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Philosophical Characteristics of Mainstream Accounting Science and Its Limitations

Características Filosóficas da Ciência Contábil Mainstream e Suas Limitações

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Abstract
The conception of what reality is and how the truth must be obtained is a central element in the scientific debate. Accounting approaches to these issues are rare, but not non-existent, the emergence of a critical approach to accounting reflects the emergence of an open and plural scientific accounting debate. This opens space for in-depth reflections on ontological and epistemological aspects, pointing out limitations under traditional perspectives that until then were understood as the ideal for the field. This article reinforces the ongoing process of demystifying the accounting mainstream, addressing some essential conceptions of the philosophy of science and elements inherent to the conduct of the scientific process. It is an invitation to reflect on which assumptions of philosophy assumed, or neglected, by the mainstream scientific accounting. Finally, the study revisits the development of the scientific accounting debate, demonstrating epistemological elements that point to science as a multiple social process, which, although taking into account rational perspectives, also considers subjective, political, cultural and emotional aspects. As a result of the study, there is both an exposure of the philosophical characteristics that are assumed and replicated by the accounting mainstream and those that, although scientific, are simply disregarded.
Keywords: Philosophy of Science. Epistemology. Ontology. Accounting Science.

Resumo
A concepção do que é realidade e como a verdade deve ser obtida é um elemento central no debate científico. Abordagens contábeis sobre essas questões são raras, mas não inexistentes, a emergência da abordagem crítica da contabilidade reflete a emergência de um debate científico contábil aberto e plural. Assim abre-se espaço para reflexões em profundidade sobre aspectos ontológicos e epistemológicos, apontando limitações sob perspectivas tradicionais que até então eram entendidas como o ideal ao campo. Este artigo é um reforço ao processo já em andamento de desmistificação do mainstream contábil, abordando algumas concepções essenciais da filosofia de ciência e elementos inerentes a condução do processo científico. Trata- se de um convite a reflexão sobre quais pressupostos da filosofia assumidos, ou negligenciados, pelo mainstream científico contábil. Por fim, o estudo revisita o desenvolvimento do debate cientifico contábil, demonstrando elementos epistemológicos que apontam par a ciência como um processo social múltiplo, o qual ainda que leve em conta perspectivas racionais, considere também aspectos subjetivos, políticos, culturais e emocionais. Como resultado do estudo tem-se tanto a exposição das características filosóficas que são assumidas e replicadas pelo mainstream contábil quanto as que, ainda que científicas, são simplesmente desconsideradas.
Palavras-chave: Filosofia da ciência. Epistemologia. Ontologia. Ciência Contábil.

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1 Introdução

Since the beginning of the 16th century, humanity has reflected on what it understands as reality and truth, as well as what would be the best way to obtain the truth about a given reality. A few years later, in the 18th century, the Enlightenment, also as a process of revolution through scientific thought, led to new reflections on the way to obtain the truth and consequently new reflections on the way people understood life in society.

Debates about the role of the State, the economy, freedom and society began to be incorporated into scientific approaches, even though many of their objective elements could only be analyzed through abstraction in relation to the rules inherent to society. The 19th century became a relevant period for reflections on reality, especially due to the emergence of positivism, science received the status of the only vector of true knowledge about the reality that was experienced, moving away from understandings about reality that could not be proven scientifically.

But it was at the beginning of the 20th century that logic and mathematical processes promoted reforms in positivist thinking, reorganizing it, thus redeeming empiricism and rationality as a way of approaching reality, but conditioned to statistical validation, including as a replication criterion and knowledge construction. At the end of the 20th century a new way of thinking about reality was established, science stopped being a space for judgments about the truth and became a process of testing and observing conjectures, which became true as they remained intact over time amidst scientific rebuttal tests.

At the beginning of the 21st century, scientists established even broader concepts about reality, incorporating cultural, social and political issues into the scientific process of recognition of the truth, establishing that scientific progress, despite leading to understandings about reality, is also a social process.

At the end of the 20th century, noting the emergence of scientific considerations that challenged the premises of traditional ways of approaching reality, accounting scientists such as Chua (1986), Cooper and Hopper (1987) and Morgan (1988) began to formulate relevant reflections on the epistemology of accounting (i.e., in-depth debates about the way scientific accounting knowledge is constructed), even so, after more than thirty years, studies of this nature are still emerging in the area (Chua, 2019; Martinez & Cooper, 2020, Duarte et al., 2021).

This curious situation of the eternal emergence of critical thinking in the accounting area seems to find some answer in the researchers' deep attachment to premises inherent to empiricism, positivism and scientific rationalism. Baker and Bettner (1997) report that in the accounting area there is a strong characterization of research along instrumentalist and positivist lines with the use of quantitative methods that accept different views from those that encompass the same characteristics.

The impact of the positivist proposal on the accounting sciences was such that Martins (2005) and Martins (2012) highlighted the existence of some accommodation by researchers in the area, to the point of becoming perceptible the existence of a restricted set of theoretical sources, which is repeatedly used, also verifying the prominence of bibliometric studies and the little concern with empirical-exploratory studies, a position supported by Theóphilo & Iudícibus (2009).

As described by Martins (2012), there is a philosophical context that has been accepted, without reflection or debate, by most accounting academics (Mainstream). This context assumes certain presuppositions about how science should be conducted, or practiced, such presuppositions, when simply assumed, promote a context of replication and maintain the scientific debate in the superficial area, naturalizing patterns and legitimizing discourses inherent to a single scientific strand, perspective assumed by Chua (2019), Homero Junior, (2017) and Lukka (2010).

Thus, considering the vast, and still expanding, debate in the philosophy of science about what science considers as reality and how it understands what is the true, it becomes vigorous that more than debating

peculiarities of positivism, it is necessary to consider the assumptions ontological and epistemological aspects that the different scientific aspects carry, clarifying doubts about what the accounting mainstream is in fact and why critical reflections find so much difficulty in the face of the dominant context in the area.

With that, starting from the reflections on the scientific development inherent to the philosophy of science, the present study seeks to elucidate the question: which assumptions of the philosophy of science are assumed by the accounting scientific mainstream? Thus, the objective of this study is to analyze which assumptions of the fundamental currents of the philosophy of science are assumed by mainstream accounting scientists.

As a way of answering the proposed research question and meeting the emanated objective, this study is developed as a theoretical article, it is a structured, discursive, argumentative and reflective work, which seeks to address an issue using theoretical and empirical studies.

In addition to this introduction, this research has three other items, the first of which debates in depth the main currents of thought in the philosophy of science, focusing on the fundamental characteristics of each current. The next item is about some reflections on the relation between the mainstream accounting thinking and the scientific philosophic currents of thought, this approach is taken in order to clarify aspects that can describe the long debates lines on science that accounting mainstream is not considering. Finally, the fourth topic of this study is about final considerations. In this topic we analyze the relationships between aspects of the philosophy of science, mainstream accounting and current developments in accounting science.

2. Reflections On Science

In this item, fundamental aspects of the philosophy of science are considered. These approaches are analyzed as a way to obtain a set of characteristics on the main epistemological and ontological aspects. These aspects reflect presuppositions assumed by scientists that align their thought to one of these currents. The interest in approaching the subject stems from the need to dissociate currents of scientific thought that emerged, consolidated, modified and in some cases declined over the modern and contemporary age. This movement offers insights that can be used to understand and describe the development of accounting science.

2.1 The end of dogmatism

Driven by changes in the modern world (1453 – 1789) such as the beginning of the rural exodus, the emergence of the bourgeoisie, the transition from feudalism to capitalism and the emerging humanist thought of the 16th century, which the English philosopher Francis Bacon (1561-1626) became to be considered the founder of a new era of reflection, the scientific ones (Bataille, 1975). The philosopher imbued with the denial of metaphysics, common at the time, understood that knowledge could only be achieved through experience. His essential propositions founded a scientific understanding that was labeled by traditional empiricism (Russell, 2015). In this conception, taken as the foundation of the scientific method as described by Savater (2015), it was understood that the researchers should get rid of deceptions which implied the establishment of false notions about reality.

The researcher should divest themselves of common sense, their worldviews, linguistic elements and the idolatry of famous thinkers as a way of becoming capable of producing knowledge (Martin, 2020; Neiman, 2003). In this way, considering the reality as a lived experience, Bacon developed the empirical-inductive method, directing the construction of knowledge through the use of a specific method.

Objectivity gained ground as a way of understanding reality. This empiricist logic (traditional empiricism) was ingrained in the scientific thought of the 16th century, constituting the basis for scientific developments noted in the current century, including accounting science.

Deepening the empiricist thought, in the 17th century John Locke (1632-1704) considered that man would be born without any knowledge, which ends up being created as his experiences occur, through a systematic trial and error (Bennett, 1999). Locke established that this is the fundamental reason for obtaining the truth by a methodological and systematic way (Bennett, 1999).

Locke's understanding, which follows Bacon's line (Neiman, 2003), offers insights into the human mind that reinforce the need to obtain scientific truth through empiricism. In this intellectual movement there is a reinforcement of the verification of reality taken as an objective aspect, regardless of any subjectivity.

In another strand of empiricism, seeking even greater pragmatism in relation to the construction of knowledge, David Hume (1713-1766) started from the notion that people are endowed with beliefs and not knowledge (Salatiel, 2011). For Hume, until a fact was empirically demonstrated, the possible results of a given interaction are just beliefs, after the empirical demonstration, real knowledge about something is formed (Salatiel, 2011).

The basis of Hume's considerations is linked to a version of the empirical perspective taken as empiricism based on causality, for him it is necessary to separate the notion of cause and effect based exclusively on what can be observed by humans. The author approaches the notions of empiricism in a radical way. So, the reality for the author can only be reached in a rational way. For Hume, scientific truth is that which is restricted to what can be verified.

Francis Bacon, John Locke and David Hume are thinkers that represent a time of changes in the way of understanding reality. This period of more than three hundred years between the 16th and 18th centuries that run through authors' contributions, demarcates a transition between forms of obtaining the truth that leave aside an ecclesiastical, dogmatic, static and metaphysical point of view, previously accepted without any contestation, and move it towards, for a set of understandings of truth from a pragmatic point of view, by experimentation and attainable to human reason.

2.2 The emergence of reason

Contemporary to Bacon (16th century), René Descartes (1596-1650) was convinced that reason would be the only method to obtain the reality of facts (Battisti, 2010). This approach later is recognized as Cartesian rationalism. Reality for him is deterministic, that is, the facts occur regardless of people's judgment of them (Battisti, 2010). As described by Russell (2015), Descartes' considerations propose a new philosophical understanding about the construction of knowledge. That demarcates modern scientific thought (Rationalism). The author understood that human beings are impregnated with innate ideas, that is, they have built-in knowledge that over the years is awakened (Battisti, 2010).

The Descartes scientific method is based on a mathematical truth, which, for him, is the foundation for the comprehension of particular understandings, in profound contrast to the method perspective constructed by empiricists, which was based on direct experimentation (Chibeni, 1993).

The essence of the thought about reality proposed by Descartes is in the constitution of methodical doubt. For the author it is the doubt that induces the construction of knowledge. Descartes and his successors abandoned the empirical-inductive reasoning that prevailed as a way of approaching reality, founding Cartesian deductive thinking (Chibeni, 1993).

Despite the divergences between empiricism and rationalism, it is necessary to emphasize that in both cases the application of a method (even if basic by contemporary standards) becomes a fundamental

requirement for understanding of the reality and for the construction of knowledge, in contrast to pre-enlightenment, orthodox and religious conceptions (Neiman, 2003; Russell, 2015; Salatiel, 2011; Savater, 2015).

As exposed by Hobsbawm (2015), this was the period in which scientific thinking has emancipated, the scientists starting to receive greater relevance in the social sphere. In this period scientists keep their focus on understanding the human as another component of the experienced reality. This choice opens space for questions about the human being as a subject, who is searching for one description of reality while being part of that reality.

In this way, recognizing the inductive conception of empiricism and the deductive conception of rationalism, Immanuel Kant (1724-1804) proposed a meeting between the two ways of understanding reality (Bresolin, 2016). That is, the author understood that there was no way to understand the object by itself (objective reality), disregarding the nature of reason, or costumes (the way people think) (Bresolin, 2016; Savater, 2015).

Kant stated that it is necessary to take into account the understandings and judgments to be able to understand the reality. For him, the pure reason is not the way to obtain knowledge like empiricists and rationalists were advocating. Kant understands that anything that we want to experience, is necessary to employ previous considerations about it (Deleuze, 1974; Neiman, 2003).

It is considered that in the period of the Enlightenment, conjectural the ideas of empiricists, rationalists and Kant's criticism, concerns of philosophers and scientists be unified. In this period emerges the search to put all conceptions that arise from one point of view that does not remain to science into a scientific proof, and if it does not receive this scientific approval, it would not be considered the truth.

This movement growled by the social intention to denounce what was considered as injustice arising from a religious domination of thought (Adorno & Horkheimer, 2014; M. A. de M. Silva, 2005; Ungureanu, 2018). This confrontation of religious truths embarked on the rational essence of Enlightenment thought, which understood that reality considered essentially by religious precepts, did not have a rational foundation that can justify its existence (Hobsbawm, 2015; Ungureanu, 2018).

The advances of the Enlightenment period form the basis for the emergence of the thought of Auguste Comte (1798-1857) in the 19th century. Focusing on developments about these new understandings of the functioning of society, the author addressed the confrontation between subjectivity and objectivity as a way to understand the reality (Guillin, 2016; Neiman, 2003).

Comte establishes in his reflections that the only way to obtain true knowledge is through scientific knowledge, however, everything that is part of reality but cannot be scientifically proven is in the theological or metaphysical domain, being subordinate to beliefs and superstitions, staying out of the interest of science (Bacha, 2014; Lacerda, 2009).

The author discusses that scientific knowledge is cumulative and is associated with the application of the scientific method. For the author, the access to reality occurs through the application of methodological precepts inherent to the natural sciences, which is a fundamental element for the demarcation of what is science and what is not. The set of this logic of thoughts was called by Comte as positivism (Bacha, 2014; Savater, 2015).

A relevant aspect of the positivist way of understanding the reality is the scientific demarcation. This concept stipulates that Mathematics, Astronomy, Physics, Chemistry, Morals, Biology and Sociology are in fact science or pure science (Lacerda, 2009). Therefore, they reflect the path to the formulation of neutral, exact and cumulative understandings about any reality, allowing through the laws and postulates of each one of them to obtain the truth about what happened under reality, in this way contributing to the progress of society (Savater, 2015).

2.3 The role of logic in science

In the late 19th and early 20th centuries, imbued with Comte's positivist thinking, but reflecting on the discoveries of the time regarding logic, several scientists came together to form the Vienna Cycle. This group of scientists initialized a line of scientific thought that was deeply diffused in the 20th century under the label of logical empiricism (Adorno & Horkheimer, 2014; Lacerda, 2009; Savater, 2015).

One huge influencer of this new empiricist/positivist perspective, Ernst Mach (1838-1896) understood that any proposition, even from the natural sciences, could not be admissible if it were not possible to verify it empirically (Lacerda, 2009; Mills, 2015). The importance of Mach's thought to these concepts is linked to the notions deriving from Hume's thought (empiricism) about objectivity of reality. In the Mach case the scientific verification criteria receives even more rigidity, it is assumed that all reality can be scientifically proven thus logical positivism approaches. In this point of view the reality is either: analytic or logical in itself; as synthetic or empirically verifiable (Bacha, 2014; Ungureanu, 2018).

Mach's seminal ideas are common with the first phase of Ludwig Wittgenstein (1889 – 1951) conceptions. Although posthumous publications demonstrate one second phase with radical denials in the way they deal with the same themes before (Lacerda, 2009; Savater, 2015). For Wittgenstein (1999) science works like a language, each one has its own essence, but they all share a common point, the logic. For this relevant author, it is through logic that scientific conceptions gain meaning and then promote human development.

Logical empiricists turned to the search for a universal and timeless conformation of science. They established a particular scientific vision, including on methodological aspects. They change basic definitions in relation to construction and scientific evaluation; labeling everything that does not conform to this view as a pseudoscience (Savater, 2015).

In support of the logic empiricist point of view about science, the foundation of universal theories, later described by (Lyotard, 2009) as metanarratives, became relevant for the major scientists in the world. These universal theories should permeate the different sciences, leading to considerations that offer explanations for past, present and future facts, that is, (convened) theories capable of explaining reality with the maximum possible scope, building “theoretical” bridges on science and society.

In this aspect, it is understood that the main focus of positivist thought is not exclusively related to the way that reality is approached, nor in its causes; but it is focuses on understandings about the dynamics of the laws of nature, that is, on the exact relationships of observable phenomena (Bacha, 2014).

So, by the premises of the logic empiricist/positivist line the principle of verification was scientifically established and socially accepted. That is, the idea that propositions only have a scientific sense when they are: subjected to factual or empirical verifications with mathematics, and especially logic, as a path to promote the necessary validations (Lacerda, 2009; Savater, 2015). The purpose of logical empiricism/positivism is to understand one reality in order to predict what will happen in equal contexts.

They understand that assuming this premise is possible to apply improvements to promote changes in the experienced reality, in this way, for these scientists, the major purpose in science is to accumulate knowledge in order to promote human development (Valentim, 2010). In the late 19th century, a period in which logical empiricism/positivism was constituted and proliferated among different branches of science, the society experienced a period of cultural, political and social changes, conceiving a social truth based on the traditional positivist precepts. Perspective socially perceived by the impact on elements such as jobs, products, professions and markets (Bauman, 2001; Thompson, 2012).

Under the historical context of the late 19th and mid-twentieth century, Popper (2017) breaking with the long tradition to demarcate the limits of science, established one new way to approach the problems that science can solve. For him, the greatest difficulty in relation to scientific demarcation is linked to the criterion used

for this reason. The author inverts the logic established stating that science is one way to construct the truth through a defined method that can be falsified and, therefore, refuted.

At this point Popper (2017) distances himself from logical empiricism/positivism, and establishes his critique of the inherent verifiability as a way of demarcating what science is. For him, verificationism cannot be accepted as a way of separating science from metaphysics as the positivists accept.

Popper (2017) understands that there are many things that could not be considered science using the traditional scientific demarcation but is very relevant to humanity. By establishing falsification as an alternative path to scientific demarcation, Popper (2017) makes room for objective constructions about reality that accept, and go beyond, the presumptions of positivism.

It is the difference between verifiability and falsifiability that distinguishes positivist thinking from "Popperian" critical rationalist thinking. For the critical rationalist, even if reality is taken objectively, like the positivists, the use of absolute rationality to obtain the truth is fallible. That is, even if the search for truth is a constant in the process of overcoming between scientific theories, it will never be known, through pure rationality, when an absolute truth has been reached (Popper, 2017).

The author establishes that every scientific appraisal of a subject must contain at its core an analysis hypothesis, which can be refuted through other equally refutable analyses, opposing inductive reasoning as a scientific conception. For him even with a vast number of singular results on a given subject it is not possible to infer universal results, because there is no way to determine how many results are needed to point out a plausible limit for the universalization of theories. In this way, it is through the application of hypothetical-deductive reasoning that it becomes possible to falsify the results, thus establishing scientific truths plausible of "verifications" on its validity (Popper, 2017).

Based on this mechanism of falsification of scientifically constituted truths, Popper (2017) points out that a theory is proven whenever it resists the tests launched on its contributions. But even resisting such tests, a scientific theory cannot be taken as one universal truth, since it cannot be proved that it actually represents a truth. However, as long as it is not refuted, disproved or another theory emerges that explains "better" that subject, scientists will be allowed to work with it to explain a particular object of study.

The logic of scientific research, according to Popper (2017) is established by the capacity of science to progress through conjectures and rebuttals. Scientific hypotheses are constantly subjected to tests that result in the survival or not of all that body of knowledge, those that survive are taken as the more capable of representing reality, but never as the absolute truth.

Thus, in this way of thinking the scientific research results from the rational search to the constant elimination of errors, in the sense of approaching the truth, assuming that the truth about a given reality, despite an essential goal, is an unattainable objective. For Popper (2017), scientific evolution takes place through the incessant search for solving problems that emerge whenever a theory is falsified, not through the simple replacement of the theory itself.

2.4 A historical approach to science

Kuhn (2017), critical of Popper (2017), points out the existence of a certain subjectivity in the notion of falsifiability inherent to critical rationalism, that is, it is not even possible to falsify the idea of falsifiability, one contradiction that testify against the Popperian logic to approach the reality and transform it into new modern dogma, remounting the medieval ages but transferring the ecclesiastical role of truth to science.

Kuhn (2017) presents his critique of both critical rationalism and positivism stating that science is, at same time, a rationally controlled activity and an historical and social process. It is noteworthy that Kuhn

(2017) understands as a paradigm any result recognized by any scientific community, inherent to scientific practices accepted by them in a given period of time.

The paradigm comprises the problems addressed by science, scientists' beliefs, social values and legitimately shared methods in a specific field of research. Thus Kuhn (2017) points to the process, which he labels as scientific revolution, as the way in which scientific progress takes place.

Paradigms, for the author, are matrix theories or general landmarks accepted by scientific communities. All paradigms, over the time (i) are established, (ii) put in doubt, (iii) new considerations about that subject are established, (iv) one new paradigm is formed and be accepted by that scientific community.

This cycle continues unstoppable throughout the historical continuum. This historical process, the scientific revolutions, described by the author introduces aspects that until then were disregarded in the scientific process. In this view, science is seen as a social activity and scientists as beings that are not just rational, since they are immersed in paradigmatic attributes and start to use these attributes to interpret reality.

The scientific paradigm is therefore a fundamental element for scientific conceptions about the realities to be proposed (Kuhn, 2017). At this point, the author inserts the notion of incommensurability, that is, a new and an old paradigm are fundamentally divergent, therefore they do not coexist. Scientists, when migrating to a new paradigm, abandon previous ideas to the detriment of new ones.

The author reinforces Popper's criticism of pure inductivism and deductivism, going against the idea that scientists are neutral and free from assumptions. On the other hand, Kuhn (2017) differs from Popper (2017) in informing that new theories do not always replace the previous ones only because they are the most explanatory, but he assumes there are subjective criteria, assumed by the communities of scientists, taking important function on the establishment of these new theories (Rufatto & Carneiro, 2009). There is not only objectivity in substituting one theory for another, but there is also subjectivity like social, political, cultural and other issues.

For Kuhn (2017), what happens in the establishment of new theories over others is the interaction of a set of values such as research funding, scientific and technological groups and structures, the intellectual trajectory of the researcher or even obtaining socially relevant positions. Therefore, when researchers are faced with an experiment potentially refuting their ideas, they use a series of other alternatives in order to promote some ideological self-preservation, which can occur consciously or not (Rufatto & Carneiro, 2009).

Kuhn's (2017) considerations about the historicity involved in science demarcate a considerable change in the way that scientists understand the reality. This author's considerations on paradigms demarcate one perspective on philosophy of science recognized by Historical Approach.

Kuhn's (2017) posits that scientific advancement does not merely progress via a steady accumulation of discoveries; rather, it undergoes paradigmatic shifts where dominant paradigms are challenged and replaced by new ones. This revolutionary perspective highlights the non-linear nature of scientific progress and emphasizes the role of crises in prompting paradigmatic changes.

Conversely, Habermas's (1982) introduces a tripartite division of human interest: technical, practical, and emancipatory, guiding knowledge production. While the technical interest focuses on controlling nature, associated with empirical sciences, the practical interest delves into human action coordination, aligning with hermeneutics. Significantly, the emancipatory interest, aligned with critical theory, seeks liberation from societal constraints. Both scholars underscore the profound influence of the social context on knowledge, yet Habermas further accentuates the indispensability of mutual understanding and communication in engendering legitimate knowledge.

Kuhn (2017) and Habermas (1982) present epistemological perspectives that diverge significantly from Popper's philosophy of science. While Popper (2017) championed the idea of falsifiability as the demarcation criterion for scientific theories, arguing that true scientific propositions must be testable and potentially falsifiable, Kuhn posited that science progresses through paradigm shifts rather than a continuous sequence of

falsifications. Habermas, on the other hand, approached knowledge from a sociological perspective, emphasizing human interests and communication as foundational for understanding scientific rationality, thereby extending the discussion beyond Popper's logical-empirical framework.

In this sense, Lakatos (1979) instituted the idea of a Research Program, for him, a research program is the union of a set of scientific approaches aimed at offering understandings about one given reality. The author corroborates with Popper's (2017) notion of falsification as a way to refute theories, but for him, the dynamic between the supremacy of one theory over another occurs in a slightly different way. That is, it is not a pragmatic attitude as proposed by Popper (2017), but occurs through a historical process.

At this point we can notice the main divergence of Lakatos' (1979) approach in relation to Popper's (2017). For him a theoretical change results from the exhaustion (regressivity) of a research program, not just by refuting experiment as Popper. Lakatos (1979) argues that it is the falsification that promotes scientific progress, diverging from Kuhn (2017), but he states that this progress occurs in a more complex way than the one proposed by Popper (2017).

As Silveira (1996) Lakatos understands that research programs hold a firm core, that is, a set of hypotheses that are not subject to provisional rebuttals. Around this core there are several auxiliary theories that function as a protective belt that sustains the core of the program. Theoretical rebuttal only occurs within the protective belt, the process of falsifying theories that are inserted in this belt causes it to be constantly modified, expanding the inherent complexity of that subject, it is a positive process for scientific development called positive heuristics (Silveira, 1996).

On the other hand, for Lakatos (1979) a crucial experiment is one that modifies the way scientists understand a problem, attacking the program's core firm, but generally being recognized a few years after directly interfering in the consolidated understanding of the subject. The author understands that a research program is constantly verified, with no possibility of a crucial experiment, alone, refuting any (meta)theory (Rufatto & Carneiro, 2009).

In this line of thought, the replacement of one theory by another is in fact a historical process, occurring when the protective belt is no longer able to absorb the observed anomalies and the program loses its ability to predict new facts, or absorb new one's information that would add to their protective belt (Silveira, 1996). The thought of Lakatos (1979) about science is highlighted by considering it as a process of alternating between conjectures and rebuttals; the author understands that science has a diversity of guidelines which provides theoretical advances, but also imposes empirical brakes on the alternation process. Even open to the possibility that theories develop over time both through falsifiability (as Popper, 2017) and through the process of scientific revolution (as Kuhn, 2017), the epistemology of Lakatos (1979) maintains that scientists strive to improve existing theories, replacing their problematic aspects and trying to maintain or preserve the unproblematic ones.

Added to this perspective is the thought of Laudan (2011) that leads to the understanding of science as an intellectual way of solving empirical or conceptual problems. By this way scientific progress is mainly produced by conceptual changes that result from rational principles, which are changeable over time.

The coexistence of rival theories for this author is a scientific rule, not an exception. Therefore, starting from the conception that science exists to solve problems, Laudan (2011) understands that the scientific objective is to produce theories, which are increasingly efficient in these resolutions. Being the preponderant conceptual element for the understanding of how science develops towards the resolution of empirical problems.

The problems addressed by Laudan (2011) are beyond the paradigms described by Kuhn (2017) or beyond the comprehension of a scientific community established by of Lakatos (1979), for him the science is concentrated to solve two kind of problems, first there are the empirical problems: which are related to objective questions of reality. The second kind of problems is the conceptual: related to non-empirical nature, they are those that exist in an exclusively theoretical scope or linked to conceptual structures.

The author informs that research traditions, the set of assertions or denials of an ontological and methodological order shared by scientists in one area, in addition to shaping the research activities carried out by them, provide the scientific development in a progressive or regressive way.

2.5 The end of the reason

Feyerabend (2011) critical of both what he pointed out as the prescriptive essence of Popper's (2017) scientific logic and the descriptive essence of Kuhn (2017) verifies the need for interactions between the two logics, recognizing a similar concern in the conception of Lakatos (1979). Such interaction preached by the author was based on the fact that for him, the logic of the search for the truth constituted by Popper (2017) was guided by a context of justification, that is, in the observation of the reasons for a certain approach to be considered the most capable to represent a certain reality.

While the one constituted by Kuhn (2017) was based on the context of discoveries, that is, on the need to develop knowledge that evolves as the understanding of reality evolves. Thus, Feyerabend (2011) sought to deconstruct a view of the scientific method as a universal rule, for him science used an oppressive character insofar as it brought to itself the notion of the only, or better accepted, path to the truth.

Critic of rationality as the essential element of science Feyerabend (2011) understood that the scientific method, fundamentally prescriptive and universally accepted by science, is the biggest constraint on the activity of scientists and scientific progress. Thus, he proposes theoretical anarchism as an epistemological path.

For Feyerabend (2011) this is a way to achieve methodological plurality. The philosopher considers that there is no way to conceive a vision of truth from a single timeless method. The author considers that the prescribed method aimed at understanding reality in an objective way leads to the presentation of results devoid of reflection, morality or identity.

Epistemological anarchism criticizes the supposed neutrality of the researcher, for him the simplification of the environment in which the scientist is inserted makes that the interpretations of the facts, of the problems created by conflicting interpretations and of the errors are no longer taken into account in scientific conclusions (Rocha, 2017).

In addition, the way discoveries are taught and disseminated carries with them the same prescriptive methodological apparatus, indicating a possible superiority of this way of producing knowledge, which for Feyerabend (2011) can be considered as a complete ideological “brainwashing”, this is because scientific truths are propagated as being all the existing truth about the facts and, at same time, the correspondent methodological framework that led to those conclusions is, thus, considered as the most correct.

For Rocha (2017), Feyerabend assumes that scientific progress is limited when science is conditioned to a universal method, and there is only some progress when methodological barriers are transposed. The breakdown of current methodological notions, whether occurring unintentionally or not, often incorporate ad hoc rules until the new assumptions presented can be justified by new models that may be built or that were already established, but were not recognized (Rocha, 2017).

Rocha (2017) considers that scientific standards, models and methodologies are included in the theoretical anarchism approach, but he understands that they are the result of the scientific process itself and not of anticipatory rationality of a logical nature. This approach reconciles the need for a method for scientific design, but assumes that the method is dependent on elements of a historical order and the knowledge available at the time, that is, on its own context (Feyerabend, 2011).

Feyerabend (2011) clarifies that there are no prescriptive perspectives in the sense of forming an “anarchic method” of doing science, that is, it is not a way of replacing a set of general scientific rules with

another, but of a clarification on the fact that any method has its limitations, especially in divergent contexts, with non-rational considerations being employed even in the most basic or most essential methods for the sciences. Considering the set of eleven epistemological approaches included in the study, as well as the proposed historical contextualization, Table 1 summarizes the main characteristics of each one.

Table 1.
Features of philosophy of science approaches

Historical period	Author	Approach	Reasoning	Truth	Reality
Great navigations and discoveries 15th, 16th and 17th centuries	Bacon	Traditional empiricism	Deductive	Discovered *Traditional approach*	Objective and unique
	Locke	Empiricism			
	Hume	Radical empiricism			
	Descartes	Racionalist	Inductive		
Enlightenment 18th century and first half of the 19th century					
	Kant	Epistemology			
	Comte	Positivism			
Industrial Revolution – Modernity Second half of the 19th century and first half of the 20th century					
	Mach	Logical positivism			
	Popper	Critical rationalism	Hypothetical deductive		
	Kuhn	Paradigms	Abductive	Constructed *Historical approach*	Subjective and unique
	Lakatos	Research programs			Objective and plural
Postmodernity Second half of the 20th century and the beginning of the 21st century	Feyerabend	Theoretical anarchism		Conventioned *Historical approach*	Subjective and plural

3. Philosophical Characteristics of Accounting Thought

It is, considering the fundamental aspects of the philosophy of science as a way to understand, in depth, the main characteristics of scientific advances that it becomes possible to perceive that accounting science is the result of the association of different scientific parts.

3.1 The empiricist accounting science

Beams (1969) escribes how empiricism and pragmatism influenced accounting thinking in the 1960s, in particular demonstrating that empiricism emerged in the area as a way of expanding current understandings, considering the fact that different perspectives could, and should, coexist. Beams (1969) emphasizes the fact that coexistence between divergent lines of thought is possible, but that it necessarily involves scientists' understanding that they are based on different assumptions.

Buckmaster (1991) highlights the fact that in the first half of the 20th century, in the North American context, little or nothing is addressed about empiricism as a way of practicing accounting science. However, even though there was no debate on empiricism, studies that were based on empirical premises were notorious.

The author states that empiricism is central to many works in the area even before the 1950s. Although these studies can be considered primitive in relation to the scientific design standards and available statistical tools, empiricism was common in accounting studies on determinants, and reporting methods; case studies on management and; studies on accounting education aimed at professional development, curriculum and professional opportunities.

The objectives of these authors resided in the attempt to demonstrate the use of accounting methods in the "real world"; described the applicability and functioning of accounting information systems and; publicized institutional activities, even though the main interest was focused on legitimizing the normative precepts of the concepts (Buckmaster, 1991).

For Buckmaster (1991) empiricism, as a way of practicing science, in accounting represented a moment of transition between a view based on norms and positivism, where empirical studies fostered the emergence of new reflections in the area, conceiving new concepts, scientific practices and ways to contribute to organizational reality. The author infers that those empirical studies may reflect how scientists in the area transferred the use of descriptive statistics to inferential statistics as the center of concerns in the area.

On the one hand, Andrew et al. (2020) and Martins (2005) are emphatic in stating that in the main scientific journals in the accounting area predominates some level of empiricism, and, furthermore, Iudícibus et al. (2005) emphasize that in accounting, empiricism has been treated with disdain, because by not reflecting on the characteristics of the philosophical line, some researchers understand (and end up transmitting this understanding) that empiricism is devoid of reason, totally distorting the precepts of the search for evidence and the verification of phenomena.

When approaching accounting science, Farias (2012), draws attention to the fact that empiricism is based on the formation of understandings about observable aspects, excluding from the scientific perspective what is not. However, the author emphasizes that there is an understanding that experiments, tests, hypotheses and theorizations, although not observable, are scientific aspects, so science deals with elements observable through experience and not observable through reason.

Frezatti et al. (2009) clarify that the accounting mainstream generates a demand for empirical verifications, however, it is necessary to verify that a good part of the accounting considerations point to questions that need to be answered with approaches that go beyond the economic perspective of the "monoparadigm" of the accounting field, similar reflection launched to the accounting mainstream by Hopwood (2002), Silva (2019) and Williams (2017) when pointing out that the copying of North American economic precepts (theories, methodologies, philosophies and others) by accounting leads to the imposition of limits that are not considered in season.

Although the debate on empiricism in accounting is vast and notorious to this day, Ryan et al. (2002) state that, especially in the financial area, even if empirical verifications are made about the reality of organizations, the conclusions of accounting scientists about empirical verifications necessarily pass through what they understand, or accept, as the reality and truth of the facts they analyzed. That is, the way to understand the reasons that lead each accounting scientist to describe reality in a certain way, is the philosophy of science.

3.2 The rationalist accounting science

The supremacy of a supposed maximum rationality of human action, as proposed by Descartes in the work on the discourse of the method, has consequences that even lead to current accounting thinking.

Colmenares (2018) noted reciprocity between international accounting standards and Descartes' precepts. For the author, the principles of Cartesian rationalist epistemology have been widely used in accounting, he verifies the relationship between the characteristics of rationalism and the essence of the formulation of accounting standards.

For Lourenço e Sauerbronn (2016), even taking into account the emergence of accounting approaches that seek understandings about how the comprehension of reality is influenced by the actors involved, that is, studies aimed at considering reality in a static way, independent of human subjectivity, are dominant in accounting sciences. As in the rationalist perspective.

According to Macintosh (2009) accounting rationalism is notable in studies in the area that assume that accounting numbers represent only an objective reality, which can be taken as a truth insofar as they are faithful to what actually happened in the world, that is, when accounting reports are understood as statements of how things really are.

In a position totally opposite to maximum rationality as a way of establishing knowledge, and following Kant ideas of the Enlightenment, Kuter, Gurkaya e Kuznetsov (2019), establish the reflections where accounting is a way of providing greater enlightenment (knowledge) about the functioning of organizations.

The authors point out that the affirmation of the status of accounting as a science, for this they highlighted that the main foundation of accounting is the production of information for the elucidation of the truth, he understood that accounting was the demonstration of the development of a society's economic life, not necessarily passing through the mathematical sieve for that.

3.3 The positivist accounting science

Buckmaster (1991) highlights that until the mid-1950s, accounting studies followed an empiricist view, however, he perceives that there is a change in the interest of accounting scientists at the time, from the search to know what accounting practices were being used, to why of these practices to be used, starting the application of statistical predictions (still rudimentary to the current standards) instead of the traditional descriptions, anticipating the emergence of the positivist view of accounting.

For Macintosh (2009) positivism was employed in accounting, in a mainstream way, with the intention that it would be possible, through its basic precepts, to capture the economic reality through its reports, that is, he notes the co-existence of a supported realistic ontology for a positivist epistemology in the scientific accounting field.

As described by Baker e Bettner (1997) in the accounting area there is a strong characterization of research along instrumentalist and positivist lines, the reason for such characterization of the authors stems from the fact that these studies employ quantitative methods, in addition to, they expose those conventional authors in the area tend to reject and not accept different views from those that encompass the same methodological characteristics.

In this sense, Theóphilo e Iudícibus (2009), when analyzing the methodological criteria adopted by scientists in the area, pointed out there is a hegemony of positivist accounting researchers. Iudícibus et al. (2012), Borba, Poeta e Vicente (2011) e Theóphilo (1998), understand that researchers who did not follow the same methodological approach and applied inductive reasoning as a way of approaching reality (described by them as normative, but that currents philosophical approaches that are actually Cartesian rationalists) presented relevant contributions to the formation of the theoretical and practical standards of modern accounting, including in relation to the formation of accounting standards.

The accounting positivists, followers of Watts e Zimmerman (1979), were fundamentally concerned with the methodological aspects of the studies undertaken, as well as observing the reality experienced objectively. For Lopes e Martins (2005) e Theóphilo e Iudícibus (2009) accounting positivists are those researchers in the area who, based on theories accepted by the scientific community, use theoretical-empirical studies to understand reality.

For Frezatti et al. (2009) the search to understand the reasons for the accounting phenomena and not just to describe those that were being used, made the positive approach to accounting gain strength, even though the emergence of this perspective in accounting has been tutored by neoclassical economic theory. A perspective corroborated by Williams (2017) e Chabrak, Haslam e Oakes (2019) point of view a strong North American scientific influence.

Considering that positivism is assumed in mainstream accounting studies without further reflection on its ontological and epistemological assumptions, a fact pointed by Homero Junior (2021) that reduces the analysis performed by scientists in the area to issues related to the application of the method and statistical techniques, excluding aspects like what reality is and how truth is accessed.

A similar aspect is noted by Martins (2012) when he states that accounting scientists assumed positivism without a deep understanding of the philosophical aspects inherent in the choice. Martins (2012) adds that the lack of information on the assumptions of positivism in accounting has reached the point that some researchers choose to rule out facing certain problems, perceived in the realm of reality, because they do not adhere to the methods commonly accepted by positivism.

Chua (2019) describes how positivism, as a philosophical paradigm, dominated accounting. She describes that the best evaluated journals in the field are those that publish studies that follow positivist trends with greater accuracy. However, the author clarifies that this stems from an approximation of positivist thinking to the dominant economic liberalism in the area, and that this process feeds back expanding the impact of mainstream researchers and marginalizing the others.

It is emphasized by Ryan, Scapense Theobald (2002) that positivism was a relevant movement of the modern age, this vision provided considerable development for the areas of finance, economics and accounting, however, in contemporary times it has come to be seen as an outdated perspective. For Lukka (2010), even though positivism is considered an outdated strand from the point of view of the philosophy of science, in accounting science it still sustains the largely dominant status.

3.4 The Logical empiricism and Critical rationalist accounting science

Christenson (1983) discusses that positive science was common in the 19th century, an epistemology that maintains that only the objective reality could be considered as part of the scientific domain, an aspect that was in disuse in the 20th century. Thus, the author understands that the concept of positive theory used in accounting is erroneous and mistaken, and must be attributed to the focus of logical empiricism added to the perspective of Popper's falsifiability.

In similar propose Hines (1988) demonstrates how much the ideas of falsifiability proposed by Popper have become dominant in accounting studies, but the author demonstrates that there is a contradiction already identified by Popper, when assuming this form as the primordial way of practicing science, whose Falsifiability is at the service of logical inquiries, and is a way of sustaining the breadth of logical positivism, that is, it does not serve as a way to confirm or prove a certain reality.

The author understands that in the accounting field, falsifiability became popular, even though researchers were not using its precepts correctly. She points out that the empirical verifications of the area were customarily subordinated to a sieve that was not established to confirm or refute an approach, but a logical assumption. The mistaken use of Popper's falsifiability in accounting led scientists in the field to think that

they tested the veracity of empirical approaches that they considered, when in fact, they should be testing logical assumptions which refuted or would not support the construction of approaches, as proposed by Popper.

Hines (1988) understands that accounting ended up being restricted by a logic of repression of creativity and criticality based on a rigorous statistical sieve, incorrectly assumed by researchers in the area as the scientific way of dealing with elements. For her, this is also a reason for new understandings of accounting to go through other ways of practicing science.

Addressing the fact that accounting scientists have been making some confusion with the term's verification and falsifiability, Chua (1986) explain that the first is linked to logical empiricism and the second to critical rationalism, for her this confusion directly affects the notion of scientific explanation established in the area. Thus, as Hopwood (2002) e Frezatti, Nascimento e Junqueira (2009), make it clear that the view of positive accounting stems from an almost direct import (with many mistakes) of the economic approach by accounting scientists, Martins (2012) considers that the debate on the dichotomy between normativism and positivism also stems from a similar (misguided and almost direct) import.

Is informed by Martins (2012) that the debate between normativism and positivism in economics was based on the clash between ontological and epistemological perspectives, focused on research approaches that intend to explain a certain situation and others that intend to define it, but that in this debate there was no place for any kind of hierarchy or supremacy among the interests of studies. Martins (2012) points out that this is a debate also proposed by interpretive scientists.

Sterling (1975) makes clear the confusion established in the field of accounting science when he addresses the fact that scientifically laws, or theories, are changeable over time and cannot claim to be perennial, the author informs that, as proposed for Popper one cannot confuse laws with truths, because in any science, as well as accounting, laws are mutable and reflect the everyday empirical challenge of each scientist.

3.5 The social perspective of accounting science

It is described by Neto e Cunha (2016) how much accounting science is also embedded in a social perspective in relation to its development, Homero Junior (2017) highlights the fact that accounting science is a social activity, as in the notion of the paradigms of Kuhn, he emphasizes the view of paradigms as a set of premises underlying the activities of a scientific community and presents considerations on elements of social and political orders that interfere in the development of accounting science.

Using the concepts of Kuhn's paradigms Frezatti et al. (2009) informs that the accounting mainstream view is using a monoparadigmatic perspective, based exclusively on economically oriented precepts and guided by neoclassical theory to explain accounting phenomena, in this case being socially supported the fact that this aspect is capable of explaining all the phenomena in the area.

Ryan, Scapens e Theobald (2002) point out that rationality seems to be a central element in economic and financial scientific approaches, serving as the firm core proposed by Lakatos in which scientists establish a position as an irrefutable perspective, in which case rationality is reflected in intention. of economic actors to maximize their rational utility.

In this way, as long as scientists in the field are succeeding in sustaining a set of theories that maintain this central rational view, they will be producing the positive heuristic, which sustains a functioning research program. However, in the event that this central perspective is constantly attacked and the efforts of scientists are only focused on defending the core position of the program, without generating new theories that confirm it, the negative heuristic is generated, which over time leads to the research program. the extinction.

Chua (1986) points out that there is some debate about Popper's concept of falsifiability in the accounting field, however scientists in the area have left aside the debate about the unfolding of this aspect,

such as Lakatos' reflections on the fact that a refuting experiment can not being able to falsify a theory in isolation and, instead of opening space for new debates, accounting scientists close themselves under a peculiar interest of treating reality with something objective and constantly confronting theories with data.

Farias (2012), when approaching accounting from the rationalist view, considers that the perspective of problems proposed by Laudan is adherent to the scientific accounting concept. For him, it is the rational capacity of accounting scientists that produces the solution of empirical or conceptual problems. Still for the author, the understanding comes from Laudan's studies on the existence of multiple theories that explain the same reality.

Even though Farias (2012) has only stuck to the ideological perspective launched on Feyerabend's contributions, authors such as Gendron e Baker (2005) e Lourenço e Sauerbronn (2016) report that the methodological freedom provided in Feyerabend's considerations can serve accounting as an impulse for the understanding that science must be practiced in a plural way.

Lukka (2010) points out that Feyerabend's approaches indicate to accountants that the scientific field is the clash of ideas, that they can be repelled, complementary or just coexist, as long as they are conceived with some coherence. Hines (1988) applies Feyerabend's approach to describe that all accounting theories, to a greater or lesser degree, are products of the expectations, sensory impressions, cognitive processes, research methods, ideological biases, epistemological assumptions, categories and presumption of each researcher.

Laughlin (1995) e Ryan, Scapens e Theobald (2002) are based on the author to consider that accounting scientists need to understand that science is immersed in the social field, and, Chua (1986) to draw the attention of the fact that not everything is rational in accounting science, although some things are.

3.6 Philosophical characteristics assumed (and rejected) by accounting science

As described the mainstream accounting adopt philosophical characteristics that emerge from empiricism (and its aspects), pass through positivism (and its aspects) and incorporate rationalism (and its aspects), and as a result, a scenario is established in which: reality is approached in an objective way, regardless of any subjectivity; the truth is obtained through the use of a strictly rational process and; the access to the truth is given by methods universally accepted through empirical verifications and by the use of hypothetical deductive reasoning, being highly necessary to provide replications on the findings.

This situation supports the traditional way of doing science in accounting and offers, as a result, a set of characteristics philosophically based on the scientific process that has been produced, intentionally or not, by most researchers. As a result, mainstream accounting scientists, given the criterion of philosophical coherence regarding their onto-epistemological assumptions, embrace the following positions in their research:

i. that scientists are totally neutral when carrying out their research (Positivism);
ii. that knowledge is cumulative (Critical Rationalism);
iii. that reality occurs independently of what is thought about it (Empiricism, Positivism and Critical Rationalism);
iv. that there is a method, or a set of methods, of a quantitative and totally rational essence, which certifies the results of its empirical verifications (Rationalism);
v. that the use of the method guarantees relevance to the study, and that this relevance is given by the ability to generalize its results (logical empiricism);
vi. that any study result that cannot be replicated, exactly like the original, is not a result obtained from a study of a scientific nature (Positivism and Critical Rationalism);
vii. that an experiment that follows the same methodological criteria, universally accepted, has the power to discredit any theory, causing a new one to overcome it (Critical Rationalism);

viii. that only one theory is capable of explaining a given object of study until it is rationally refuted by another (Critical Rationalism);
ix. that any process of knowledge construction results from a systematic confirmation of hypotheses rationally created by researchers (Critical Rationalism).

Likewise, strictly considering consistency with some elementary precepts of the philosophy of science about what is taken as the most important scientific accounting, a traditional accounting researcher rejects the following perspectives:

i. that the scientist is also part of the reality he is dealing with (Historical approach);
ii. knowledge is built as history happens and new knowledge needs emerge (Paradigms);
iii. that reality is subjective, that is, it depends on people's judgment about it (Theoretical Anarchism);
iv. that the method employed depends both on the context and on the available knowledge about the object of study (Research Traditions, Theoretical Anarchism, Research Traditions);
v. that the results of scientific studies cannot always be generalized, and even so, they are relevant to understand reality (Historical approach);
vi. that the demarcation of what is a scientific study stems from the problem to be analyzed and not from the available methodological options (Research traditions);
vii. that the scientific development process carries with it broader issues than the rationally constructed criteria, it also involves cultural, emotional, political, economic and social issues (Historical approach);
viii. that different theories on the same subject coexist and can explain the same object in different ways (Research Programs, Research Traditions and Theoretical Anarchism);
ix. that the knowledge construction process involves deduction and induction, as well as continuous reflection on the empirical aspect involved, and may or may not assume hypotheses to be tested (Historical approach).

4. Final Considerations

It is notable that the debate inherent to the philosophy of science is vast, is, and will remain under construction, however it is equally noticeable that accounting science, by not reflecting in depth on the philosophical assumptions that drive scientific development, ends up losing opportunities to contribute with the progress of society (Chua, 2019; Gendron & Baker, 2005; Gray & Milne, 2015; Martinez & Cooper, 2020; Palea, 2017).

The conceptions of the philosophy of science describe, since the end of the 20th century, the scientific process as the result of collaborations of scientists who structure their explanations according to their worldviews, taking into account the individual creative process, moving away from the notion of impartiality in their methodical observations of objective reality. It encompasses the perspective that scientists themselves act differently in relation to their creations, taking them to scientific communities, not necessarily in an entirely rational way (Feyerabend, 2011). These new reflections on science led to the center of the epistemological debate, conclusions that scientific knowledge is built over time, accompanying historical changes and the needs arising from it (Kuhn, 2017).

Therefore, mainstream accounting scientists, by not tolerating plural perspectives on the scientific process (Chua, 1986) restrict the advancement of this science (Gray & Milne, 2015). The establishment of a theoretical or methodological unit in the accounting field, as outlined in the premises of the true positivist or

rationalist thought, today has become only a utopian search of some accounting researches trying to ignore the complexity of contemporary social and organizational reality.

Such concern is idealized to the point of being conceived exclusively in the interest of promoting research and studies that continue to support the same and old way of seeing reality and obtaining the truth, always offering new theories and theoretical perspectives within the same and strict framework (Feyerabend, 2011; Kuhn, 2017; Lakatos, 1979; Laudan, 2011), that is, the mainstream accounting scientists are producing results that meet the interests of researchers in the area, but offering few advances to society in general (Gendron & Baker, 2005; Homero Junior, 2017; Hopwood, 2007)

Finally, in response to the research question emanated, it is understood that the accounting debate without due reflections about the philosophical characteristics of the scientific process is restrictive to the development of the field, preserves the status quo of researchers of a dominant strand and, marginalizes scientists who take divergent perspectives from the mainstream about reality and how to obtain the truth. The proposed objective was achieved insofar as it delimits that the mainstream perspective assumed in accounting sciences is retrograde and outdated, restricting itself to the debate carried out until the beginning of the 20th century, and disregards the advances on the way of approaching reality, as well as how to consider the truth, built at the beginning of the 21st century (Armstrong, 1994; Chua, 2019; Cooper & Hopper, 1987; Homero Junior, 2017; Lourenço & Sauerbronn, 2016; Mattessich, 2012; Owen, 2008; Wanderley & Cullen, 2012).

However, despite not being a simple task, breaking the frontiers of the dominant view is not impossible, some paths are already verifiable in studies that follow the non-mainstream view, pushing the frontiers of accounting knowledge; other paths are still available to be traced in the molds of several other areas of knowledge, expanding the countless referential horizons; one should not forget the possibility and need to generate their own accounting knowledge, but not only those that are under the ruthless regulation of the mainstream, but mainly those arising from the most complex human activity, the thought.

As future developments, it is understood that other approaches, such as those of a sociological nature, are capable of producing understandings beyond those proposed in this study, which were focused on the way in which science is carried out, focusing, therefore, on results regarding how knowledge is disseminated in society.

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Contribuição	Eduardo Codevilla Soares	Nilton Cesar Lima	Vagner de Oliveira Magrini
1. Concepção do assunto e tema da pesquisa	X	X	X
2. Definição do problema de pesquisa	X	X	X
3. Desenvolvimento das hipóteses e constructos da pesquisa (trabalhos teórico-empíricos)	X	X	X
4. Desenvolvimento das proposições teóricas (trabalhos teóricos os ensaios teóricos)	X	X	X
5. Desenvolvimento da plataforma teórica	X	X	X
6. Delineamento dos procedimentos metodológicos	X	X	X
7. Processo de coleta de dados	X	X	X
8. Análises estatísticas			
9. Análises e interpretações dos dados coletados	X	X	X
10. Considerações finais ou conclusões da pesquisa	X	X	X
11. Revisão crítica do manuscrito	X	X	X
12. Redação do manuscrito	X	X	X