



(Un)Making Human Geography in Turkey under the Dominance of Environmental Determinism¹

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Abstract: The environmental determinism is still being debated for more than a century among both geographers and non-geographers. In recent years, a new type of environmental determinist thinking so-called 'neo-environmental determinism' has emerged in the discipline of geography. However, in this paper our aim is not to advance neo-environmentalist debate in geography, but to show how early twentieth-century versions of environmental determinism still alive and thriving in a number of ways in current Turkish human geography. While environmental determinism was abandoned in the western geography, namely Anglo-American countries, between 1920s and 1950s, it continues to be practiced as dominant approach in Turkish human geography. Indeed, starting from the 1960s Turkish geography has been alienated from modern western geography both in terms of philosophical approaches and methodological practice. In the last 50 years, although the discipline of geography in the west has experienced significant developments and paradigm shifts, unfortunately the same level of success has not been reflected in Turkish geography. In this context, using data based on content analysis of the articles, books and PhD dissertations published by Turkish geographers over time, this paper seeks to answers two questions: (1) By whom and in which way has the environmental deterministic thought been transferred to Turkish geography and what were the consequences of this transfer? (2) How and why were Turkish human geographers able to keep up with approach of environmental determinism so long time? This paper provides a critical reflection on historical development and practice of human geography in Turkey. The paper show that, apart from Anglo-American geography, Turkish human geography has developed very unique disciplinary context by ignoring both quantitative revolution in the 1950s and 1960s and post-positivist transformations from 1970s onwards and thus reproduced its environmental deterministic approach and regional geography method until now and in this way the sub-discipline represents very anachronistic example in terms of history and philosophy of geography. Our findings suggest that the direction of causality in geographic research at the framework of human-environment interactions in Turkey have always been from the environment to humans. Humans and its culture and activities have always remained on the back, passive and weak. Overall result of this situation has led to distort the reality in the favor of the nature and to fall into an anachronistic position in the face of other disciplines when they analyze the social, political and economic issues as geographers due to their inability to save themselves from the domination of nature and physical factors. As a result, it is very clear that the mild environmental determinism, mostly in the form of possibilism, is the hidden philosophy or paradigm of Turkish human geography. In other words, Turkish human geography -although recently new methods and approaches are emerging but still in its infancy stage- is fundamentally and strongly characterized by a methodologically "regional" and philosophically "mild environmental determinist" subdiscipline.

Key Words: Environmental determinism, possibilism, history and philosophy of geography, Turkish geography, human geography in Turkey

1. Introduction

The environmental determinism is still being debated for more than a century among both geographers and non-geographers. Although during the mid of the 20th century it declined and faded out, now it is alive and shows no sign of fading and even more than there are widespread signs of its vitality in the modern academy and media. In recent years, a new type of environmental determinist thinking so-called "neo-environmental determinism" has emerged both in the discipline of geography and mostly outside of geography. Jared Diamond's best-selling books *Guns, Germs and Steel* (Diamond, 1997) and *Collapse* (Diamond, 2005) are some of the best examples of this new 'neo-environmental determinism' approach. Not only famous geographers like Jared Diamond, but also very

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famous economist Jeffrey Sachs (2001, 2005) and many other well-known scholars such as the bioregionalist Kirkpatrick Sale, the archeologist Betty Meggers and Brian Fagan, the historians Eric Jones and David Landes suggest similar neo-environmentalist approaches about the development and underdevelopment of countries over time and they argue that environmental determinants played the most critical role in human history (see Meyer and Guss, 2017). However, many human geographers challenged such kind of neo-environmentalist arguments in geography and criticised very harshly their approach and way of thinking (Blaut, 1999; Sluyter, 2003; Bassin, 2003; Peet, 2006; Judkins et al, 2008; Radcliffe et al., 2010; Livingstone, 2011; Sheppard, 2011; Eades, 2012) and thus totally rejected their "neo-environmental determinism". For instance, Diamond and Sachs have each been accused of the heinous crime of environmental determinism by Blaut (1999), Bassin (2003), Peet, (2006) and Judkins et al. (2008) since nature plays the significant causal role in their accounts (Sheppard, 2011:49). However, in this paper our aim is not to advance neo-environmentalist debate in geography, but to show how early twentieth-century versions of environmental determinism still alive and thriving in a several ways in current Turkish academic human geography.

Every structure of thought aims to arrive at the knowledge of world with its own methods and concepts. At the outset of 20th century, the discipline of geography took physical environment as its subject-matter and gave it a central role in its scientific explanations. According to this view, physical environment is the primary force governing human actions and is the subject-matter of the discipline of geography. This idea became the dominant paradigm of geography and is called "environmental determinism". The main argument of environmental determinism is that "the human existence is the highest achievement of the power of the earth" or in other words "man is the production of the earth's surface" (Semple, 1911; Peet, 1985; Livingstone, 2011). Combining this thought with the idea of natural selection, as it is established by Darwin, Ratzel aims to account for politics on scientifically justifiable grounds. According to this thought just as organisms need to adapt to their environment in order to survive, humans in the same way need to adopt a way of life in order to live in accordance with their environment (Unwin, 1992; Özgüç and Tümertekin, 2000; Yavan, 2014). In a period where physical environment was emphasized, and all facts of human life were explained by means of this thought, physical determinism was more than a scientific explanation; it became a tool for justification of the policies of colonialist states. In other words, this approach had its effects on politics and those effects in turn defined what was expected of geography as a discipline. The language of science turned into the language of colonialism (Peet, 1985; Livingstone, 1992). In the 1920s, the determinist approach began to regress as the human aspect slowly came into prominence in the geographical discipline. During the 1920s as environmental determinism was under great attack by Barrows (1923) and Sauer (1925), in response to these criticisms, the discipline witnessed the emergence of "possibilism," which was really a form of modified environmental determinism (Johnston, 2017:2). Hence, despite the critics of possibilist Vidal, Brunhes, Barrows and Sauer among others, environmental determinism continued its existence in the 1930s and 1940s under the notion of regional geography in a slightly modified paradigm of possibilism. In 1950s, different paradigm emerged within the discipline of geography such as spatial analysis and as a paradigm that could not account for the conditions of this period, environmental determinism became outdated. After the second half of the 1960s, humanistic geography and Marxist geography emerged as new approaches and alongside the already existing quantitative geography and post-positivist geography and, they took the scene in the discipline of geography in 1970s (Figure 1).

This transformation of thought could be followed by the Turkish geographers in a very restricted context. However, the fast pace of change in geographical discipline in the West and extension of subject-matter into a multi-focused structure have not been observed in Turkey. In other words, while environmental determinism was abandoned in the western geography, namely Anglo-American countries, between 1920s and 1950s, it continues to be practiced as dominant approach in Turkish human geography. Indeed, starting from the 1960's Turkish geography has been alienated from modern western geography both in terms of philosophical approaches and methodological practice. In the last 50 years, although the discipline of geography, especially human geography, in the west has experienced significant developments and paradigm shifts (Livingstone, 1992; Unwin, 1992; Johnston, 1997; Peet, 1998; Creswell, 2013), unfortunately the same level of success has not been reflected in



Turkish geography at all. Indeed, since the mid-2000s the number of studies that have examined academic development and performance of Turkish geography from a critical perspective (Arı, 2005, 2017; Arı and Köse, 2005; Kaya, 2005, 2008, 2010; Yavan, 2005a, 2005b; 2012, 2014; Yavan and Kaya, 2012; Bekaroğlu and Yavan, 2013, 2018; Özgür and Yavan, 2013; Gümüşçü, 2012; Karabulut, 2012; Tekeli, 2012; Bekaroğlu, 2016; Bekaroğlu ve Sarış, 2017; Anlı, 2016; Bilgili, 2016; Özgür, 2018; Yazan ve Bekaroğlu, 2018) indicated that Turkish geography has remained completely silent on the paradigmatic shifts in the geographical theory and practice in the west and showed a serious resistance and even rejection by ignoring these changes. For this reason, a few years ago, Yavan and his colleagues (Tuysuz and Yavan, 2012; Özgür and Yavan, 2013; Kurtar and Yavan, 2014; Yavan and Kurtar, 2015) did some research and argued that environmental determinism and regional geography approach are the main paradigm of Turkish geography.

In this context, we argue that Turkish geography in general and Turkish human geography in particular represents quite unique and anachronistic case in terms of history and philosophy of geography because environmental determinism and regional geography has long ago abandoned the contemporary geography, but it is still alive and living in the Turkish human geography. Turkish geography has not been assessed in a way that can be taken seriously until the beginning of the 2000s. Until 2005, published studies, which analyzed the scientific development of Turkish geography, has almost completely excluded philosophical, theoretical and methodological debates of the discipline and only focused on empirical facts and historical descriptions of the departments and peoples (Akyol, 1943a, 1943b, 1943c; Bilgin, 1961; Darkot, 1951; Bediz, 1966; Akkan, 1972, 1998; Gürsoy, 1974; Alagöz, 1975; Hüttheroth, 1992; Erol, 1993; Doğanay, 1995; Gümüşçü, 1996; Yiğit, 1996; Erinc, 1997; Akkan, 1998; Kara, 1998; Özçağlar, 1998; Özey, 1998; Koçman, 1999; Kayan, 2000; Tümertekin, 2001).

Indeed, with the exception of a few important studies (e.g. Akyol, 1943c; Tümertekin, 1971; Erinc, 1973a), the published studies from 1940 to 2004 are very far from being critical and usually consist of the studies reminiscent of a hagiographical tradition which is generally praising and glorifying the existing situation of geography. However, this approach has begun to change since 2005 and a new generation of innovative Turkish geographers has begun to question the state of discipline critically and analyzing the successes or failures that Turkish geography experienced over time from historical, theoretical and methodological point of view.

To date, the existing critical empirical literature on Turkish geography focus on many different part of disciplinary developments including the international publication performance of the discipline (Yavan, 2005b; Bekaroğlu and Sarış, 2017), undergraduate and graduate education problems (Kaya, 2008; 2010; Yavan, 2012; Bilgili, 2016; Özgen, 2016), the relationship with other disciplines (Yavan, 2007; Yazan and Bekaroglu, 2018), innovation trends in Turkish human geography (Özgür, 2018), reasons for success and failure in the historical development process (Pérouse, 2012, Tekeli, 2012, Gümüşçü, 2012, Özgür and Yavan, 2013), and theoretical inadequacies and approaches (Arı, 2005; Arı and Köse, 2005; Kaya, 2005; Yavan, 2005a; Tuysuz and Yavan, 2012). However, no study except for Kurtar and Yavan (2014) and Yavan and Kurtar (2015) as well as a recent one by Arı (2017) has been done on how environmental determinism came to be the dominant approach in Turkish human geography and why it is so resistant to change. For this reason, the aim of this study is to inquire environmental determinism and its effects on the discipline of geography in Turkey. For this purpose, this study will focus on two main questions: (1) By whom and in which way has the environmental deterministic thought been transferred to Turkish geography and what were the consequences of this transfer? (2) How and why were Turkish geographers able to keep up with approach of environmental determinism so long time?

Up to date, the existing literature has focused on "the big picture" and "general trend and problems" of the discipline over time but has completely ignored exploring the underlying paradigm and its ontological, epistemological and methodological assumptions and features in the context of Turkey. This was the main motivations behind this paper. The main problem, however, was to question ontological and epistemological assumptions of the existing –hidden- paradigm and to deconstruct its



componets and methods that is deeply embedded within discipline's practice. Such a deep inquiry and challenging task was first made by Tuysuz and Yavan (2012) for the regional geography approach which constitutes the methodological framework of the discipline in Turkey. The second attempt was undertaken by Yavan and Kurtar (2015), which is the previous version of the present work, on the paradigm of environmental determinism (we argued), which constitute epistemology of the regionalist methodological framework. The last one was done by Arı (2017) focusing on the perspective of human-environment relationships in Anglo-American geography and evaluating the reflection of this perspectives on Turkish geography as a result of environmental determinism. He concluded that determinist studies are frequently encountered in the Turkish geography literature while studies conducted with the other three perspectives such as cultural ecology, environmental perception and political ecology are less frequent.

2. Method

In order to figure out how environmental determinism became the dominant approach in human geography in Turkey and how such kind of determinist ideas has transferred to Turkish geography and why it remained so long time in the discipline, three different methods have been followed and these are discussed in the following sections of the paper. The first section, comprising the theoretical part of the study, will try to account for the historical context, the philosophy and the main arguments of environmental determinism and possibilism. The aim of this part is to provide some insight into the tradition of environmental determinist and possibilist thinking using published works of very influential scholars of the early 20th century (e.g. Semple, 1911; Brunhes, 1920; Barrows, 1923; Huntington, 1924; Sauer, 1925; Vidal de la Blache, 1926; Taylor, 1927) and also substantial literature already has appeared in numerous publications over time (e.g. Platt 1948a, 1948b; Tatham 1951; Lewthwaite, 1966; Glacken, 1967; Peet, 1985; Frenkel, 1992; 1994; Blaut, 1999; Judkins et al., 2008; Radcliff et al., 2010; Keighren, 2010; Livigstone, 2011; Meyer and Guss, 2017 among others). In the second section, the focus of the study is directed towards the Turkish geography and based on the selected publications of the first, second and third generation of Turkish geographers from 1940-1980 (e.g. Louis, 1941; Akyol, 1943a, 1943b, 1943c; Çitakoğlu, 1943; Darkot, 1951; Tanoğlu, 1964; İzbrak, 1968; Tunçdilek, 1967; Tümertekin, 1971; Alagöz, 1972, 1975; Erinc, 1973a, 1973b), this part shows how environmental determinist approach has entered into Turkish geography. Also in this second part, to display the development of Turkish geography, articles published in four journals of Turkish geographical discipline, namely; Journal of Turkish Geography (Türk Coğrafya Dergisi), Journal of İstanbul University of Institute of Geography (İstanbul Üniversitesi Coğrafya Enstitüsü Dergisi), Ankara University Journal of Geographical Research (Ankara Üniversitesi Coğrafya Araştırmaları Dergisi), The Journal of the Faculty of Languages, History and Geography (Ankara Üniversitesi Dil ve Tarih-Coğrafya Fakültesi Dergisi) are subjected to reference and content analysis over the period of 1943-1980. The third section, which contains the other argument of this study, evidence of the prevalence and continuity of environmental determinist and possibilist thinking of today in Turkey are provided. To this end, PhD dissertations submitted to geography departments in Turkish universities in the field of Human Geography between the years of 2005 and 2013 are taken into account and analyzed in terms of contents. Results of this study will help us understand a process that is unknown to most and start critical thinking our discipline.

3. Theoretical Framework: Environmental Determinism and Possibilism

An increasing variety of schools of thought have emerged over time in the discipline of geography (Peet, 1998:10). Figure 1 illustrates the existence of parallel schools of thought within geography from the 1850s to the 2000s. Since at least the 1960s, different paradigms continued to live side by side and thus geography, especially human geography, has become a multi-paradigmatic discipline (Johnston, 1997; Tekeli, 2012; Yavan, 2014). Using the terminology of Kuhn's model, until the time of Darwin geography was in the pre-paradigm period and Kant did not developed a paradigm for geography but he provided a philosophical foundation for the geography and gave geography a theoretical justification as a branch of knowledge (Holt-Jensen, 2009). After Kant, despite being the two founding fathers of the discipline, neither Humbold nor Ritter have put forward a paradigm for



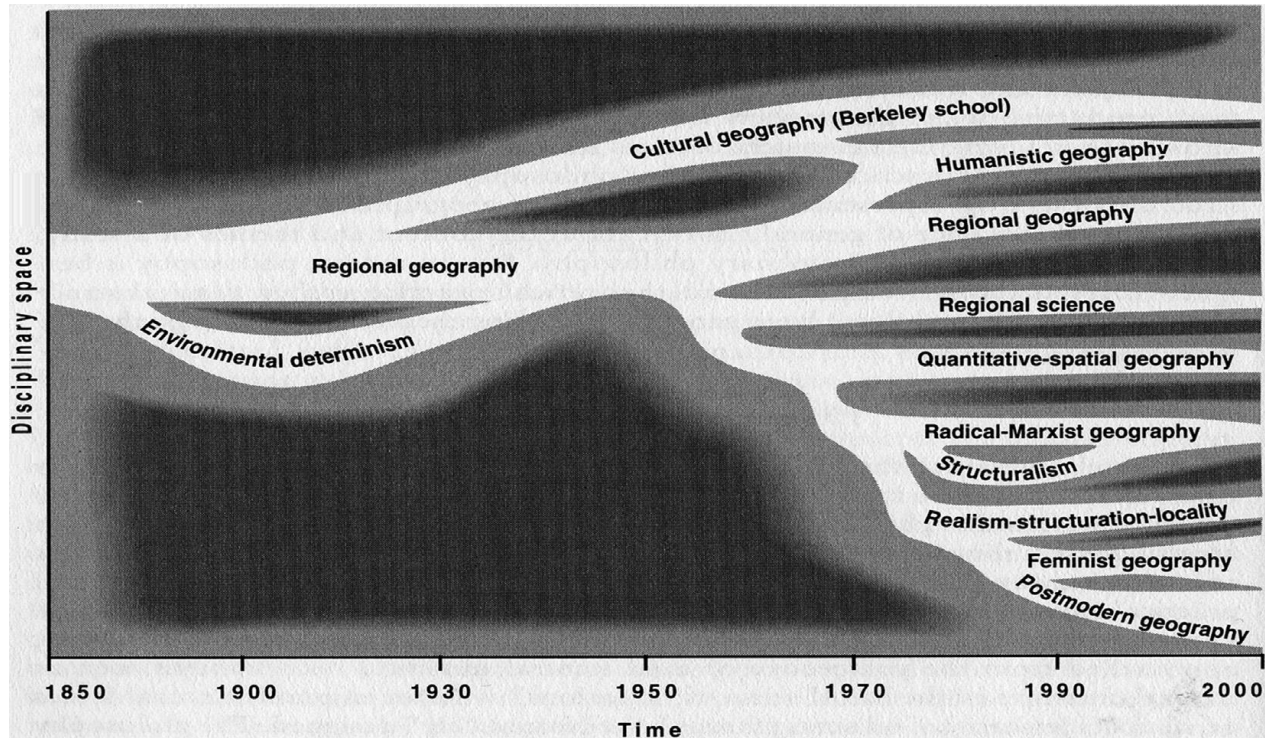
geography. Although modern academic geography was founded on the ideas of Humboldt and Ritter, Darwin's book *the Origin of Species* in 1859 was profound influence on geographers' ways of thinking and thus the development of discipline of geography as science. As a result of this developments, there is no douth that environmental determinism represents first paradigm of the modern geography as the Figure 1 shows.

3.1. Environmental Determinism

Environmental determinism is a way of thinking or approach in which human activities are controlled by the environment (Livingstone, 2011). It is a type of idea and the belief that "the character and form of a society, culture or body can be explained by the physical conditions within which it has developed" (Hinchliffe, 2009:196). In short, environmental determinist believe that the nature determines the human world, which means physical environment causes and explains the human activity and behaviour. David Livingstone (2011:368) describes those claims very clearly:

"Sometimes the behaviour in question is attributed to the configuration of topographic features like rivers, mountains, valleys, deserts, plains, and so on; sometimes climatic conditions are identified as the critical explanans; sometimes the local character of soil is taken to be the critical determining environmental factor. And of course even these causal explanations may be more finely tuned – the role of a tropical sun, or long-term climatic change, or persistent drought may be called upon to explain one aspect or another of human culture".

Figure 1: Changing Paradigms and/or Schools of Modern and Postmodern Human Geographical Thought



Source: Peet, 1998:10

Although environmental determinist thought had a great influence at the outset of 20th century especially from the 1890s to the 1920s, the idea of environment as a governing force had its origins in an earlier time. Since ancient times many scholars such as Greek scholars Plato, Aristotle, Hippocrates and Strabo; Medieval and Renaissance scholars Ibn Khaldun, Machiavelli and Jean Bodin, and the Enlightenment's most influential scholar Montesquieu all wrote the physical elements in



particular climate conditions influence the development of societies and the human characteristics like temperament, physiognomy, and intelligence (Tatham 1951; Glacken 1967; Livingstone, 2011). Especially in the middle ages the environmental effect and the idea of adapting to conditions were used as means of explaining differences between races and cultures. Montesquieu in his book *The Spirit of the Laws*, published in 1748, considered the effects of climate, religion, laws and tradition on social order. Montesquieu famously observed that "*The empire of the climate is the first, the most powerful of all empires*" (Livingstone, 2011:372). Islamic world also had similar notions. The idea of the environment as determining force is explicit in Ibn Khaldun's work. Ibn Khaldun in his work *Muqaddimah* explains the effect of environment (climate) on people's physical, psychological and moral aspects (Glacken 1967) and illustrates his point black human skin was due to the sub-Saharan Africa's warm climate and not because of their descendants and also nomadic culture is a result of the desert environment (Fekadu, 2014).

At the beginning of the modern geography period around in the 1870s, we see once again the facts of human life explained through physical environment. The idea of geography in this period was that it was a discipline comprising all subjects of cosmography. In a time when analytical natural sciences were thriving, specialization was increasing, nomothetic generalization was considered as essential in science, a tendency to consider geography as not having a place within the context of the system of sciences and the thought that geology and history covered the grounds of geography became prevalent (Yavan, 2014). Out of this process, modern geography emerged as part of the new modern scientific worldview through Darwin's work, in contrast to previous the cosmographic character of Ritter's and Humboldt's geography (Stoddart, 1966; Peet, 1985). This new discipline and "scientific" understanding of the geography was based on Humboldt's and Ritter's thoughts on one hand and on Darwin's theory of evolution and Lamarck's thoughts on the other (Yavan, 2014).

The theory of evolution proposed by Darwin in his "*Origin of Species*", published in 1859, became one of the main ideas of environmental determinism and a source of inspiration for many geographers (Stoddart, 1986; Tümertekin, 1990; Unwin, 1992). His concepts of natural selection and adaptation is the core of environmental determinist thought (Johnston and Sidaway, 2016). On the other hand, Lamarck proposes that habitual adaptations to the environment will directly change the form and formation of an organism and that organic life has a tendency towards complexity and that the human existence is the highest achievement of this power of life (Peet, 1985). This idea of evolution and the thought that human existence is the highest achievement of environment caused a great excitement in geographers and was seen as having a great explanatory power. Geographers saw the possibility of a general "human-environment" theory in Darwin's concept of natural selection. That is; just as organisms need to adapt to their environment in order to survive, humans in the same way need to adopt a way of life in order to live in accordance with their environment (Tümertekin, 1990). Darwin's theory was perceived as implying that the continuity of a changing force in the end will produce a series of changes. The mechanic element of struggle in the process of adaptation causes the survival of the fittest, and nature is the primary force of this process. This determinist thought was applied to human geography. Human geography, while emphasizing an aspect of the theory evolution, neglected other aspects such as Darwin's idea that some adaptations are accidental and that nature is not a factor in these (Stoddart, 1986). Actually, human geography was interested in the results of adaptation rather than its causes.

Darwin's above-mentioned ideas have provided a magnificent argument for geographers who are willing to preserve the idea of the sovereignty of the physical environment in mind. As a result, at the beginning of the 20th century after Darwin's work, how geography was conceptualized as a science is very clearly revealed by Holt-Jensen (2009:62-63):

"After Darwin, geographical research was primarily concerned with discovering the laws of nature. Nature was studied with open eyes: geographers sought as objectively as possible to identify the natural processes that governed the formation of valleys, uplands and coastlines. A more restricted view was taken of human activity; only the relationships between nature and humanity were considered to be of prime interest. Humanity's achievements were explained as consequences of the survival of the fittest under the pressure of natural conditions".



This interpretation of Darwinist thought was endorsed by first German geographers, then American geographers and was reflected in their works. This idea became the main argument of the works of the German geographer, Friedrich Ratzel at the end of the 19th century. Ratzel in his work "Anthropogeography", published in 1882 and 1891 in two volumes, puts forth that "humanity lives under nature's law", and "cultural forms as having been adapted and determined by natural conditions" (Holt-Jensen, 2009:63). In this view Ratzel was considered as the founder of environmental determinism (Unwin, 1992) and tried to "establish geography on a modern scientific basis" (Peet, 1985:316) by exposing the effects of environment on humans. Environmental determinist thought is also apparent in his work *Political Geography*, published in 1897, where he elaborated on this main idea. In this work he explained the laws of the growth of states in terms of organic growth and developed the term "Lebensraum" (Living space): "Just as the struggle for existence in the plant and animal world always centres about a matter of space, so the conflicts of nations are in great part only struggles for territory" (Stoddart, 1966:694). The view that a species need a living space (Lebensraum) in order to survive meant that states could and should expand their territories (Bassin, 2003). Ratzel's views on organic state concept and his notion of Lebensraum was later adapted and distorted in Germany, under the banner of geopolitik, by the German National Socialist Party in support of Nazi ideology (Stoddart, 1966; Livingstone, 2011).

Ratzel's view, propagated by European geographers, reached the United States. Ellen Churchill Semple, one of Ratzel's students was influenced by his ideas and in her book *The Influences of Geographic Environment: On the Basis of Ratzel's System of Anthro-geography*, published in 1911, defended his standpoint. Semple, who gave the most explicit expression of environmental determinism popularized Ratzel's ideas and introduced it to English speaking world, especially among American geographers (Unwin, 1992; Livingstone, 2011). Semple developed her point of view as follows (Semple 1911:1):

"Man is a product of the earth's surface. This means not merely that he is a child of the earth, dust of her dust; but that the earth has mothered him, fed him, set him tasks, directed his thoughts, confronted him with difficulties that have strengthened his body and sharpened his wits, given him his problems of navigation or irrigation, and at the same time whispered hints for their solution. She has entered into his bone and tissue, into his mind and soul".

In this quotations Semple suggest that human temperament, culture, religion, economic practices and social life all could be the result of environmental influences (Unwin, 1992). Semple also argued (1911:620) that;

"the northern peoples of Europe are energetic, provident, serious, thoughtful rather than emotional, cautious rather than impulsive. The southerners of the subtropical Mediterranean basin are easy-going, improvident except under pressing necessity, gay, emotional, imaginative, all qualities which among negroes of the equatorial belt degenerate into grave racial faults".

Indeed, the idea of "manifest destiny" was a hallmark of the 19th century thought (Peet, 1985). The core of these thoughts was fatalism; to comply with what nature has given. Just like church dogma in middle age, the sovereignty of nature was absolute and shaped humans. This force is described by Semple giving many similar examples in his book.

Two influential American geographers who promoted environmental determinism until the middle of the twentieth century were Ellsworth Huntington and Griffith Taylor. Especially Ellsworth Huntington, who continued the study of environmental effects to make environmentalism the main mode of explanation in American geography not only 1920s but also during 1930s and even 1940s. Both geographers argued that environmental factors in particular climatic conditions were the primary determinant of racial differences, human intelligence, physical appearance, and moral potential (Livingstone, 2011; Keighren, 2015). Environmental determinist thought surrounded itself with racist and colonialist discourses regarding geopolitics (Frenkel, 1992; Blaut, 1999). These discourses entered into all areas of life. This situation can be exemplified by quoting Huntington's book *The Character of Races* (1924:70)as follows: "Thus, if white colonization takes place on a large scale within the tropics,



there is grave danger that the physically strong but mentally lethargic elements will be the ones to become the ancestors of the future population”.

There is no doubt that environmental determinism helped ideologically to legitimate Social Darwinism, which was used to justify imperialism and racism by applying Darwin's law of natural selection "*the strong should eliminate the weak in the name of the progress of mankind*", justified racism and fostered colonialism and global supremacy of the West (Peet, 1985). According to Peet (1985:310), "*Environmental determinism, I argued, was geography's contribution to Social Darwinist ideology, providing a naturalistic explanation of which societies were fittest in the imperial struggle for world domination*". White supremacy and/or the superiority of the West was thought to be related to their environment and it was this environment that bestowed on them this power over other people. James Blaut (1999) describes this as the happy marriage of environmental determinism and Eurocentrism. This happy marriage was the means of justification of every political act. Based on Darwin's theory and used by Ratzel as a so-called scientific explanation, the environmental determinist approach resulted in an unfortunate image of geography and later even became a source of embarrassment (Harden, 2012). While environmental determinism has been criticized and rejected for numerous reasons, it provided a genuine search for explanation and theory for geography (Johnston, 1997; Harden, 2012; Cresswell, 2013) and also acted as a critical focal point for geography's disciplinary identity during 1890s to 1920s (Livingstone, 2011) .

As a result, indeed, until the middle of the twentieth century, strong elements of crude environmental determinism played a major role in the selection of topics that were included in school textbooks in most countries. A 'commercial' type of geography, which laid considerable emphasis on raw material supplies and little on the distribution of entrepreneurial skills and institutions, was popular. The influence of physical geography on transport routes was greatly overstressed and oversimplified (Holt-Jensen, 2009:65). Put like this, "*environmental determinism lived on in landscape geography and regional geography as well as in many school textbooks*" (Ernst and Philo, 2009:106).

3.2. Possibilism

While environmental determinism remained a dominant and popular way of thinking to geographical thought until the 1920s and even its more lighter version (i.e. possibilism) to the 1950s (for example Ernst and Philo (2009:106) called it a 'softened' version of environmental determinism), it was not avoided a large number of the above-mentioned criticisms (Johnston, 1997; Holt-Jensen, 2009; Harden, 2012). Possibilism emerged as a response to the question of where in the discipline of geography, conceptualized as a human-environment relation in the modern period, should be the direction of causality the understanding of human-environment relations. Possibilism emerged as a response to the question of which way should be the direction of causation (from the environment to humans or from humans to the environment) in the discipline of geography conceptualized as a human-environment relation in the modern period (Yavan, 2014). In this context, possibilism emerged as opposed to environmental determinism, and possibilists argued that human beings can respond to the effects of the physical environment in various ways (Livingstone, 2000). The main argument of Possibilist approach was that natural factors have an impact on human activity but that it is not decisive. The Possibilists have never excluded the environment from the analysis, emphasized its limitative power, that is, unlike environmental determinists they exerted a strong emphasis on the power and capacity of man over the environment. Therefore, in Possibilism, man is not an agent that reacts passively to the physical environment, but an active actor who can choose (Tatham, 1951).

The development of the possibilistic approach is directly related to the works of Vidal de la Blache and Jean Brunhes in France, and the works of Isaiah Bowman and Carl Sauer in the United States (Tatham, 1951). Possibilist thinking was first born as Vidal's critique of environmental determinism and thus formed the basis of Vidal's regionalism in human geography. However, the French historian Lucien Febvre, who termed this approach "Possibilism" based on the view point of Vidal de la Blache in 1922, contradicts it with environmental determinism by arguing that "*there are no necessities, but*



everywhere possibilities and man as a master of these possibilities is the judge of their use' (Tatham, 1951:154; Livingstone, 2000:609). According to the French geographers Vidal De la Blache (1926) and Brunhes (1920), human being can choose the alternative that best fits their socio-cultural position under the restrictive influence of the physical environment. Both Vidal de la Blache and Brunhes acknowledged that nature has an impact on human activity, but argued that nature is not a determining factor. For them, "*nature is never more than an adviser*" (Vidal De la Blache, 1926:321). However, interestingly, the famous French geographer Brunhes, who was one of the most important representatives of this possibilist thought, argued that "*without physical geography there could be no substantial human geography*" (Unwin, 1992:95). By saying that he was actually implicitly emphasized the decisive role of the natural environment. Similarly, "*Vidal always conceived of human geography as a natural, not a social science*" (Tümertekin, 1990:78; Livingstone, 2011:375). Vidal de la Blache, for instance, insisted that *genres de vie* (way of living or lifestyle) were themselves reflective of nature even as they engaged in its transformation, and it would therefore be mistaken to consider his to be an altogether radical voluntarism (Livingstone, 2011:375). Thus, based on these views of Vidal, Berdoulay (1976) argued that these views of Vidal reveal that the French possibilism was essentially a "neo-Kantian" solution to dichotomy between the human and the environment.

On the other hand, later on Isaiah Bowman and Carl Sauer in US advocated the possibilist approach to environmental determinism. American geographer Barrows (1923:3), who defined geography as the science of human ecology, which is a study of human adjustment to the environment, advocated that the discipline of geography was moving toward a focus on the "*mutual relations between man and his natural environment*" and therefore he promoted geographers "*to minimize the danger of assigning to the environmental factors a deterministic influence which they do not exert*". However, according to Peet (1985), the critics or proposal initiated by Barrows was a mild criticism from within the environmentalist school. Two years after Barrows, this time Carl Sauer (1925) launched very strong attack on environmental determinism and rejected it as either a theoretical or a methodological program for geography. Sauer's critique played the main internal role in finishing environmental determinism as the hegemonic theory of geography at least in US (Peet, 1985:328). As Harden (2012:740) put it, "*Sauer's geography emphasized cultural landscapes, created not by nature alone but by culture working with nature*". In other words,

"Sauer thus stressed culture as a geographical agent, although the physical environment retained a central significance as the medium with and through which human cultures act. Hence such elements as topography, soils, watercourses, plants and animals were incorporated into studies of the cultural landscape insofar as they evoked human responses and adaptations, or had been altered by human activity" (Cosgrove, 2009: 133).

As in Vidal de la Blache and Brunhes, in the US, Sauer and Bowman, who advocated a possibilist approach to environmental determinism, took implicitly a semi-determinist position, emphasizing that nature provides a static background to human (cultural) activities (Harden, 2012). Judkins et al, (2008:21) has put it very clearly: "*We characterise the 'moment of cultural possibilism' as reducing the determinism of the environment to a force of constraint or to act as an enabler – preserving only a muted sense of influence*". Although environmental determinism has been criticised in the 1930s, the 1940s and 1950s, it did not change effectively and the regionalist version of possibilism remained as a hidden paradigm of the discipline (Peet, 1985: 328).

As Johnston pointed out, the debate over environmental determinism and possibilizm continued until the 1960s (Platt, 1948; Martin, 1951; Tatham, 1951; Spate, 1952; Lewthwaite, 1966). Spate (1952), for example, proposed a middle way with the concept of "probabilism" instead of possibilism. Even worse, Martin (1951:6) further argued that in the 1950s neither "possibilism" nor "probabilism" was the right concept, both were in a dilemma and did not work, and therefore basic hypothesis for human geography should be again "environmental determinism". Considering that the year 1950s, we hope to think that this proposal by Martin (1951) was not "extreme environmentalism" according to Platt's (1948a) classification, but at least it was "mild environmentalism". As a result, "*differences between possibilism, environmental determinism and probabilism are more easily identified when taken as ideal types rather than as operational perspectives in geographical research*" (Livingstone,



2009:560). Despite all this complexity, “the doctrine of environmentalism (in its **deterministic** and **possibilistic** stripes) was never entirely eliminated and has found continued explanatory validity in biological anthropology and archaeology” (Keighren, 2015:724; [emphasis added]) as well as of course in geography as mentioned in the introduction.

Holt-Jensen (2009:114), in his book, noted this so-called pseudo-difference between possibilism and environmental determinism in a very striking way.

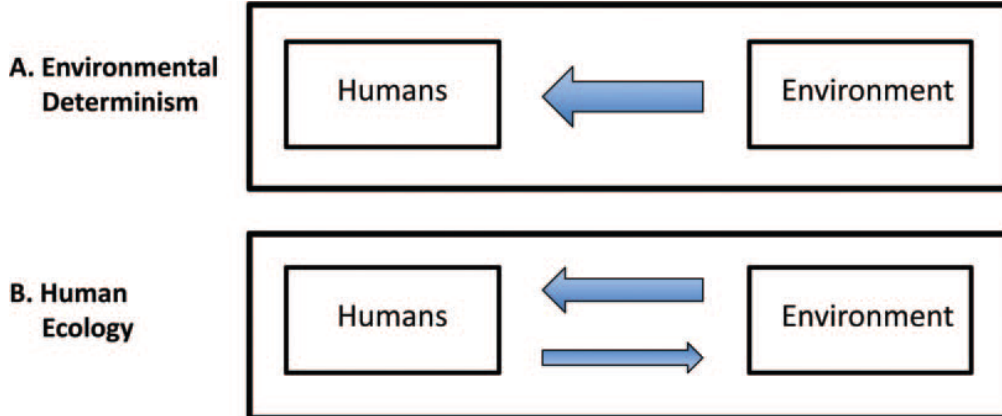
*“Although possibilists reacted against the determinists’ simple explanatory models, many of their ideas were derived from Darwinism. They took over Darwin’s concepts about struggle and selection although they also considered that chance and human will played an important role in development. While possibilism could be said to constitute a new paradigm, it did not immediately replace determinism. Partly because of the strength of geomorphology and physical geography, the deterministic explanatory model continued **to survive side by side with possibilism**”. [emphasis added].*

Johnston (2017:2) gives another illustration of this type of collaboration as follows:

“In response to mounting criticism, geography witnessed the emergence of “possibilism,” which was really a form of modified determinism. Under possibilism the environment is viewed as offering a range of options from which humans select a preferred one based on cultural differences, available technology, and so forth. As Jones (1956, 369) notes, the options available to humans were “circumscribed” by the environment but not “fatally determined.” Possibilism failed to address adequately the central concerns surrounding environmental determinism and was eventually dismissed for many of the same reasons that environmental determinism was; it too was regarded as fundamentally deterministic, it ignored the role of what later came to be called “human agency” and the importance of locally constructed realities, and with the regional perspective gaining prominence, a non-nomothetic approach, many geographers of that time questioned the legitimacy of human geography searching for general theories and laws in the first place”.

In conclusion, as claimed by some scholar, the distinction between possibilism and environmental determinism is not clear-cut, it is quite intimate and intertwined especially in empirical research and operational level. Despite the accusation of determinists, Possibilists have never been able to give themselves away from nature. As Harden’s diagram shows very clearly (Figure 2), the direction of causality in geographic research at the framework of human–environment interactions have always been toward the environment. This situation has not changed at all in neither environmental determinism nor possibilism in essence. Humans and its culture and activities have always remained on the back, passive and weak. Overall result of this situation has led to distort the reality in the favor of the nature and to fall into a ridiculous/anachronistic position in the face of other disciplines when they analyze the social, political and economic issues as geographers due to their inability to save themselves from the domination of nature and physical factors.

Figure 2: Basic Approach and Explanation in Geographic Research under the Framework of Environmental Determinism and Possibilism



Note: the arrows represent the direction(s) of causation
Source: Harden, 2012:739



4. The Development of Environmental Determinist Approach in Turkish Geography

The development of geography in the modern period (1874-1949) in any countries cannot be adequately understood without some reference to its German and French roots. Developments in geographical approach in the West especially in German geography during this period have greatly affected the discipline of geography in all over the World. French geographer Berdoulay (2011:73) describes the intellectual impact of German and French geography on modern geography as follows:

"German and French geographic thought and achievements played a foundational role in the development of geography as a discipline in European and American academic institutions during the late nineteenth century and the first decades of the twentieth. Although the German contribution was quite early, creative and important, a full-fledged French school emerged slightly later, taking inspiration from it while challenging it significantly. Together, they formed the standard against which scholars in other countries came to compare themselves".

This is why geography in Turkey cannot be adequately understood without some reference to its German and French roots. Obviously, many factors played a role in the development of geography in Turkey such as cultural, political, economic etc. Nevertheless, as Berdoulay (2011:73) put it very clearly, *"the circulation of ideas has always had an international dimension"* and thus Turkish geography is no exception. Indeed, the process of change in geographical approach in the West, that took place in second half of the 19th century and at the beginning of 20th century, greatly affected the conception of geography in Turkey. At the beginning of the 20th century geograph in Turkey was insufficient in itself and was in need of Western models, conceptions, techniques and systems of thought. Therefore, western developments in geography shaped the discipline of geography in Turkey. In the following section, we figure out what extent human geography in Turkey owed to German and French geography in terms of the transfer of ideas of environmental determinism into Turkish geography. In order to do that we first need to look at the early academic history of geography in Turkey during the period and then to assess their contributions.

Modern geography education in Turkish universities started at Geography Department of Istanbul University in 1915 (Akyol, 1943c; Darkot, 1951; Tümertekin, 1971; Erinc, 1973a). The second turning point in terms of history of geography in Turkey was foundation of Geography Department within the body of Ankara University Faculty of Languages, History, and Geography in 1935. The above-mentioned two departments laid institutional and academic foundations of geography in Turkey, which would maintain their effectiveness until the mid-1970s. In the modern sense, the first systematic and regional geography studies were carried out in Turkey during this period in which both domestic and foreign geographers, German and French geographers being in the first place, gave lectures and conducted research at this two department. Within this period, the first academic journals and association emerged, many general and regional academic geography books about Turkey were published, and various maps and atlas were produced (Yavan, 2012:118-119). Erinc (1973a) names the period from 1915 to 1940 as "pioneers of modern geography, foundation and organization period" in terms of the history of geography and describes the period between 1942 and 1973 as "Rising period of the Turkish geography". Before 1970, there were just two geography departments at Turkish universities and geography was one of the relatively smaller discipline.

The discipline of geography in Turkey was greatly influenced by the developments of western (German and French) geography during the early 20th century at least in two ways. The first instance of Western influence on Turkish geographical discipline was translation of published works and applying their techniques to materials at hand. Geography in Ottoman period had concerns on the defense of the country. İbrahim Hakkı Akyol's (1943a:13) statements reflect the conception of the period: *"Geography, for us, as in any other state, started with defensive and military concerns and thus, initially dealt with the regional geography and topographical descriptions. Our guide was the French."* The conception of geography in France at that time (around the 1870s) depended on classical description and statistical numbers. The translations of French publications caused the same view to prevail in Turkey. The condition of French geography was far from being a science. But with Vidal de la Blache it began to become an explanatory science. Vidal de la Blache "[...] stated that



geography is not a bookish science and tried to show the effect of environment on man by exhibiting the connection between nature and history and persisted that only in this way geographical thought make an impression in our minds” (Akyol, 1943b:131). French geography began to move away from Humbolt and Ritter, who defended the descriptive geography tradition. In this period the conception of geography in France slowly started to change and Turkish scholar or graduate students studying abroad came across a wholly different conception.

Table 1: Foreign Scholars Who Worked in Turkish Universities During 1915-1950

Country	Name	University	Field	Working period
Germany	Erich Obst	İstanbul	Human Geography	1915-1918
France	Theodore Lefebvre	İstanbul	Human Geography	1925-28
France	Ernest Chaput	İstanbul	Physical Geography	1928-39
Germany	Herbert Louis	Ankara	Physical Geography	1936-43
England	W. J. Mc Callien	Ankara	Physical Geography	1944-50

Source: Authors’s own elaboration based on Tümertekin, 1971; Erinç, 1973a

German and French geographers who came to work in Turkey during the period 1915-1950 (see Table 1), were the second source of influence in environmental determinism’s introduction to Turkey. The establishment of the first modern Turkish university Darülfünun (today’s Istanbul University) and department of geography in 1915 was the most significant development of the period. The department of geography of this new university (Darülfünun) was supplied with teaching staff and for this purpose E. Obst from Germany was invited to lecture (Erinç, 1973a:10). The teaching staff studied in different countries and foreign scholars who came to Turkey worked as under foreign scholar status brought different approaches and conceptions to the department of geography. The education of the department reflected both the German school Obst belonged to, and the French school Lefebvre and Chaput belonged to. Erinç (1973a:11) describes the educative formation of the department of geography as follows:

“Faik Sabri and Ali Macit who studied in France gave weight to human and regional geography. They were under the influence of Ritter school, as developed by V. De la Blache under the influence of Reclus and Ratzel, in France. Hamit Sadi, on the other hand, was under the influence of Ritter-Ratzel school as developed in Germany and Austria.”

The influences of T. Lefebvre and E. Chaput, who came to lecture in Turkey, are also noteworthy. Lefebvre, who was a defender of Ritter school, gave lectures on human geography, economic geography and cartography. Chaput, on the other, gave lectures on geology and ignored geomorphology. The influence of W.M. Davis’ approach in physical geography is deeply felt in this period. The dominant view is that physical environment is the primary force governing human actions. Under the influence of Chaput, geology based geographical studies became the norm of the period (Erinç, 1973a). The dominant view of physical environment can easily be seen in the article “What is Geography?”, written in 1964, by Ali Tanoğlu. Tanoğlu (1964:4), in his article, emphasizes the importance of physical environment as follows: “among the facts of the earth, natural facts should be given priority. Especially the German Geographical School maintains this.”

Most of the first and second generation of Turkish geographers studied abroad (in Germany and in France) and brought with them the ideas and practices they adopted. Two main ideas of this period was environmental determinism and possibilism. Hence the first and second generation of Turkish geographers was influenced both by their own domestic and visiting foreign professors and by the countries they studied in (See Table 2). Before World War I, four Turkish students who became founder generation of the geograph department of Istanbul University (Darülfünun) were sent abroad by the Ottoman government for training and among them F. S. Duran, A. M. Arda and S. Mansur studied in France, S. Selen in Austria and İ. H. Akyol in Switzerland. After the Republican period during the 1927-1934 the new (first) generation of professional geographers from İstanbul and Ankara University who took education either in Germany (D. Bediz, N. Çitakoğlu and later R. İzbrak)



or in France (Darkot B., A. Ardel, A. Tanoğlu and C. A. Alagöz) on behalf of the Turkish state returned to Turkey and began for teaching and doing research. Table 2 shows the individuals and schools where the first generation geographers were affected. According to this table, while the geographers studying in France became a student of famous geographers Demangean, De Martonne and Baulig who were students of famous geographer of the period Vidal de la Blache (Dickinson, 1969; Martin, 2005), those studying in Germany followed the Humbolt-Richtofen school and became the students of Norbert Krebs, Erich von Drygalski and Johann Sölch who were students of famous geographer of the period Albrecht Penck and Siegfried Passarge (Dickinson, 1969; Martin, 2005).

Table 2: Founders, First ve Second Generation Turkish Geographers (1915-1941)

Name	University	Education Country	School	Working Period	Field
The FOUNDERS (1915-1933)					
Faik Sabri Duran	İstanbul	Paris, France	Vidal de la Blache	1913-1920	Human Geography
Ali Macit Arda	İstanbul	Paris, France	Vidal de la Blache	1915-1933	Human Geography
Selim Mansur	İstanbul	Paris, France	Vidal de la Blache	-	-
Hamit Sadi Selen	İstanbul	Vienna, Austria	Ritter-Ratzel	1915-1933	Human Geography
The FIRST GENERATIONS (1933-1939)					
İbrahim Hakkı Akyol	İstanbul	Lozan, Switzerland	Humbolt-Richtofen	1923-1950	Physical Geography
Besim Darkot	İstanbul	Strasbourg, France	Vidal de la Blache	1932-1973	Human Geograhly
Ahmet Ardel	İstanbul	Strasburg, France	Vidal de la Blache	1933-1973	Physical Geography
Ali Tanoğlu	İstanbul	Sorbonne, France	Vidal de la Blache	1934-1974	Human Geography
Cemal Arif Alagöz	Ankara	Sorbonne, France	Vidal de la Blache	1935-1972	Human Geography
Danyal Bediz	Ankara	Munich, Germany	Ritter-Ratzel	1935-1978	Human Geography
Niyazi Çitakoğlu	Ankara	Germany	Humbolt-Richtofen	1936-1946	Physical Geography
Reşat İzbirak	Ankara	Berlin, Germany	Humbolt-Richtofen	1936-1998	Physical Geography
The SECOND GENERATIONS (1940-1959)					
Sırrı Erinç	İstanbul	USA	Humbolt-Richtofen	1940-1985	Physical Geography
İsmail Yalçınlar	İstanbul	France	French school	1941-1984	Physical Geography
Cevat Rüştü Gürsoy	Ankara	Germany	German school	1940-1985	Human Geography
Talip Yücel	Ankara	France	French and German	1945-1986	Human Geography
Erol Tümertekin	İstanbul	USA	Ritter-Ratzel	1950-1993	Human Geography
Necdet Tunçdilek	İstanbul	England	Ritter-Ratzel	1948-1988	Human Geography
Hamit İnanlık	İstanbul	France	French school	1949-1969	Physical Geography
Oğuz Erol	Ankara	Germany-England	German school	1952-1993	Physical Geography
Turgut Bilgin	İstanbul	England	German school	1955-1996	Physical Geography
Ajun Kurter	İstanbul	France	French school	1956-1997	Physical Geography

Source: Authors's own elaboration based on Tümertekin, 1971; Erinç, 1973a; Yiğit and Tunçel, 2017

During 1940s-1950s, the second generations of geographers went abroad (mostly in France, then in Germany and few in the US and Britain) and studied there for a while (generally short period of time like 1 year) and came back to Turkey with new ideas and approaches based on location. Among these geographers, Erinç was influenced by Humbolt-Richtofen school; Yalçınlar by French school; Tümertekin, by Ritter-Ratzel school and by branches of Humbolt-Richtofen school as developed in the United States;) and Tunçdilek by American representatives of Ritter-Ratzel school, namely, E.C. Semple and Huntington (Erinç, 1973a:30).

As a result, for a long time German and French influences have been very important in the development of geography in Turkey (Tümertekin, 1971). In general, it is clear that the geography department of Istanbul was influenced by the French tradition both in the physical and human geography, while the geography department of Ankara was almost entirely remained under the influence of the German tradition (Erinç, 1973a). More recent empirical study conducted by Bekaroğlu and Yavan (2013) using citation analysis confirmed this argument by suggesting that Turkish geographers were mostly using the sources of French and German and thus developed under the strong influences of German and especially French school of geography for the period of 1943 to 1980. They also pointed out that influences of Anglo-American geography tradition on the discipline have begun to be dominant only since early 2000s.



Looking on Turkish geographical discipline, we can detect two strains of Western thought. One of them is the descriptive regional geography conception and the other is the environmental determinism. Through the translated works and the students who trained abroad, the dominant understanding of geography in the West at that time has been adopted and tried to be applied. But this both approaches was not wholly successful and was insufficient. Darkot (1951:62), asserts that published works were inadequate and lacked detail. He gives the following account: "*The information on the cities; the geographical conditions of their founding were never considered. Information of them only included, by which river's side they were on and records on their number of inhabitants.*" Darkot gives many examples on this subject in his article. As seen in this example, Turkish geographical discipline relied on descriptive method and reflected a conception of physical environment during the early period

The dominance of environmental determinism in Turkish Geography can be seen in the works written by the first and second generation geographers. The founder of the geography department at Ankara, German geographer Herbert Louis (1941:174) uses the term living space (Lebensraum) which was coined by Ratzel and commonly used by Nazis in his article. Louis expresses his thoughts on Turkey as follows: "*The geometric depiction of Turkey's location in the world does not mean much. What is important is the nature of neighboring regions and relations with these regions. (...) at least the layout of the great division of the old world according to living spaces (Lebensraum) should be known*" (Louis, 1941:174). More interestingly human geographer Ali Tanoğlu (1964) advises on how the human geography in Turkey should be done. He states that environment affects and governs man in following words:

"Humans, just like plants and animals, depend on the natural environment and need to adapt to this environment in order to live and prosper. According to human geography, human groups and their lives and activities cannot be isolated from the climate they live in, their countries and the lands they cultivate; they are effected by these. If these conditions are isolated the subject cannot be studied and understood in a scientific manner." (Tanoğlu,1964:5).

Similarly, Alagöz (1972:11-12) argued that a good geology was necessary and very important for making human geography. He claimed that:

"Geology is the cousin of geography! Because geography and geology are close relatives. Just as history is necessary and useful in explaining facts of human geography, geology is important and useful in explaining geological formations as regards physical conditions and in explaining social and economic facts of regional geography".

The dominance of the environmental determinist thought can also be seen from the widespread use of its main argument that the physical geography explains human geography. The content analyses of the period proves this point. The content analysis of articles published between 1941 and 1980 in four Turkish geographical journals yields significant results regarding their subjects. Although the number of human geography publications are statistically not small (%45), this is misleading (Table 3). The content analyses of these articles show that they were based on the physical geography approach and natural condition were given priority while human aspect was neglected.

Table 3: Number and Percentage of Articles Published in the Geographical Journals in Turkey

Journals	Years	Physical	%	Human	%	Total	%
Journal of Turkish Geography	1943-74	88	59	62	41	150	100
Journal of İstanbul University of Institute of Geography	1951-80	103	54	88	46	191	100
Ankara University Journal of Geographical Research	1966-81	24	47	27	53	51	100
Journal of the Faculty of Languages, History and Geography	1943-78	24	60	16	40	40	100
Total	-	239	100	193	100	432	100

Source: Authors's own elaboration based on those journals.



Turkish geographical discipline, taken as a whole, reflects the character of physical geography. A comparison to Western application of geographical discipline shows that the same tendency was also preeminent in the West. In other words, although geographical discipline in Turkey can be seen as human geography based on physical geography, we see that in the studies of the period Western approaches were taken as a model; preeminent points of view and scientific procedures were applied. This approach was considered as the valid and progressive way of scientific inquiry at that time. However, after 1970, geographical discipline in Turkey could not follow western developments. Existing practices in use were internalized and environmental determinist approach, taken almost as a dogma, became an unalterable character of Turkish geographical discipline.

5. Making Human Geography in Today's Turkey under the Environmental Determinism Approach

The main reason of the underdevelopment of human geography in Turkey is that it was based on physical geography, or to put it more precisely, it was based on natural factors and physical environment as its basic explanation. Human geography was taught and applied under the heading of physical geography for long years and became almost a sub-branch of physical geography. Both Tümertekin (1971) and Erinç (1973a) expressed their astonishment that even human geographers did physical geography and emulated them. Approaches that emerged after the 1970s, in reactions to environmental determinist conception (Marxist geography, feminist geography, postmodernism, post-structuralism) emphasized the importance of the human aspect and transformative effect of human actions. But these approaches never had a place in Turkish geographical discipline and, moreover, they were discarded. The argument for this attitude was the idea that geography is the description and knowledge of space and space indicating physical environment in geography. Space could not indicate a person, a chair or a restaurant. Space indicated rocks, soil, plants; the accepted field of study of geographers. Without these (rocks, land, plants, climate etc.) human geography could not be explained. Because man was the product of environment. If we understood the physical environment we would have understood man.

The condition of Turkish geographical discipline today shows that the environmental determinist thought is still prevalent. Ph.D. theses written in the field of human geography are an important proof of this. We have analyzed these in two aspects. Firstly, the number of theses in the field of human geography, which take physical geography as basis are supplied (Table 4-5). Secondly, the main structures of thought in Ph.D. theses are tried to be shown through content analysis.

Table 4: PhD Dissertation Submitted Between the Years 2005-2013 in the Field of Geography in Turkey

Years	Human Geography (PhD Thesis)	Physical Geography (PhD Thesis)	Geography Education (PhD Thesis)	Total	Human Geography Rate of PhD Thesis (%)	Physical Geography Rate of PhD Thesis (%)	Geography Education Rate of PhD Thesis (%)	Total (%)
2005	8	1	0	9	89	11	0	100
2006	8	1	5	14	57	7	36	100
2007	4	2	8	14	29	14	57	100
2008	6	1	11	18	33	6	61	100
2009	3	3	12	18	17	17	66	100
2010	7	5	8	20	35	25	40	100
2011	9	8	5	22	41	36	23	100
2012	6	5	6	17	35	29	36	100
2013	12	8	3	23	52	35	13	100
Total	63	34	58	155	41	22	37	100

Source: Authors's own elaboration based on PhD dissertations.

**Table 5:** The Human Geography Phd Dissertations That Based on Physical Environment

Years	Total number of PhD in human geography	Number of PhD based on Physical Environment	Rate (%)
2005	8	7	87,5
2006	8	6	75
2007	4	4	100
2008	6	6	100
2009	3	3	100
2010	7	5	71
2011	9	4	44
2012	6	2	33
2013	12	10	83

Source: Authors's own elaboration based on PhD dissertations.

Considering the number of theses, written in the years between 2005 and 2013, in the fields of human geography, physical geography and geographical education; we see that theses on human geography are greater in number (Table 4). This can be considered as positive since it shows that in geographical studies there is a growing awareness of the human aspect. But the analysis of theses shows that the idea of the preeminence of physical environment is still prevalent. In the contents section of PhD dissertations we see sections on geographical features of the studied regions (climate, flora, water supplies, geology, geomorphology etc.) instead of theoretical framework. In a world that changed drastically through globalization, explaining human facts (immigration, culture etc.) by physical environment and processes brings with it an important issue. When we analyze the content of PhD dissertations in human geography (Table 5), most of PhD dissertations commonly explain their purposes as such: "*Apprehending the social and economic potentials of a region through analyzing and synthesizing social and economic characteristics according to physical geography*". The essential feature of a geographical study is expressed as such: "*to exhibit the environmental features of a region, as best as could be done, and thus differences or similarities of socio-cultural behaviors of different groups of people will be evident.*" Taking the argument further, it is claimed that social facts such as culture can be explained by physical environment. The following quote is an example of this view: "*Examining the geological and geomorphological features that shape the cultural characteristics is essential towards reaching an understanding on how cultural values were developed in a geographical region.*" Indeed, a large number of similar examples could be provided like this in the context of the PhD dissertations.

A comparison of the PhD dissertations written in 2000s (i.e. 2005-2013) and 1940s-1950s shows that facts of human life are still explained by physical environment. This fact reveals that human geographical discipline in Turkey is out of date. Human life is not considered as a social fact but as a product of physical environment. The idea that geography should be based on physical features is still prevalent. This point of view is repeated in most theses on human geography. Geographical studies are superficial, devoid of theory and are ignorant of contemporary conditions. These are signs of a crisis.

6. Conclusion

In 1973, the most famous and distinguished Turkish geographer Erinc (1973a:27) described the situation of the Turkish Geography as following:

"Covering nearly 30 years this period [1943-1973], the main features of the Turkish geography on all aspects manifested progress, development, and increase. (...) [During this period] Turkish Geography reached international level, in some ways even exceeded at this level. Indeed, in 1960 one comparative study conducted by Council of Europe dealing with geography teaching and research system in European universities clearly expressed that Geographical teaching and research in Turkey is very successful, constitutes an ideal example for all European universities".



However, this situation has been changed dramatically in last 40 years, this time by a French geographer Pérouse, who is a professor teaching at Galatasaray and Mimar Sinan University and also director at the French Institute of Anatolian Studies (IFEA) in Istanbul and editor-in-chief of the European Journal of Turkish Studies since 2003 as well as done many geographical research on Turkey, evaluated the situation of the Turkish geography in his article as follows (Pérouse, 2012):

"A discipline that continues to shrink", "Low participation in international research", "The dominance of Physical Geography", "A discipline that not even a member of family of social sciences", and "A discipline which is still mostly done by others".

The discipline of geography has experienced a considerable growth, change and discussion in Turkey over the past decade. In this decades, number of study published on the Turkish geography from critical point of view (e.g. Arı, 2005; Arı and Köse, 2005; Kaya, 2005, 2010; Yavan, 2005a, 2005b, 2007, 2012; Tuysuz and Yavan, 2012; Bekaroğlu and Yavan, 2013, 2018; Özgür and Yavan, 2013; Bekaroğlu, 2016; Bekaroğlu and Sarı, 2017). These publications indicated that compared to other disciplines, academic geography in Turkey rather weak and there is strong need to modernize the departments and the discipline. It is also emphasized that geographers in Turkey lack necessary skills in conducting quantitative and qualitative research methods and producing high quality publications. However, one of the most important results of these studies was that the Turkish geography had a deep structural problem, especially epistemological and methodological, and the theoretical foundations of Turkish geography were based on old-fashion paradigms. Environmental determinism continue to dominate the writings of the Turkish geographers and regional geography is still the main methods in Turkish geography and thus regional geography (Länderkunde) go hand in hand with environmental determinism. This clearly indicates that the current geography in Turkey especially human geography are experiencing the situation, which is similar in the United States in 1950s and in Germany and France at the beginning of the 1970s.

The process of change in geographical approach in the West, that took place in second half of the 19th century, greatly changed the world. Turkish geographical discipline was greatly influenced by this process and scientific inquiries continued in accordance with the West. Most of the first and second generation of Turkish geographers studied abroad (in Germany and France) and brought with them the ideas and practices they adopted. Two main ideas of this period was environmental determinism together with possibilism and regionalism. These ideas became the norm of scientific inquiry both in the West and in Turkey. The scientific attitude that was in accordance with Western developments was interrupted in 1970. Since then these two ideas are heavily criticized and left out of practices of science in the West. Despite criticism of environmental determinism, Turkish geographers defended and maintained this approach all the stronger and turned it into a kind of dogma.

Turning back to our day this dogmatic structure, though somewhat shaken, is still preeminent in Turkey. Because PhD dissertations are products that reflect the prevalent academic structure of thought of their period, this can easily be seen in PhD dissertations. Analyzing PhD dissertations in human geography written between the years of 2005 and 2013 on this account, we see that even monographs and cultural studies are based on the idea of physical environment. Even though the subject-matter of human geography is human, the question of how geography that is found on "human" should be done is still unanswered on Turkish geographers' part. No approach that leads to thinking space in human terms or that leads to a way of thinking that distinguishes geography from other sciences has been sought out. The reason of this is that Turkish geographers are still trying to account for the scientific value of geography just as Western geographers did in the 1920s, 1930s and 1950s. It was relatively easy for the West to turn towards a way thought that is based on the human aspect but Turkish human geographers, isolating themselves from social sciences and the theory of knowledge, alienated even to their own discipline. The crisis of Turkish geographical discipline is evident and unless this crisis is overcome, it will not be possible to speak of human geography as a discipline.



Although almost 100 years have passed, it is still considered "normal" to make publications that accept the power of the physical environment on humans in the Turkish geography literature. According to the recent study, Arı (2017:20-22) argued that the critics and warnings against the environmental determinist thought in the Turkish geography literature begun about 50 years ago and these criticisms were voiced by different geographers at different times. However, despite all these critics and warnings, he maintained that the Turkish geography continues its development as an environmental determinist character. Although we agree with the views of Arı to a large extent, we suspect and think differently on some respects. Therefore, in our opinion, some comments of Arı (2017) is inaccurate and need to be corrected in two ways: The first of all, those scholars who oppose environmental determinism (mentioned by Arı in his paper) continued their own work with deterministic explanations and thus their objections only remained apparently and in no way committed to the content of their works. In fact, when looking at the other works of these authors cited by Arı, it is immediately noticed that environmental determinism is the dominant paradigm. Indeed, Tanoğlu (1964), who criticized environmental determinism and found the possibilist approach correct way of thinking in his work, also stated many environmental determinist arguments in the following pages of his paper in question and in this context, Erinç (1973a:30) mentioned that he is thinking exactly in the same manner as the determinists. Similarly, Erinç in his study (1973b) argued that he is against environmental determinism (p. 2, 4, 23-24), but in the same study (especially on page 2 and also throughout the entire paper) he provided deep traces of environmental determinism in his work as also noted by the Somuncu (2014:295). Perhaps the most typical representative of environmental determinism in Turkey was Tunçdilek who undoubtedly inspired and influenced by Semple, Huntington and Taylor as Erinç (1973:30) noted. In many of his works (see e.g. Tunçdilek, 1960:36; 1967 among others) Tunçdilek used environmental determinist arguments to explain the dwellings, rural life and agricultural activities in Turkey particularly around the middle and upper regions of the Sakarya Valley around Eskisehir. In contrast to the arguments set forth by Arı (2017), similar arguments can be demonstrated for Tümertekin (1990) and Yücel's (1987) studies as well. Although both geographers argued they were opposed to environmental determinism, essentially they were adhered strictly to Vidalien holistic regional which is essentially a semi-determinist possibilist approach that put the physical environment implicitly at the center of geographic research. Finally, Arı (2017:37-38) stated that Doğanay (2011) also made a sharp warning against environmental determinism and opposed it. However, this is not exactly true because Doğanay (2011:15), just like in the case of Tanoğlu, first mentioning that environmental determinism is unacceptable in this age and then in the same study, he listed the effects of nature on human beings sequentially (p. 15 and 16). His views on the effects of nature on human beings in this study strongly advocate environmental determinist thinking and thus Doğanay (2011:16) suggests the following arguments:

"The obvious point here is that the societies that live in mountainous and highland regions and cold or very hot areas do not accept the contemporary laws; back in civilization; their idea of law are weak and the tribal conception is dominant and therefore living standards are low societies. We can say that the main role in the lagging of these societies are based on the compelling natural environmental factors and also being away from the urban culture...The states established in the regions rich with natural resources become stronger and longer lasting; societies living in areas with limited natural resources establish a state under more difficult conditions and the sovereignty period of these states will be short. I think this opinion is basically true"

These views of Doğanay are indeed as strong as the extremist environmental determinist ideas of Ratzel, Semple, Huntington and Taylor.

The second point on the view of Arı's comments is that, the existence of a French version regional geography method and its shielding provided the most appropriate milieu for the environmental determinism (and/or possibilism) to survive. In other words, regional geography go hand in hand with environmental determinism and possibilism. Taking a step back from the regional approach and its emphasis on the environment was regarded as equivalent to damaging the geography or betraying it or unmaking geography. Therefore, the regional geography and its armor in one way or another prepared a very suitable conditions for environmental determinist ideas in the Turkish context. Indeed, regional geography is based on the idea of holism, and this holistic structure, that is, the



region is composed of nature and human factors, which came from the famous -region scheme- put forwarded in the early 20th century by Hettner (Wardenga, 2006) and called Hettner's "*Länderkundliche Schema*" or "Layer Concept", which was methodological concept widely used in regional geography and these concept incorporates 11 different layer or pre-determined factors, such as (1) location, (2) geology, topography and geomorphology,(3) climate, (4) hydroglogy (5) vegetation/flora, (6) fauna and soil as well as (7) population, (8) settlements, (9) economy (10) transportation and (11) Linguistic, Religious and Politics.

On the other hand, Arı (2017) also proposed a possibilism approach and argued that if the Turkish geography was really possibilist it would not be an environmental determinist. However, although possibilism opposes to environmental determinism, from the very beginning all possibilists in geography - from Vidal to Brunhes, from Barrows to Sauer - have put nature or the environment at the center of the discipline of geography and hence there has never been a strict border between possibilism and environmental determinism as noted before in the theory section. According to many geographers, who wrote on the history and philosophy of geography, possibilism is basically the implicit or the softened version of environmental determinism. Therefore, avoiding environmental determinism should not be in the form of possibilism. In fact, Arı (2007) indicate that the modern human-environment approach is not possibilism, it is political ecology and thus the recipe for the environmental determinism and possibilism trap should be obviously political ecology.

As can be seen from these explanations, it is never enough to criticize and dismiss environmental determinism, instead, it is necessary to discard it from the geographical thinking and practice. Our observations from this study is that geographical studies in Turkey is not the extreme environmental determinism, they are very rarely the extremist version but often in the form of the mild environmental determinists, even most often could be classified the possibilist as well. These results are quite consistent with the finding of Arı (2017:24) who argued that "a large part of the human-environment studies in Turkish geography literature are moving or swing between the environmental determinism and the Possibilism" but our study revealed that the majority of works in Turkey is much closer to the possibilist approach, rather than crude environmental determinism. However, being possibilist did not prevent the discipline from becoming environmental or nature-centered because the possibilism itself, as noted previously, is a kind of semi-determinist approach with nature-oriented background. In this respect our interpretation of the situation is different and also in some sense contrary to the arguments of Arı, who promote the possibilist notion. Because possibilism is definitely not an approach to be praised, and although the Turkish geography is mostly possibilist, it has continued to attribute superiority to nature or the environment and put it at the center of discipline.

As Harden's diagram shows very clearly (see Figure 2), it is assumed that the direction of causality in geographic research at the framework of human–environment interactions in Turkey have always been from the environment to humans. Humans and its culture and activities have always remained on the back, passive and weak. Overall result of this situation has led to distort the reality in the favor of the nature and to fall into a ridiculous/anachronic position in the face of other disciplines when they analyze the social, political and economic issues as geographers due to their inability to save themselves from the domination of nature and physical factors.

Despite the neo-environmentalist ideas from outside of geography, there are no environmental determinist studies in the discipline where contemporary academic geography is practiced. As emphasized long time ago by American geographer Platt (1948a:126) "environmentalism has been banished from the field". But some countries such as Turkey, where both the discipline of geography and the level of development of the country has not developed well, even nowadays environmental deterministic studies are available. We would like to close the article with the following remarkable words and suggestions by Platt (1948b), which he wrote 60 years ago for American geographers, as a valuable proposal for the Turkish human geographer:

*Natural environment is important, though not in the simple way that environmentalism seems to indicate.
The study of geography implies no prejudice in favor of natural environment as a causative factor.*



Geographers can no more afford to be chronically biased in favor of this set of features than other social scientists can afford to be biased in favor of a contrary set. Scholars all look at the same world, and their views should ultimately fit together (Platt, 1948b:351).

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