages. The analysis has sought to expound his methodological assumptions, in addition to the three stages of his theory. This study is justified by the impact of *Civilisation* on the human sciences, its fraternal nature and for questioning interpretations that reaffirmed geography as an eminently empirical science. As a result, it is possible to identify the development of a geography capable of problematizing common senses of the time, most notably European views regarding the East.

**KEYWORDS:** Geography; Anarchism; Léon Metchnikoff; Geographical Theory.

### RESUMO

Este artigo, que tem como método a abordagem contextual, analisa a obra *La Civilisation et les grands fleuves historiques* do geógrafo anarquista Léon Metchnikoff, que propõe um modelo geográfico e histórico de interpretação da evolução humana. Baseado em pressupostos teóricos claros, muitos dos quais são comuns a É. Reclus e P. Kropotkin, Metchnikoff divide seu modelo interpretativo em três grandes fases evolutivas. A análise busca elucidar tais pressupostos, bem como as três etapas de sua teoria. Este estudo se justifica pelo impacto de *Civilisation* nas ciências humanas, sua orientação fraterna e para questionar interpretações que reafirmam a geografia como uma ciência eminentemente empírica. Como resultado, se identifica o desenvolvimento de uma geografia questionadora dos sentidos comuns da época, notadamente, das visões europeias sobre o Oriente.

**PALAVRAS-CHAVE:** Geografía; Anarquismo; Léon Metchnikoff; Teoría Geográfica.

1. The author would like to express his gratitude to Federico Ferretti, Sergio Nunes, Rafael Gomes and Lucas Hanada Viotto.

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Artigo recebido em:

02/07/2020

Artigo aprovado em:

24/03/2021

## RESUMEN

Este artículo, que utiliza el enfoque contextual como método, analiza el libro *La Civilisation et les grands fleuves historiques* escrito por el geógrafo anarquista Léon Metchnikoff, que propone un modelo geográfico e histórico de interpretación para la evolución humana. Basado en supuestos teóricos específicos, muchos de los cuales son comunes a É. Reclus y P. Kropotkin, Metchnikoff divide su modelo interpretativo en tres fases evolutivas principales. El análisis busca dilucidar sus declaraciones metodológicas, así como las tres etapas de su teoría. Lo estudio se justifica por el impacto de *La Civilisation* en las ciencias humanas, su naturaleza fraternal y crítica de las interpretaciones que reafirman la geografía como una ciencia eminentemente empírica. Como resultado, se identifica el desarrollo de una geografía cuestionadora de los sentidos comunes de la época, en particular de las opiniones europeas acerca del Oriente.

**PALABRAS-CLAVE:** Geografía; Anarquismo; Léon Metchnikoff; Teoría Geográfica.

## INTRODUCTION

In the genealogical search to establish the ideas that inspired *Oriental Despotism* by Karl August Wittfogel, and the geographic imagination of the early twentieth century regarding the East, one most outstanding feature is the influence of Léon Metchnikoff (1838-1888), an anarchist geographer, who was a specialist in the regions of the Far East, and with links to Élisée Reclus (1830-1905). In this article, we analyze Metchnikoff's thinking in his posthumous work entitled *La Civilization et les grands fleuves historiques* (*Civilization and the Great Historical Rivers*), of 1889, an unfinished book, which was organized and prefaced by Reclus, and published by Hachette, the same publishing house

that published much of this French geographer's work.

The study of Metchnikoff's work may be justified by its innovative proposal: an evolutionary historical-geographical model for the relationship between man and nature. His thesis sought to explain, more precisely, how and where the first empires arose and how their expansion linked environments, territories, peoples and cultures, thereby finally opening up to an interrelated world from the social viewpoint. Thus, an analysis of his proposition demonstrates at least two facts:

(1) Contrary to what some of the literature has stated on the history of geography, it is possible to discover a great interpretive model proposed by

**GEOGRAFARES** 

Revista do Programa de Pós-Graduação em Geografia e do Departamento de Geografia da UFES

JANEIRO - JUNHO, 2021  
ISSN 2175-3709

2. CLAPARÈDE, A. de. *La civilisation et les grands fleuves historiques, par Léon Metchnikoff, avec une préface de M. Élisée Reclus in Globe. Revue genevoise de géographie*, n. 29, p. 127-28, 1890.

Metchnikoff based on the contributions of Carl Ritter. Reference books on the history of geography - such as those by Claval (2011), for example - emphasize the empiricism of our discipline and stress the importance of those authors who have proposed models that were later revalorized by the academic field of geography, such as those of Von Thünen and Walter Christaller. Although Metchnikoff proved to be an extremely important figure within the Reclus circle, participating in geographic societies and having his work reviewed by the *Revue genevoise de géographie*<sup>2</sup>, the impact of *La Civilisation* was relatively limited in the field of academic geography. However, his book drew the attention, for example, of the Russian Marxist G. Plekhânov, who dedicated a review to him and also wrote his obituary (PLEKHÂNOV, 1923; PLEKHÂNOV, 1891). According to Konishi (2013, p. 70), *La Civilisation* was banned from publication in Russia, although it was widely read at a time of crisis in Russian Populism, when the movement split into several groups, some of which approached Marxism. It should also be noted that *La Civilisation*... was read and cited by authors such as Euclides da Cunha (2000, p. 119), Walter Benjamin (1968, p. 123) and by V. A. Anuchin (1977), an important theorist of Russian geography.

(2) An analysis of the book makes it possible to problematize what Bruno Latour contended in an essay on the epistemology of scientific thou-

ght. Latour (1994) argued that science and modern thought basically operated through a process called purification, which consists of separating nature and culture, which, in his view, was artificial, since in reality both elements are inseparable. Metchnikoff proved the opposite, i.e., there were modern science proposals that analyzed culture and nature in a manner that was synchronous and inseparable. Taking the environment as a privileged category, Metchnikoff analyzed social evolution, and also the natural changes that catalyze or delay human transformations. Strongly inspired by the positivism of H. Spencer, as well as a mixture of Darwinism and Lamarckism common to the network of Reclus and P. Kropotkin (1842-1921), Metchnikoff reaffirmed the teleological sense of history, which, in his view, was heading towards the triumph of anarchism, towards the dissolution of the State and towards recognizing cooperation as a hegemonic parameter of human relations. His interwoven proposal for the analysis of humanity-nature may be compared to contemporary work, such as that of Whatmore (2002), which aspires to the formulation of hybrid geographies.

Therefore, our objective is to expose and analyze the model proposed by Metchnikoff, which requires an internal analysis of *La Civilisation*, whilst not overlooking the context in which the work was produced. Thus, we have employed the contextual appro-

ach proposed by Berdoulay (2003), who argues that the examination of works and authors should involve the historical and social context, as well as the intellectual influences. Hence, as demonstrated by Ferretti (2007; 2011), Metchnikoff was one of the fundamental thinkers within the network of collaborators of Élisée Reclus, an independent author, who managed to occupy a space in the field of academic geography by mobilizing a group and research agenda, and whose main contribution was the *New Universal Geography*. Metchnikoff together with other members of the Reclus network shared methods, themes, approaches and a political militancy that supported both the social struggle, the anarchist political perspective and the desire to popularize science.

In addition, P. Bourdieu is a second reference that supports our analysis, since Reclus, Metchnikoff and Kropotkin shared a common habitus (BOURDIEU, 2001, p. 67-91), i.e., they shared theoretical and practical views on the field of geography and also on social struggle. Thus, far from raising the dead in order to bury them even deeper, our intention in recovering Metchnikoff's work has been to pay attention to what Bourdieu called *reflexivity*, which is the ability to understand the process of forming the field of geography, the evolution of the disposition of its cultural capital and the diverse habitus of its members.

. As will be verified later in this work, at the height of the age of empires, Metchnikoff proposed a model for interpreting the history of humanity that attacked the fundamental ideas of nationalism and imperialism in European countries, such as race, geographical determinism, social Darwinism and Eurocentrism, by contending, for example, that civilization was born outside Europe. A geography that does not propose war and is not complicit in imperialism, but that aims to raise awareness of the inevitable evolution arising from an increase in the levels of cooperation between individuals and groups.

That said, the article begins by revealing Metchnikoff's trajectory, followed by an investigation into the methodological assumptions shared by the network of anarchist geographers in order to finally dwell upon *La Civilisation*. The analysis of China is of particular note, viewed as despotism with a humanist face, with a distinct evolution and geographic situation in relation to other civilizations, in order that, following this, we may present the final considerations.

## METCHNIKOFF'S TRAJECTORY

Metchnikoff was born in Kharkiv, which today is in the Ukraine, and began his studies in medicine. In 1855, he faced problems when participating in student protests and, after

**GEOGRAFARES** 

Revista do Programa de Pós-Graduação em Geografia e do Departamento de Geografia da UFES

Janeiro-Junho, 2021  
ISSN 2175-3709

3. This spelling refers to another transliteration possibility of Мечников.

his initial graduation from the University of St. Petersburg, he worked for a time as a dragoman (an interpreter in Eastern countries), going on to leave Russia and join the Expedition of the Thousand with Giuseppe Garibaldi, in Italy, where he suffered a serious injury (PLEKHÁNOV, 1923). In 1874, he was invited to teach Russian at a Japanese school, an activity he exercised while attentive to the Meiji Restoration (1867-1912) that was underway.

During his youth, he was influenced by the ideas of the Russian populists and participated in a network of illegal newspapers of the *emigrés*, the militants who had been in exile. Metchnikoff collaborated with Aleksandr I. Herzen (1812-1870), which ultimately reinforced his admiration for the Russian commune and its social dynamics. Russian peasants possessed strict ethics due to the extreme situation to which they were subjected, organizing themselves under the principle that those who do not work do not eat, and safeguarding contempt for those who did not make their livelihood from the land and expected to profit from it, such as merchants, bankers, landlords, amongst others (KRAUSZ, 2017, p. 360). However, the experience in Japan had altered his political judgment:

Although the Russian commune provided an indication of alternative development for the Populist movement, it would be in Ishin Japan, with its radical openness to technological change and new ideas from abroad, that Mechni-

kov<sup>3</sup> would identify a universal possibility for cooperatist anarchist human progress, transcending the provincialist claims of Slavophiles. After his stay in Japan, Metchnikoff would acknowledge the severe limitations of the Russian commune as a model for socialist everyday life. In 1881, he would criticize the idealization of contemporary Russia as a “good kingdom of limitless communalism.” (KONISHI, 2013, p. 36).

As Konishi (2013) highlights, the Meiji Restoration, in the last quarter of the nineteenth century, was accompanied by an openness to foreign ideas and brought about profound social changes, such as migration, urbanization and industrialization. Interestingly, at that time, many Russian exiles in Siberia began to flee from exile along a route that passed through China, Japan, California, the United States, then over to the East Coast, reaching Western Europe. This new route received renowned political figures, such as Mikhail Bakunin, and consequently increased the presence of ideas, books, synopses, of Russian culture in Japan. L. Metchnikoff's work as a Russian teacher at a foreign language school is a demonstration of the Japanese interest in the Russian culture. According to Konishi (2013), the result of such a relationship was the translation of Russian writers, some of whom brought a great impact onto cultural life, as is the case of Léon Tolstoy.

By observing the consequences of the Restoration *in situ*, Metchnikoff noted that, even notwithstanding the rural exodus, Japanese peasants could

count on a network of mutual support, which guaranteed that their daily life would function as usual, without the coordination of an instituted government. Metchnikoff discovered associations that had been formed between workers or students, for example, originating from a certain region, many of whom had been displaced and were facing difficulties such as homelessness, unemployment and the lack of family support. Metchnikoff interpreted such networks of sociability as a cumulative evolution of social and intellectual consciousness (KONISHI, 2013, p. 51). Reassembling the Tokugawa period (1603-1868), the evolution of this tradition resulted in villages that spontaneously financed the study of some of their young people, which counterbalanced the State's meager role in reducing the impacts of urban growth and social modernization. Thus, the Restoration demonstrated a willingness to learn from others, from abroad, a rapid modernization, in his view, based on cooperation for the selection of technological, scientific and intellectual advances that could contribute the most to that society. For Metchnikoff, this process could be a model for other societies (KONISHI, 2013, p. 53).

From this experience, Metchnikoff elaborated the concept that mutual aid should be consciously practiced and that, the more it was exercised, the more evolved the society would be. Such a principle is important for his

interpretative model of human history, since in the first established empires, such as in Egypt, cooperation did not occur completely spontaneously, but through State coercion. For Metchnikoff, this was the basic civilizational level and, therefore, the most primitive, contrasting with Japan of the Meiji Era.

His journey to Japan also enabled Metchnikoff to criticize some of Mikhail Bakunin's (1814-1876) positions regarding social revolution: it would take place in terms of cultural advancement and of social awareness and not just from mobilizing the masses, or even from historical and material conditions, as established by Marx (KONISHI, 2013, p. 60). Like Reclus and Kropotkin, Metchnikoff sympathized with Bakunin's ideas, most notably his anti-authoritarian stance and the need for the dissolution of the State, something made possible by awareness, rather than by violence *tout court*. Thus, Metchnikoff was in line with Kropotkin's understanding with regard to Darwinism, which in Russia was received with suspicion by the intellectuals, who refused to bring natural selection through competition to the ultimate consequences. Unlike Western Europe, where Hegelianism was stronger, in Russia, Darwinism had arrived in an environment deeply marked by *naturphilosophie*, engaging, for example, Mikhail G. "Pavlov [who] was a follower of Friedrich Schelling and Lorenz Oken

**GEOGRAFARES** 

Revista do Programa de Pós-Graduação em Geografia e do Departamento de Geografia da UFES

Janeiro-Junho, 2021  
ISSN 2175-3709

4. *This and all non-English citations hereafter have been translated by the author. por nós.*

and the influence of their vague but suggestive metaphysical *naturphilosophie* permeated his science courses while he grafted German philosophy to the tree of Russian science” (ROGERS, 1960, p. 374).

This influence reinforced the idea that there existed a continuity between natural and social history, whereby an identity existed between matter and spirit, thus:

[Schelling] presented the intricate relationship between idea and matter that may be observed in any organism, which tends to organize itself according to its own concept, and from there, deduces both the need for the relationship between the phenomena and the spirit and the **identity** between spirit and matter - from where a relationship of continuity between the human and the natural originates, which will inevitably be reflected in its conception of mythology (PINTO, 2019, p. 388).<sup>4</sup>

Based on this principle of identity, in the 1860s, Darwinism was received with enthusiasm amongst young intellectuals, due to the perspective that its explanatory power would explain the origin of species and the evolution of life in its entirety (ROGERS, 1960, p. 383). Obviously, interpretations of the theory were manifold, as were the confrontations with German romanticism. However, one important point of this current was the assumption by Johann Gottfried von Herder (1744-1803) that evolution was not linear (PINTO, 2019, p. 389). This was one of the

backcloths which, in our view, influenced Metchnikoff's geography, and alongside this, it is also important to highlight the role of P. Kropotkin.

It was this *sui generis* reception of Darwin's thought that led P. Kropotkin to develop his Theory of *Mutual Support* or of *Mutual Aid*, placing cooperation as a fundamental factor of evolution, including that of the human species, in the struggle for survival, which involves, for example, the difficulties imposed by the geographical environment. Kropotkin and Metchnikoff provided help for one another and their experience in Japan played a role in elaborating the Theory of Mutual Aid, as well as in the suggestions that Kropotkin made regarding the society of the future (KONISHI, 2013, p. 63-73). Evidence of the exchange between both men becomes apparent when comparing the authors debated by Kropotkin (1950) in his book *Mutual Aid* and by Metchnikoff (1886) in his theoretical article *Evolution and Revolution*. In these works, both authors cite the same zoologists in order to reflect on the dynamics of animals. Kropotkin is adamant in reaffirming that collective interests have the role of making the group evolve as a whole, since competition only becomes preponderant either in nature or in human society, given the scarcity of resources, which is a rare situation. Even when faced with a crisis, amongst ani-

mals, it is possible to observe mechanisms for avoiding competition, such as seasonal migrations and hibernation, for example (KROPOTKIN, 1950, p. 68-70). From a theoretical viewpoint, Kropotkin's inspiration was Karl Fedorovich Kessler, a zoologist who emphasized the mechanism of cooperation as a fundamental element for animal life.

The universal parameter of cooperation gives strength to Metchnikoff's criticism on comparisons between west and east: contrary to the spirit of the time, from an ontological viewpoint, such societies would not be different, since in cooperation, both encounter the basis of their sociability and evolution factor (KONISHI, 2013, p. 70). This did not however, prevent him from considering aspects of the differentiation of his historical development and, in some cases, reproducing common places in the geographical imagery of his time.

Back in Europe, Metchnikoff, sympathetic to anarchism and geography, worked with É. Reclus. Both possessed close political and methodological orientations and Metchnikoff was one of those who compiled information from the volumes on Asia for the *New Universal Geography*. Moreover, Metchnikoff worked as his secretary and accepted an invitation, originally made to Reclus, to work at the University of Neuchâtel, between 1883 and 1888, while

the Reclus preferred to focus on completing the *New Universal Geography* (FERRETTI, 2007, p. 126).

After returning from the East, in 1881, Metchnikoff published a breathtaking work on Japan called *L'empire japonais*. Its publication was financed by F. Turretini, one of the major enthusiasts of Orientalism. Metchnikoff used cultural empathy as a methodological tool when trying to insert himself into the studied civilization, which most certainly bestowed a great quality to his works (FERRETTI, 2013, p. 6-7), and the use of this method was recurrent in some members of the Reclus intellectual circle. Bringing European cultural superiority into doubt, cultural empathy consisted of becoming immersed in the culture of the other, experiencing their customs and way of life, certainly a stance that was at odds with the spirit of the time. In 1888, Metchnikoff passed away, leaving the manuscript of *La Civilisation*, which was then organized by Reclus.

## METHODOLOGICAL ASSUMPTIONS

*La Civilisation* is a posthumous, unfinished work that shares several assumptions and viewpoints by É. Reclus and P. Kropotkin. Thus, Metchnikoff was a privileged interlocutor from this network that produced geographic knowledge with major reper-



Revista do Programa de Pós-Graduação em Geografia e do Departamento de Geografia da UFES

Janeiro-Junho, 2021  
ISSN 2175-3709



cussions, for example, when we consider the *Nouvelle Géographie Universelle* by É. Reclus. *La Civilisation* aspired to be a systematic book that divided human evolution into three phases: (1) the river phase, during which empires emerge along the banks of rivers; (2) the Mediterranean phase, in which the environment and the people are linked around closed seas, and (3) the Atlantic phase, during which the same is repeated for the open seas and in which there is a tendency towards relations on a global scale. The book is organized into eleven chapters with the following subtitles: progress; progress in history; the geographical synthesis of history; the races; the environments; the great divisions of history; the territory of river civilizations; the Nile; the Tigris and the Euphrates; the Indus and the Ganges; and the Hoang-ho and Yangtse-kiang. Perhaps because it is an unfinished work, the focus is clearly on the first evolutionary stage of humanity, a fact that is reaffirmed by the very tone of the title. Herein, we set out to expose his methodological assumptions and interpretations concerning the scientific positions of his time.

## DARWINISM AND POSITIVISM

As mentioned above, like his colleagues, Metchnikoff adopted Darwinism and cooperation. He also adopted an absolutely anti-Malthusian stance, remembering

that Kropotkin, for example, stated that T. Malthus's rationale, acknowledging that the population grows faster than the available natural resources, was abstract, and did not consider the environment, the climate, the intra- and inter-specie relations, and ignored cooperation in evolutionary dynamics (KROPOTKIN, 1950, p. 68-69). For Metchnikoff (1886, p. 431), the Malthus law worked for animals, but not for humans, who, even in the most primitive stage of evolution, organized themselves to produce excess food.

Metchnikoff also incorporated the ideas of Lamarck, in which humans and animals adapt to the environment they live in, creating a genetically and socially transmitted inheritance. Similarly, society and nature are not at all distinct, i.e., social life is seen as an evolutionary form very close to nature (PELLETIER, 2013, p. 284). The theory of evolution and transformism is presented as a synthesis of organic and inorganic processes, of actions that are mechanical, physical and chemical, even though Metchnikoff (1886, p. 428) admitted that it was difficult to distinguish the organic and the inorganic, as in the case of dead animals, for example.

Coupled with adopting a position on Darwinism was its interpretation of positivism and modern science. Just as Darwin's doctrine was accepted with reservations, additions and deletions, so was the formulation of Comte. In

a long article called *Evolution and Revolution*, Metchnikoff revealed his positions, which differed only in nuances from those of Reclus and Kropotkin. Metchnikoff (1886, p. 412) indicated that the advantage of positivism would be to propose a theory of evolution based on the progress of the natural sciences capable of putting an end to the debate between idealism and materialism, since positive natural laws were proposed that demonstrated the meaning of evolution. While diversity existed in the evolutionary movement, from the social viewpoint its ultimate goal was just one, although there were multiple ways of arriving there.

The advance of Comte was to highlight the individual instinct of self-preservation and the altruistic instinct, manifested in sexual attraction, as modulators of social dynamics and the perpetuation of the human species. The result of this would be the gregarious process that commonly unites individuals for food and for defense. However, the author criticized Comte for isolating the social sphere, since, as H. Spencer pointed out, natural laws permeated society, making it difficult to separate them from an analytical viewpoint, in the same way that, when analyzing social groups, it becomes almost impossible to separate the individual and society. Metchnikoff (1886, p. 413-415) thus sought a vision of totality. His proposition was not dissociated from an assessment of the political

uses of social Darwinism:

I merely endeavour to state that each of the three branches into which modern theoretical sociology divides itself has its proper political programme according to its philosophical premises. Thus, French positivism is prone to a kind of learned patriarchy, somewhat like a scientific papalism or the Chinese Tribunal of Ceremonies. The “struggle for life” school puts forth the *Kulturkampfy*, whether Social-democratic or Bismarckian; whilst Herbert Spencer has revived the old Manchester *laissez faire, laissez passer* — i.e., the doctrine of no governmental or revolutionary interference (METCHNIKOFF, 1886, p. 425).

His criticism also extended to Cesare Lombroso and, after all said and done, he sought to reaffirm his method, to demonstrate that science was not neutral, and to reaffirm his thesis that the evolutionary peak of humanity was anarchism (FERRETTI, 2007). In this regard, Metchnikoff (1886, p. 435) was clear that social Darwinists had anathematized anarchism in universities, even though a figure such as P. J. Proudhon was sympathetic to positivism and to the development of social science (PRÉPOSIET, 2007, p. 200-212).

His methodological choices assumed the geographical environment as a fundamental category, which became quite evident in *La Civilisation*. The mesology of Reclus, i.e., the study of the environment that has currently fallen into disuse, used a dialectic conception inspired by Proudhon thought, which acknowledged pairs in

**GEOGRAFARES** 

Revista do Programa de Pós-Graduação em Geografia e do Departamento de Geografia da UFES

Janeiro-Junho, 2021  
ISSN 2175-3709

an unstable equilibrium, without the need for a synthesis as a third element, i.e., a unity between opposites (PELLETIER, 2009, p. 33). Thus, the relationship between “man and the environment” established a mutable harmony, a sequence of progress and returns, which, in order to be understood, required, from an epistemological viewpoint, a combination of synchronous and diachronic analyzes. This serial dialectic was not synonymous with the Hegelian contradictory union, because, for Proudhon, it was the alternation of two opposing elements that originated the dynamics of conflicts and equilibriums.

Society and nature, individual and society, time and space, organic life and inorganic life are dichotomies that Metchnikoff attacked from the methodological viewpoint, not because they were necessarily seen as an obstacle, but because the author sought totality, a position that placed him at a distance from the purification indicated by Latour. Within this process, he did not shy away from discussing contemporary sociological theory, much less the relationship between society and science, a central topic for his agenda, since one of the objectives of Reclus and his network “was to contribute to the progress of a science and a secular, rational education, which was seen, however, as an instrument of progress in the evolution of the human race towards equality” (FERRETTI, 2011, p. 235-236).

Furthermore, Reclus and those in his network questioned the division of the world into the Near East, the Middle East and the Far East, since the major geographic divide between East and West should have been the Himalayas range and its surroundings (PELLETIER, 2013, p. 466). This was because the history and culture of Islamic societies in North Africa and Asia Minor were linked to Europe and the rest of the West. This is evident when we note the roots of the Judeo-Christian religions, or even the profusion of peoples that occupied prehistoric Europe from India and its surroundings. The constitution of Greek culture itself took on elements from both India and North Africa.

## **SOCIETY AS AN ORGANISM**

Another important element of his position was organicism, derived from Spencer and from Darwinism. Metchnikoff (1886, p. 421) argued that the human group functions as an organism, although it is discrete and not concrete, since its sensitivity is dispersed amongst its members and not concentrated within a single sensory bundle. However, damage to any part of it, a portion of society, for example, may compromise the entire organism.

Therefore, a biological metaphor may be observed in Metchnikoff's thought between a set of cells that cooperate with one another to form a more

complex organic tissue, and the grouping of human beings. The biological explanation extends to sociology, with no clear borderline between the individual and society, a point which is taken up by Spencerianism (WHITE, 1976, p. 398-402).

The view that man disturbs the dynamics of nature, currently makes part of our common sense (PELLETIER, 2013, p. 311), but this was strange to Reclus and the anarchists, who saw nature and society within a dynamic relationship, which establishes balances at each occasion during evolution. Indeed, such a vision, which comes from *Naturphilosophie*, inspired the precursors of modern geography, A. von Humboldt and C. Ritter - the latter being a professor of Reclus. Thus, in addition to the concept of nature, Metchnikoff, Reclus and Kropotkin absorbed several of Ritter's methodological assumptions - we will see below that *La Civilisation* uses his comparative method.

According to Pelletier (2013, p. 285), for the anarchist geographers, the environment was not merely a biogeographic dimension, but involved society, the culture of man which becomes adapted, as well as nature that is transformed according to its needs. Thus, being "neither blind anthropocentrism, nor reductive biocentrism, this position proposes a dialectic that tends towards a non-arrogant, humble, but voluntary anthropocentrism" (PELLETIER,

2009, p. 164).

## RACE AND GEOGRAPHICAL FATALISM

By rejecting the concept of race, Metchnikoff criticized the Ratzelian classification of natural and cultural peoples, or even peoples with and without history, opting for a humanist approach in which some stateless communities were closer to the political dynamics of anarchism. Hence, these peoples were resistant to the creation of the State or to subjugating their freedom to an arbitrary authority. Throughout the preface to *La Civilisation*, Reclus (1889, p. XIX-XX) highlights contempt for the idea of race as a biological foundation and, while admitting that there were long-term adaptations, built from the relationship of a given society and their environment, he stated that they were far from constituting races. This position is relevant for the time, due to the strength of social Darwinism and the late expansion processes of European empires. Reclus was adamant in condemning racism and the excesses of imperialist colonization, defending the right of the natives to expel their exploiters (FERRETTI, 2013, p. 16). It is of note, however, that the anarchist adopted a positive view of contact between peoples and the capacity of social labor to improve the environment and consequently, living conditions, respecting the freedom and autonomy of each people.



Revista do Programa de Pós-Graduação em Geografia e do Departamento de Geografia da UFES

Janeiro-Junho, 2021  
ISSN 2175-3709

In addition to the environment, both Reclus and Metchnikoff considered that social relations played an important role in shaping the individual and the social group. Metchnikoff used, for example, the case of the baker's son who adopts his father's profession due to living within the family, i.e., the characteristics of peoples or even social classes are transmitted from generation to generation. The natural environment, however, must compose the equation of multiple influences in understanding social formation. In the same preface, Reclus made it clear that nature does not dictate the meaning of civilization or of a people, since they are relationships of accommodation that present this people with the phenomena of the surrounding nature" (RECLUS, 1889, p. XXII). Thus, while man dominates nature, molding himself to its limitations and resources through a profound connection, he concomitantly creates a series of new needs and problems that did not exist previously.

Refuting race was accompanied by the problematization of what Metchnikoff called geographical fatalism, i.e., the idea that the environment determines society. Clearly, he recognized the role of the environment of social evolution, although the imperative of will and of freedom - ideas central to anarchism - are elements that oppose fatalism (PELLÉTIER, 2013, p. 33). The anarchist geographers sought multiple determinations when

analyzing the geographical environment, affirming in the last instance that the geographical and social configurations were the fruits of freedom and of the human will in their multiplicity and contradiction. This does not signify discarding the role that the environment and nature play in linking certain trends and predispositions for human development. Therefore, the evolution of the environment as a whole is investigated.

## THE EVOLUTIONARY MODEL OF THE ENVIRONMENT

For Metchnikoff, progress is a non-linear flow of advances and setbacks that may, in general terms, be analyzed by a synthetic evolutionary model. Thus, *La Civilisation* is the proposal of this model that takes cooperation as an essential parameter, generating clusters and a complex society capable of appropriating and transforming the environment through technical development and, finally, multiplying into new clusters, some of them even more complex. Natural and social evolutions are associated, with human society being a form of embodying the superior organization of nature itself (METCHNIKOFF, 1889, p. 1-27).

Like Kropotkin (1950, p. 163), Metchnikoff did not believe in one single origin of the family, and much less that it developed as an isolated unit. The family, considered the smallest social unit, emerged in several human groups,

through coexistence, and its formation, as well as the emergence of the rural commune, was accompanied by the sedentism of human groups, which may be observed in various peoples of the world. After the family, the commune appeared as a dissolution of the primitive tribes with the agglutination of groups that were based on solidarity, giving rise to local customs and a certain stability for the group to exist and reproduce.

From this, readers may ask themselves why Metchnikoff used the concept of civilization in his book, an idea generally associated with the empire or the formation of an imperial culture. For Metchnikoff, the formation of the first empires occurred with the advent of the State. However, from a cultural and demographic viewpoint, these groups were consolidated by an amalgamation of peoples subjugated voluntarily or involuntarily to an authority. Undoubtedly, this was a process that provided social complexification, transformations in the natural environment and technological advances. Thus, civilization is the complex learning of science, technique and the thinking of different societies that were initially brought together voluntarily or by the coercive force of the State (FERRETTI, 2007, p. 130).

Metchnikoff, in a very similar manner to Kropotkin, adopted the classification used by Conrad Malte-Brun (1755-1826) who divided people into savages, barbarians and

civilized. While those in the first would live in an egalitarian community, from amongst those in the second a caste would emerge capable of legitimizing their political power through the formation of an aristocracy (KROPOTKIN, 1950, p. 98). Everything indicates that Metchnikoff used the same parameter, emphasizing here that such classifications are always subject to criticism, since such peoples would not be inferior from a cultural and social viewpoint. In addition, in smaller societies, from a demographic viewpoint, dependency amongst individuals becomes clearer, together with cooperation as a basis for survival.

The emergence of state power enabled cooperation to become channeled coercively. Such a proportionately coercive and constructive force constructed great civilizations along the banks of great rivers in arid environments that imposed harsh conditions for the reproduction of life. Its coordinating and constructing role fostered hydraulic works by creating structures that were capable of providing water for agricultural production. Evidently, based on Proudhonian ideas, the individual will must overcome the coercive will, making way for an anarchist society with the dissolution of the State (METCHNIKOFF, 1889, p. 27). This is the ultimate end of humanity's evolutionary process.

However, Metchnikoff emphasized that in all latitudes it is possible to encounter free or

**GEOGRAFARES** 

Revista do Programa de Pós-Graduação em Geografia e do Departamento de Geografia da UFES

Janeiro-Junho, 2021  
ISSN 2175-3709

anarchist peoples, who belong more to ethnography than to history, and who occupy the privileged environments where they may obtain the means to survive by mobilizing little effort (METCHNIKOFF, 1889, p. 40). Whether free or submitted to the State, these peoples are put to the test by the environment that differentiates them by adapting to and stimulating certain characteristics that are important for their survival. The environment directs the organic variation and the acquisitions are transmitted by genetic inheritance (TUATHAIL, 1996, p. 22).

Metchnikoff (1889, p. 70) emphasized Ratzel's idea that through migration there was a transmission of human customs and techniques to other environments. However, the transmission is not exclusively the result of the domination of one people by another. More than the imposition, Metchnikoff stressed the transmission, assimilation and mixing of habits as the best formula for adaptability to the environment. Thus, he demonstrated how Egypt, one of the main cradles of civilization, was multiethnic and multicultural. In short, heritability was forged from social interaction and adaptability to the environment, which, in some cases, is even responsible for "human varieties", but not for new races (METCHNIKOFF, 1889, p. 105).

## THE TOPOLOGY OF HISTORICAL PEOPLES

Having clarified the metho-

dological positions adopted by Metchnikoff, it is now necessary to delve deeper into the central argument of his book. For Metchnikoff, the very uneven distribution of civilizations on the globe was a motive for geographic investigation, demonstrating that the environment changes and is transformed by human action. Returning to ancient history, the importance of great rivers for the construction of civilizations occurred after the world climate dried at the end of the last glaciation, which caused a major human migration and encouraged sedentarism along the river banks, most notably in Egypt, India, Mesopotamia and China. Perennial water guarantees agriculture, and subsequently irrigation, with an abundance of food that boosts demographic growth, urban development and the complexification of culture (PELLETIER, 2013, p. 318; WHITE, 1976, p. 406). Rivers may only be transformed by a great deal of human labor at the same time that social complexification may only arise from expressive demographic densities. In the words of the author:

On the other hand, we see geographical regions — e.g., the Lower Valley of the Nile, or of the Yang-tze-Kiang and Hoang-ho — where physical conditions require from the inhabitants far more co-operation than they were able to yield freely and consciously in their state of civilization; and, in fact, those countries have always been, and are still, classical for their despotism, either political, or coastal, or whatever else it may be. (METCHNIKOFF, 1886, p. 435).

Through this basic idea,

Metchnikoff illustrated historical evolution based on empirical content. Armed with an anarchist political vision and his permanent attempt to immerse himself in the culture of the other - cultural empathy -, as it turned out, the author did not fail to use the category of despotism to characterize ancient societies, or even those in which cooperation occurred in a coercive manner. In addition to ancient history, the Roman empire, the reign of Louis XI in France, that of Ivan the Terrible, in Russia, are all understood as periods of despotism in which the basis of social cooperation was not the spontaneous will of individuals, but a centralizing state that, through its authority and violence, attempted to direct the evolutionary sense of the group (METCHNIKOFF, 1889, p. 43-44).

Back in the dawn of civilization, the first empires of the ancient world were human groupings based on coercion, whose leader represented a divine force, a living symbol of “cosmic fate” (METCHNIKOFF, 1889, p. 51-52). Therefore, an intimate relationship may be noted between temporal and spiritual power, the latter a symbolic and cultural justification for exercising the power of a sovereign. When comparing the four ancient empires that transmit his legacy to future societies, Metchnikoff used Ritter's comparative method observing the similarity of his geographical situations. His judgment is clear: the Nile is the backbo-

ne of Egypt, as are the Tigris and the Euphrates of Mesopotamia, the Ganges of India, and the Yellow, Blue and Pearl Rivers of China. Also taken from Ritter, Metchnikoff acknowledged that large water bodies have the property of connecting environments and groups, i.e., the river network offers communication and transport from the local scale through to the entire planet. From the organic metaphor it may be considered that rivers are the veins of the planetary organism. Furthermore, according to Ferretti, Metchnikoff, like Reclus, acknowledged a “[...] path of history from east to west, which confirms the idea of a settlement that flows like a river towards the sea from the Asian highlands.” (FERRETTI, 2007, p. 79). The first four civilizations were overflows from Central Asia, which followed on towards the closed seas and finally to the open oceans.

Thus, the coordination of work gave rise to a complex division of labor, because “step by step a physiological division of labor, with its natural consequence, *subordination*, begins to be observable with individuals who are connected by mere physical ties” (METCHNIKOFF, 1886, p. 433), whereby the subordination that originates from this higher stage of organization imprints a morphological mark on the environment from the construction of monuments, cities and extensive agricultural explorations. Concurrently, Metchnikoff (1889, p. 118-125)

**GEOGRAFARES** 

Revista do Programa de Pós-Graduação em Geografia e do Departamento de Geografia da UFES

Janeiro-Junho, 2021  
ISSN 2175-3709



defended the idea that the historical decline of ancient peoples was enhanced by a climatic change caused by changes in the movement of terrestrial translation. He considered that such civilizations had come from a weakening process, which was accelerated by this transformation of the geographical environment.

However, the next stage of human evolution was voluntary consensus, i.e., the science of cooperation between individuals, a step that led to an increasingly individual conscience and, therefore, a clear need for solidarity. The incompatibility between the State and the social contract established between free and equal individuals referred to Proudhon's political thought, which criticized Rousseau's contractualism, but defended concrete contracts, established between equals, without the need for a sovereign to block their natural freedom (PRÉPOSIET, 2007, p. 203). Hence his praise for self-organization and federalism, which is seen as a reflection of the expansion of individual and social consciousness and, therefore, emancipation from the despotism that gave rise to civilizations.

## THE EVOLUTION AND CHARACTERISTICS OF ANCIENT CIVILIZATIONS

It is a notable fact that the four great ancient civilizations in Egypt, Babylon, India and China all developed along the banks of great rivers. The first,

the Egyptian, emerged slowly adapting itself little by little in an environment that was transformed by the actions of man (METCHNIKOFF, 1889, p.142). All these great early civilizations were constituted in an isolated manner and cleared the way for the next stage of human evolution, the Mediterranean phase, i.e., the development of history no longer along the banks of rivers around just one empire, but around a closed sea with a series of other peoples. Metchnikoff contrasted Egypt with the Phoenicians, who he considered to have inaugurated the Mediterranean phase, since these people were cosmopolitan, open to trade and to technical and cultural transmissions. Thus, empires overspilt into a closed sea, unlike China, which did not extend its development towards the sea, since it remained linked to its three large river basins - the Yellow River, the Blue River and the Pearl River. This empire was an exception to the scheme of river civilizations, because it possessed special characteristics.

One common aspect, shared by all river societies, was a clear division of labor between the parasitic ruling class and the workers. The upper caste conceived monuments, observed the stars, directed military operations and conducted philosophical and theological speculations, while the mass of workers erected civilization (METCHNIKOFF, 1889, p. 320). All the contributions of these peoples had a universal value, i.e., they were transmit-

ted throughout history and in the four great monarchies of the ancient world we encounter the corvée work imposed on the majority. Even though he gave importance to the orographic condition of the great rivers, which induced development around the river plain, Metchnikoff distanced himself from what he called “Mesopotamian fatalism”, since this was only a possible historical development, which may or may not occur. When comparing the four great Mesopotamian civilizations, it is possible to verify that they have similar social characteristics and geographical conditions (METCHNIKOFF, 1889, p. 364).

It may be noted that Metchnikoff attributed a teleological sense to history based on the awareness of equality and freedom, a fact that is not dissociated from a dynamic of geographical disposition and circulation of civilizations. Thus, in addition to the east-west directional movement, the first civilizational centers had their origin in the tropics, as we have seen. From the first civilizations, some expanded latitudinally – such as China –, remaining approximately in the same climate, and others spread in a longitudinal direction. The movement that gave rise to Europe left the tropical zone of Egypt/Babylon and moved towards the subtropical areas of the Mediterranean in Greece and Rome, so as to later move to the temperate north in France and Spain and, later, London, Berlin and

Russia. The occurrence of the most dynamic social centers in history, and in the northern hemisphere, followed a spatial flow that moved from south to north.

Russia was historically an exception as a dynamic country, since its frontier moved in a latitudinal direction. However, all dynamic civilizations have moved in a longitudinal direction. Thus, stationary civilizations remained in an east-west direction, generally following the flow of large rivers, not exposing themselves to climatic diversities and, therefore, remaining in a tropical or equatorial climate (METCHNIKOFF, 1889, p. 58-59). This would explain the stagnation of civilizations in the East, which in Metchnikoff's day were viewed by the West as being stationary. Despite this scheme, which today's readers may consider as being somewhat strange, Metchnikoff, unlike his contemporaries, emphasized the cultural heritage that Europe received from the East, admitting that stagnation could be relative, as he found when analyzing China.

### THE MEDITERRANEAN AND ATLANTIC PERIOD

After this first stage, linked to cultivation along the river banks in environments whose water resources were scarce, thereby generating the foundations of the first cities and the creation of a parasitic variety responsible for the general coordination of the works,



Revista do Programa de Pós-Graduação em Geografia e do Departamento de Geografia da UFES

Janeiro-Junho, 2021  
ISSN 2175-3709

a new stage appeared, marked by competition between the oligarchies, characterized by feudalism. The peak of this period was the Middle Ages and the Renaissance, and extended through to the French Revolution, periods in which political power was not always concentrated in the hands of the monarch or the aristocrats.

Kropotkin, for example, had a positive view of the medieval period when he argued that villages were an evolution of the rural commune. This transformation occurred through the union of the mentality of the commune with the corporations of professionals, who managed to build cities free from the repressive power of the feudal lords and the monarch through the formation of federations in order to defend freedom and that were based on cooperation (KROPOTKIN, 1950, pp. 146-147). It is within this environment of freedom and opposition to the papacy, imperialism and feudalism that there was an enormous advance in the arts, science and crafts. For Kropotkin (1950, p. 163), from a federative organization, several commercial leagues arose, the most famous being the Hanseatic League. From an historical viewpoint, such advances were being disciplined, expropriated and controlled by the State, by political centralization or even by political agents who, often authoritatively, were eager to impose their will to the detriment of the group's freedom. This did not prevent Kropotkin from viewing this

period as being full of cultural and material advances. These interpretations were compatible with Metchnikoff's characterization of the Mediterranean period, in which a closed sea integrated peoples, allowed the ascent of expanded trade routes and enabled the emergence of cooperative groups that were independent of state power.

Kropotkin's acclaim for the medieval and Renaissance cities inspired his successors, for example, P. Geddes, since Kropotkin exalted the city planning and embellishment from the effect of becoming aware of the common ownership of urban public space. The division of bourgeois families, the call for Caesaropapism and autocracy were elements that, in his view, enabled the political centralization and feudalization of cities, which began to oppose the countryside, and resulted in wars against peasants. For the anarchists, the monarchical control of corporations paralyzed their advance and dynamism, a process more easily observed in royal cities such as Moscow, Paris and Westminster. It was then possible to observe, with the triumph of reclaiming the idea of the Roman Empire, the dissolution of the military power of independent cities, the monopoly of an official church, the subordination of corporations to the State and an intolerance towards the organization of political groups (KROPOTKIN, 1950, p. 170). However, mutual support persisted in the countryside and

in the city amongst the traditions of popular culture. Thus, for Kropotkin (1950, p. 224), despotism imposed itself where the principle of cooperation was in decay and stagnation, such as in the theocracy of the States of the East (including the civilizations of the great rivers) or in the terminal phase of the Roman Empire.

The advances of Metchnikoff's Mediterranean period were related to the strengthening of the free will of these social groups that were then independent, and submitted to the State. At that moment, a set of political, economic and cultural relations emerged between peoples around the Mediterranean Sea, a body of water that facilitated transport and communication. Despite classifying the second phase of his Mediterranean model, this was not Eurocentrism, since his aim was to describe a closed sea or even lakes (the Great Lakes in the USA), a dense set of rivers (the Amazon basin or the Tigris and the Euphrates transformed by human labor) or a gulf (Sea of Japan or the Yellow Sea) that facilitated regional transit (FERRETTI, 2007, p. 80). What endowed these closed seas with importance was their ability to link spaces and constitute themselves as a centrality.

Lastly, Metchnikoff also indicated a third evolutionary phase, in which the awareness is highlighted of the principles of the French Revolution, with fraternity as one of its mottos. Concurrently, technical advances enabled the consolida-

tion of intense relations in the Atlantic Ocean, projecting humanity into a new phase. Metchnikoff (1889, p. 127-128), like Reclus, explained the success of European civilization due to the rich soil, a varied climate and a privileged geographical position. It should be remembered, however, that the environment is only one element and that there was no defense of geographical fatalism, since such factors have not been invariable in history, i.e., they have a relative value within each situation (METCHNIKOFF, 1889, p. 129). However, indeed, it was the European civilization that launched itself in the Atlantic and constituted long-range maritime routes to America and Asia based on new technical advances, enabling the global integration of human societies.

Therefore, in addition to the three phases of social cooperation, simple coercion, feudal oligarchy and a society guided by the principles of the French Revolution, there were three geographical environments that were of a universal character and were spread throughout human history, the river environment, which expanded into a circulation dynamic in the closed sea to finally project itself into the oceans (METCHNIKOFF, 1889, p. 156).

His approach brought a special focus to the Atlantic and flow networks that densified with the great navigations. However, Metchnikoff (1889) foresaw a complexification trend of flows in the Pacific.



Revista do Programa de Pós-Graduação em Geografia e do Departamento de Geografia da UFES

Janeiro-Junho, 2021  
ISSN 2175-3709

Contemporary readings, such as those of Arrighi (2008), have confirmed this idea, since the Pacific has played an increasingly important role in commercial relations. As Ferretti (2007, p. 122) observed, Metchnikoff, upon returning from Japan in 1876, noted the construction of the Panama Canal as an important step in this process, thereby enabling an approximation between China and Europe.

From the conception of an evolutionary transmission from east to west, it is easy to deduce the decadence of Europe replaced by America, which is the recipient of European civilizational progress, without encountering the obstacles of ancient institutional traditions. In synthesis:

The most recent, modern period, the Ocean Period, began with the declaration of rights of humans and citizens. Mechnikov divided the Ocean Period into two segments: the Atlantic Era, which spanned the opening of America to the beginning of the gold rush on the American Pacific Coast and Russia's colonization of its eastern region, and the latest, the Global Epoch. This was to be the period of the greatest human cooperation and anarchy, given impetus by interactions across the Pacific toward the end of the nineteenth century and the rising internationalisms among people on the nonstate level. (KONISHI, 2013, p. 69).

Undoubtedly, if in the Mediterranean period there were interdependent human groups with a greater division of labor, in the Atlantic phase the relationship between social groups was marked by the fre-

edom of association and the absence of coercive controls, i.e., an increasingly clear tendency of consolidating anarchism and the weakening of the State's role in directing society (WHITE, 1976, p. 404). Such a view would not be contrary to the anarchist hopes of establishing colonies in the New World, a place that had a distinct historical and political heritage, without the historical weight of the Old World. It is no coincidence that Metchnikoff closed *La Civilisation* by addressing the perspectives in America, its geographic isolation from other continents and man's need to cooperate in order to survive, even if the "language" of the American natural environment had yet to be deciphered (METCHNIKOFF, 1889, p. 365).

## THE CHINESE EXCEPTION

With the historical-geographical model exposed in all its amplitude, Metchnikoff (1889) made it clear that his analytical model was the historical trend, but never the exclusive rule. For the ancient, as we have stated, the figure of the despot appeared as being central to the functioning of society and the river served as a great synthesis of the geographical environment that the grouping occupied.

However, by exposing the functioning and the nature of river societies, China is presented as a kind of exception when compared to the others. First, it is the only one that is based on three river basins.

Moreover, its geographical situation is relatively isolated, since Tibet, the Gobi desert and Siberia render contact with more distant countries difficult. China is outstanding for the connectivity of its hydrographic network, which makes up a geographical unit where the most important historical events have taken place.

In this regard, Metchnikoff (1889, p. 321) was clear that around a third of humanity was under the domination of the Chinese empire, relativizing its stagnation by believing that this society had undergone significant transformations. Within this context, Confucianism itself emerged as a humanist doctrine that gradually succeeded in weakening despotism and in giving a voice to the mass of the population with regards to the right to good government. This doctrine marked the abandonment of “pharaonic despotism” and inaugurated a period of a new “democratic” social order (METCHNIKOFF, 1889, p. 333-335), since Mencius, a disciple of Confucius, for example, valued popular revolts in the case of a bad government. The people constituted the most precious asset of the nation, a conception that contrasted with the despot's contempt for his people, who are viewed as a mere resource subordinated to the will of the ruler. For Metchnikoff (1889), the Chinese reached a stage that no other “river monarchy” had reached, hence its specificity, since Confucius had ba-

lanced the social order that “(...) was the brutal product of the environment” (METCHNIKOFF, 1889, p. 342). In addition, he had associated territorial taxes to land income, ending feudal privileges, as well as including the sages in the social hierarchy, which made it possible for all citizens to run for public office.

Metchnikoff (1889, p. 363), however, denounced the fallacious view of Chinese stagnation and highlighted that securing power in the three river basins located at different latitudes had caused a slower development, with several historical recommencements and contradictions. Reclus considered however that there were other elements that explained China's slow development: (1) the immensity of the Pacific inhibited the impulse to conquer the seas or encourage explorers to navigate in circles; (2) the development axes of the east had a centrifugal direction with long rivers that do not meet, which made it difficult to forge stable political units, even though there were exceptions, such as the Yellow River basin, and (3) contrary to Europe, where all peoples tended to converge to a central point, i.e., the Mediterranean, in Asia there was a lack of geographical centrality with the presence of many separation barriers (PELLETIER, 2013, p. 466). Thus, the geographical situation was one of the reasons for the backwardness, even though it was invariably linked to the natural conditions in Asia.



Revista do Programa de Pós-Graduação em Geografia e do Departamento de Geografia da UFES

Janeiro-Junho, 2021  
ISSN 2175-3709

In the *New Universal Geography*, Reclus brought the Chinese stagnation into question due to the evolution of its agrarian structure, which changed over the course of history. However, when commenting on a popular revolution in China, the anarchist geographer stated that the will of the masses faded over a short period and produced a bureaucratic caste that controlled the soil and the people (FERRETTI, 2013, p. 14). In contrast, similar to Metchnikoff, Reclus agreed that, in China, the official religion was progressively weakening. Still in 1900, Reclus wrote a text on the Chinese position and European diplomacy, in which he condemned the process of territorial sharing by several foreign powers. Simultaneously, continuing his tradition of using the comparative method, from the viewpoint of social progress, Reclus compared the Taiping revolution to the revolutionary events of 1848 in Europe and, interestingly, stated that lowering the wages in China could not in any way impact European industry (RECLUS, 1900, p. 15). Most certainly, Reclus did not foresee China's position in the twenty-first century.

## FINAL CONSIDERATIONS

Reclus was able to organize a veritable ensemble of intellectuals and collaborators, which made it possible to publish his *New Universal Geography* and, within this context, Metchnikoff played

a fundamental collaborating role in consolidating his method and his research agenda. As Bourdieu (2001) highlighted, when used in a given scientific field, the adjective “new” was aimed at a rupture or an innovation in the way of undertaking science. However, the “novelty” of being recognized by peers should be strongly based on previously consolidated traditions within the field. In the case of Reclus, this was no different, since his geography was based on the methods of C. Ritter, Malte-Brun and on the naturphilosophie that underpinned modern geography.

As Metchnikoff was a member of that network it could be no different; moreover, when analyzing *La Civilisation*, we believe it was made clear that Kropotkin, Reclus and Metchnikoff shared a common habitus. They all had origins from amongst the middle and upper social classes, became engaged in revolutionary struggles and participated in political life as anarchist militants. We have seen the common elements of method and their options in the face of the scientific debates of their time: criticism of Malthusianism, of social Darwinism, the tribute to C. Ritter, the instrumentalization of the idea of the environment, a positive reading of the medieval, the inseparability between nature and society or between time and space, to mention but the most relevant elements.

From this *habitus*, Reclus and his closest collaborators managed to occupy a space in

the field of geography: although Metchnikoff and Reclus became university professors only at the end of their lives, both – together with Kropotkin – were widely recognized for their contributions to the *field* of geography, receiving awards and occupying institutional positions in several geographic societies around the world, in addition to publishing dozens of books and articles. Reclus could have been criticized or ignored, but he received great recognition for his work from his peers both within the field of geography and outside.

Another component of the habitus of the three geographers was the strategy of publishing in several languages, in scientific periodicals in the field of geography, in addition to publications in renowned journals that discussed various scientific and literary themes, such as the *Contemporary Review*, in which Metchnikoff published, in English, his main theoretical essay "Evolution and revolution". Without a shadow of doubt, Reclus, endowed with a vast cultural capital, endorsed *La Civilisation* by organizing, prefacing and promoting its publication by Hachette, the publisher known for having launched his own work. Nevertheless, it should be mentioned, as did Ferretti (2007; 2011), that the group's political project was not dissociated from science, i.e., another component of the habitus of this group was the continuation of militancy and the publication of texts in anarchist magazines in order

to defend their political views. It is clear from the analysis of *La Civilisation* that the epithet of mankind is anarchism and the dissolution of the State, which will only take place from the general awakening of individual consciences.

Metchnikoff, however, had his own light, albeit less, as his trajectory was recognized inside and outside geography, as revealed above. Looking at it in perspective, it is precisely the habitus that allowed Metchnikoff to make an anti-imperialist geography at the height of the era of Empires. His perspective enables us to question the common places of social domination by the European powers, inquiring about the theoretical categories of utilitarian geographies that justified and boosted colonialism – for example, F. Ratzel. This is evidenced through criticism of the concept of race, social Darwinism, by defending cooperation as a social foundation and, above all, by questioning stagnation and despotism in the East. Even though in some passages Metchnikoff ultimately reproduced the common sense of the time, his questioning was evident that the peoples of the East inevitably tended towards historical immutability and despotism – a statement that was often based on environmental determinism. Thus, he identified and exposed the social and symbolic domination of his time, attacking analyzes that had an ideological background for the endorsing imperialism. Cultural empathy enabled Metchnikoff and Reclus to ques-



Revista do Programa de Pós-Graduação em Geografia e do Departamento de Geografia da UFES

Janeiro-Junho, 2021  
ISSN 2175-3709



5. *An eventual military and  
demographic invasion  
from China towards the  
west.*

tion various places in common with the view of the East of their time, which, at the same time, did not prevent some common senses regarding China from being reproduced, justified, but contradictorily problematized. Anarchist geographers, for example, were fiercely opposed to the idea of the yellow peril<sup>5</sup>, in vogue at the *fin de siècle*.

In addition, as mentioned by Plekhânov (1891), *La Civilisation* directly referred to a concern of the philosophy of history, which certainly goes back to the legacy of Ritter, who defended an inseparability between geography and history, in addition to the teleological scrutiny of humanity and nations (CAPEL, 1981). From a philosophy of history that refers to concrete thinking, i.e., equipped with an understanding of the natural laws of the universe - the inevitability of the evolution of nature-society - Metchnikoff created a model from its empirical content, from the analysis of the past and of the present, projecting it towards future trends.

Furthermore, Metchnikoff traced the historical evolution of humanity as a tension between the centralization of political power and free cooperation, focusing on the awareness of individual and social freedom. This is a tortuous and dialectical process that takes humanity onto a stage of free, conscious cooperation. In the words of the author: "Speaking anthropomorphically, we may state that evolution has a goal, that this goal is progress, and that nature rea-

ches it safely and practically without caring about it either consciously or intentionally" (METCHNIKOFF, 1886, p. 436). Thus, his model was not simply content with clarifying the past, indicating a conception of future society.

As we have attempted to demonstrate, Metchnikoff's geography is inseparable from that of Reclus and Kropotkin, and that these anarchist geographers occupied an important position in the field of geography in the late nineteenth century and were to be claimed as a disciplinary tradition for critical geography as from the 1970s. Even if Metchnikoff had not been incorporated as a canon in the field of geography, as was Reclus, the impact of his work may not be ignored, which indirectly influenced the thinking of geographer K.A. Wittfogel and produced major repercussions in Russia on the eve of the revolution, when there was an urge to interpret the past in order to rethink the future.

Lastly, Metchnikoff offered a model built on a broad historical investigation that referred to the evolution of society and nature, and to the technical links of the environments. This was a geography outside the orbit of economic and cultural imperialism in force at the time; a theory disinterested in justifying social domination, but concerned with overcoming it by defending freedom, equality and fraternity as the unavoidable destiny of human society.

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Revista do Programa de Pós-Graduação em Geografia e do Departamento de Geografia da UFES

Janeiro-Junho, 2021  
ISSN 2175-3709

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