

THE CONCEPT OF PARADIGM IN THE SOCIAL SCIENCES: COUNTERPOINT TO THOMAS KUHN

DAS CIÊNCIAS SOCIAIS E O CONCEITO DE PARADIGMA SEGUNDO THOMAS KUHN

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Abstract: Thomas Kuhn, in his book *The Structure of Scientific Revolutions*, made a thorough study of the idea of paradigms, and how they serve as theoretical references for the construction of knowledge, presenting answers to inquiries often posed by the science. Such paradigms, according to the author, would be subjected to changes at certain moments, as new questions would arise with the development of science itself; such “breaks” are what Kuhn calls scientific revolution. In his work, however, the author fundamentally relies on the natural and exact sciences, rarely addressing the social and human sciences, since, according to Thomas Kuhn, these, for its unstable nature, would not be able to develop arrays of knowledge through paradigms capable of answering all questions. It draws to attention, however, that, with due caution, it is indeed possible to establish the existence of social paradigms, being necessary to observe them from a broader, multidisciplinary approach in order that the answers provided by them can meet the needs of scientists and researchers.

Keywords: Paradigm according to Thomas Kuhn. Of the humanities and social sciences. Social Paradigms.

Resumo: *Thomas Kuhn, em sua obra A Estrutura das Revoluções Científicas, fez um aprofundado estudo acerca da ideia de paradigmas e como estes servem como referências teóricas para a construção do conhecimento, apresentando respostas para questionamentos muitas vezes postos pela ciência. Tais paradigmas, segundo o autor, estariam sujeitos a mudanças em determinados momentos, vez que novas questões seriam postas com a evolução da própria ciência, sendo tal “quebra” o que Kuhn chama de revolução científica. Em sua obra, porém, o autor apoia-se fundamentalmente nas ciências naturais e exatas, pouco abordando as ciências sociais e humanas, vez que, segundo Thomas Kuhn, estas, por sua natureza instável, não seriam aptas a desenvolverem matrizes de conhecimento por meio de paradigmas que fossem capazes de responder a todas as perguntas. Nota-se, porém, que, ressalvadas as devidas proporções, é possível sim estabelecer a existência de paradigmas sociais, apenas sendo necessário observá-los de uma forma mais ampla, multidisciplinar, para que as respostas por eles fornecidas possam atender aos anseios dos cientistas e pesquisadores.*

Palavras-chave: *Paradigma segundo Thomas Kuhn. Das ciências sociais e humanas. Paradigmas sociais.*

SUMMARY: 1. Introduction. 2. The idea of paradigm according to Thomas Kuhn. 3. The social sciences and humanities. 4. Social paradigm and the counterpoint to Thomas Kuhn. Conclusion. References.

1 INTRODUCTION

To understand the sciences fundamentally reflects the ability to meet its practice, its mechanisms, and its full operation. It is the gateway to understanding the researcher's behavior, their attitudes and their decisions. From the analysis of these ideas and the effective understanding of them, Thomas Kuhn outlined in his work the functioning of the elements of the various scientific studies. For the author, the sciences evolve through the so-called paradigms that, simply put, can be conceptualized as “universally recognized scientific achievements that for a time provide model problems and solutions to a community of practitioners” (KUHN, 2011).

These paradigms are the ones that will provide to scientists the answers they seek to the problems posed by scientific research, and by science itself; it is possible to relate its own concept to the very idea that they play the role of requirements of science. The quest for answers through science, which enables the creation of standards, the development of studies, theories, explanations and applications, creates models that foment the scientific tradition. According to Kuhn, “universally recognized scientific achievements that for a time provide model problems and solutions for a community of practitioners” (KUHN, 2011). By way of explanation, the author employs several examples, such as the Aristotelian physics, as such theory was accepted for over a thousand years. For Kuhn, other theories connected with the exact sciences also fulfill the role of paradigms. What it is possible to observe, nonetheless, is that the author distance

himself from the concepts of social paradigms as these, in their complexity, are unable to provide the answers that scientific paradigms must produce. This is the point of divergence between Thomas Kuhn theory and the approach of the present study, which endeavors to discuss the idea of paradigm within the field of the social sciences.

2 THE IDEA OF PARADIGM ACCORDING TO THOMAS KUHN

In his work "The Structure of Scientific Revolutions," 1962, Thomas Kuhn defines, as already seen, the concept of "paradigm" in the science field. The author defines a paradigm as an "entire constellation of beliefs, values, techniques, and so on shared by the members of a given community" (KUHN, 2011). Kuhn, in his analysis, put in the foreground for the construction of this concept the exact and natural sciences, referring to, at other times, the idea that the paradigm would also represent a theoretical framework that is generally accepted by the scientific community, being this framework related to an area of knowledge.

The paradigm, as defined by Thomas Kuhn, represents the clear interest in establishing answers to inquiries posed by science, enabling the promotion of knowledge and settling any doubts that may arise in a research, in a period of time, as well as the doubts and questions that should be made by the researcher in his quest for knowledge. Once laid, the paradigm that prevails at a given time can answer all queries that surfaces and that are relevant towards the scientific research.

The obstacle, howbeit, is that even the paradigm will face limits within its own concept, which as a result, makes it unsuitable for the construction of the sought solutions; by proving itself as ineffective, such paradigm starts to being questioned as a referential of knowledge, if it still could be considered as a model to be pursued, or if it should be replaced by a new paradigm. Notwithstanding the resistance that such ideas - and the very scientific community that relies on such marks - can offer, eventually the scientific production and the pursuit for answers will demand a new paradigm in order to continue to foster the production of knowledge, which will provoke the gradual abandonment of the referential by the scientific community.

According to Kuhn, "the early developmental stages of most sciences have been characterized by continual competition between a number of distinct views of nature" (KUHN, 2011), i.e., it is from this concept that the author defines in brief lines the concept of "normal science". Within the idea of Thomas Kuhn, it is possible to affirm that it is precisely the revolutions of the paradigms that promote the development of normal science, and not the accumulation of knowledge on years of research, neither the creations brought by man. By

scientific revolution the comprehension is of the transformation of paradigms, from its deconstruction and reorganization, representing, according to Kuhn himself, “the usual developmental pattern of mature science” (KUHN, 2011).

Traditional science has, as a trait, the knowledge built on the success of researches that have its basis on old paradigms, being such researches recognized as paradigms by the scientific community (BOURDÉ/MARTIN, 2000). Kuhn, in his work, highlights two features of such feats: the fact that they are open for any scientists and researchers to use them to solve several problems, and its ability to aggregate multiple researchers and scientists around a given theory, this is because all those who share the same paradigm, the same vision, are committed to the same set of rules that will fall on the scientific practice. It is the paradigm that determines if a scientist is inserted in a scientific community or not, being its formation responsible for the acquirement of the conceptual maps inherent to their activity, learning and internalizing these assumptions.

The paradigm is not linked to external rules of any form. According to Kuhn (2011), when there is the revolution of a paradigm and the tradition of the referential knowledge of science, all the elements that arise, such as techniques and eventual responses will not be subjected to a set of standards. This is the moment in which the author conceptualizes the birth of what he calls a “paradigm crisis”, i.e. the verification that new paradigms emerge in the face of the old ones, conflicting with each other, until only one is identified as the most suitable to provide the answers that the scientific community hopes to obtain. This process, explained by Kuhn, is called scientific revolution.

Important to note that, the possible absence of a standard response or a normative model does not preclude the fact that the paradigm still remains as a referential within the research proposal, on the contrary, the mere existence of the paradigm completely removes the idea of the existence of a normative model. This happens because that the various fields of science are in conflict within their fields of knowledge. It is in this sense that more remarkable revolutions or less remarkable ones are possible to be observed, affecting small or large groups of scientists and researchers. It is the multifaceted nature of science and its multidisciplinary nature which, in accordance to Kuhn, prevents the paradigms to be completely standardized, a problem that, explained by the author, is aggravated when it comes to the question of the social sciences.

3 THE SOCIAL SCIENCES AND HUMANITIES

Thomas Kuhn, writing about paradigms, always based his ideas on the exact or natural sciences, relying on Newtonian or Aristotelian examples. For

the author, as said before, the idea of a social paradigm would be indeed too complex, due to the instability of this field. The revolutions that built the notion of paradigm in the social sciences were born, not by the construction of knowledge, but by human conflicts recorded over the course of decades, which affected the way society is organized and its values: events such as world wars, the building of economic blocks, the Cold War, the space race, all this directly affected the geopolitical vision that we had of the world. The paradigm of “liberty, equality and fraternity”, for example, succumbed to the record of spy games between countries, the making of nuclear arsenals, records of human rights violations, and the arms race taking over the role of international relations (BARROS, 2010).

Other examples can be easily checked through discussions of great relevance for the social construction of knowledge: in the early twentieth century, the evolutionism – a field where several racist thesis were developed at the time - was harshly criticized by anthropologists such as Arthur Ramos and Franz Boas (BARROS, 2010), among many others, all around the world, given the fact that such paradigm would work as a ratifying element of crimes against the humanity and a negative action in detriment of a nation, victim of human trafficking perpetrated by slavery. The concept of ethnocentrism already existed since the nineteenth century in order to criticize the European expansionism and the overlapping of such expansion on different cultures, aggravated by the extermination of social and ethnic groups (BOURDÉ/MARTIN, 2000). This cultural imposition negatively represented a shift of a social paradigm, once it departed from the innate value of the people, replacing it with a culturalist model that promoted social and scientific revolutions, as well as changes in the behavior of the people directly affected.

Emile Durkheim in his work “The Elementary Forms of Religious Life”, stated that the formation of citizens was created by an education separated from the religion, and that showed to the students basic rules of integrative socialization, based on rights and duties of the State and its citizens. As for Elliot, democratization jeopardized the quality of education; for him, culture represents a lifestyle, and not just a mere sum of several elements. As an example, the author deconstructs the concept of the European civilizing process, demonstrating that the break of the paradigm of the nations that lived in a state of servitude led to the creation of free labor conditions in that region, through the enslavement of African peoples and extermination of indigenous communities. What history has always placed as a step in the process of “civilization”, the author sought to deconstruct, forming a new paradigm that denounced as a crime against humanity, setting a milestone in the humanist cultural movement of the time.

Other authors, such as Jean Paul Sartre and Edgar Morin, also questioned scientific paradigms from a *sui generis* point of view. Sartre, famous for his construction of existentialism from a humanist outlook, conducted studies of the society from a Marxist existentialism perspective, considering social, spiritual and material aspects of the society of which he was part. It was from this vision, that embraced concepts ranging from the Christian existentialism to psychoanalysis, that the author was able to overcome one of the most criticized points of Marx's paradigm, which deals with the place of a man in the society in which he is inserted, having as a starting point the idea of the human action on historically established conditions (LÖVY, 2000). It was from these ideas that Sartre was able to construct the point of existence of the individuals and their place in the world, as well as the condition of their existence from their individual values. In his work "Existentialism is a Humanism," Sartre (1999) states that every human being is unique and has a place in the world, considering their values, dreams, longings and innermost desires. This, however, puts us as people who will be born, live, and die alone, because even though we are living in society, only you are the master of your feelings, fears and achievements. It was from the existentialism traced by Sartre in his work that it was possible to conclude: "the important thing is not what life did of you, but what you allowed life do to you" (SARTRE, 1999)

As for the Edgar Morin (2006), an active researcher of the early twentieth century, it fell to him the systematization of the idea of complex thinking in the form of a social scientific paradigm. In addition to his theories of mass culture, it was Morin the one responsible for expanding the scientific concept of human kind, translating it into the existence of the "homo sapiens sapiens", a real paradigm shift, since this assertion nullified the idea of superiority and the detachment of science and research of the very process of knowledge.

It is from such assertions that Morin draws a harsh criticism to the self-evaluation process, which aims to clarify the questions of the collective. Questions, such as inquiries of the purpose of science, to whom it is a benefit, etc., were favorable to a paradigmatic revolution that questioned the values of research in the face of the arms race and the development of technologies more and more focused on fields of less interest of the population as a whole, all of it in the name of a supposed national security policy, as example of the movement of Law and Order in the US of the 1980s, or all investments in warfare in the last two decades in the US war against Iraq (BARROS, 2010). This culture of war fosters a culture of fear, paranoia, at the same time that large sums of money are directed to the military development, to the detriment of social areas such as health, education, welfare, housing, etc., i.e. policies that genuinely reflects the aspirations of the

community, as they represent direct elements that make up the social welfare of the population as a whole. The paradigm established here - that a strong country is a country with armies and armed - totally subverts the population values, causing a scientific revolution averse to the collective yearnings. Hence, such relevant questions in this case, and at the same time, so much more complex that those noticed in the observation of scientific breakthroughs in the exact and natural sciences.

4 SOCIAL PARADIGM AND COUNTERPOINT TO THOMAS KUHN

The role that Thomas Kuhn played in regards of the discussions concerning the building and conflict of paradigms through the revolutions of knowledge was essential, since his studies have become a reference for the study of science as a knowledge tool. Nonetheless, as it can be observed, in the social and humanities sciences, a pressing need exists for a more rigorous set of such concepts, given the simple fact that, in this field of knowledge, the various theories recorded directly conflict with each other, strongly and constantly, without existing a prevalence of a particular thesis above the other - which, fundamentally, characterizes the basic concept of a paradigm. For all that it is difficult to establish, within the field of social sciences, a scientific revolution, since by the concept of Kuhn (2011), this occurs when a milestone of knowledge loses its effectiveness in answering all the questions put it, and it wears down until a new framework of knowledge replaces it. In the social sciences, the situation changes, since the ideas definitely not break with its predecessors, there is a definite break with the values of the past, however, they began to include progressively the different paradigm

Using as an example a natural science, such as Physics, it is possible to note that, at several moments, a theory (more complete) fully encompasses the other one, from the moment that it exceeds the previous one in providing the elucidation of which the researcher seeks to find; therefore, in such occurrences, if there is a break of the previous paradigm, the new one will absorb the previous feats, with its due dimensions, and in accordance with its own inclinations. Be that as it may, even Physics brought numerous cases in which new theories were born of the complete break with what was deemed as, up to a certain point, as correct paradigm, a presupposition antecedently discussed in this article pointed out by Thomas Kuhn as the so called "scientific revolutions", i.e., the complete replacement of a scientific milestone by another. The very own history of natural sciences was constructed from the aggregation and refinement of established paradigms, which, for Kuhn, was a mere development of what he called "normal science", conjointly with the breaks, that fomented the revolutionary character of

science. There was, for the author, a glaring difference between the assimilation of knowledge and the break with the previously established knowledge. For Kuhn, taking note of the different fields of knowledge and their respective areas of study related to the exact and natural sciences, they tend to mature gradually until they reach a stage marked by the predominance of a single paradigm. According to the author, "it remains an open question what parts of social science have yet acquired such paradigms at all. History suggests that the road to a firm research consensus is extraordinarily arduous" (KUHN, 2011).

With the social and humanities sciences, it is not necessary to insist on the fact that it is much more common to identify, throughout its history, the eternal standard of competing paradigms that occur at the same time, in a state of reciprocal discontinuity. Here, if each theory allows the possibility of posing and solving new problems, one cannot say that a paradigm surpasses the other at all. Reason why, since long before, historians and sociologists have become accustomed to living with a significant diversity of paradigms related to their fields of knowledge, as well as competing theories concerning their various objects of study. Important to notice, also, that the very issues raised by a particular paradigm in a human science (as well as in the natural sciences), will not be the same to draw the attention of historians and social scientists linked to another theoretical framework. Diametrically different questions emerged by the various forms of historiographical paradigms since the moment that history became scientific, such as the Positivism, which are, basically, different problems from those that were evoked by theoretical developments offered by independent thinkers such as Max Weber and Michel Foucault.

It is possible to go further and embrace an image used by Kuhn himself, regarding his analysis of the relevant paradigms of social and human sciences: the grouping of scientists and social and human researchers, linked to different paradigms from various fields, such as anthropology, sociology, psychology, for example, would exist in a "different world", since each would have a different view of the same question. While a social scientist would see the issue from the spectrum of social relations, an anthropologist would see the roots of the issues relevant to the origin of the people as a determining factor for understanding the problem, and a psychologist would have on the behavioral base, analyzed in the light of psychoanalysis, the answer to the issue, e.g..

The important aspect of the question, however, lies in the way each of them perceives the same situation. Not only this coexistence and heavy traffic between diverse theories is more pronounced in the humanities and social sciences, the fact is that, social scientists have come to expect that much to this experience

give that that they are used to this experience under different optics and scopes. Social scientists, each in their area of operation, remain with each other a direct relationship of exchange of knowledge, translating their thoughts with one another in order to build values, which will be used as a basis for the formation of new milestones of theoretical knowledge.

The field of social sciences and humanities offers for its enthusiasts a complex network of paradigms and theoretical positions that should be chosen, case by case, for the practice of knowledge production in each of the fields of knowledge. It is not with the succession of paradigms that supersede each other, thus making the science advance from irreversible ruptures that the social and human scientists deal with, but with the possibility of establishing a communication between different worlds (BARROS, 2008). It is possible to perceive, more markedly, a process of “translation” of knowledge than the mere “conversion” of the same between scientists and social researchers. The conversions of researchers who have decided to migrate to a new paradigm, despite that fact that it happens, are always an individual decision, and not the needs of the scientific community. It is impossible to expect that a mass adoption of a particular group of researchers to a new paradigm occurs, especially considering the nature of break with the past of such work, which directly promotes, at first, the division of the scientific community to those who adopt the new theoretical framework, and those who fiercely defend the point that was overcome (KUHN, 2006). The transition process is long and can often take decades until the new paradigm is definitively established or even generations, as with most of the community of physicists who joined the Newtonian paradigm, and then considered it surpassed by the “Theory of Relativity”, of Albert Einstein. Even if a historical materialist could persuade a positivist to leave his theoretical field, he perfectly understands that he is unable to convert in a massively way all the positivists who are dedicated to that area. Likewise, although it is possible to convince a social scientist to adopt a new paradigm in his studies, this conversion process would be a long and tortuous one, marked by debates and discussions by both sides. It is vital to understand that you it is not possible to impose to the whole scientific field a single theoretical current within the paradigm, since it would represent a single solution for all the theoretical and empirical issues set out in years and years of research. The concept proposed by Thomas Kuhn for the understanding of science and research came to occupy a prominent place in the context of studies on the history of the various disciplines. The concept of paradigm, however, as explained by the author, needs adaptations, according to its application into one or other field of knowledge, especially when we have in mind the social and human sciences. Advisable to remember that at another time of his reflections, when cutting edges of his conceptual framework,

Kuhn came to speak of a “disciplinary matrix” - a notion that could be proved as being more effective in relation to a broader universe of values that affect every scientific community in question.

With due reverence, we disagree with the author. Despite the need to adapt the concept of paradigm for the social sciences, such adjustments do not invalidate its concept. Designed in a framework of historicity and adaptation to the human sciences, the notions of “disciplinary matrix” and “paradigm” can be adapted particularly well to the study of the History Theory, for example. In this conceptual framework, the “disciplinary matrix” would correspond, first, to a broader universe of values that would hardly be put into question by most practitioners from the field. Although they do not provide the final answers to all empirical questions raised in the social and human field, the social paradigm gives us the basis for the starting point of a research, which is established by the multidisciplinary nature of the various actors involved in the issue now debated, from the most diverse fields (WALLERSTEIN, 1991).

Thomas Kuhn also suggests that the above examples are also part of a disciplinary matrix. Appropriate to point that such examples are not part of the disciplinary core of the matter to be discussed, but in any case, it is inserted as a complete set of models available to all researchers and scientists, be they beginners or not. For the author, the examples are, first, several real solutions to issues that researchers and students since the beginning of their scientific, academic, laboratorial education, or even reading chapters of scientific books (KUHN, 2006).

For the author, such responses indicate, through examples, how the fieldworkers should carry out their work. In history, it is possible to encounter several examples through the repertoire of methods and techniques made available to historians for the systematic analysis of the different available sources. It will be through such archetype, that an applicable methodological operation can be used to an analogous situation, being of no matter which current of thought or paradigm the historian takes as a reference. For historians, it is in the methodological framework, primarily, that the archetypes are at his disposal in larger quantities, given the fact that theoretical and conceptual choices, in the majorly of cases, already begin to be a part of a more specific scientific field, in line with theoretical perspectives and historiographical paradigms, understood as subsets that fit within the disciplinary matrix but form specific territories, sometimes competing, within this matrix. This brings us, by the way, to the next aspect to be discussed. Once the paradigms are overcome, it is possible to observe the existence of numerous theoretical perspectives; it would be the case, for example, to think of the numerous theoretical perspectives that populate the paradigm of historical materialism or the historicist paradigm. It is possible that, at certain times, one of these currents come into conflict with the other regarding

the use of certain concepts, approaches, or even the interpretation and possibilities of application of certain principles that compose the paradigm. Historians are accustomed to pervade languages and expressive elements, belonging to different fields of knowledge. Such as other human scientists, the historians very commonly deal with words and phrases in common use, so their language is generally easily communicable to the public. It's easier to a non-specialist public to understand a historian, than to understand an economist or a professional attached to the study of the law, for example, even more difficult will be to easily comprehend the language of theoretical physicists and economists when they are using mathematical formulas and a conceptual system based on which, for a full understanding of it, a technical knowledge is needed on the subject. Yet, even historians have their own language, transversal to the different levels that are established from a more comprehensive framework, which is the disciplinary matrix.

CONCLUSION

The classic paradigm of the social sciences emerged and developed up unto the present day, based on the consideration about the aspects and movements of society. However, the local social groups (of a country) are being gradually assimilated or subsumed by global society, a reality that, still, it is not acknowledged. This global society presents empirical and methodological challenges that require new concepts, categories and interpretations. It's possible to observe and debate about how society and the state should relate to each other, which one should be subordinated to the other and which one have the duty to take the highest moral values. Thus, was born the paradigm of thinking that the borders of society and the state are the same or, if not, could (and should) be.

The global society as a disciplinary matrix of a global knowledge, and maker of new social paradigms, has been the subject of studies and interpretations in its geopolitical, cultural, historical, economic, political, and linguistic, among others, aspects (WALLERSTEIN, 1991). Apart from the information and insights that arise in our times at researches relative to the national society, and at the same time there is the proliferation of theories about the settings and movements of global society.

Thus, the epistemological key moment of the debate arises, in which it is possible to identify the existence of the classical paradigm, grounded on the consideration of the local society (national), being surrounded by something larger, formal and really, by the new paradigm, constructed on the reflection on the subject of the global society. The idea of a paradigm that relates to the social sciences has deep roots in the idea of the site, the identity of a people, and the globalization movements all of which replaces such paradigms, antagonistic point

in regards of the ideas of Thomas Kuhn, who explores the concept that such fields, due to their complexity cannot create matrices of knowledge. The national society continues to have validity, with its territory, population, and all sorts of values that represent their existence in the world, a parallel to the thought of Sartre (1999), that defines human existence by their values. It is the space in which its members develop their activities from the beginning to end of their lives. What often the researcher does not realize, not in an empirical, historical, theoretical or methodological view is that, of all reality in which individuals and classes, nations and nationalities, cultures and civilizations are inserted as the focal points of the local paradigm, a globalized one replaces it. Acknowledge the existence of a social paradigm, with local or global facets, shows that there is an empirical basis in the social sciences and humanities, which contradicts the thought of Thomas Kuhn about the difficulty of recognizing such existence. There are indeed problems in the definition of such paradigms because of the existence of the multiple disciplines in the face of various social sciences, however as previously seen, social scientists can engage in their respective fields, and thus exchange knowledge to build a value. The process of globalization accentuates this standardization, since the exchange of ideas becomes even more flagrant, allowing techniques, easily shared, and increasingly found responses. A complete exhaustion of the discussions is not possible; nonetheless, the existence of social paradigms in constant evolution allows that answers can be obtained in a determinate period by the satisfaction of those who embark in the world of research.

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