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**ACCOUNTABILITY FOR SUSTAINABILITY: AN APPROACH BEYOND THE  
ACCOUNTING MAINSTREAM**

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**UBERLÂNDIA – MG**  
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**ACCOUNTABILITY FOR SUSTAINABILITY: AN APPROACH BEYOND THE  
ACCOUNTING MAINSTREAM**

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## DEDICATION

*To my son and wife for all the love, kindness and understanding.*

*To my parents, brother and sister for their support, companionship and affection.*

*To my teachers and colleagues for their example and dedication.*

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## EPIGRAPH

*“If you change the way you look at things, the things you look at change.”*  
- Wayne Walter Dyer

## **ABSTRACT**

The study discusses how the accounting area is responding to the challenges of accountability and sustainability, and with that, how accounting can contribute to the debate and promotion of sustainable development. In this way, the thesis contributes to the accounting literature by providing a better understanding of the role of accounting in the culture of accountability, as a tool to support organizations in achieving their goals. This research excels in the search for understandings that best fit the current social and economic reality. Therefore, the objective of the study is to carry out an analysis of how the accounting mainstream makes it difficult for disruptive understandings of accountability and sustainability to be disseminated both in a practical and scientific way in accounting. In this research we discuss how accounting can contribute to the sustainable development of organizations, and how the Theory of Planned Behavior is a useful tool for the accounting debate and promotion of this kind of development. The thesis consists of the gathering of four articles, two of a reflective theoretical nature, which address the onto-epistemological context that involves the accounting mainstream, one of a bibliographic nature, aimed at understanding the conceptual and theoretical developments related to the theme, and one empirical study, which analyzes how the subject reveals itself with the accounting practice. As a result, the research demonstrates that accounting is a fundamental tool for organizations in developing their business strategies and achieving sustainable performance in the short, medium and long term. The research concludes that accountability is an important aspect of sustainable development and that accounting can play an important role in promoting accountability.

**KEYWORDS:** Accountability, Sustainability, Accounting

## **RESUMO**

O estudo discute como a área contábil está respondendo aos desafios da accountability e sustentabilidade, e com isso, como a contabilidade pode contribuir para o debate e promoção do desenvolvimento sustentável. Dessa forma, a tese contribui para a literatura contábil ao proporcionar uma melhor compreensão do papel da contabilidade na cultura da accountability, como ferramenta de apoio às organizações no alcance de seus objetivos. Esta pesquisa prima pela busca de entendimentos que melhor se adequem à realidade social e econômica atual. Portanto o objetivo do estudo é realizar uma análise de como o mainstream contábil dificulta que entendimentos disruptivos sobre accountability e sustentabilidade sejam disseminados tanto de forma prática quanto científica na contabilidade. Nesta pesquisa debatemos como a contabilidade pode contribuir para o desenvolvimento sustentável das organizações, e como a Teoria do Comportamento Planejado é uma ferramenta útil para o debate contábil e promoção do desenvolvimento sustentável. A tese é constituída pela reunião de quatro artigos, dois de caráter teórico reflexivo, que abordam o contexto onto-epistemológico que envolve o mainstream contábil, um de caráter bibliográfico, voltado para compreender os desdobramentos conceituais e teóricos relacionados ao tema, e um de caráter empírico, que analisa como o assunto revela-se junto a prática contábil. Como resultado, a pesquisa demonstra que a contabilidade é uma ferramenta fundamental para organizações no desenvolvimento de suas estratégias de negócios e no alcance de performances sustentáveis, em curto, médio e longo prazos. A pesquisa conclui que a accountability é um aspecto importante do desenvolvimento sustentável e que a contabilidade pode desempenhar um papel relevante para a promoção da accountability.

**PALAVRAS-CHAVE:** Responsabilidade, Sustentabilidade, Contabilidade

## LIST OF ILLUSTRATIONS

### Article 3

Figure C1. Number of articles per year .....	60
Figure C2. Number of citations per year .....	60
Figure C3. Density of the most relevant areas of study.....	61
Figure C4. Relations of areas of study .....	61
Figure C5. Two major lines of thought .....	64

### Article 4

Figure D1. Conceptual Model .....	88
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## LIST OF TABLES

### **Thesis**

Table 1. Objectives, results and contributions of articles.....	12
Table 2. List of objectives achieved .....	104

### **Article 1**

Table A1. Features of philosophy of science approaches .....	26
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### **Article 3**

Table C1. Accounting perspectives on sustainability reporting .....	58
Table C2. General research data of number of articles and citations .....	60
Table C3. Most cited papers .....	63
Table C4. Top 20 most cited articles on Accountability and Sustainability (2019-2021) .....	66

### **Article 4**

Table D1. Sample Characterization.....	88
Table D2. Results of confirmatory factor analysis .....	89
Table D3. Square Correlations, Cronbach's Alpha composite reliabilities, and average variances extracted .....	91
Table D4. Findings .....	92

## **LISTA DE ABRAVIATURAS E SÍMBOLOS**

**USP** – Universidade de São Paulo

**ANPAD** – Associação Nacional de Pós-Graduação e Pesquisa em Administração

**ANPCONT** – Associação Nacional de Programas de Pós-graduação em Ciências Contábeis

**UnB** – Universidade Nacional de Brasília

**UFSC** – Universidade Federal de Santa Catarina

**UFU** – Universidade Federal de Uberlândia

**CSR** – Corporate Social Responsibility

**TPB** – Theory of Planned Behavior

**ATT** – Attitudes

**SN** – Subjective Norms

**PBC** – Perceived Behavioral Control

**TBL** – Triple Bottom Line

## SUMMARY

<b>1. PRESENTATION .....</b>	<b>5</b>
1.1 Problematization .....	6
1.2 Objectives .....	8
1.4 Study delimitation.....	10
1.5 Study organization .....	11
<b>2. PHILOSOPHICAL CHARACTERISTICS OF MAINSTREAM ACCOUNTING SCIENCE AND ITS LIMITATIONS.....</b>	<b>14</b>
<b>3. LIBERALISM AS A VIGILANT ACCOUNTING STANDARD AND THE SOCIAL APPROACH TO THE MARKET. ....</b>	<b>39</b>
<b>4. ACCOUNTABILITY AND SUSTAINABILITY A CRITICAL SYSTEMATIC REVIEW AND BIBLIOMETRIC ANALYSIS .....</b>	<b>52</b>
<b>5. TOWARDS SUSTAINABILITY ENGAGED ACCOUNTING: A BEHAVIORAL APPROACH .....</b>	<b>77</b>
<b>6. FINAL CONSIDERATIONS .....</b>	<b>102</b>
6.1. Results.....	102
6.2. Contributions .....	104
6.3 Limitations and recommendations for future research .....	105
<b>7. REFERENCES .....</b>	<b>105</b>

## 1. PRESENTATION

In this introductory item, the delimitation and justification of this study will be contextualized, the problem and research objectives are also discussed. It is noteworthy that this thesis is constituted through the union of articles produced independently, but that are related to each other because they fundamentally contribute to the question and central objectives.

It should be noted that the contents of the articles selected in this thesis have been developed, and improved, through a series of debates on their contents in different scientific events, both nationally and internationally in the accounting area, such as the Qualitative Research and Critical Accounting, USP Accounting Congress, AnpCont Congress, ANPAD Meeting, UnB Congress of Accounting and Governance, UFSC Congress of Controllershship and Finance and UFU Congress of Accounting, since 2021.

This thesis is proposed under the challenging condition of illuminating, debating, analyzing and mainly generating awareness about the paradigmatic limits of the accounting mainstream, which end up obscuring important contemporary understandings about accountability and sustainability. Understandings discussed in the thesis topic delimitation.

As a way of meeting this condition, in an introductory way, the first two articles (of a theoretical/reflective nature) have the essential objective of promoting the debate on some conceptual boundaries linked to the accounting mainstream. In the articles, philosophical and economic premises, that provide support for theories and concepts frequently used in accounting studies, are revisited.

The reflection raised in the first article exposes paradigmatic barriers linked to the way of understanding and practicing accounting as a science. In this paper, fundamental perspectives related to the philosophy of science are revisited, exposing both the origins and the consequences of the way accounting is approached from different philosophical perspectives.

In the second article, reflections are made on essential characteristics of neoclassical economic thinking and the way in which it influenced accounting thinking to the point of becoming hegemonic. In this article, seminal and contemporary studies on this theme are analyzed, exposing the ways in which neoclassical thinking became ingrained in accounting reflections to the point of becoming hegemonic.

Both articles aim to clarify the main ontological and epistemological barriers established in the accounting field over the years and that hinder, or prevent, broader understandings of some concepts (such as accountability and sustainability) to be established in the area.

The third article, of a bibliometric nature, intends to deepen the theoretical debate on the subject, analyzing the international scientific production carried out on accountability and sustainability. The motivation for the position of this study is the quest to understand how issues have been debated in the area since 1984 (First record registered in the researched database - Web of Science) until December 2021 (Closing of data collection).

The article confirms the fact that there is a group of studies in the accounting area, guided by positivist, functionalist and neoclassical premises, which are highly influential in research in the area (Mainstream). Such influence occurs with sufficient intensity to produce different theoretical currents on accountability and sustainability in the accounting area, but which, in essence, are delimited by the same conceptual boundaries. It should be noted that, even with such a conceptual domain on the part of the mainstream, it is possible to identify alternative/emerging currents on the subject, which are not established under the same premises, but which point out that divergent understandings of accountability and sustainability are not only possible, but necessary today.

The fourth article, of an empirical nature, demonstrates that the conceptual/theoretical limit established by the accounting mainstream does not only have consequences for the scientific field, but also for accountants who practice the profession. In this way, the article confirms that the same paradigmatic boundaries assumed by accounting scientists are being assumed by accountants who practice the accounting profession, reinforcing fundamental limits on the concepts of accountability and sustainability. It is important to highlight the fact that the article makes it clear that accountants understand the relevance of sustainability to organizations, however, they understand that the decision to exercise the accounting profession in an unconventional way is not within their competence.

Through the interaction of the results of the four articles selected for this thesis, it is possible to reinforce the understanding that (i) there is a dominant line of reasoning in the accounting area which shares (Consciously or not) certain premises; (ii) this line of thought makes use of the scientific field as a way of legitimizing these premises; (iii) the accountants who perform the accounting activity end up replicating such fundamentals.

Thus, we can see the establishment of a tacit feedback between paradigmatic understandings of the accounting scientific mainstream and the accountant's practical activity. A cycle that is sustained both by the constant “confirmatory” replication of its premises, and by the marginalization of reflections that do not assume them as a basis for understanding the reality.

The result of these exhaustive processes of replication and marginalization is the maintenance of a historical accounting process, which imposes restrictions on the ability of accountants (scientists or professionals) to reflect on the situation they are in and promote changes in the current reality they are in.

### 1.1 Problematization

Understanding the basic current of scientific thought as the one that brings together the main ideas of researchers in a certain field of knowledge, Colander et al. (2004) defined the concept of scientific mainstream. Mainstream is a dominant concept among academic institutions, organizations and scientific journals in a certain period of time. In a similar way Dequech (2007) approaches the mainstream as the result of a dominant trend in the scientific environment.

For these authors this trend leads researchers to carry out their scientific communications based on similar epistemological and methodological lines. As a result of this process, Macias-Chapula (1998) and Legg and Black (2020) presents that the mainstream is capable of generating a systematic of citations and publications in journals that always approach a certain topic in the same way, since the main trend, followed by these authors, becomes a self-inducer of credibility, whether for the work published in a particular vehicle, or for the vehicle itself.

Chua (2019) go further and report that this logic favors the emergence of an “elite of the profession”, that is, the researchers who historically present significant contributions to the area are those who are taken as the builders of the mainstream. As pointed by Colander (2013) This logic of the “elite” also falls at the level of institutions and universities.

In relation to accounting science, the mainstream is easily identifiable, the particularity inherent to this science is that there is little space for scientific (and practical) debate on this issue. Even though, this debate, which has been established for more than forty years and has been gaining relevance in discussions in the area, is still little accomplished. Chua (1986) and Cooper and Hopper (1987), in the 80's, described how accounting thinking was increasingly dominated by one scientific perspective, a debate that has gained some adherents on science since then (Andrew et al., 2020; Gendron & Baker, 2005), subject discussed in more depth in article 1 of

this thesis. But this is one debate that hasn't been noticed, effectively, in the practical reality of the professional accounting.

Therefore, based on the fact that the accounting mainstream is dominant and feedback by the development of the area (Baxter & Chua, 2003; Hopwood, 2007; Palea, 2017), commonly accepted theories and debated concepts have become hegemonic and are little contested, an aspect demonstrated in paper 2 of this thesis. However, despite not being a simple task, breaking these boundaries of the dominant view is not impossible, some paths are verifiable in studies that follow the non-mainstream view and push the frontiers of accounting knowledge (Chabrak et al., 2019).

This study focus on the following contemporary accounting gaps: (i) the contradictions of the dogmatic view on the role of organizations and the effects of markets in a society (Williams, 2017); (ii) the contemporary emergence of social and environmental concerns along with economic ones (Elkington, 2020); (iii) the social character of accounting, essentially what is considered in emerging accounting approaches (Gallhofer & Haslam, 2019); (iv) the analysis of the multidisciplinary debate on the concept of accountability and sustainability (Sareen & Wolf, 2021) that proves how harmful the limitations of the accounting mainstream are for scientific considerations in the area: excluding (or stigmatizing) understandings that bring together individual and collective goals (Gendron, 2018); (v) the suppression of social solutions that focus on conflicts arising from economic organizational perspective and (Gray & Milne, 2015); (vi) the marginalization of the considerations that go beyond the traditional economic status of organizations (Graham & Grisard, 2019). Considering these gaps, focusing on the different theoretical definitions of accountability and sustainability, this thesis considers the following problem: How does the accounting mainstream prevent disruptive understandings of accountability and sustainability?

In order to answer this research question, this study focuses on the relation of accountability and sustainability, as well as their impacts on accounting and organizations. We debate the fact that accounting mainstream is not only harmful to a scientific understanding of accountability and sustainability, but also the practical.

We also consider that the accounting mainstream prevents the understanding of accountability and sustainability by failing to include environmental and social factors in their reports (Cho, Laine, et al., 2015; She & Michelon, 2019). This leaves investors and other stakeholders in the dark about the long-term sustainability of a company's operations (Hörisch et al., 2020). Additionally, the accounting mainstream relies heavily on financial measures, which can provide a short-term view of performance that does not consider environmental and social factors (Wang et al., 2020). In this context, the purpose of this work is to reflect on the importance of accounting practice and accounting research in the construction of a more sustainable society.

The accounting mainstream is largely driven by a profit motive (Alawattage & Wickramasinghe, 2021; Baker & Brewis, 2020; Gilbert, 2021; Wong et al., 2021), which can prevent a full understanding of accountability and sustainability. For example, companies may be more likely to focus on short-term profits rather than long-term sustainability (Hörisch et al., 2020), and they may be less likely to disclose negative information that could impact their bottom line (She & Michelon, 2019). Additionally, the accounting profession has been slow to adopt new reporting standards that would provide more transparency around environmental and social issues (Andrew & Cortese, 2013; Brown & Dillard, 2014). As a result, investors and

other stakeholders may not have all the information they need to make informed decisions about a company's impact on society and the environment (Nicholls, 2020).

## 1.2 Objectives

In order to elucidate the constituted thesis and answer the proposed research question, the following general objective was adopted: To constitute an analysis of how the accounting mainstream prevents disruptive understandings of accountability and sustainability from being disseminated in scientific and practical accounting.

Thus, to do this, we expose understandings that indicate that the dominant accounting paradigm obscures and excludes currents of scientific thought, that do not legitimize the positivist and neoliberal metanarrative. This study assumes that accounting is a discourse that is determined by the economic, social, political and cultural relations of a society. Addressing the fact that accounting is also a social practice because it is an activity that is carried out by individuals, groups of individuals and organizations as a way of exercising control over the resources and relationships of a given society. In this sense, the accounting system of meaning that is determined by the economic, social, political and cultural relations of a society is also a social practice.

However, we demonstrate that the concept of accountability and sustainability, when considered by plural economic, social and scientific approaches, promotes emancipatory reflections (Gallhofer & Haslam, 2019), able to break cycles of domination (Sartre, 2011), and points to ways of freeing accounting thinking from monoparadigmatic shackles (Frezatti et al., 2009).

The general objective is followed by four specific objectives:

1. To demonstrate how the philosophical premises impact on the characteristics of the accounting field.
2. To explain how the economic neoclassical perspective dominates the reflections on accounting.
3. To analyze the major lines of thoughts in accounting literature about accountability and sustainability.
4. To analyze how the accounting mainstream premises restrict the understandings of the practical accountants about accountability and sustainability.

## 1.3 Justification, relevance and contributions

The accounting understandings regarding the functioning of organizations, for the most part, seem to be contained in a way of thinking about the company in the essential molds of the expansion of shareholder wealth (Antonelli et al., 2017). Several accounting perspectives are launched in order to better understand the organizational dynamics and its consequences, however, many of them insist on assuming pre-defined theoretical discourses on the action of economic agents (Mendes et al., 2020).

On one hand, it is remarkable the fact that, under the validity of fundamentally positivist and neoclassical precepts, advances were made in the way of understanding how people act in business environments. On the other hand, is noticeable the exhaustion of understandings that seek to reduce the action of man, mainly, on economically oriented criteria, without their real

significance to society (Bellucci et al., 2019; Chua, 2019; Gallhofer & Haslam, 2019; Wong et al., 2021).

However, more than two centuries have passed since the industrial revolution; the entrenchment of capitalism as a model of socioeconomic development and; the expansion of the complexity of the markets, meanwhile, as a result from this predatory organizational perspective, social and environmental ills became preponderant (Elkington, 2020), bringing questions to the premises of the dominant paradigm (Alawattage & Wickramasinghe, 2021; Baker & Brewis, 2020). Time has revealed that both the way organizations traditionally compete, and the way managers conduct their organizations for profit, generate harmful consequences for the social order and for the environment Duarte et al. (2021).

These concerns gained strength in the second half of the 20th century, and part of them were incorporated into the notion of CSR, which later merged with the perspective of sustainability described by Brundtland (1987). Subsequently, they received theoretical and conceptual support from the Triple Bottom Line conveyed by Elkington (2011), a perspective that understands, at the same level, concerns about economic, social and environmental outcomes. Faced with such incorporations, CSR and sustainability have converged over time, and are currently treated similarly.

Thus, this contemporary conceptual context established, allowed the emergence of new considerations on accountability, free from the limitations of the theoretical approach linked to the economic mainstream. These new considerations incorporate sociocultural elements, and focus on the promotion of consciential changes on the role of companies and the actions of managers in the 21st century society. In this way, they find in accounting, especially in the critical and interpretive accounting perspective (Chua, 2019), the opportunity to promote this debate, establishing scientific revolutions (Kuhn, 2017; Mendonça & Videira, 2007) and cultural and social changes (Giddens, 1999).

Considering this relevant moment of paradigmatic contestation, that causes revisions on the way in which theories have been considered in accounting science, this thesis takes place. Thus, accountability and sustainability are adopted as a phenomenon of study, proposing contributions not only for economic reasons, but serving as an active instrument of reflections about the traditional paradigm, in line with previous studies such as those proposed by Boiral (2013), Gray (2001) and Lehman (1999) that treat accountability and sustainability from a critical view of business action and social everyday life.

The study is justified by the possibility of expanding the accounting paradigmatic boundaries beyond the deterministic view of the economically oriented and socially functional business practices. In this way, offering protagonism to the concepts of accountability and sustainability, when considered from the emancipatory perspective, as formative elements of social consciousness.

Thus, the relevance of this study focuses on the theoretical contribution to the scientific development of accounting under a critical focus. It is seeking to cooperate with debates that have already begun, both from a national and international point of view. Debates that take into account the difficulties inherent to the dominant monoparadigmatic essence in area. New approaches that induce the way that accountants understand this fundamentally abstract element and which, in turn, impacts on the practical social routine of accountants.

As an expected result of this study, it is intended to unveil considerations aligned with critically applied to accounting science, demonstrating the dominant capable paradigm and limits of the

prevailing going beyond it, exposing disruptive conceptual alternatives of promoting expanded theoretical analysis on social, environmental and economic problems generated by business action.

Situated within the prevailing accounting paradigm boundaries, this study is a contribution to the community as it seeks to launch a new look on ways of understanding the impacts of organizational dynamics on society, taking into account the relationship between economic, social and environmental factors in the face of treatment by organizational valuation and significance, associated in terms of relevance and societal context.

#### 1.4 Study delimitation

By proposing understandings focused on reality in a liquid way, Bauman (2007) draws attention to the construction of critical reasoning about reality, about ways of doing things and about ways of accessing the truth. The understanding of what is real, in this context, is established by the constant construction of new truths about the facts or, as described by Lyotard (2009) on the construction of metanarratives.

In this way, it is opportune to reflect on this study, in which the investigation is conducted under the thesis that: mainstream accounting science assumes ontological, epistemological and methodological assumptions inherent to the 19th and 20th centuries, resulting in the fact that advances in accounting concepts have not followed the advances not only organizational and institutional, but of humanity in the social field.

In this alarming situation of not transposing considerations that focus exclusively on the promotion of profit, accounting understandings that use divergent social approaches to produce new comprehensions about organizational performance, in addition to the economically oriented aspects, were obscured and marginalized.

It is worth highlighting the fact that the present study detaches itself from the dominant scientific accounting thought, establishing, as a proposed thesis, a borderline paradigmatic understanding, incapable of being approached under the validity of traditional accounting thought. This is because it seeks evidence that cannot be obtained without using an expanded onto-epistemological view of the area, which accepts theoretical debates that go beyond preconceived and dominant conceptual discourses (Feyerabend, 2011).

It is noteworthy that this study departs from the strand recognized as *Stewardship* (Davis et al., 1997; Hernandez, 2012; Tucker & Block, 1994) since it does not focus on the actions of managers, or customers (Singh & Tiwari, 2020), but it deals with the mutual relations between organizations and society. There is no interest in what leads the actor to integrate his objectives with the organizational ones, common in studies on stewardship, but it tries to address how human and social relations are guided by the interests of the dominant elites (Fogarty & Zimmerman, 2019; O'Connell et al., 2020).

Thus, the present study has as its scope the conceptual nuances of accountability and sustainability, also incorporating (but not only) the analyzes that deal with the subject under the prevailing accounting paradigm; that is as a fluid and dialogic system, with an accounting basis, capable of mediating power relations between organizations and everyone who affects or is affected by their actions, not only from an economic perspective, but also from a social and environmental perspective, at the individual, or collective level.

Anyway, in the mainstream literature, accountability is often equated with responsibility (Boiral, 2013; Chow & Bracci, 2020; García-Sánchez et al., 2022), but we believe that it is

important to, alternatively, distinguish these concepts. In this work we consider that accountability is only the formal aspect of the relationship, that is, the obligation of the agent to report and justify his or her actions and be held accountable for it (Gibassier et al., 2018; Helfaya et al., 2019; King et al., 2012). In contrast, responsibility comprises the formal aspect, but also the material aspect, that is, the obligation of the agent to make good the damage caused by his or her actions (de Villiers & Sharma, 2020a; Deegan, 2013; Dillard & Vinnari, 2019).

The formal aspect of accountability is derived from a set of rules that define the agent's responsibilities, his or her obligations and the expected outcomes (Pan & Patel, 2020). The agent is expected to act in accordance with these rules, and if he or she does not comply, he or she will be accountable for his or her actions. The material aspect of responsibility, on the other hand, is derived from the moral principles that define what is right and what is wrong (Davidson et al., 2019). The agent is expected to act in accordance with these principles, and if he or she does not, he or she will be responsible for his or her actions.

Therefore, in this work we consider that accountability is a necessary condition for responsibility, that is, accountability operates in the field of organizational conditioning while responsibility operates in the human behavior area. Thus, we refer to accountability in this study also as a set of rules of an institutional scope, but considering only those rules that are capable of producing responsibility.

In parallel, it is important to notice that the sustainability concept in accounting mainstream literature includes the ability of an organization to maintain its current level of profitability and operational efficiency while also meeting its financial obligations in the future (Albitar et al., 2020; García-Sánchez et al., 2022; Wang et al., 2020). The concept encompasses three key components: financial, environmental, and social.

The financial key refers to the ability of an organization to generate enough revenue to cover its expenses and continue operations into the future. Within this key component the organization ensures that it has enough cash on hand to meet its short-term obligations, such as payroll and rent, and long-term obligations, such as loans and leases. The environmental key refers to the ability of an organization to minimize its impact on the environment. This includes reducing waste, recycling materials, and using energy-efficient practices. The social key refers to the ability of an organization to create a positive social impact. This includes supporting employees, providing fair wages and benefits, and investing in the community.

However, the sustainability concept considered in this study involves these aspects, but go beyond, and insert the notion that the humans and their environment are one and the same, that the natural and social worlds are inseparable, and that humans are a part of nature. This perspective considers that the sustainability concept must be approached in an integrated manner, where the interrelationships between humans, their activities and the environment must be considered.

### 1.5 Study organization

In order to meet the research question demand and fulfill the objectives stipulated for this thesis, the study is conceived by the gathering of 4 scientific articles: (i) Philosophical characteristics of mainstream accounting science and its limitations; (ii) Liberalism as a Vigilant Accounting Standard and the Social Approach to the Market; (iii) Accountability and sustainability: A

critical systematic review and bibliometric analysis and; (iv) Towards sustainability engaged accounting: A behavioral approach.

The first two articles are intended to support the contextual debate on the accounting mainstream, that is, to highlight the fact that there is a historical movement that involves accountants and induces them to accept certain premises. The articles address the fact that there is a particular philosophical context that was defined as the best way of producing knowledge in the area, it also addresses the notion that one specific economic perspective has been adopted in accounting studies that became hegemonic. The articles explore the fact that such currents, philosophical and economic (assumed by accountants) form such a dominant context in the area that any positions that are not aligned with them end up being stigmatized or marginalized.

The third article of this thesis focuses on the concepts of accountability and sustainability, it is a bibliographic survey of international studies produced in the accounting area on the subject. The article demonstrates that the first considerations on the subject began in the 1960s. In the article, it is possible to highlight the fact that there are studies, researchers, institutions and journals that have a lot of influence on the construction of concepts about accountability and sustainability. However, it is also verified that these studies follow a similar trend and treat the themes, subordinating them to the same way of practicing science, that is, even if they present small variations in the proposed understandings, they do so by pursuing traditional forms of knowledge production.

The fourth article addresses the perception of Brazilian accountants about accountability and sustainability, using the Theory of Planned Behavior approach. The article addresses the fact that there are attitudes, subjective norms and perceived behavioral controls that impact the way organizations deal with accounting information and, when they are guided by accountability perspectives, they impact sustainable organizational behavior.

Table 1 presents the objectives, results and contributions of each article to meet the general objective of the study.

**Table 1.** Objectives, results and contributions of articles

TITLE	OBJECTIVE	RESULTS	CONTRIBUTIONS
Philosophical characteristics of mainstream accounting science and its limitations.	To analyze which assumptions of the fundamental currents of the philosophy of science are assumed by mainstream accounting scientists	The mainstream perspective in accounting sciences restrict 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.	There is a set of accepted conventions, without further reflection, that directly interfere in the way accountants understand the reality they are inserted in.
Liberalism as a Vigilant Accounting Standard and the Social Approach to the Market.	To analyze the fundamental characteristics of the line of economic thought that is assumed by mainstream accounting scientists and to discuss the social approach to the market as an alternative.	The reflection proposed in the study leads to thinking about ethics, morals, solidarity, commitment, the division of power and the meaning of the experienced patterns that give meaning to these elements. It denounces that reality cannot be described exclusively under a strand of thought, without considering different perspectives.	There is a specific (neoclassical) economic understanding, assumed by accountants, which influences the way practical issues are approached in the area.
Accountability and Sustainability: A critical systematic	To carry out a bibliometric analysis of the research that is dedicated to the	Two lines of thought are recognized, one that follows the traditional sustainability research	Relevant themes in literature were clarified, major gaps and suggestions for further research

review and bibliometric analysis.	intersection of sustainability with the challenges of accounting in dealing with aspects of social responsibility.	and concentrates the economic dimensions on businessman decisions, and a second line that emphasizes the need to expand the social awareness of sustainability.	were highlighted, and research opportunities were underlined.
Towards sustainability engaged accounting: behavioral approach A	To analyze the impacts of accountant attitudes, subjective norms and perceived behavioral control in the way that accounting information is used in organizations, and how it impacts on organizational sustainable behavior.	The perception that a paradigm shift in the accountancy mainstream approach, has significant impacts on the assumptions and practices of the accountancy process within the organization, that may impact the organizations' sustainable performance, on its triple bottom line.	This investigation settles the chain of effects between the accountant and the organization accountancy environment, that leads, through the information process approach, to the improvement of the organization overall sustainability.

## **2. PHILOSOPHICAL CHARACTERISTICS OF MAINSTREAM ACCOUNTING SCIENCE AND ITS LIMITATIONS**

## PHILOSOPHICAL CHARACTERISTICS OF MAINSTREAM ACCOUNTING SCIENCE AND ITS LIMITATIONS

### CARACTERÍSTICAS FILOSÓFICAS DA CIÊNCIA CONTÁBIL MAINSTREAM E SUAS LIMITAÇÕES

**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 científico contábil, demonstrando elementos epistemológicos que apontam para 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

## 1. INTRODUCTION

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 grewled 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 Circle. 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 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.

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 A1 summarizes the main characteristics of each one.

**Table A1.** 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 <i>Traditional approach</i>	Objective and unique
	Locke	Empiricism			
	Hume	Radical empiricism			
Enlightenment 18th century and first half of the 19th century	Descartes	Racionalist	Inductive		
	Kant	Epistemology			
	Comte	Positivism			
Industrial Revolution – Modernity Second half of the 19th century and first half of the 20th century	Mach	Logical positivism	Hypothetical deductive		
	Popper	Critical rationalism			
	Kuhn	Paradigms	Abductive	Constructed <i>Historical approach</i>	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 <i>Historical approach</i>

### 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) describes 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, Iudicibus 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 demonstrates 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.

## REFERENCES

- Adorno, T. W., & Horkheimer, M. (2014). *Dialética do Esclarecimento*. (Almeida, G. Trad). Rio de Janeiro: Zahar.
- Andrew, J., Cooper, C., & Gendron, Y. (2020). Critical perspectives on accounting and journal rankings: Engaging in counter discourses and practices. *Critical Perspectives on Accounting*, 71, 102–169. <https://doi.org/10.1016/j.cpa.2020.102169>
- Armstrong, P. (1994). The Influence of Michel Foucault on Accounting Research. *Critical Perspectives on Accounting*, 5(1), 25–55. <https://doi.org/10.1006/cpac.1994.1003>
- Bacha, M. D. L. (2014). Comte e Peirce, sobre a classificação das ciências: o status da matemática. *História Da Ciência e Ensino: Construindo Interfaces*, 9(1), 75–91. August 27, 2022, from <https://revistas.pucsp.br/index.php/hcensino/article/view/19428>
- Baker, C. R., & Bettner, M. S. (1997). Interpretive and critical research in accounting: a commentary on its absence from mainstream accounting. *Critical Perspectives on Accounting*, 8(4), 293–310. <https://doi.org/10.1006/cpac.1996.0116>
- Bataille, G. (1975). Os Dados Históricos III A Sociedade Industrial. In G. Bataille (Ed.), *A parte maldita, precedido de A noção de despesa* (1st ed., Vol. 1, pp. 105–138). IMAGO.

- Battisti, C. A. (2010). O método de análise cartesiano e o seu fundamento. *Scientiae Studia*, 8(4), 571–596. <https://doi.org/10.1590/s1678-31662010000400004>
- Bauman, Z. (2001). *Modernidade líquida*. (Dentzien, P. Trad) Rio de Janeiro: Zahar.
- Beams, F. A. (1969). Indications of Pragmatism and Empiricism in Accounting Thought. *The Accounting Review*, 44(2), 382–388. <http://www.jstor.org/stable/243813>
- Bennett, J. (1999). Locke's philosophy of mind. In *The Cambridge Companion to Locke* (4th ed., p. 247). Cambridge University Press.
- Borba, J. A., Poeta, F. Z., & Vicente, E. F. R. (2011). Teoria da Contabilidade: uma Análise da Disciplina nos Programas de Mestrado Brasileiros. *Sociedade, Contabilidade e Gestão*, 6(2), 124–138. [https://doi.org/10.21446/scg\\_ufrj.v6i2.13242](https://doi.org/10.21446/scg_ufrj.v6i2.13242)
- Bresolin, K. (2016). *A filosofia da educação de Immanuel Kant: da disciplina à moralidade*. EdUCS.
- Buckmaster, D., & Theang, K.-F. (1991). An exploratory study of early empiricism in U.S. accounting literature. *The Accounting Historians Journal*, 18(2), 55–83. <http://www.jstor.org/stable/40698055>
- Chabrak, N., Haslam, J., & Oakes, H. (2019). What is accounting? The “being” and “be-ings” of the accounting phenomenon and its critical appreciation. *Accounting, Auditing and Accountability Journal*, 32(5), 1414–1436. <https://doi.org/10.1108/AAAJ-08-2017-3097>
- Chibeni, S. S. (1993). Descartes e o realismo científico. *Reflexão: Universidade Estadual de Campinas*, 57, 35–53. August 27, 2022, from <https://www.unicamp.br/~chibeni/public/descreal.pdf>
- Christenson, C. (1983). The Methodology of Positive Accounting. *The Accounting Review*, 58(1), 1–22. <http://www.jstor.org/stable/10.2307/246639>
- Chua, W. F. (1986). Radical Developments in Accounting Thought. *The Accounting Review*, 61(4), 601–632. <http://www.jstor.org/stable/247360>
- Chua, W. F. (2019). Radical Developments in Accounting Thought? Reflections on Positivism, the Impact of Rankings and Research Diversity. *Behavioral Research in Accounting*, 31(1), 3–20. <https://doi.org/10.2308/bria-52377>
- Colmenares, V. H. C. (2018). El método cartesiano y su relación con las Normas Internacionales de Información Financiera. *Revista Visión Gerencial*, 0(1), 138–146. <https://doi.org/10.53766/VIGEREN>
- Cooper, D. J., & Hopper, T. M. (1987). Critical studies in accounting. *Accounting, Organizations and Society*, 12(5), 407–414. [https://doi.org/10.1016/0361-3682\(87\)90028-6](https://doi.org/10.1016/0361-3682(87)90028-6)
- de Iudicibus, S., Ribeiro Filho, J., Lopes, J., & Pederneiras, M. (2012). Uma reflexão sobre a contabilidade: caminhando por trilhas da “teoria tradicional e teoria crítica.” *BASE - Revista de Administração e Contabilidade Da Unisinos*, 8(4), 274–285. <https://doi.org/10.4013/base.2011.84.01>
- Deleuze, G. (1974). *Lógica do Sentido*. (Fortes, L. Trad.) São Paulo: Perspectiva.
- Farias, M. (2012). *Desenvolvimento científico da contabilidade: uma análise baseada na epistemologia realista da ciência* [Tese de doutorado, Universidade de São Paulo, São Paulo]. August 27, 2022, from <https://doi.org/10.11606/T.12.2012.tde-02052012-205410>
- Feyerabend, P. (2011). *Contra o método*. (Mortari, C., Trad). São Paulo: Editora UNESP.
- Frezatti, F., Nascimento, A. R. do, & Junqueira, E. (2009). Desenvolvimento da pesquisa em Contabilidade Gerencial: as restrições da abordagem monoparadigmática de Zimmerman. *Journal of Accounting and Economics*, 2001, 6–24. <https://doi.org/10.1590/S1519-70772009000100002>
- Gendron, Y., & Baker, C. R. (2005). On interdisciplinary movements: The development of a network of support around Foucaultian perspectives in accounting research. *European Accounting Review*, 14(3), 525–569. <https://doi.org/10.1080/09638180500041364>

- Gray, R., & Milne, M. J. (2015). It's not what you do, it's the way that you do it? Of method and madness. *Critical Perspectives on Accounting*, 32, 51–66. <https://doi.org/10.1016/j.cpa.2015.04.005>
- Guillin, V. (2016). Aspects of scientific explanation in Auguste Comte. *Revue Européenne des Sciences Sociales*, 54–2, 17–41. <https://doi.org/10.4000/ress.3589>
- Hines, R. D. (1988). Popper's Methodology of Falsificationism and Accounting Research. *The Accounting Review*, 63(4), 657–662. <http://www.jstor.org/stable/247905>
- Hobsbawm, E. (2015). *A era das revoluções: Europa 1789 - 1848*. (Teixeira, M & Penchel, M., Trad). Rio de Janeiro: Paz & Terra.
- Homero Junior, P. F. (2017). A Constituição do Campo Científico e a Baixa Diversidade da Pesquisa Contábil Brasileira. *Revista de Educação e Pesquisa Em Contabilidade (REPeC)*, 11(3), 314–328. <https://doi.org/10.17524/repec.v11i3.1565>
- Homero Junior, P. F. (2021). Reflexões sobre a Prática da Pesquisa Crítica em Contabilidade no Brasil. *Revista de Educação e Pesquisa Em Contabilidade (REPeC)*, 15(2), 225–242. <https://doi.org/10.17524/repec.v15i2.2823>
- Hopwood, A. (2002). “If only there were simple solutions, but there aren't”: some reflections on Zimmerman's critique of empirical management accounting research. *European Accounting Review*, 11(4), 777–785. <https://doi.org/10.1080/0963818022000047073>
- Hopwood, A. G. (2007). Whither accounting research? *Accounting Review*, 82(5), 1365–1374. <https://doi.org/10.2308/accr.2007.82.5.1365>
- Iudícibus, S. de, Martins, E., & Carvalho, L. N. (2005). Contabilidade: aspectos relevantes da epopeia de sua evolução. *Revista Contabilidade & Finanças*, 16(38), 7–19. <https://doi.org/10.1590/s1519-70772005000200002>
- Kuhn, T. (2017). *A Estrutura das Revoluções Científicas* (Boeira, V. & Boeira, N., Trad). São Paulo: Perspectiva.
- Kuter, M. I., Gurskaya, M. M., & Kuznetsov, A. V. (2019). Alexander Galagan: Russian titan of the Enlightenment in the history of accounting. *Accounting History*, 24(2), 293–316. <https://doi.org/10.1177/1032373218761129>
- Lacerda, G. B. de. (2009). Augusto Comte e o “positivismo” redescobertos. *Revista de Sociologia e Política*, 17(34), 319–343. <https://doi.org/10.1590/s0104-44782009000300021>
- Lakatos, I. (1979). O falseamento e a metodologia dos programas de pesquisa científica. In I. Lakatos & A. Musgrave (Eds.), *A crítica e o desenvolvimento do conhecimento*. (Cajado, O. Trad) São Paulo: Cultrix.
- Laudan, L. (2011). *O progresso e seus problemas: rumo a uma teoria do crescimento científico* (Ferreira, R. Trad). São Paulo: Editora da UNESP.
- Lopes, A. B., & Martins, E. (2005). *Teoria da contabilidade: uma nova abordagem*. Atlas.
- Lourenço, R. L., & Sauerbronn, F. F. (2016). Revistando possibilidades epistemológicas em contabilidade gerencial: em busca de contribuições de abordagens interpretativas e críticas no Brasil. *Revista Contemporânea de Contabilidade*, 13(28), 99. <https://doi.org/10.5007/2175-8069.2016v13n28p99>
- Lukka, K. (2010). The roles and effects of paradigms in accounting research. *Management Accounting Research*, 21(2), 110–115. <https://doi.org/10.1016/j.mar.2010.02.002>
- Lyotard, J. F. (2009). *A condição pós moderna*. (Barbosa, R. Trad) Rio de Janeiro: José Olympio.
- Macintosh, N. B. (2009). Accounting and the truth of earnings reports: Philosophical considerations. *European Accounting Review*, 18(1), 141–175. <https://doi.org/10.1080/09638180802327073>
- Martinez, D. E., & Cooper, D. J. (2020). Seeing Through the Logical Framework. *Voluntas*, 31(6), 1239–1253. <https://doi.org/10.1007/s11266-020-00223-8>

- Martins, E. (2005). Normativismo e / ou Positivismo em Contabilidade: Qual o Futuro? *Revista Contabilidade & Finanças*, 39(3), 1. <https://doi.org/10.1590/S1519-70772005000300001>
- Martins, E. (2012). *Pesquisa contábil brasileira: uma análise filosófica* [Tese de doutorado Universidade de São Paulo]. August 27, 2022, from <https://doi.org/10.11606/T.12.2012.tde-14022013-171839>
- Mattessich, R. (1972). Methodological Preconditions and Problems of a General Theory of Accounting. *The Accounting Review*, 47(3), 469–487. <http://www.jstor.org/stable/244962>
- Mills, M. A. (2015). Explicating Meyerson: The Critique of Positivism and Historical Épistémologie. *HOPOS: The Journal of the International Society for the History of Philosophy of Science*, 5(2), 318– 347. <https://doi.org/10.1086/682423>
- Morgan, G. (1988). Accounting as reality construction: Towards a new epistemology for accounting practice. *Accounting, Organizations and Society*, 13(5), 477–485. [https://doi.org/10.1016/0361-3682\(88\)90018-9](https://doi.org/10.1016/0361-3682(88)90018-9)
- Neiman, S. (2003). O mal no pensamento moderno: uma história alternativa da filosofia. In *Revista portuguesa de filosofia* (Vol. 57, Issue 4). Difel.
- Neto, J. E. B., & Cunha, J. V. A. da. (2016). Colaboração Acadêmica em Bancas de Mestrado na Pós-Graduação Stricto Sensu em Contabilidade. *Contabilidade, Gestão e Governança*, 19(1), 126–145.
- Owen, D. (2008). Chronicles of wasted time? *Accounting, Auditing & Accountability Journal*, 21(2), 240– 267. <https://doi.org/10.1108/09513570810854428>
- Palea, V. (2017). Whither accounting research? A European view. *Critical Perspectives on Accounting*, 42, 59–73. <https://doi.org/10.1016/j.cpa.2016.03.002>
- Popper, K. (2017). *A lógica da pesquisa científica*. Cultrix.
- Rocha, C. A. A. (2017). Skinner e Feyerabend sobre o método e o papel da ciência em uma sociedade livre. *Temas Em Psicologia*, 25(3), 913–926. <https://doi.org/10.9788/tp2017.3-02pt>
- Rufatto, C. A., & Carneiro, M. C. (2009). A concepção de ciência de Popper e o ensino de ciências. *Ciência & Educação (Bauru)*, 15(2), 269–289. <https://doi.org/10.1590/S1516-73132009000200003>
- Russell, B. (2015). *História da filosofia ocidental – Livro 3: A filosofia moderna*. Nova Fronteira.
- Ryan, B., Scapens, R. W., & Theobald, M. (2002). Research Methodology in Finance and Accounting. In *Research Methods in Finance and Accounting* (2nd ed.). Academic Press Limited.
- Salatiel, J. R. (2011). *Pierce e Hume em torno do empirismo: uma dupla estratégia do método pragmatista em resposta ao ceticismo*.
- Savater, F. (2015). *Uma história descomplicada da Filosofia*. Planeta do Brasil.
- Silva, R. A. C. da. (2019). A história da normatização contábil americana com ênfase na mundial. *Revista Activos*, 17(2). <https://doi.org/10.15332/25005278/5732>
- Silva, M. A. de M. (2005). Teoria crítica em relações internacionais. *Contexto Internacional*, 27(2), 249– 282. <https://doi.org/10.1590/s0102-85292005000200001>
- Silveira, F. L. (1996). A metodologia dos programas de pesquisa: A epistemologia de Imre Lakatos. *Caderno Catarinense de Ensino de Física*, 13(3), 56–63.
- Sterling, R. R. (1975). Toward a Science of Accounting. *Financial Analysts Journal*, 31(5), 28–36. <https://doi.org/10.2469/faj.v31.n5.28>
- Theóphilo, C. R. (1998). Algumas Reflexões sobre Pesquisas Empírica em Contabilidade. *Caderno de Estudos FIPECAFI*, 10(19), 9–15.
- Theóphilo, C. R., & Iudícibus, S. de. (2009). Uma Análise Crítico-Epistemológica da Produção Científica em Contabilidade no Brasil. *Contabilidade Gestão e Governança*, 8(2). [https://www.revistacgg.org/contabil/article/view/164/pdf\\_87](https://www.revistacgg.org/contabil/article/view/164/pdf_87)

- Thompson, E. P. (2012). Algumas observações sobre classe e ‘falsa consciência.’ In Negro A. L. & Silva S. (Eds.), *As peculiaridades dos ingleses e outros artigos*. EdUnicamp.
- Ungureanu, J. C. (2018). Relocating the conflict between science and religion at the foundations of the history of science. *Zygon*, 53(4), 1106–1130. <https://doi.org/10.1111/zygo.12470>
- Valentim, F. O. (2010). *O Brasil e o Positivismo*. Publit.
- Wanderley, C. de A., & Cullen, J. (2012). Pesquisa em Contabilidade Gerencial: Mainstream versus Pesquisa Alternativa. *Revista Contabilidade Vista & Revista*, 22(4), 15–44.
- Watts, R. L., & Zimmerman, J. L. (1979). The Demand for and Supply of Accounting Theories: The Market for Excuses. *The Accounting Review*, 54(2), 273–305. <http://www.jstor.org/stable/245516>
- Williams, P. F. (2017). Jumping on the wrong bus: Reflections on a long, strange journey. *Critical Perspectives on Accounting*, 49, 76–85. <https://doi.org/10.1016/j.cpa.2017.10.004>
- Wittgenstein, L. (1999). *Investigações filosóficas*. (Montagnoli, M. Trad) Petrópolis: Vozes.

### **3. LIBERALISM AS A VIGILANT ACCOUNTING STANDARD AND THE SOCIAL APPROACH TO THE MARKET.**

## **LIBERALISM AS A VIGILANT ACCOUNTING STANDARD AND THE SOCIAL APPROACH TO THE MARKET**

### **O LIBERALISMO COMO NORMA CONTÁBIL VIGILANTE E A ABORDAGEM SOCIAL DO MERCADO**

**ABSTRACT** The field of accounting research presents a strong epistemological concentration based on the adoption of a positivist perspective to analyze reality and to build scientific knowledge, lacking debates that help in expanding the matrices of accounting thinking. The article aims to analyze the fundamental characteristics of the line of economical thought that is assumed by mainstream accounting scientists and to discuss the social approach to the market as an alternative. The discussions presented, when questioning the hegemony of mainstream thinking, offer bases for the field of accounting research to be more plural, contemplating the epistemological diversity consistent with the very plurality of reality and social processes. As a way of answering the proposed research question and meeting the emanated objective, this study is developed as a theoretical essay, being a structured, discursive, argumentative and reflective work, which seeks to address an issue using theoretical and empirical studies. The relevance of the article lies in the approximation of accounting with Marxism as a matrix of thought capable of promoting analyzes in the accounting field, contributing to broaden its methodological and theoretical horizons. As a result and contributions, the reflection proposed in the study leads to the development of accounting thinking, denouncing that reality cannot be described exclusively under one strand of thought, without considering different perspectives, which indicates the need for alternative approaches. The article contributes to this debate insofar as it brings an analysis of the mainstream perspective from liberalism, contrasted with the possibility of using the Marxist approach as an analytical path for accounting research.

**KEYWORDS:** liberal thought; accounting mainstream; Marxism

**RESUMO** O campo de pesquisa contábil apresenta uma forte concentração epistemológica pautada na adoção da perspectiva positivista para analisar a realidade e para construir o conhecimento científico, carecendo de debates que auxiliem na ampliação das matrizes de pensamento contábil. O artigo tem como objetivo analisar quais as características fundamentais da corrente do pensamento econômico que é assumida pelos cientistas contábeis do mainstream e discutir a abordagem social do mercado como alternativa. As discussões apresentadas, ao questionar a hegemonia do pensamento mainstream, oferecem bases para que o campo da pesquisa contábil possa ser mais plural, contemplando a diversidade epistemológica condizente com a própria pluralidade da realidade e dos processos sociais. Como forma de responder à questão de pesquisa proposta e atender ao objetivo emanado, este estudo é desenvolvido como um ensaio teórico, tratando-se de um trabalho estruturado, discursivo, argumentativo e reflexivo, que busca tratar uma questão utilizando estudos teóricos e empíricos. A relevância do artigo se encontra na aproximação da contabilidade com o marxismo como matriz de pensamento capaz de fomentar as análises no campo contábil, contribuindo para alargar seus horizontes metodológicos e teóricos. Como resultado e contribuições, a reflexão proposta no estudo conduz ao desenvolvimento do pensamento contábil, denunciando que a realidade não pode ser descrita exclusivamente sob uma vertente de pensamento, sem ponderar perspectivas diversas, o que indica a necessidade de abordagens alternativas. O artigo contribui para este debate na medida em que traz uma análise da perspectiva do mainstream a partir do liberalismo, contraposta com a possibilidade de utilização da abordagem marxista como caminho analítico para a pesquisa contábil.

**PALAVRAS-CHAVE:** pensamento liberal; mainstream contábil; marxismo

## 1. INTRODUCTION

Classical economic reasoning, resumed in the 20th century as neoclassical (Bresser-Pereira, 2009), produced understandings that social development is guided by financial development, establishing that the constant search for wealth expansion - an essential business objective, in this view - is the effective marker of economic analyses, and conductor of verifications on the performance of countries, regions and locations.

The incorporation of classical economic thinking into accounting promoted the establishment of objective and pragmatic business reflections, founding a perspective on the functioning of companies based on the need to constantly maximize profits (Ramakrishnan & Thakor, 1991). The understanding that, in essence, companies work for the production of profit, ensured the protagonism of financial reports along with business performance analyses, including their competitive capabilities.

Thus, the developments of the capitalist model formulated a dominant reasoning in society that led to the understanding that companies have as their objective the production of profit. As a result of this context, the accounting practice, aimed at promoting and analyzing financial performance, has become a fundamental element for economic development (Davison, 2004; Evans, 2004).

Gonçalves (2019) understands that the periods of both the modern and the contemporary age were profoundly striking for accounting, for him the informative capacity of accounting records to show the profitability of invested capital gave it an outstanding relevance to accounting, a position shared by Wolfgang von Goethe, as noted by Carqueja (2007); Mises (2010) and Nepomuceno (2014).

For this reason, accounting became complementary to the understanding of distributive economic issues (Iudícibus et al., 2012), attracting scientific reflections that were capable of offering greater informational capacity to accounting records, giving these records greater credibility (Iudícibus et al., 2012).

This perspective guided the thinking of accounting scientists and was so striking in this science that it produced a homogeneous body of knowledge, exhaustively replicated in most studies in the area, replication that normally occurs without much reflection on its premises (Chua, 2019; Homero Junior, 2021; Martinez & Cooper, 2020).

Over time, the theoretical assumptions of liberal economic thought have unfolded plurally through the concepts developed and applied in the area, however, little progress has been made beyond the conceptual scope aimed at maximizing profit. In other words, the emergence and development of the accounting mainstream can be seen in the light of economically oriented and socially imposed interests by a dominant elite, which uses the scientific field as a way of legitimizing its objectives of recognizing, with increasing accuracy, the returns of its investments.

It is then by applying the accounting notion exposed by Gendron & Baker (2005) that it is noticed that mainstream accounting scientists, not deepening debates on epistemology, end up replicating understandings without reasoning about their implications (Fournier & Grey, 2000).

Thus, they do not understand in depth the theories that support the logic of thought they employ when establishing their own conclusions (Riccio et al., 2007); as a consequence, they end up

being used to legitimize a discourse of domination imposed by an elite interested in maintaining this situation and expanding its dominant character (Foucault, 2012, 2014), restricting accounting analysis to merely quantitative and financial aspects.

Currently, it is constantly launched a series of questions about fundamental principles that were established under the inherence of the mainstream paradigm, which are often denied by the accounting mainstream scientists, who adopt the surveillance processes (Foucault, 1987) as a way of sustaining a particularly degenerating paradigm.

In this sense, the present study invites us to the following reflection: What are the premises that support the economic view of the accounting mainstream? Thus, the objective of this study is to analyze the fundamental characteristics of the line of economic thought that is assumed by mainstream accounting scientists and to discuss the social approach to the market as an alternative.

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

For Meneghetti (2011, p.326) the theoretical essay “despite not being linked to methodological rigor, as happens in scientific production, it is in the reflective capacity to understand reality”. Therefore, “the test does not require empirical evidence, even if it can be presented as an element of confirmation of assumptions. This is a permanent reflection, in which the centrality of its strength is less in the empirical evidence and more in the attributes of reason that thinks reality”.

## **2. THEORETICAL FOUNDATION**

The profound changes noted between the Middle Ages and the Modern Age, especially those triggered after the French Revolution and the emergence of Enlightenment ideals, led a series of philosophers to focus efforts on the understanding of society, many of them focusing on the analysis of the ways in which collectivities are established, especially in the demarcation of the boundaries between private and public interests.

Thomas Hobbes (1588 - 1679), even in opposition to some Enlightenment precepts, understood that men in search of more security in the face of the challenges of living socially established pacts, arising from particular interests of self-preservation, which serve as a mediation between people, ensuring collective rules of coexistence (Weffort, 2011). In this sense, the perspective of society as an organism aimed at protecting individual life, is inserted.

John Locke, on the other hand, establishes some premises such as the right to life, the right to property, political and religious tolerance and the separation of state powers as the social basis capable of ensuring the (contractual) rules necessary for coexistence in collectivity, in the case of this philosopher, these premises guarantee human beings’ “natural” right to live and obtain fruits through the work he performs (Bennett, 1999).

Locke understood that work and human life are inalienable goods, that is, they belong only to the individual, and it is solely up to him to define how he wants to deal with these issues, as long as the collective contractual rule is not broken (Weffort, 2011). The philosopher's conceptions give rise to a line of thought characterized as classical liberalism, and involves the notion that private property should prevail over natural spaces whenever they become

productive by human action, observing the interests of the collectivity (Bennett, 1999; Weffort, 2011).

Noting that human beings are guided by the maximization of their well-being, Bernard Mandeville (1670 – 1733) modifies Hobbes' notion of society. For the philosopher, society exists exclusively to support the particular interests of individuals. Thus, the set of particular interests constitute the collective interest, without the existence of a particular and articulated collective interest (Mandeville, 2018).

The progress of society in this sense starts from the notion that each individual, particularly and focused on fulfilling their own interests, contributes to the development of the collectivity (Mandeville, 2018). In this line of thought, the search for personal satisfaction results in greater collective comfort, which is the interest of society. The common good is therefore the sum of private interests.

David Hume, starting from a vision similar to Mandeville, however pursuing a more pragmatic approach, understands that it is reason that formulates the context for the individual to pursue his particular goals, in this process people perceive themselves involved by sympathies with each other, therefore the process of achieving particular goals is permeated by a morality of complying with the established social rules (Salatiel, 2011).

Ganem (2000), analyzing the work *The Wealth of Nations* by Adam Smith (1723 – 1790), a contemporary of Hume, observed that the philosopher was able to conglomerate the bases of social thought at the time, founding a school of thought later recognized as liberalism. Smith's ideas encompassed the set of reflections based on Enlightenment ideals and some developments on the understanding of social reality at that time, Smith's ideas were based on rationality about aspects of everyday life.

Smith, verifying economic changes in relation to the precepts of mercantilism, brought the emerging philosophical perspectives on individuals closer to the economic vision. The philosopher proposed that, when driven by private interests, people were able to promote collective economic growth, and it was not up to the State to participate in the economy (in this case devoid of public interests) (Hunt & Lautzenheiser, 2013).

For Smith, the individual, legitimately moved by his private interests, seeks opportunities to become productive to the collective, with this, he starts to offer only products that will meet what others want, even in optimal quantities, since there is a limit of accepted products defined by the number of people willing to purchase those products (Rubin, 2014).

In this sense, the author exclusively applies rationality as a way of considering that demand and supply are complementary to each other, since the productivity, inherent in the ability to establish exchanges between products, is only maintained while their demand is not met (Ganem, 2000).

In this sense, producers cease to be productive for the collectivity if they continue to produce goods without available demand. In a situation of excess supply, prices fall and production is no longer advantageous for individual economic objectives. Smith proposes that this system generates a natural regulation between demand and supply (Ganem, 2000).

Thus, the role of economic analysis under the liberal philosophical perspective is in the understanding of the laws that guide the distribution of economic results generated by the flow of capital among those who own the land, wage earners and capitalists.

## 2.1 Liberal thinking as a watchful accounting norm

For Carqueja (2007) the motivation for the development of accounting over the years fell under the informational aspect of profit. Gray et al. (2013) address that this accounting development is at the service of economic interests, the same thing is also noted in the studies of Dillard & Vinnari (2019); Homero Junior (2021) Lourenço & Sauerbronn (2016) and Spence (2009).

The orientation of the accounting technique for the promotion of corporate profits is a striking aspect in accounting science (Jeanjean & Ramirez, 2009; Mattessich, 1972; Vernon Kam, 1990) but the acceptance of the accounting technique as accounting in its totality is an aspect which has attracted much criticism in the scientific field.

The seminal authors of the emerging current (at the time) of accounting thought focused on the incorporation of specific scientific precepts (Littleton, 1953; Paton, 1973; Vernon Kam, 1990). They proposed that the construction of concepts in the area must stop following the non-scientific postulation of ideas of renamed accounting thinkers of the time, and start to take place through precepts methodologically agreed and shared by the scientific community (Iudicibus & Lopes, 2004), turning to an objective and pragmatic business perspective (Mattessich, 1972).

Watts & Zimmerman (1986) and other accounting positivists proposed that scientists in the field should use statistical procedures and exact mathematical formulas to establish reproducible and verifiable understandings in the field of accounting. In this way, the Positive Accounting Theory was created following the positive approach to economics, incorporating precepts from that community of economic scientists, including not only the methodological premises but also the ontological, epistemological and axiological aspects.

Authors such as Jensen & Meckling (1976); Malkiel & Fama (1970) and Watts & Zimmerman (1986) used the positivist and neoclassical economic conceptual framework to carry out practical verifications of the accounting reality, similar movement carried out by other authors such as Aquino & Cardoso (2009); Iudicibus & Lopes (2004); Lopes & Martins (2005); Santos et al. (2015) and Scott (2009).

The business vision focused on the constant offering of profits, consolidates the neoliberal premise of human action in a society focused on the fulfillment of certain functions, legitimizing institutional practices that support a dominant class, interested in the naturalization of spurious economic standards that maintain its status quo, and that in this way, endures in the face of people's incapacity to promote reflections on this situation.

In the case of accounting science, this situation of domination is striking to the point of being discussed under the notion of monoparadigm as undertaken by Frezatti et al. (2009) commented by Lourenço & Sauerbronn (2016); Wanderley & Cullen (2012) and discussed by Andrew et al. (2020); Chua (2019) and Viegas & Oliveira (2018).

Thus, the concepts with accounting applications were restricted to the production of knowledge based on the systematic pricing of business and market activities, ensuring the necessary reliability for economic actors to develop objective assessments of the uses of goods, promoting greater and greater accumulation of wealth (Beaver, 1997; Iudicibus & Lopes, 2004; Lopes & Martins, 2005; Ryan et al., 2002; Scott, 2009).

The interest in sustaining this economically oriented view of the accounting mainstream is remarkable. This support commonly makes use of institutional surveillance expedients and is rooted in its premises. Legitimizing the liberal foundations as beacons of accounting thought and shedding light on the restrictions of these perspectives in the current context.

### 3. SOCIAL APPROACH TO THE MARKET

Karl Marx, in the 19th century, critical of the liberal view, stated that the capitalist economic model is a way of converting the entire social reality around the market, for him the precepts of the capitalist market govern social reality, whether under political or religious, ethical or otherwise aspects (Baldi, 2019).

In the Marxist conception, the functioning of capitalism stems from the exchanges that occur in the market environment. These exchanges, ultimately, take place between goods and human labor, as the currency used ends up representing the market value of one of these items (Peto & Verissimo, 2018).

Marx considers that the vision of capitalism stipulated by a liberal economic line assumes that the exchanges that occur in the market happen between items that have a corresponding value (in currency) and are totally rational in relation to the benefits obtained in these exchanges. Marx verifies that this premise obscures the fact that human labor is exchanged for a wage, which in turn is used in the market to acquire goods, maintaining the functioning of capitalism (Barbieri & Feijó, 2014; Hunt & Lautzenheiser, 2013; Nobre, 2004; Rubin, 2014).

For Marx people are forced to sell their labor power as a means of subsistence, however, the market does not recognize the value of human labor in the same way as it recognizes the value of commodities. The philosopher understands that when an entrepreneur hires the labor of a worker for the production of a certain commodity, the value of this transaction represents only a part of the value of that commodity, which receives, in addition to the production costs, a profit margin (Marx & Engels, 2007).

Thus, when people use the salary, they received for their work to exchange for goods on the market, they perceive that there is a disparity in the valuation between these items (merchandise and human labor). In this conception, the ideals of universal freedom and equality, advocated in liberal perspectives, do not exist in the capitalist model (Baldi, 2019).

This conception of capitalism makes workers end up subjugated by the level of power of companies that determine both the market value of wages and products. For Marx, the liberal ideal of equality and universal freedom is just an illusion, distorted by the individual process of accumulating wealth (Nobre, 2004).

In a historical perspective on the development of society, Marx informs that there was always a set of people, who held the necessary resources for production to be carried out, while there was another set of people who carried out production; in the interaction between these two groups, the domination of workers is established by the action of the holders of the means of production (Vieira, 2019).

This perspective considers that liberal premises apply only to those who own capital (the means of production), that is, liberal precepts are applied to capitalists and not to workers, who are obliged to sell their labor at prices determined by the capitalists, driven by their individual quest to obtain advantages (Machado, 2019).

The notion of equilibrium between demand and supply guided by prices as a way of determining what is individually advantageous (or not), central to Smith's conceptions, in Marx's approach does not apply to the part of the market that belongs to workers, as there is a their obligation to sell their labor power, including at the price the capitalist wants (Machado, 2019). On one hand, freedom is the result of the desire to accumulate capital, on the other hand, there is the intention of subsistence.

In this logic, as an imbalance between capitalists and workers is established, there can be no freedom in social spheres: workers end up with their existence restricted to work, they are involved by an economic context that dominates them, not allowing them to reflect on their existence, execute their plans and/or form associations around common interests (Nobre, 2004).

For Marx (2013) only a revolution is capable of inverting the logic of power in society, leading workers to control, deconstructing the current reality and producing a really free social reality. This society, in fact free, is proposed by the author through the alteration from the capitalist economic model to the communist one. But the philosopher considers that a direct transition from the current model to the proposed one is impossible, thus stressing the need for a transition model, socialism.

In the communist conception, there is no private property of the means of production, contrary to the liberal conceptions of the thought of Locke, Smith and Ricardo, in this way, regardless of whether or not there is any modification in the natural space in the process of making it productive, it is a good of all people, not just those who made it, or have plans, to make it productive (Vieira, 2019). Even under contrary conditions, Marx maintains the notion that life and work are inalienable.

The author subverts the liberal notion that collective interests are just the sum of private interests, he considers that there is a public and general interest, which is the result of State laws, which in turn are agreed by legitimate representatives of society, as well as in defending these impersonal laws, individuals are defending the nature of life (Ganem, 2000). In Marx's reasoning, it is the State that determines the individual order, the objectives to be achieved and defines what morality is. It is up to the State, in this process, to ensure natural independence and intellectual freedom (Vieira, 2019).

For Marx, the State is an association in which individuals realize their freedom, not just execute it as in Liberal thought. In this sense, the State is rationally the mediator of conflicts, the interlocutor of interests and the propeller of individuality, since the general will is the one that is established in the laws of the State (Vieira, 2019).

Freedom in the Marxist view is not a concept, but an action. For him, collective freedom must be the rational reflection of the interests of individual freedom, it must be understood not in a theoretical way as proposed by liberals, but in a practical way. It should be recognized for what actually happens in society, noting that those who hold the power to determine truths, formulate and apply laws, are the bourgeois, not the proletarians (Marx & Engels, 2007).

The Marxist questioning is based on the fact that power was established by capitalists, which explains why the State is not capable of sustaining the freedom of the people, on the contrary, the State is seen as an apparatus that oppresses most people by imprisoning them in a market logic, a perspective that creates a truth about the social reality that marginalizes and excludes those who do not have a voice, or power, for the creation (or modification) of the truths, or laws, of the collectivity (Ganem, 2000; Nobre, 2004).

Marx establishes a line of thought that points out that the capitalist economic model is doomed to failure:

- (i) The author considers that, driven by the interest in obtaining individual advantages, capitalists look for ways to expand their own result in market transactions, including looking for ways to pay less for the work performed by workers (Machado, 2019);

(ii) In order for workers to receive lower wages to be acceptable, capitalists need to create a context of oversupply of labor and shortage of jobs, that is, a situation of unemployment, since workers subsist exclusively for work, they tend to accept lower wages for the work they do (Peto & Verissimo, 2018).

(iii) This condition, however, widens the disparity between the market value of goods and labor, reducing the purchasing power of workers. When workers have a low ability to acquire products on the market, the demand for these products is also reduced, establishing a paradox based on the fact that even though supply is equally reduced by demand, prices become impracticable even for essential subsistence items (Vieira, 2019).

Therefore, the search to meet individual interests through the service of what is advantageous to be produced, conditioned by the price marker between supply and demand, a central element of liberal thought, in Marx's view, leads the collectivity to successive economic crisis and inevitably to collapse, not freedom (Marx & Engels, 2007).

#### **4. RESULTS**

When approaching its private owners who support economic thinking, in some disappointments, it launches itself to different ways of thinking about the collectivity, the State, the private property, the means of production, work and capital. It is clear how much the thinkers in the area strive to maintain coherence in relation to what they understand by freedom and equality.

At one extreme (the classical liberal) freedom is taken to the center of any consideration understanding that society can be seen as: (i) an individual protection organism as proposed by Hobbes; (ii) a contract established by those who live in community, as proposed by Locke; (iii) a way to ensure private interests as proposed by Mandeville; and (iv) a set rationally created to satisfy the interests of particulars, as in Smith and Mill's view.

At the other extreme (the Marxist) society is understood as something broader than individual commercial interests, the focus is on equality, even if some freedom is given up for this. The State has its own interests that are the representation of interests of the collectivity, so it receives legitimacy to define, by itself, all the elements of social life. In its future configuration, communism, the social domination of workers imposed by the capitalist model is overcome.

In liberal thinking, private property needs to be guaranteed to individuals by the State, it is understood that the space that has been altered in order to make any production viable is no longer natural to man and needs to be rationally owned by someone.

For Marxists, private ownership of the means of production is the source of the oppression of workers, it is understood that the individual who owns a means of production also has the ability to determine, at the same time, the market value of products and the wages of workers. Thus, acting in the interest of maximizing his gains, the capitalist imposes on the worker a logic of exclusion and subservience through work, which barely guarantees him the minimum possible to live.

#### **5. FINAL CONSIDERATIONS**

More than considering the strands of the history of economic thought as separate, or overlapping one another, it is necessary to understand them as the result of reflections on the self and its peers, in a selfish or collaborative way.

The reflection proposed in the study leads to thinking about ethics, morals, solidarity, commitment, the division of power and the meaning of the experienced patterns that give meaning to these elements. It denounces that reality cannot be described exclusively under a strand of thought, without considering different perspectives.

Establishing a truth based on the support, albeit unconsciously, of a single strand restricts the ability to understand the economic and social elements; in the same way that reflections established through perspectives lacking understandings of being and inconsistent with these same understandings, reduce the possibility that sufficient answers are produced to face current and future problems or understand the past.

The objective of this study was met as the bases of economic thought were revisited, bringing to light the characteristics commonly replicated by accounting studies, but which are often relegated by studies of this nature. In the same way, it is verified that the objective was met by approaching the parallels and intersections of the elementary premises of economic thought.

As future developments, it is considered that other approaches to freedom and equality, in addition to efficiency, such as those considered from economic thought in this study, are capable of producing in-depth understandings of both society and the economy, pushing the boundaries of accounting knowledge on the subject and fighting the surveillance imposed by the economistic view of the accounting mainstream.

## REFERENCES

- Andrew, J., Cooper, C., & Gendron, Y. (2020). Critical perspectives on accounting and journal rankings: Engaging in counter discourses and practices. *Critical Perspectives on Accounting*, 71, 102–169. <https://doi.org/10.1016/j.cpa.2020.102169>
- Aquino, A., & Cardoso, R. (2009). O Reconhecimento Contábil e as Teorias Contratuais da Firma. *Pensar Contábil*, 11(44), 32–38. August 27, 2022, from <http://www.atena.org.br/revista/ojs-2.2.3-06/index.php/pensarcontabil/article/viewFile/78/78>
- Baldi, L. A. de P. (2019). A categoria ideologia em Marx e a questão da falsa consciência. *Revista Katálysis*, 22(3), 631–640. <https://doi.org/10.1590/1982-02592019v22n3p631>
- Barbieri, F., & Feijó, R. L. C. (2014). *Metodologia do pensamento econômico: o modo de fazer ciência dos economistas* (1st ed.). Atlas.
- Beaver, W. H. (1997). *Financial reporting: an accounting revolution* (3rd ed.). Upper SaddleRiver, NJ: Prentice Hall.
- Bennett, J. (1999). Locke's philosophy of mind. In V. C. Chappell (ed.), *The Cambridge Companion to Locke*. Cambridge University Press. pp. 89.
- Bresser-Pereira, L. C. (2009). Os dois métodos e o núcleo duro da teoria econômica. *Revista de Economia Política*, 29(2), 163–190. <https://doi.org/10.1590/S0101-31572009000200001>
- Carqueja, H. O. (2007). Teoria da contabilidade – uma interpretação – estrutura conceptual e teoria da contabilidade. *Revista de Estudos Politécnicos*, 7(1), 7–40. Retrieved August 27, 2022, from [http://scielo.pt/scielo.php?script=sci\\_arttext&pid=S1645-99112007000100002&lng=en&tlng=pt](http://scielo.pt/scielo.php?script=sci_arttext&pid=S1645-99112007000100002&lng=en&tlng=pt).
- Chua, W. F. (2019). Radical Developments in Accounting Thought? Reflections on Positivism, the Impact of Rankings and Research Diversity. *Behavioral Research in Accounting*, 31(1), 3–20. <https://doi.org/10.2308/bria-52377>
- Davison, J. (2004). Sacred vestiges in financial reporting: Mythical readings guided by Mircea Eliade. *Accounting, Auditing & Accountability Journal*, 17(3), 476–497. <https://doi.org/10.1108/09513570410545821>
- de Iudícibus, S., Ribeiro Filho, J., Lopes, J., & Pederneiras, M. (2012). Uma reflexão sobre a contabilidade: caminhando por trilhas da “teoria tradicional e teoria crítica.” *BASE - Revista de Administração e Contabilidade Da Unisinos*, 8(4), 274–285. <https://doi.org/10.4013/base.2011.84.01>

- Dillard, J., & Vinnari, E. (2019). Critical dialogical accountability: From accounting-based accountability to accountability-based accounting. *Critical Perspectives on Accounting*, 62, 16–38. <https://doi.org/10.1016/j.cpa.2018.10.003>
- Evans, L. (2004). Language, translation and the problem of international accounting communication. *Accounting, Auditing & Accountability Journal*, 17(2), 210–248. <https://doi.org/10.1108/09513570410532438>
- Foucault, M. (1987). *Vigiar e punir: nascimento da prisão* (Ramalhe, R., Trad.). Petrópolis, RJ: Vozes. (Original published in 1975).
- Foucault, M. (2012). *A arqueologia do saber* (Neves, L. F., Trad.). Rio de Janeiro, RJ: Forense universitária. (Original published in 1969).
- Foucault, M. (2014). *Microfísica do poder* (Machado, R., Trad.). Rio de Janeiro, RJ: Paz & Terra. (Original published in 1970)
- Fournier, V., & Grey, C. (2000). At the critical moment: Conditions and prospects for critical management studies. *Human Relations*, 53(1), 7–32. <https://doi.org/10.1177/0018726700531002>
- Frezatti, F., Nascimento, A. R. do, & Junqueira, E. (2009). Desenvolvimento da pesquisa em Contabilidade Gerencial: as restrições da abordagem monoparadigmática de Zimmerman. *Journal of Accounting and Economics*, 2001, 6–24. <https://doi.org/10.1590/S1519-70772009000100002>
- Ganem, A. (2000). Adam Smith e a explicação do mercado como ordem social: uma abordagem histórico-filosófica. *Revista de Economia Contemporânea*, 4(3). August 27, 2022, from <https://revistas.ufjf.br/index.php/rec/article/view/19623>
- Gendron, Y., & Baker, C. R. (2005). On interdisciplinary movements: The development of a network of support around Foucaultian perspectives in accounting research. *European Accounting Review*, 14(3), 525–569. <https://doi.org/10.1080/09638180500041364>
- Gonçalves, M. (2019). Contabilidade por partidas dobradas: história, importância e pedagogia (com especial referência à sua institucionalização em Portugal, 1755–1777). *De Computis - Revista Española de Historia de La Contabilidad*, 16(2), 69. <https://doi.org/10.26784/issn.1886-1881.v16i2.355>
- Gray, R., Dillard, J., & Spence, C. (2013). Pesquisa em Contabilidade Social como Se o Mundo Importasse Um ensaio sobre nostalgia e um novo absurdismo. *Revista de Contabilidade e Organizações*, 7(17), 119–133. <https://doi.org/10.11606/rco.v7i17.59345>
- Homero Junior, P. F. (2021). Reflexões sobre a Prática da Pesquisa Crítica em Contabilidade no Brasil. *Revista de Educação e Pesquisa Em Contabilidade (REPeC)*, 15(2), 225–242. <https://doi.org/10.17524/repec.v15i2.2823>
- Hunt, E. K., & Lautzenheiser, M. (2013). *História do Pensamento Econômico*. (Villela, A. A., Trad.). Rio de Janeiro, RJ: Elsevier. (Original published in 2011).
- Iudícibus, S. de, & Lopes, A. B. (2004). *Teoria avançada da contabilidade*. São Paulo: Atlas.
- Jeanjean, T., & Ramirez, C. (2009). Back to the Origins of Positive Theories: A Contribution to an Analysis of Paradigm Changes in Accounting Research. *Accounting in Europe*, 6(1), 107–126. <https://doi.org/10.1080/17449480902896510>
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure, *Journal of Financial Economics*, 3(4), 305–360, [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X).
- Littleton, A. C. (1953). *Structure of Accounting Theory*. American Accounting Association.
- Lopes, A. B., & Martins, E. (2005). *Teoria da contabilidade: uma nova abordagem*. São Paulo: Atlas.
- Lourenço, R. L., & Sauerbronn, F. F. (2016). Revistando possibilidades epistemológicas em contabilidade gerencial: em busca de contribuições de abordagens interpretativas e críticas no Brasil. *Revista Contemporânea de Contabilidade*, 13(28), 99. <https://doi.org/10.5007/2175-8069.2016v13n28p99>
- Machado, N. M. C. (2019). A “primeira versão” da teoria da crise de marx: A queda da massa de mais-valia social e o limite interno absoluto do capital. *Estudos Economicos*, 49(1), 163–203. <https://doi.org/10.1590/0101-41614916NCM>

- Malkiel, B. G., & Fama, E. F. (1970). Efficient capital markets: a review of theory and empirical work. *The Journal of Finance*, 25(2), 383–417. <https://doi.org/10.1111/j.1540-6261.1970.tb00518.x>
- Mandeville, B. (2018). *A Fábula das abelhas ou vícios privados, benefícios públicos*. (Simões, B. C., Trad.). São Paulo: Editora UNESP.
- Martinez, D. E., & Cooper, D. J. (2020). Seeing Through the Logical Framework. *Voluntas*, 31(6), 1239–1253. <https://doi.org/10.1007/s11266-020-00223-8>
- Marx, K. (2013). *Crítica da economia política. O processo de produção do capital* (Enderle, R., Trad.). São Paulo: Boi Tempo.
- Marx, K., & Engels, F. (2007). *A ideologia alemã : crítica da mais recente filosofia alemã em seus representantes Feuerbach, B. Bauer e Stirner, e do socialismo alemão em seus diferentes profetas* (Enderle, R., Trad.). São Paulo Boi tempo.
- Mattessich, R. (1972). Methodological Preconditions and Problems of a General Theory of Accounting. *The Accounting Review*, 47(3), 469–487. August 27, 2022, from <http://www.jstor.org/stable/244962>
- Meneghetti, F. K. (2011). O que é um ensaio-teórico? *Revista de Administração Contemporânea*, 15(2), 320–332. <https://doi.org/10.1590/s1415-65552011000200010>
- Mises, L. von. (2010). *Ação humana* (Stewart, D., Trad.). São Paulo: Instituto Ludwig von Mises Brasil Editora.
- Nepomuceno, V. (2014). O caminho para a extinção das partidas dobradas na contabilidade dos EUA. *Revista Brasileira de Contabilidade*, 208, 91–103. August 27, 2022, from <https://dialnet.unirioja.es/descarga/articulo/7193079.pdf>
- Nobre, M. (2004). *A teoria critica* (1st ed.). Rio de Janeiro: Zahar.
- Paton, W. A. (1973). *Accounting Theory*. Scholar Book Co.
- Peto, L. C., & Verissimo, D. S. (2018). Natureza E Processo De Trabalho Em Marx. *Psicologia & Sociedade*, 30(0), 1–11. <https://doi.org/10.1590/1807-0310/2018v30i181276>
- Ramakrishnan, R. T. S., & Thakor, A. V. (1991). Cooperation versus competition in agency. *Journal of Law, Economics, and Organization*, 7(2), 248–283. <https://doi.org/10.1093/oxfordjournals.jleo.a037011>
- Riccio, E. L., Mendonça Neto, O. R. de, & Sakata, M. C. G. (2007). Movimentos de teorias em campos interdisciplinares: a inserção de Michel Foucault na contabilidade. *Revista de Administração Contemporânea*, 11(spe2), 11–32. <https://doi.org/10.1590/s1415-65552007000600002>
- Rubin, I. I. (2014). *História do pensamento econômico*. Rio de Janeiro: Editora UFRJ.
- Ryan, B., Scapens, R. W., & Theobald, M. (2002). Research Methodology in Finance and Accounting. In *Research Methods in Finance and Accounting* (2nd ed.). Academic Press Limited.
- Salatiel, J. R. (2011). *Pierce e Hume em torno do empirismo: uma dupla estratégia do método pragmatista em resposta ao ceticismo*. Argumentos Revista de Filosofia. August 27, 2022, from [https://repositorio.ufc.br/bitstream/riufc/51322/1/2011\\_art\\_jrsalatiel.pdf](https://repositorio.ufc.br/bitstream/riufc/51322/1/2011_art_jrsalatiel.pdf)
- Santos, J. G. C. dos, Caliope, T. S., & Coelho, A. C. (2015). Teorias da Firma como fundamento para formulação de teorias contábeis. *Revista de Educação e Pesquisa Em Contabilidade (REPeC)*, 9(1). <https://doi.org/10.17524/repec.v9i1.1182>
- Scott, W. (2009). Efficient Security Markets. In *Financial Accounting Theory* (5th ed., p. 546). Prentice Hall.
- Spence, C. (2009). Social accounting's emancipatory potential: A Gramscian critique. *Critical Perspectives on Accounting*, 20(2), 205–227. <https://doi.org/10.1016/j.cpa.2007.06.003>
- Kam, V. (1990). Accounting theory. In *Accounting Theory* (2nd ed., Vol. 3). John Wiley & Sons.
- Viegas, P. G., & Oliveira, J. H. (2018). Pesquisa em Contabilidade Gerencial: Oportunidades além do Mainstream. *Revista Científica Multidisciplinar Núcleo Do Conhecimento*, 7(8). August 27, 2022, from <https://www.nucleodoconhecimento.com.br/contabilidade/oportunidades-do-mainstream>
- Vieira, J. L. (2019). O problema da propriedade privada para o jovem Marx. *Trans/Form/Ação*, 42(2), 123–150.

<https://doi.org/10.1590/0101-3173.2019.v42n2.07.p123>

Wanderley, C. de A., & Cullen, J. (2012). Management Accounting Research: Mainstream versus Alternative Approaches. *Revista Contabilidade Vista & Revista*, 22(4), 15–44. August 27, 2022, from <https://revistas.face.ufmg.br/index.php/contabilidadevistaerevista/article/view/1405>.

Watts, R., & Zimmerman, J. (1986). *Positive Accounting Theory* (1st ed.). Prentice Hall.

Weffort, F. (2011). *Os clássicos da política* (Vol. 148). Ática.

#### **4. ACCOUNTABILITY AND SUSTAINABILITY A CRITICAL SYSTEMATIC REVIEW AND BIBLIOMETRIC ANALYSIS**

## ACCOUNTABILITY AND SUSTAINABILITY: A CRITICAL SYSTEMATIC REVIEW AND BIBLIOMETRIC ANALYSIS

### RESPONSABILIDADE E SUSTENTABILIDADE: UMA ANÁLISE BIBLIOMÉTRICA E REVISÃO SISTEMÁTICA CRÍTICA

**ABSTRACT Purpose:** This research analyzes the theoretical relations of accountability and sustainability in accounting literature. Accountability is an ascending theme in accounting that is linked to creating awareness about the impact of the actions of companies in society. Sustainability is a relevant alternative way of thinking about business management to face the economic, social, and environmental challenges of the 21st century. The objective of this study is to map the literature that investigates the intersection between sustainability and accountability, interpreting the development of this research trend over the years, identifying future opportunities to enrich this topic, as well as identifying the most relevant fields of study according to the Web of Science database. **Methodology:** This article based its analysis on the Web of Science database, collecting all the available data up to 2021. A verification of the obtained results was also performed against Scopus database. Subsequently, the collected data were placed and analyzed in the VOS viewer® software for the construction of bibliometric maps. Finally, theoretical characteristics are investigated in order to find conceptual relationships, gaps and complementation. **Results:** The analysis demonstrates that there are two main research focuses on this point: the first one assumes that the sustainability attitude emerges inside the corporations and their results impact society; the second line accepts that sustainability is one social aspect that influences corporate actions. In both cases, accountability is a key factor to understand the consequences to adopt a sustainable behavior in organizations. **Implications/originality:** The contribution of this study is the identification of the main trends in this research area, as well as the respective gaps that provide exciting opportunities for future research. The findings may help firms find better ways of reporting the value they deliver to society, inspiring others to become more sustainable. **Limitations:** The greatest limitation encountered was the decision to only consider Web of Science results for analysis, ignoring other sources of information. In addition, the use of only academic research (papers) limited the veracity of the results, since other kinds of sources were not considered.

**KEYWORDS:** sustainability; accountability; corporate social responsibility; systematic review; bibliometric studies; literature review.

**RESUMO Objetivo:** Esta pesquisa analisa as relações teóricas de accountability e sustentabilidade na literatura contábil. Accountability é um tema ascendente na contabilidade que está ligado à conscientização sobre o impacto das ações das empresas na sociedade. A sustentabilidade é um relevante forma alternativa de pensar a gestão empresarial para enfrentar os desafios econômicos, sociais e ambientais do século XXI. O objetivo deste estudo é mapear a literatura que investiga a interseção entre sustentabilidade e accountability, interpretando o desenvolvimento dessa tendência de pesquisa ao longo dos anos, identificando oportunidades futuras para o enriquecimento desse tema, bem como identificando os campos de estudo mais relevantes de acordo com banco de dados da Web of Science. **Metodologia:** Este artigo baseou-se na sua análise na base de dados Web of Science, recolhendo todos os dados disponíveis até 2021. Também foi realizada uma verificação dos resultados obtidos na base de dados Scopus. Posteriormente, os dados coletados foram colocados e analisados no software VOS viewer® para construção dos mapas bibliométricos. Por fim, são investigadas características teóricas a fim de encontrar relações conceituais, lacunas e complementações. **Resultados:** A análise demonstra que há dois focos principais de pesquisa neste ponto: o primeiro pressupõe que a atitude de sustentabilidade emerge dentro das corporações e seus resultados impactam a sociedade; a segunda linha aceita que a sustentabilidade é um aspecto social que influencia as ações corporativas. Em ambos os casos, a prestação de contas é um fator chave para entender as consequências para a adoção de um comportamento sustentável nas organizações. **Implicações/originalidade:** O contributo deste estudo é a identificação das principais tendências nesta área de investigação, bem como as respectivas lacunas que proporcionam oportunidades interessantes para futuras investigações. As descobertas podem ajudar as empresas a encontrar melhores maneiras de relatar o valor que entregam à sociedade, inspirando outras a se tornarem mais sustentáveis. **Limitações:** A maior limitação encontrada foi a decisão de considerar apenas os resultados do Web of Science para análise, ignorando outras fontes de informação. Além disso, o uso apenas de pesquisas acadêmicas (artigos) limitou a veracidade dos resultados, uma vez que outros tipos de fontes não foram considerados.

**PALAVRAS-CHAVE:** sustentabilidade; responsabilidade; responsabilidade social corporativa; revisão sistemática; estudos bibliométricos; revisão da literatura.

## 1. INTRODUCTION

Managers, shareholders, and accountants are essential actors for economic development. In the 20th century, social and environmental problems emerged and forced the multiplication of reflections on the impact of business activities in the social sphere (Elkington, 2020). Despite these reflections, business scientists, insisting on approaches that disregard the subject from object (Dillard & Vinnari, 2019), incorporating a pre-conceived old-world vision established through long-standing lines of research without thorough reflections (Bagg, 2021).

While the social world witnesses the radical rise in environmental issues such as global warming, pollution, logging, species exclusion and genetic mutations (Gray, 2010a), the business world continues to concentrate on a reality where maximizing profit is the essential objective of many organizations (Alawattage & Wickramasinghe, 2021). At the same time people find themselves enmeshed in contexts of economic, mental, and social poverty, while the business administrators and investors set their minds on finding ways to increase the return on the capital invested at the lowest possible cost (Fehrenbacher et al., 2019). In the 21st century, the acknowledgment that many of the environmental and social problems that plague humanity come from business activity is not news (Egan & Tweedie, 2018; Yang et al., 2021).

Established debates that go beyond these mainstream conceptions and adopt other approaches demonstrate that it is possible to extrapolate the rationalized considerations of the production of accounting/financial reports (Villiers & Sharma, 2020a), addressing the radically emancipatory potential of accounting (Gallhofer & Haslam, 2019) when considering environmental, social, and economic issues in an integrated way (Nicholls, 2020). It is from the social perspective of accounting (Gray et al., 2013) that there is an urgent need for accounting to lay aside passivity, give up the negligent and fallacious exemption regarding the production of information, and become a promoter of change in the world, as well as an active and interested agent generating changes for new understandings of business actions in society.

According to Boiral (2013), Brown & Dillard (2014), Higgins et al. (2014) and Homero Junior (2021) the use of sustainability in the accounting field is about economic legitimation and ignoring others real sustainability perspective. This is a problem linked to accountability that is acknowledged. For Roberts (2021) accountability is a way to transform the individualistic thought of companies into a more collective one through ethics. Sinclair (1995) demonstrates how accountability is a possibility for constructing a sense of being accountable in business. For Ahrens et al. (2020) accountability is a social process influenced by reality experienced. Boiral et al. (2019) and Nadeem et al. (2021) raise questions about the lack of credibility in disclosures of companies on sustainability and how this affects the stakeholder accountability.

Mason (2020) presents some perspectives on the power in accountability that influence the real understanding of sustainability by organizations, and Sareen & Wolf (2021) discuss the importance of accountability as a mechanism of sustainability transition in an organizational way of thinking. These authors support an accounting line of argument that accountability and sustainability are complementary concepts. Cho et al. (2015) deepens this debate by describing the existence of a notable recent mainstream interest in CSR. However, for him and Patten (2013) this recent interest does not seem to have accompanied the development of studies related to the area in the last thirty years, due to lack of knowledge or interest. According to Adams (2015), reflections on the integration of organizational processes with the precepts of sustainability has the potential to promote changes in the way corporate actors understand the impacts of business actions on society and the environment. The author states that it is the role of accounting researchers to get involved with the theme to generate new ways to promote this potential.

The concept of sustainability was introduced as a way to integrate economic, social and environmental elements into human and business action (Brown et al., 1987; Brundtland, 1987; Christensen, 2014; Elkington, 2011, 2020), unveiling a set of possible reflections so that theoretical barriers faced by accounting scientists are overcome. Accounting authors such as Homero Junior and Carrieri (2020), Byrch et al. (2015) Gray (2001, 2010), and Lamberton (2005) undertake seminal accounting reflections on sustainability, but studies of this nature are still uncommon, and out of the mainstream.

Despite all the improvements that have been achieved separately in sustainability and in accountability, studies that relate both are not common, but they may reveal some practical and theoretical possibilities that are hidden by the economic mainstream thought, increasing the understanding of the concepts inherent in them. Everyone living in the 21st century, accountants or not, is inserted in a social context in which changes are dramatic and constant (Bauman, 2001). A large part of these dramatic social transformations can be seen in relation to the changes in climate that have imposed themselves on the entire planet (Elkington, 2011), in the high levels of crime that are no longer exclusive to poor or developing countries (Farias et al., 2020), and especially in the power of governments, which is eroded daily in the face of the economic and political rise of big companies (Phiri, 2020; Senge, 2017). Sustainability and accountability are an emergent way to overcome this reality.

It is in this context that the present study is inserted, seeking to understand and (re)interpret epistemological lines of research on accountability and sustainability which have an impact on organizational and accounting studies, highlighting both: (i) conceptual perspectives widely debated, but which come to be being criticized today; (ii) and exposing scientific opportunities for development, which face paradigmatic barriers to be overcome in order to promote changes in current organizational practices.

Therefore, understanding that in the beginning of the 21st century:

- (i) there has been an academically oriented and socially interested accounting mainstream supporting the maintenance of the academic status quo (Villiers et al., 2019; Gendron & Baker, 2005; Homero Junior, 2017, 2019; Mendes et al., 2020; Wong et al., 2021) and ensuring the supremacy of the business economic interest (Anesa et al., 2019; Elkington, 2020; Farias et al., 2020; Gallhofer & Haslam, 2019; Graham & Grisard, 2019; Purvis et al., 2019);
- (ii) accounting reflections emerge from the critical approach that focus on the conflict inherent in the current social situation (Andrew et al., 2020; Baxter & Chua, 2003; Chabrak et al., 2019; Chua, 1986, 2019; Cooper & Hopper, 1987; Dillard & Vinnari, 2019; Ejiogu et al., 2018; Roberts, 2021) and;
- (iii) the understanding that economic development, guided by obtaining and expanding profit, produces a context of environmental and social devastation (Ala & Lapsley, 2019; Elkington, 2020; Gray, 2010; Hörisch et al., 2020; Perkiss & Moerman, 2018).

This study is an invitation to the following reflection: How does the concept of accountability intersect with sustainability accounting research? In answering the research question, the proposed objective is to carry out a bibliometric analysis of the research that is dedicated to the intersection of sustainability with the challenges of accounting in dealing with aspects of social responsibility.

To address these gaps, this article applies the bibliometric analysis to understand the past studies and possible trends, as well as opportunities for future research. The choice of the design for this research reflects the intention to explore different areas of study and investigation. This study offers new research opportunities in this field – topics less studied that need to be explored, researched, and analyzed by academicians and practitioners – using content analysis from recent literature to identify key themes for further research, as well as to identify gaps in the literature. Finally, through the bibliometric maps developed by VOS viewer®, we were able to identify the most commonly studied themes and topics found in literature. This enabled us

to analyze the topics that mainstream researchers pay less attention to and in this way, create a list of opportunities for future research.

In addition to this brief introduction, this article has four other sections: section two, Theoretical background, gives a brief approach describing accountability and sustainability; the third section, Methodology, describes the methodological choices adopted in this analysis; the Results are presented in part four, together with a brief characterization of the literature, the gaps identified and future opportunities. Finally, the Conclusion on the research elaborated is laid out, as well as its contributions and limitations.

## **2. THEORETICAL BACKGROUND**

### **2.1 The sustainability idea**

Studies in the field of Corporate Social Responsibility (CSR) have roots in the seminal work of Bowen (1953). CSR was linked to decisions of companies that needed to adopt directives to link organizational objectives with the social objectives. For Bowen (1953) CSR stems from public responsibility, social obligations, and commercial morality. Carroll (1991) developed the pyramid of CSR, based on the proposed four components: economic factors, responsibility to regulations and laws, ethics, and philanthropy.

Despite the criticisms of neoclassical thinkers and the problems in the pyramidal progressive thought, Bowen (1953) and Carroll (1991) conduct the organizational thinking to another baseline, where profit continues to be important in business policy, but it is not the only exclusive directive. In a contemporary way, sustainability is a line of thought related to these CSR seminal authors, using this literature as a reference to establish the precepts of the 1987 report of the World Commission on Environment and Development of the United Nations, chaired by Gro Brundtland, which defines sustainability as the form of development that meets the needs of present generations without compromising the ability of future generations to meet their own needs (Warde, 2011).

Over time, the CSR and Sustainability approaches progressively converged, sharing comparable dimensions (Abad-Segura et al., 2020; Meseguer-Sánchez et al., 2021; Sánchez-Hernández et al., 2021; Sheehy & Farneti, 2021). These two approaches involve multiple levels of analysis (individual, group, company, community, etc.) and multiple stakeholders (employees, shareholders, customers, suppliers, partners, community members, etc.). In addition, the CSR and Sustainability theories consider three converging dimensions: the social, the environmental and the economic (Pérez Cañizares, 2021; Sánchez-Teba et al., 2021)

Looking at society's need to go through a process of "sustainability", that is, become more sustainable over time, Hallin et al. (2021) point out that understanding the triple bottom line perspective is still impacted by many remnants of the traditional way of thinking about business activity. For the authors, mainstream researchers and professionals both insist on considering: an "economic sustainability" operationalized by production or manufacturing costs; an "environmental sustainability" for the use of energy and other resources, such as, the waste from operations; and "social sustainability" under measures regarding equal opportunities. Then, they obscure precisely what the triple bottom line perspective states, the integration of these dimensions.

Other parallel contributions, brought by Elkington (2011), reinforce the thought that the Triple Bottom Line portrays sustainability as being understood by the integration of economic, social and environmental factors. Thus, the author proposes a model associated with the difficulty of continuously considering the factors in an integrated way through three types of drivers to be

applied: (1) the business case, where environmental and social factors are in the background in relation to the economic factor; (2) the human case, where environmental and economic factors are displaced due to the social factor; and, (3) the green case, where the economic and social factors are relegated due to the environmental factor.

The author suggests that, depending on the moment, a company must act according to the case that best fits the scenario presented, considering the different levels of interests of those involved, the multiplicity of concerns of stakeholders, and looking ahead to integrating the environmental, social and economic dimensions.

Although the subject has been debated for some time, sustainability is still used as a basis in a few accounting studies. Authors such as Dagiliene & Štutienė (2019); Hörisch et al. (2020) and Zyznarska-Dworczak (2020) use the mainstream view of accounting as a way of integrating it with an understanding of sustainability as a guide for the information to be produced in the area. Lazkano & Beraza (2019) approaches the subject from macroeconomics applied to accounting, that is, accounting focused on elements of a local, regional, and national order as examples. Then there are approaches such as those by Di Carlo et al. (2019), Pina et al. (2020) and Sinervo (2020), who apply the controversial concept of financial sustainability as a way of indicating the ability to maintain the financial health of an organization over time.

## **2.2 Sustainability on accounting**

Recognizing sustainability as a line of reasoning that investigates how disciplines can develop knowledge in favor of sustainable development, Bebbington & Larrinaga (2014) explore the possibilities of sustainability in relation to accounting. For the authors, the focus of sustainability is injected into this field by overcoming the limitations of current accounting approaches; in other words, it is necessary to acknowledge that there are problems different in nature from those that accountants are used to dealing with, so it is necessary to experiment with new ways of knowing, including new ways of engaging research.

Addressing the fact that environmental and social aspects apparently are not compatible with accounting, (Gray, 2010a, 2013) asserts that the traditional accounting practice, predominantly economic, does not offer reasons for the use of (traditional) accounting fundamentals in sustainability-oriented accounting, which is necessarily conceived from an alternative accounting perspective. Like Gray (2010b), and confirming the understanding that mainstream accounting aspects are not capable of offering an understanding of sustainability, Deegan (2013) informs that only when accounting conventions and principles are set aside can such concerns be perceived in the contributions of the area. The author understands that the automatic accounting logic, reporting or measuring organizational performance, based on current precepts, ends up creating abysses between organizations and stakeholders.

However, one topic is predominant in accounting studies on sustainability: the debate on disclosure practices (Cooper & Owen, 2007). In this perspective, three broad lines are verified, the first linked to the inherent failures of these practices in meeting sustainable principles, the second related to how much they promote sustainability, and a third that addresses how disclosure practices should be carried out at the organizational level. Table C1 presents the most frequently cited studies in each of these aspects.

**Table C1.** Accounting perspectives on sustainability reporting

Disclosure raises awareness of sustainability		Disclosure		Disclosure does not raise awareness of sustainability	
Adams (2015), Thomsom (2015)	Agrees with the integrated reporting initiative.	Maroun (2017)	Ways to audit information	Malsh (2013), Gibassier, Rodrigue, Arjaliés (2018)	Myths of Adoption of the Report.
Stubbs and Higgins (2014)	The practice of reporting mobilizes resources in the organization.	Mary-anne, Dannielle, Maroun, Warren (2010)	Avoid failures in the construction of reports.	Michelon, Pilonato, Ricceri (2015), Flower (2015)	Criticizes the integrated reporting initiative.
Wang, Zhou and Wang (2020)	The report is beneficial to governance practices.	Lys; Naughton; Wang (2015), Eccles, Krzus and Ribot (2015)	Recommendations for the adoption of principles and practices.	Boiral (2013), Diouff; Boiral (2017), Melloni, Caglio and Perego (2017)	Companies shape reports to what they want to emphasize or hide.
Dhaliwal et al. (2012), McNally and Maroun (2018)	The practice causes significant changes in the process and generates value.	Maroun (2018)	Need for adequacy of audit teams.	Giovannoni and Maraghini (2013)	Reports create tensions between performance and creativity
Kim, Park and Wier (2012), Christensen (2016), Garanina and Dumay (2017), Reimsbach; Hahn; Gürtürk (2018)	Disclosure influences stock performance.	Villiers; Rinaldi; Unerman (2014); Malola and Maroun (2019)	Integrated report drivers.	Cho et al. (2015) Chaidali and Jones (2017)	Lack of credibility of the integrated report.

Observing the crescent preoccupation of the companies in legitimizing their responsibility over society throughout the disclosure process, Cooper & Owen (2007) identify accountability as a missing link in this relation. The authors describe how the current disclosure process is molded to limit the stakeholders' opportunity to take action, that is, at the same time the disclosure process is used for organizations to display some social concern, it is used to limit the power of the stakeholders. Cho et al. (2015) and Patten (2013) indicate CSR as an emerging topic in accounting reflections. These authors say that CSR Disclosure is used to put the focus on organizational image aspects rather than on the management of Accountability. For these authors, the reason to use the Disclosure in this way derives from the mainstream accounting thought and follows a similar movement in the mainstream economic, management and accounting journals, but in case of accounting, these situations persist because accounting researchers insist on not reconceptualizing problematics outside the mainstream point of view.

### 3. METHODOLOGY

The data used for this article was taken from the Web of Science (WOS) database, a platform that makes it possible to acquire, analyze and disseminate information on different academic disciplines. Using a search through key terms, this tool automatically generates information related to the topic in question. Through this, we can generate sufficient and credible data to obtain essential information for our research work, based on citations, articles, authors, and departments (Liu, 2019; Meho & Yang, 2007; Zhu & Liu, 2020).

It is important to highlight that a comparative analysis with the Scopus database was carried out, considering the fact that it has a well-known knowledge that it has an important collection of scientific studies related to the topic. However, it is noteworthy that no significant differences were found between the results indicated by the two bases, we understand that this result is related to the specificity of the search terms, as well as to the search options of seeking information only in scientific journals of the accounting area. Therefore, as a way of avoiding

redundancy, or promoting any damage to the results found, it was decided to keep only the results obtained from the Web of science database.

Bibliometric research is a quantitative methodology that allows us to count bibliographic content, using an analysis network based on the most relevant documents, keywords, authors, or journals. Using mapping techniques, this research aims to provide information on the structure of the network, making it possible to analyze its contents and draw important conclusions for the development of the discipline studied (Waltman et al., 2010). This author also argues that this technique should solve the following problems: (1) identify the main topics covered by the academic literature (2) understand and analyze the different relationships between the most recurrent keywords and themes and (3) discuss their evolution.

The data considered for this article was collected in December 2021 with no restrictions on the study period, where 668 results in WoS-indexed accounting journals were obtained. The keywords to acquire the study database were: (“Accountability” [or] “Transparency” [or] “Responsibility” [or] “Answerability”) [AND] (“Sustainability” [or] “Triple bottom line” [or] “Corporate Social Responsibility” [or] “CSR”), where the topics, titles, abstracts, and keywords were considered. Subsequently, the VOS viewer program was used to build the respective bibliometric maps, classified by authors, articles, and journals (Merigó & Yang, 2017).

The decision to use WoS was due to the fact that WoS is the oldest, broadest, and most reliable database in the research world (Birkle et al., 2020). We can justify our decision by the many advantages of the tool, such as the largest registry of articles and citations (Repiso et al., 2019), the most authentic and reliable source for research papers (Khan et al., 2020), the possibility of extracting relevant information (Luo et al., 2020), the delivery of solutions that enable research in emerging areas (Butt et al., 2021), and the international collaboration with city and world leaders in scientific production and development (Csomós et al., 2020). Other databases were consulted, and no relevant additional publications were found.

Therefore, using the software and database mentioned above, these were the analytical standards:

1. In a first instance, research was carried out on the WOS, downloading the inventory containing the cited references, author, title, source, and abstract;
2. In a second instance, within the VOS viewer software, the database was applied and analyzed using the “binary counting” method, resulting in the analysis of the titles and abstracts of all documents.

## **4. RESULTS**

### **4.1 Evolution and data analysis**

This analysis concentrated on the number of articles and citations they received in the period between 1984 and 2021. This period is mentioned because all the keywords used in this analysis did not appear, simultaneously, in any publication before 1984. Figure C1 demonstrates the annual number of publications that dealt with accountability and sustainability when they are analyzed together. The first publications appeared in 1984, but only after 2007 did the publications become more frequent until December of 2021, when the data was last taken from the WoS.

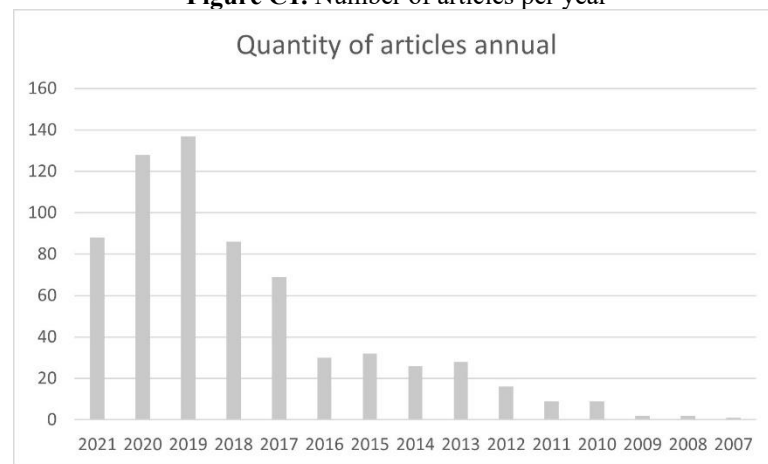
**Figure C1.** Number of articles per year

Figure C2 shows the number of citations made each year since 1984. Nevertheless, and similarly to what happens in figure 1, only in mid-2007 was there an increase in citations. Table C2 represents the number of publications and citations in accounting journals, considering the results of the research sample. The fields of study related to this research are “Business finance”, “Management”, “Public administration”, “Economics” and “Business”.

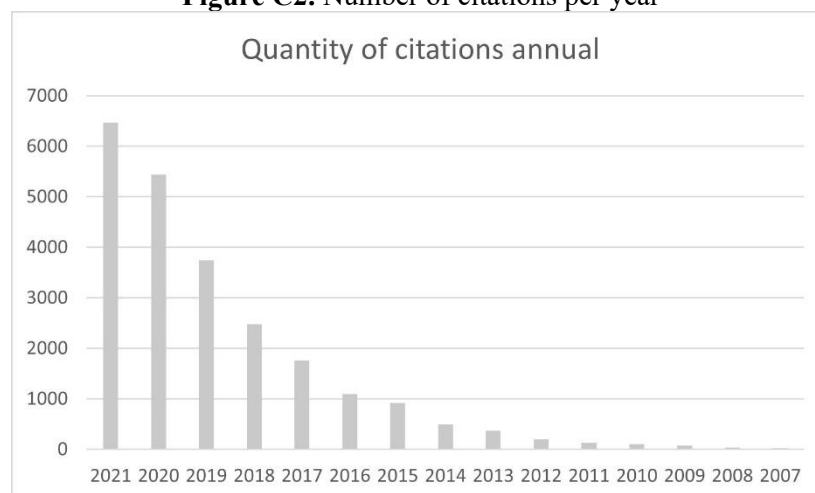
**Figure C2.** Number of citations per year

Table C2 shows that there are 684 articles and 23.543 citations in specialized accounting journals, which deal with accountability and sustainability together. This situation demonstrates that it is an emerging topic in the accounting field, but it also indicates that there is a lot of space, compared to international literature, for new studies that address the theme.

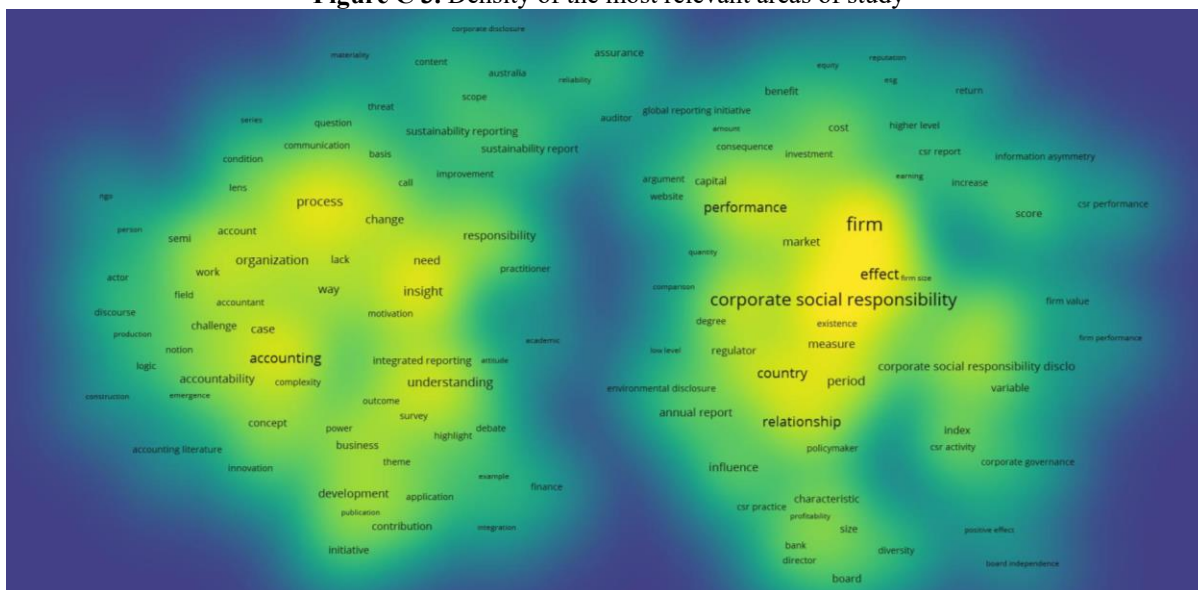
**Table C2.** General research data of number of articles and citations

Keywords	Number of articles	Number of citations
(Accountability OR Transparency OR Responsibility OR Answerability) AND (Sustainability OR triple bottom line OR Corporate social responsibility OR CSR)	668	24,034

Using the VOS Viewer software to recover the information about the relationships among a group of words that normally appear connected in these articles. The software was set for: “co-occurrence map based on text data”, the fields from which terms to be extracted were “Title and abstract fields”, and the counting method as “binary counting”. This set was chosen because of the interest in finding the major topics in those papers analyzed. Secondly, we used the “thesaurus” file to merge different variants of the same keywords. Then we included a minimum

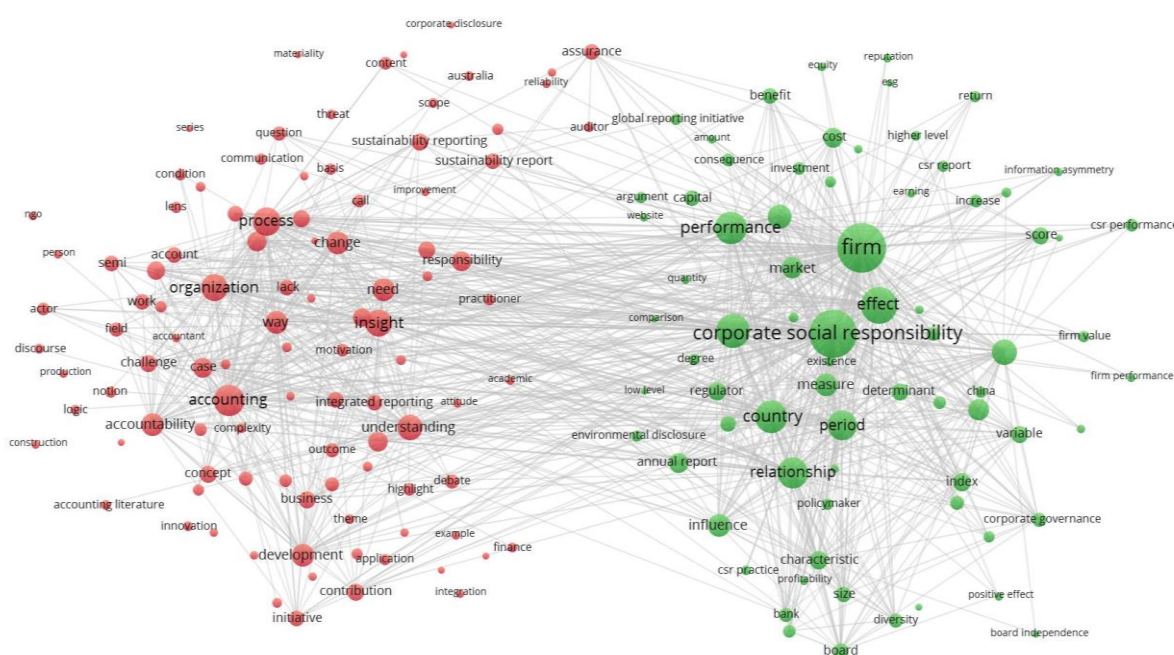
number of twelve entries for each term. With this setup, 176 items were obtained and used to find a higher density of clusters and the relationship between the terms (Figure C3).

**Figure C 3.** Density of the most relevant areas of study



Two main clusters are highlighted in figure C3. The first one comprises one hundred and two areas, the second aggregates seventy-four study areas. Figure C4 illustrates the relationship between the fields of study, evidencing the two big clusters that include different study areas. From the same figure we can analyze the topics that are not receiving much attention by accounting scientists. The figure shows that there are two main clusters in this group of publications. A cluster is formed by the relation of proximity and link of the words and represents a topic or a trend of research considering the group of articles analyzed.

**Figure C4.** Relations of areas of study



This configuration reveals that the growth of the awareness of the environmental and social impacts of the business activity is not instantaneous, but involves a learning process. As a process, this may take some time when a new understanding of the power of the companies and

their influence on the society can be developed together. The actual level of consciousness, understanding and perceptions about the impacts of the organizations on society reflects the current level of the disclosure systems, which involves the development of the accounting mainstream thinking. “Accounting” is the largest word on this cluster with 127 occurrences and 169 links to other words, which indicates that, for the papers that contain accountability and sustainability together, accounting is a key element for the establishment of this learning process of change of awareness.

In the second cluster, in green, we find a search for the actual determinant elements of the CSR. In this literature we found pragmatic concepts that assume the current economic development of the business as a baseline that can define its contribution to social development. Thus, this literature assumes that companies are concerned, first, with the economic achievement of the stakeholder. The literature in this cluster focuses on the idea that CSR is a concern of business, and that it is a consequence of the decision makers awareness of the effect of their own decisions on business.

The words that are decentralized correspond to themes that are not receiving much attention from the scientists and could demonstrate an opportunity for further work. So, these terms demonstrate that there are research opportunities for approaches that focus on the impact of choices taken by organizations over time, that is, the reduction of the effect of business performance on current social and environmental condition. In the green cluster we find the words “Website”, “Board independence”, “Firm performance”, “CSR Performance”, “Earning”, “Equity” and “Profitability”. In this case, the research opportunity is in seeing how business decisions can be molded so firms acquire a responsible position on society, equating its economic, social and environmental results.

#### **4.2 Accountability and Sustainability: publications and authorship relations**

Table C3 lists the most cited and relevant scientific publications related to the keywords chosen. We see that the first group deals with the interpretation of the choice of organizations for the disclosure of information related to CSR or environmental performance. The second group is about the relation between CSR and the organizational behavior, tracking a link over the disclosure and the conduct of companies. The third group is not so homogenous as the other two, but some patterns can be seen within these fifteen papers: (a) seven of them are looking for the financial return over the CSR or sustainability action, (b) seven other articles are focused on criticizing the use of CSR or sustainability reported by organizations to legitimize their economic positions and create a false public view of environmental or social concern, (c) one publication tells about the major research topics on the integrated reports.

The study conducted by Dhaliwal et al. (2011) explains the benefits obtained by companies that make a voluntary disclosure of CSR. For these authors the choice of companies to make voluntary disclosures is associated with the reduction of the cost of equity capital. Additionally, Dhaliwal et al. (2011) say that these companies attract dedicated institutional investors and analyst coverage and, in two years, are more likely than other companies to carry out seasoned equity offerings to raise capital. Informed by these authors, this research looked for the reasons and consequences of the voluntary disclosures, using traditional theories about CSR. They therefore propose economic justifications (or reasons) for all the actors involved, principally the companies, the investors and regulators to adopt a CSR behavior.

Following one suggested line of research from this study, Dhaliwal et al. (2012) conducted an international verification that affirmed the fact that analysts committed lower forecast errors in companies that choose to make voluntary disclosure. The authors report that they found higher relations on these economic aspects in countries where CSR could affect the business

performance of the company. This result highlights the choice for CSR as an economically oriented aspect of the business.

**Table C3.** Most cited papers

Reference	Citation	Group
Dhaliwal, D. S., Li, O. Z., Tsang, A., & Yang, Y. G. (2011). Voluntary Nonfinancial Disclosure and the Cost of Equity Capital: The Initiation of Corporate Social Responsibility Reporting. <i>The Accounting Review</i> , 86(1), 59–100., doi: 10.2308/accr.00000005	1.154	1
Clarkson, P.M., Li, Y., Richardson, G.D., Vasvari, F.P. (2008) Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. <i>Accounting Organizations and Society</i> , 33, 303–327, doi: 10.1016/j.aos.2007.05.003	1.096	
Roberts, R.W. (1992) Determinants of Corporate Social Responsibility Disclosure: An Application of Stakeholder Theory. <i>Accounting Organizations and Society</i> , 17, 595–612, doi: 10.1016/0361-3682(92)90015-K	961	
Kim, Y., Park, M.S., Wier, B. (2012) Is earnings quality associated with corporate social responsibility? <i>Accounting Review</i> , 87, 761–796, doi: 10.2308/accr-10209	626	2
Dhaliwal, D. S., Radhakrishnan, S., Tsang, A., & Yang, Y. G. (2012). Nonfinancial disclosure and analyst forecast accuracy: International evidence on corporate social responsibility disclosure. <i>The Accounting Review</i> , 87(3), 723–759, doi: 10.2139/ssrn.1596458	587	
Liao, L., Luo, L., & Tang, Q. (2015). Gender diversity, board independence, environmental committee and greenhouse gas disclosure. <i>The British Accounting Review</i> , 47(4), 409–424, doi: 10.1016/j.bar.2014.01.002	373	3 b
de Villiers, C., Rinaldi, L., Unerman, J. (2014) Integrated Reporting: Insights, gaps and an agenda for future research. <i>Accounting, Auditing &amp; Accountability Journal</i> , 27, 1042–1067, doi: 10.1108/AAAJ-06-2014-1736	333	3 c
Matsumura, E.M., Prakash, R., Vera-Muñoz, S.C. (2014) Firm-value effects of carbon emissions and carbon disclosures. <i>Accounting Review</i> , 89, 695–724, doi: 10.2308/accr-50629	316	3 a
Cooper, S.M., Owen, D.L. (2007) Corporate social reporting and stakeholder accountability: the missing link. <i>Accounting, Organizations and Society</i> 32(7-8), 649-667, doi: 10.1016/j.aos.2007.02.001	299	3 b
Michelon, G., Pilonato, S., Ricceri, F. (2015). CSR reporting practices and the quality of disclosure: An empirical analysis. <i>Critical Perspective on Accounting</i> , 33, 59–78, doi: 10.1016/j.cpa.2014.10.003	296	
Burritt, R. L., Schaltegger, S. (2010). Sustainability accounting and reporting: Fad or trend? <i>Accounting, Auditing &amp; Accountability Journal</i> , 23(7), 829– 846, doi: 10.1108/09513571011080144	295	
Cho, C.H., Laine, M., Roberts, R.W., Rodrigue, M. (2015). Organized hypocrisy, organizational façades, and sustainability reporting. <i>Account. Organ. Soci.</i> 2015, 40, 78–94, doi: 10.1016/j.aos.2014.12.003	290	
Boiral, O. (2013). Sustainability reports as simulacra? A counter-account of A and A+ GRI reports. <i>Accounting Auditing &amp; Accountability Journal</i> , 26 (7), 1036-1071, doi: 10.1108/AAAJ-04-2012-00998	272	
Hoi, C. K., Wu, Q., Zhang, H. (2013). Is corporate social responsibility (CSR) associated with tax avoidance? Evidence from irresponsible CSR activities. <i>The Accounting Review</i> , 88(6), 2025–2059, doi: 10.2308/accr-50544	249	3 a
Clarkson, P., Fang, X., Li, Y., Richardson, G. (2013). The relevance of environmental disclosures: Are such disclosures incrementally informative? <i>Journal of Accounting and Public Policy</i> , 32, 410–431, doi: 10.1016/j.jaccpubpol.2013.06.008	247	3 b
Qiu, Y., Shaukat, A., Tharyan, R. (2016). Environmental and social disclosures: Link with corporate financial performance. <i>The British Accounting Review</i> , 48(1), 102–116, doi: 10.1016/j.bar.2014.10.007	245	3 a
Lys, T., Naughton, J.P., Wang, C. (2015). Signaling through corporate accountability reporting. <i>Journal of Accounting and Economics</i> , 60, 56–72, doi: 10.1016/j.jacceco.2015.03.001	245	
Chen, Y.-C., M. Hung, Y. Wang. (2018). The Effect of Mandatory CSR Disclosure on Firm Profitability and Social Externalities: Evidence from China. <i>Journal of Accounting and Economics</i> , 65, 169–190, doi: 10.1016/j.jacceco.2017.11.009	242	
Dhaliwal, D., Li, O. Z., Tsang, A., & Yang, Y. G. (2014). Corporate social responsibility disclosure and the cost of equity capital: The roles of stakeholder orientation and financial transparency. <i>Journal of Accounting and Public Policy</i> , 33(4), 328– 355, doi: 10.1016/j.jaccpubpol.2014.04.006	234	
Artiach, T., D. Lee, D. Nelson, and J. Walker. (2010). The Determinants of Corporate Sustainability Performance. <i>Accounting &amp; Finance</i> , 50 (1), 31–51, doi: 10.1111/j.1467-629X.2009. 00315.x	230	

The Clarkson et al. (2008) study seeks to identify the relation between environmental performance and voluntary environmental disclosure. To do this, they traced two lines of

investigation, one that follows the connection of the expected explanation of the traditional economic theory on CSR disclosure choices, and a second that follows the relation under the socio-political theories and the motivations of the companies to insure CSR voluntary disclosure. In this way the authors confirm, using traditional quantitative methods, that the environmental performance and the level of discretionary environmental disclosures are positively associated as expected by the economic-based theories, contradicting what the socio-political theories assume. But one of the most important contributions in the Clarkson et al. (2008) study is that socio-political theories, contrary to the economic theories, can explain noted patterns in the data principally related to legitimation.

It is important to notice in the results of the Clarkson et al. (2008) study that economics-based voluntary disclosure theories were made to provide correct economic predictions, that is, to indicate forecasts of experienced reality based on collected data and facts, and in this case, the results only confirm that these theories are epistemically coherent.

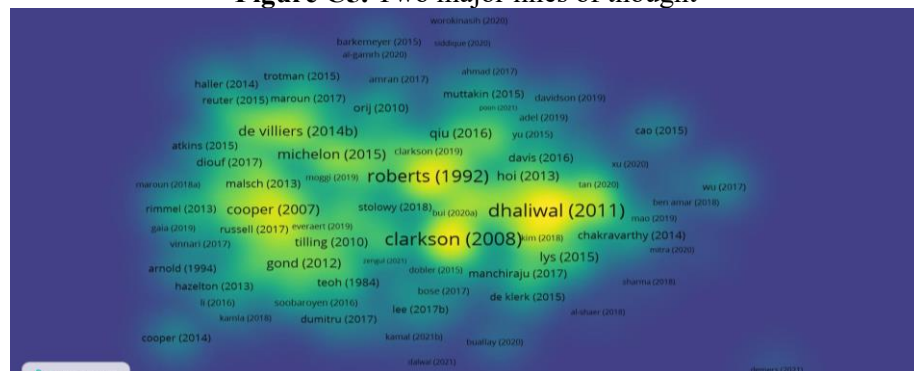
On the other hand, the authors' results suggested that socio-political theories are not robust in predicting the level of discretionary disclosure, but they did not realize that these theories were not constructed to enable predictions, but they are essentially used to give explanations about the reality, as the authors affirmed in relation to some data patterns noticed by them.

Analyzing the propositions and the findings of the most influential researchers such as Dhaliwal et al. (2011, 2012) and Clarkson et al. (2008), and the central characteristics of this group of the twenty most-cited articles, we can highlight the fact that the two major lines of thought assumed by the authors in studies about the Accountability and Sustainability in accounting journals are:

- i. Firstly, the traditional line — which assumes CSR as a business choice that contributes, or responds, to the economic actors (businessman, investor, consumers, regulators and others)—became more socially responsible for their decisions.
- ii. Secondly, a social line that assumes that the CSR is related to awareness-raising of the impacts of the business activities on society and the environment. This awareness became more evident when different premises were assumed to face the contemporary reality, incorporating points of view different from the traditional economic explanations of the reality.

Figure C5 demonstrates the relevance of the most-cited articles in relation to other papers, and in the same figure it is possible to see the two major lines of thought highlighted. On this figure we can find on one side, [I] the proximity of the articles of Dhaliwal et al. (2011), Clarkson et al. (2008), Roberts (1992), Hoi et al. (2013) and Lys et al. (2015), representing the ideas of group one. [II] On the other side we can see the proximity of the articles of Cooper & Owen (2007), Gond et al. (2012), Villiers et al. (2014) and Michelon et al., (2015) representing the second line of thought.

**Figure C5. Two major lines of thought**



### 4.3 Analysis of investigation opportunities: where do we go from here?

On table C4 we show important aspects of the actual development of this field. We selected the 20 most-cited articles between 2019 and 2021 and found the recent gaps in the literature and research proposals; in second place, we highlighted some opportunities for further research that pointed out directions to enrich the literature on this ascending theme.

In this regard, it is possible to group the gaps informed by the authors into two major perspectives. First, there is a perspective that assumes that sustainable concern starts with the business and flows to society as assumed by Dhaliwal et al. (2011), Clarkson et al. (2008), Roberts (1992), Hoi et al. (2013) and Lys et al. (2015), and a second one that understands that this concern flows in the opposite direction as assumed by Cooper & Owen (2007), Gond et al. (2012), Villiers et al. (2014) and Michelon et al., (2015).

In the first approach, we notice theoretical efforts that indicate directions to make social and environmental issues compatible on the economic business-decision baseline (Al-Hadi et al., 2019; Albitar et al., 2020; Eliwa et al., 2021; Wang et al., 2020). In the second approach, the authors demonstrate attention to illustrate the necessity to change the mainstream business thought in order to contribute to a general, and emergent, sustainable paradigm (Villiers & Sharma, 2020a; Dillard & Vinnari, 2019; Helfaya et al., 2019; Khan et al., 2020; Y. Luo, 2005; She & Michelon, 2019).

That is, on one side, we found authors that use the accountability terms as a business way to develop sustainable solutions to increase their contribution to society, not only (but including) economic reasons (Clarkson et al., 2019; Cook et al., 2019; Gomez-Conde et al., 2019; Hollindale et al., 2019), and on other side, we found authors that use accountability as a social, or environmental, demand that business must adapt to enable development to current and future generations (Alshbili et al., 2020; Bellucci et al., 2019; Farooq & de Villiers, 2019).

**Table C4. Top 20 most cited articles on Accountability and Sustainability (2019-2021)**

Reference	Gaps or proposed research	Suggestions for future investigation	Group
Al-Hadi, A. Chatterjee, B. Yafian, A. Taylor, G. Monzur Hasan, M. (2019). Corporate social responsibility performance, financial distress and firm life cycle: Evidence from Australia. doi: 10.1111/acfi.12277.	The association between CSR performance and financial distress along firm life stages.	No recommendations for future research.	Business to society perspective (Financial aspects)
Albitar, K. Hussainey, K. Kolade, N. Gerged, A.M. (2020). ESG disclosure and firm performance before and after IR: The moderating role of governance mechanisms. doi: 10.1108/IJAIM-09-2019-0108.	The effect of environmental, social and governance disclosure on firm performance before and after the introduction of integrated reporting.	Investigate this issue by considering other countries, not only the UK. Consider the industry-level Firm Performance while investigating the role of ownership concentration, gender diversity and board size.	
Eliwa, Y., A. Aboud, and A. Saleh. (2019). ESG practices and the cost of debt: Evidence from EU countries. doi: 10.1016/j.cpa.2019.102097.	Analyze the lending institutions reward firms in 15 EU countries for their environmental, social and governance (ESG) performance and disclosure in terms of lowering their cost of debt capital.	How to measure ESG practices and how it impacts the business economics; Expand the sample to include countries with emerging economies, diverse cultural and institutional settings to investigate their impact on the association between ESG practices and the cost of debt.	
Cook, K.A., Romi, A.M., Sánchez, D., Sánchez, J.M. (2019) The influence of corporate social responsibility on investment efficiency and innovation. doi: 10.1111/jbfa.12360.	The impacts of CSR on Financial efficiency and innovation capacity.	Take into account other potential such as improved cost of capital, improved access to capital and earnings persistence.	
Gomez-Conde, J., Lunkes, R.J., Rosa, F.S. (2019) Environmental innovation practices and operational performance the joint effects of management accounting and control systems and environmental training. doi: 10.1108/AAAJ-01-2018-3327.	Analyze the effect of management accounting and control systems on environmental innovation practices and operational performance.	Longitudinal study on the relations between the uses of management accounting and control system and the environmental innovation practices, environmental training and operational performance	
Clarkson, P., Li, Y., Richardson, G., & Tsang, A. (2019). Causes and consequences of voluntary assurance of CSR reports. doi: 10.1108/AAAJ-03-2018-3424.	Impacts on firm valuation by the choice to make voluntary disclosure.	No recommendations for future research.	
Hollindale, J., Kent, P., Routledge, J., Chapple, L. (2019). Women on boards and greenhouse gas emission disclosures. doi: 10.1111/acfi.12258.	Association under women on organizational board and the disclosure of GHG emission.	Apply the same theoretical and methodological approach in countries other than Australia.	Business to society perspective (Governance aspects)
Wang, R., Zhou, S., & Wang, T. (2020). Corporate governance, integrated reporting and the use of credibility-enhancing mechanisms on integrated reports. doi: 10.1080/09638180.2019.1668281.	Examine the significance of corporate governance mechanisms in explaining variations in the quality of integrated reports and the extent and quality of credibility-enhancing mechanisms (CEMs) for integrated reports.	Examine whether ‘whole-report’ assurance can be substituted by the forms of ‘separate assurance’ and those innovative CEMs that are currently put into practice; Extend the investigation to countries other than South Africa.	
Adel, C., Hussain, M.M., Mohamed, E.K., Basuony, M.A. (2019) Is corporate governance relevant to the quality of corporate social responsibility disclosure in large European companies? doi: 10.1108/IJAIM-10-2017-0118.	The impact of corporate governance structure and other firm-specific characteristics on the quality of CSR disclosure in European companies.	No recommendations for future research.	
Davidson, R.H., Dey, A., Smith, A.J. (2019) CEO materialism and corporate social responsibility. doi: 10.2308/accr-52079.	The impact of CEO presuppositions on business CSR.	Analyze the usefulness to the measure of the level of luxury from businessmen ownership to explain variations in corporate results.	

Khan, H. Z., Bose, S., & Johns, R. (2019). Regulatory influences on CSR practices within banks in an emerging economy: Do banks merely comply? doi: 10.1016/j.cpa.2019.102096	Analyze whether the banks in Bangladesh embrace CSR practices to follow the regulatory guidelines issued by the central bank or if they develop CSR practices opportunistically and politically.	Explore reasons why banks in the industry do not avail themselves of their legitimate tax exemption benefits. Explore how to develop the quality of banks' CSR practices and, in this regard, the quality of the efforts undertaken to meet regulatory requirements.	Society-to-business perspective (The poor use of CSR by Companies)
Luo, L., (2019), The influence of institutional contexts on the relationship between voluntary carbon disclosure and carbon emission performance. doi: 10.1111/acfi.12267.	The use of carbon disclosure by organizations as a legitimation tool.	Analyze the usefulness and credibility of information on Voluntary Carbon Disclosure by organizations.	
Dillard, J. and Vinnari, E. (2019), Critical dialogical accountability: from accounting-based accountability to accountability-based accounting. doi: 10.1016/j.cpa.2018.10.003.	The increase of the quantity of non-financial disclosure by organizations is not reflected by an increased accountability.	Accounting approaches from an accountability perspective.	
She, C., & Michelon, G. (2019). Managing stakeholder perceptions: Organized hypocrisy in CSR disclosures on Facebook. doi: 10.1016/j.cpa.2018.09.004.	The use of organized hypocrisy disclosure strategies in social media allows firms to manage stakeholder perceptions and maintain legitimacy.	Use case studies to assess hypocrisy across different CSR communication platforms.	
Bebbington, J., Österblom, H., Crona, B., Jouffray, J.-B., Larrinaga, C., Russell, S., & Scholtens, B. (2019). Accounting and accountability in the Anthropocene. doi:10.1108/aaaj-11-2018-3745	Illuminate possible points of connection between the Anthropocene and accounting scholarship through a case study from the seafood sector	Generate additional observations as to what an Anthropocene-accounting hybrid would be.	Society-to-business perspective (Meet external expectations)
Alshbili, I., Elamer, A. A., & Beddewela, E. (2018). Ownership types, corporate governance and corporate social responsibility disclosures: Empirical evidence from a developing country. doi: 10.1108/ARJ-03-2018-0060.	Corporate governance structures and ownership types are associated with the level of CSR disclosures in a developing country.	Analyze whether corporate governance structures and ownership types are associated with the level of CSR disclosures in a developing country considering disclosures in other channels.	
De Villiers, C. and Sharma, U. (2017), A critical reflection on the future of financial, intellectual capital, sustainability and integrated reporting. doi: 10.1016/j.cpa.2017.05.003.	The importance of Intellectual Capital dimension on voluntary organizational reports.	Develop understanding on the needs of information of different actors about Intellectual Capital.	
Farooq, M.B. and de Villiers, C. (2018), The shaping of sustainability assurance through the competition between accounting and non-accounting providers. doi: 10.1108/AAAJ-10-2016-2756.	The competition between ASAPs and NASAPs shapes the practice and institutionalization of sustainability assurance.	Explore the competition for sustainability assurance services in different geographical settings approach adopted by different subtypes of NASAPs.	
Helfaya, A., Whittington, M., & Alawattage, C. (2019). Exploring the quality of corporate environmental reporting: Surveying preparers' and users' perceptions. doi: 10.1108/AAAJ-04-2015-2023.	Incorporate users' perceptions of quality and preparers' pragmatic understanding on business environmental reporting.	Expand the sample of users, in order to enable the analysis of different categories of users, and consequently their different groups of perceptions.	Society-to-business perspective (The stakeholder engagement)
Bellucci, M., Simoni, L., Acuti, D., Manetti, G. (2019) Stakeholder Engagement and Dialogic Accounting: Empirical Evidence in Sustainability Reporting. doi: 10.1108/AAAJ-09-2017-3158.	Examine how sustainability reporting and stakeholder engagement processes serve as vehicles of dialogic accounting.	Study the features of stakeholder engagement, the characteristics of social, environmental and sustainability reporting, and the various traits of Dialogical Accounting as they are encountered by stakeholders themselves – especially stakeholders from marginalized communities.	

Considering these identified starting points, it is possible to identify research trends looking for suggestions for further investigation, performed by these authors. In the first group, where the accountability for sustainability flows from business to society, we notice the preoccupation of the authors to expand the research samples, retest the statistical approaches utilized, reformulate variables, attempt to control external situations in experiments, and replicate the applied methodology in other contexts. In this way, reinforcing the perspective that these authors are looking to pragmatic, rational and practical directions to justify changes in business decisions that go beyond the traditional economic orientation. In the second group, we notice the suggestions of the authors that led to incorporating more variables, points of view, orientations and directions that can illuminate the current unsustainable mainstream business thinking. These authors demonstrate many considerations that supplant the traditional starting point, assuming critical perspectives or launching new reflections on assumptions that were taken as true for many years without deeper questioning.

In order to clarify these gaps in research, pursuing further the findings of the analyses of these two groups, we notice some gap resemblances:

**Group 1** – The CSR is a process that comes from business and flows to society.

1.1 - Financial impacts: Al-Hadi et al. (2019); Albitar et al. (2020); P. Clarkson et al. (2019); Cook et al. (2019); Eliwa et al. (2021) and Gomez-Conde et al. (2019) demonstrate the existence of a perspective that is designed to test the financial justifications for business assuming the sustainable perspective. Financial distress, financial performance, firm value, assurance and management control are central themes in this line and are determinant in demonstrating the economic contribution affected by the CSR committed companies. It is important to notice that all these publications come from accounting reviews, and these authors are concerned about understanding the CSR perspective on business. We analyzed the papers that had received the greater number of citations between 2019 and 2021, which revealed that there is a relevant line of research focused on finding economic justifications for businesses that incorporate concerns about the social, environmental and economic impact of their actions.

1.2 - Governance impacts: Adel et al. (2019); Davidson et al. (2019); Hollindale et al. (2019) and Wang et al. (2020) illuminate a line of research that is concerned with noting the paths that business can follow to change presuppositions on their decision-making processes. These authors are looking for aspects that lead the governance to induce sustainable decisions on business behavior. Questions linked to governance committees and mechanisms, the composition of the board, the CEO presumptions and the institutionalization of sustainable processes are addressed by these authors. This group of papers points to research that is focused on finding a business orientation that is aware of their responsibilities to the society.

**Group 2** – The CSR is a process that came from society and flows to business.

2.1 - The poor use of CSR: Dillard & Vinnari (2019); Z. Luo et al. (2020); She & Michelin (2019) and Khan et al. (2020) illustrate the existence of a line of thought that denounces the use of sustainable behavior to create a fallacious context of normality, inducing the society to agree with negative impacts of the companies' actions on environment and society. Aspects such as legitimation, erroneous disclosure and irresponsibility are argued along this line, which indicates the need for accountability to be linked with sustainability.

2.2 - Meet external expectations: Alshbili et al. (2020); de Villiers & Sharma (2020b); Farooq & de Villiers (2019) and Bebbington et al. (2020) show an important line of thought concerned with developing business mechanisms to acknowledge the social expectations of their actions. The relevance of the business board, the intellectual capital, and the assurance patterns

exemplify business characteristics that must be developed to clarify the process of recognizing external expectations.

2.3 - The stakeholder engagement: Bellucci et al. (2019) and Helfaya et al. (2019), point to the need for the organizations to keep the communication channels open to their stakeholders. These authors argue that companies must not only listen to the social claims but incorporate and interact with these demands. They highlight paths where different interests can collaborate to induce sustainable development. The role in this line is to find ways to incorporate these interests into business practices.

## **5. CONCLUSION**

### **5.1. Discussion**

This study focuses on examining the current accounting literature on accountability and sustainability, underlining research subjects, identifying theoretical and methodological patterns, highlighting trends, gaps and research opportunities. We found an ascending literature that indicates two distinct approaches to this literature, one that comes from business and impacts society and another that comes from society and impacts business.

In the first case there are positions that assume sustainability as the new business direction, assumed by the managers as new strategic directives. Thus, the economic objectives are still the main business purpose and are utilized to induce social and environmental company behaviors. From this view, sustainability is a business choice that organizations assume to change their social relationship and respond to the demands of the stakeholders, and so are more responsible for their actions. In this line of thought, the authors assume that accountability is a business goal that must be achieved to enable companies to develop their economic activities and, at the same time, to be responsible for the society and the environment. According to this, and even expanding their precepts, accounting maintains its traditional essence as a business practice to inform determined uses of the information, be it financial or not. It is important to notice in this first case that two lines are highlighted by the accounting authors consulted. The first emphasizes the financial aspects as a justification for business, assuming a sustainable perspective, and the second one assumes there are governance aspects that lead the business to a CSR behavior.

In the second case we note the understanding that assumes the formation of sustainability attitude as a long-range learning process, where new business definitions are formed from time to time and taken to organizations, shaping a new appreciation of their role in society. This path is reflected in the kind of disclosure choices made by organizations, which demonstrates the level of sustainable awareness achieved in that historic period. In this case accounting is a key factor to increase the understanding of accountability, formulating trusted relationships between companies and society. Relationships that go beyond the traditional economic orientation and promote the raising of social awareness to business impacts on the environment and the society, defining acceptable, or unacceptable, business behaviors according to economic, social, and environmental dimensions. In this case, three lines are considered, the first focused on denouncing the limitations of CSR comportment and demonstrating that in some cases business uses this orientation to disguise its real intentions. The second line points out the necessity of business to listen to stakeholder expectations of its activities. And the third line points to elements that organizations can develop to be more receptive to CSR.

These findings contribute both to Cho et al. (2015) perspective on the fact that mainstream researchers are interested in developing studies related to CSR, as well as to Patten (2013), which reports that many of these researchers fail to engage with previous studies on the topic.

This finding reinforces the fact indicated by Gendron & Rodrigue (2021) about the rise of paradigmatic border control mechanisms in the scientific accounting field.

Going beyond the well-known dichotomy between the two major perspectives uncovered through the analysis of research gaps undertaken by the authors, we note that modern accountability thought transcends the traditional aspects linked to responsibility, transparency and answerability demands on business, and extends to the formation of awareness for sustainability. In other words, through the analysis undertaken we demonstrate two different, and growing, lines of research that culminate in changes of the traditional business economic perspective, expanding understanding of the impact of business actions on society and environment, thus calling on economic actors to participate in the active search for current and future solutions in relation to human development.

## **5.2. Contribution**

This paper exemplifies the use of literature review to identify accounting research areas related to accountability and sustainability. In order to demonstrate the different research areas related to this subject, we found an emergent, progressive and informative investigation topic. Relevant themes in literature were clarified, major gaps and suggestions for further research were highlighted, and research opportunities were underlined. Two lines of thought are recognized, one line that follows the traditional CSR research development and concentrates the social, environmental, and economic dimensions on businessman decisions, and a second line that emphasizes the need to expand the social awareness of sustainability and debate different aspects of the impact of economic action on the environment and society.

It is important to note that the two major groups of research are not mutually exclusive, that is, they show aspects that could be interchangeable and complementary. For example, the line that denounces the possibility of business making poor use of the CSR thinking is relevant to bring insights to expand the approaches developed by the authors that follow the financial line. At the same time, the authors that highlight the relevance of board structure, composition and committees to induce the CSR behavior find a complement in the lines that approach the need to meet and engage the stakeholder expectations on company decisions.

The complementing crossover of the lines strengthens the relevance of accountability as a path to expanding the traditional business economic orientation, not only for the aspect of voluntary disclosure, but actually inserting social and environmental elements into the process of decision making, assuming the CSR as a business pattern and promoting sustainable development.

## **5.3. Limitations and recommendations for future research**

It is notable that this study attempts to achieve its objectives by clarifying theoretical aspects related to accountability and sustainability in accounting journals, but some limitations must be considered when the study findings are discussed. First, this paper focuses on theoretical characteristics found in accounting literature on these issues. We therefore chose WoS as the data source, which is the recommended data source for this, as mentioned in the methodology, but this choice might influence the results shown, restricting the demonstration of alternative theoretical data. Second, the use of Vos Viewer software to analyze the results is shown to be a good way to find major data patterns by terms used, but in some cases, particular attention was given to texts in order to interpret different meanings of the same terms. Third, as this study demonstrated the existence of theoretical relationships between accountability and sustainability through the accounting lens, further research can empirically analyze these relations and demonstrate new lines to expand the current thinking on accounting directed towards sustainability.

## REFERENCES

- Abad-Segura, E., González-Zamar, M. D., Infante-Moro, J. C., & García, G. R. (2020). Sustainable management of digital transformation in higher education: Global research trends. *Sustainability (Switzerland)*, 12(5). <https://doi.org/10.3390/su12052107>
- Adams, C. A. (2015). The international integrated reporting council: A call to action. *Critical Perspectives on Accounting*, 27, 23–28. <https://doi.org/10.1016/j.cpa.2014.07.001>
- Adel, C., Hussain, M. M., Mohamed, E. K. A., & Basuony, M. A. K. (2019). Is corporate governance relevant to the quality of corporate social responsibility disclosure in large European companies? *International Journal of Accounting and Information Management*, 27(2), 301–332. <https://doi.org/10.1108/IJAIM-10-2017-0118>
- Ahrens, T., Ferry, L., & Khalifa, R. (2020). Governmentality and counter-conduct: A field study of accounting amidst concurrent and competing rationales and programmes. *Management Accounting Research*, 48(December 2017), 100686. <https://doi.org/10.1016/j.mar.2020.100686>
- Al-Hadi, A., Chatterjee, B., Yafian, A., Taylor, G., & Monzur Hasan, M. (2019). Corporate social responsibility performance, financial distress and firm life cycle: evidence from Australia. *Accounting and Finance*, 59(2), 961–989. <https://doi.org/10.1111/acfi.12277>
- Ala, A. S., & Lapsley, I. (2019). Accounting for crime in the neoliberal world. *British Accounting Review*, 51(5), 100839. <https://doi.org/10.1016/j.bar.2019.100839>
- Alawattage, C., & Wickramasinghe, D. (2021). Strategising management accounting: liberal origins and neoliberal trends. *Accounting, Auditing and Accountability Journal*. <https://doi.org/10.1108/AAAJ-01-2021-5124>
- Albitar, K., Hussainey, K., Kolade, N., & Gerged, A. M. (2020). ESG disclosure and firm performance before and after IR: The moderating role of governance mechanisms. *International Journal of Accounting and Information Management*, 28(3), 429–444. <https://doi.org/10.1108/IJAIM-09-2019-0108>
- Alshbili, I., Elamer, A. A., & Beddewela, E. (2020). Ownership types, corporate governance and corporate social responsibility disclosures: Empirical evidence from a developing country. *Accounting Research Journal*, 33(1), 148–166. <https://doi.org/10.1108/ARJ-03-2018-0060>
- Andrew, J., Cooper, C., & Gendron, Y. (2020). Critical perspectives on accounting and journal rankings: Engaging in counter discourses and practices. *Critical Perspectives on Accounting*, 71, 102–169. <https://doi.org/10.1016/j.cpa.2020.102169>
- Anesa, M., Gillespie, N., Spee, A. P., & Sadiq, K. (2019). The legitimization of corporate tax minimization. *Accounting, Organizations and Society*, 75, 17–39. <https://doi.org/10.1016/j.aos.2018.10.004>
- Bagg, S. (2021). Beyond the search for the subject: An anti-essentialist ontology for liberal democracy. *European Journal of Political Theory*, 20(2), 208–231. <https://doi.org/10.1177/1474885118763881>
- Bauman, Z. (2001). *Liquid modernity*. Cambridge, UK: Polity Press.
- Baxter, J., & Chua, W. F. (2003). Alternative management accounting research - Whence and whither. *Accounting, Organizations and Society*, 28(2–3), 97–126. [https://doi.org/10.1016/S0361-3682\(02\)00022-3](https://doi.org/10.1016/S0361-3682(02)00022-3)
- Bebbington, J., & Larrinaga, C. (2014). Accounting and sustainable development: An exploration. *Accounting, Organizations and Society*, 39(6), 395–413. <https://doi.org/10.1016/j.aos.2014.01.003>
- Bebbington, J., Österblom, H., Crona, B., Jouffray, J. B., Larrinaga, C., Russell, S., & Scholtens, B. (2020). Accounting and accountability in the Anthropocene. *Accounting, Auditing and Accountability Journal*, 33(1), 152–177. <https://doi.org/10.1108/AAAJ-11-2018-3745>
- Bellucci, M., Simoni, L., Acuti, D., & Manetti, G. (2019). Stakeholder engagement and dialogic accounting: Empirical evidence in sustainability reporting. *Accounting, Auditing and Accountability Journal*, 32(5), 1467–1499. <https://doi.org/10.1108/AAAJ-09-2017-3158>
- Birkle, C., Pendlebury, D. A., Schnell, J., & Adams, J. (2020). Web of Science as a data source for research on scientific and scholarly activity. *Quantitative Science Studies*, 1(1), 363–376. [https://doi.org/10.1162/qss\\_a\\_00018](https://doi.org/10.1162/qss_a_00018)
- Boiral, O. (2013). Sustainability reports as simulacra? A counter-account of A and A+ GRI reports. *Accounting, Auditing & Accountability Journal*, 26(7), 1036–1071. <https://doi.org/10.1108/AAAJ-04-2012-00998>
- Boiral, O., Heras-Saizarbitoria, I., & Brotherton, M. C. (2019). Improving corporate biodiversity management through employee involvement. *Business Strategy and the Environment*, 28(5), 688–698. <https://doi.org/10.1002/bse.2273>
- Bowen, H. R. (1953). *Social Responsibilities of the Businessman*. Harper & Brothers Publishers.
- Brown, B. J., Hanson, M. E., Liverman, D. M., & Merideth, R. W. (1987). Global sustainability: Toward definition. *Environmental Management*, 11(6), 713–719. <https://doi.org/10.1007/BF01867238>

- Brown, J., & Dillard, J. (2014). Integrated reporting: On the need for broadening out and opening up. *Accounting, Auditing and Accountability Journal*, 27(7), 1120–1156. <https://doi.org/10.1108/AAAJ-04-2013-1313>
- Butt, N. S., Malik, A. A., & Shahbaz, M. Q. (2021). Bibliometric Analysis of Statistics Journals Indexed in Web of Science Under Emerging Source Citation Index. *SAGE Open*, 11(1). <https://doi.org/10.1177/2158244020988870>
- Byrch, C., Milne, M. J., Morgan, R., & Kearins, K. (2015). Seeds of hope? Exploring business actors' diverse understandings of sustainable development. *Accounting, Auditing & Accountability Journal*, 28(5), 671–705. <https://doi.org/10.1108/AAAJ-08-2013-1438>
- Carroll, A. B. (1991). The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. *Business Horizons*, 34(4), 39–48. [https://doi.org/10.1016/0007-6813\(91\)90005-G](https://doi.org/10.1016/0007-6813(91)90005-G)
- Chabrak, N., Haslam, J., & Oakes, H. (2019). What is accounting? The “being” and “be-ings” of the accounting phenomenon and its critical appreciation. *Accounting, Auditing and Accountability Journal*, 32(5), 1414–1436. <https://doi.org/10.1108/AAAJ-08-2017-3097>
- Cho, C. H., Michelon, G., Patten, D. M., & Roberts, R. W. (2015). CSR disclosure: the more things change...? *Accounting, Auditing & Accountability Journal*, 28(1), 14–35. <https://doi.org/10.1108/AAAJ-12-2013-1549>
- Christensen, C. B. (2014). Human ecology as philosophy. *Human Ecology Review*, 20(2), 31–49. <https://doi.org/10.22459/her.20.02.2014.02>
- Chua, W. F. (1986). Radical Developments in Accounting Thought. *Accounting, the Social and the Political*, 61(4), 55–66. <https://doi.org/10.1016/b978-008044725-4/50009-6>
- Chua, W. F. (2019). Radical Developments in Accounting Thought? Reflections on Positivism, the Impact of Rankings and Research Diversity. *Behavioral Research in Accounting*, 31(1), 3–20. <https://doi.org/10.2308/bria-52377>
- Clarkson, P., Li, Y., Richardson, G., & Tsang, A. (2019). Causes and consequences of voluntary assurance of CSR reports: International evidence involving Dow Jones Sustainability Index Inclusion and Firm Valuation. *Accounting, Auditing and Accountability Journal*, 32(8), 2451–2474. <https://doi.org/10.1108/AAAJ-03-2018-3424>
- Clarkson, P. M., Li, Y., Richardson, G. D., & Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Accounting, Organizations and Society*, 33(4–5), 303–327. <https://doi.org/10.1016/j.aos.2007.05.003>
- Cook, K. A., Romi, A. M., Sánchez, D., & Sánchez, J. M. (2019). The influence of corporate social responsibility on investment efficiency and innovation. *Journal of Business Finance and Accounting*, 46(3–4), 494–537. <https://doi.org/10.1111/jbfa.12360>
- Cooper, D. J., & Hopper, T. M. (1987). Critical studies in accounting. *Accounting, Organizations and Society*, 12(5), 407–414. [https://doi.org/10.1016/0361-3682\(87\)90028-6](https://doi.org/10.1016/0361-3682(87)90028-6)
- Cooper, S. M., & Owen, D. L. (2007). Corporate social reporting and stakeholder accountability: The missing link. *Accounting, Organizations and Society*, 32(7–8), 649–667. <https://doi.org/10.1016/j.aos.2007.02.001>
- Csomós, G., Vida, Z. V., & Lengyel, B. (2020). Exploring the changing geographical pattern of international scientific collaborations through the prism of cities. *PLoS ONE*, 15(11 November), 1–20. <https://doi.org/10.1371/journal.pone.0242468>
- Dagilene, L., & Štutienė, K. (2019). Corporate sustainability accounting information systems: a contingency-based approach. *Sustainability Accounting, Management and Policy Journal*, 10(2), 260–289. <https://doi.org/10.1108/SAMPJ-07-2018-0200>
- Davidson, R. H., Dey, A., & Smith, A. J. (2019). CEO materialism and corporate social responsibility. *Accounting Review*, 94(1), 101–126. <https://doi.org/10.2308/accr-52079>
- de Villiers, C., Dumay, J., & Maroun, W. (2019). Qualitative accounting research: dispelling myths and developing a new research agenda. *Accounting and Finance*, 59(3), 1459–1487. <https://doi.org/10.1111/acfi.12487>
- de Villiers, C., Rinaldi, L., & Unerman, J. (2014). Integrated reporting: Insights, gaps and an agenda for future research. *Accounting, Auditing and Accountability Journal*, 27(7), 1042–1067. <https://doi.org/10.1108/AAAJ-06-2014-1736>
- de Villiers, C., & Sharma, U. (2020a). A critical reflection on the future of financial, intellectual capital, sustainability and integrated reporting. *Critical Perspectives on Accounting*, 70, 0–25. <https://doi.org/10.1016/j.cpa.2017.05.003>
- de Villiers, C., & Sharma, U. (2020b). A critical reflection on the future of financial, intellectual capital, sustainability and integrated reporting. *Critical Perspectives on Accounting*, 70. <https://doi.org/10.1016/j.cpa.2017.05.003>
- Deegan, C. (2013). The accountant will have a central role in saving the planet . really? A reflection on “green accounting and green eyeshades twenty years later.” *Critical Perspectives on Accounting*, 24(6), 448–458.

- <https://doi.org/10.1016/j.cpa.2013.04.004>
- Dhaliwal, D. S., Li, O. Z., Tsang, A., & Yang, Y. G. (2011). Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. *Accounting Review*, 86(1), 59–100. <https://doi.org/10.2308/accr.00000005>
- Dhaliwal, D. S., Radhakrishnan, S., Tsang, A., & Yang, Y. G. (2012). Nonfinancial Disclosure and Analyst Forecast Accuracy: International Evidence on Corporate Social Responsibility Disclosure. *SSRN Electronic Journal*, 87(3), 723–759. <https://doi.org/10.2139/ssrn.1596458>
- Di Carlo, F., Modugno, G., Agasisti, T., & Catalano, G. (2019). Changing the accounting system to Foster Universities' financial sustainability: First evidence from Italy. *Sustainability (Switzerland)*, 11(21). <https://doi.org/10.3390/su11216151>
- Dillard, J., & Vinnari, E. (2019). Critical dialogical accountability: From accounting-based accountability to accountability-based accounting. *Critical Perspectives on Accounting*, 62, 16–38. <https://doi.org/10.1016/j.cpa.2018.10.003>
- Egan, M., & Tweedie, D. (2018). A “green” accountant is difficult to find: Can accountants contribute to sustainability management initiatives? *Accounting, Auditing and Accountability Journal*, 31(6), 1749–1773. <https://doi.org/10.1108/AAAJ-03-2017-2891>
- Ejiogu, A., Ambituuni, A., & Ejiogu, C. (2018). Accounting for accounting's role in the neoliberalization processes of social housing in England: A Bourdieusian perspective. *Critical Perspectives on Accounting*, 80, 102053. <https://doi.org/10.1016/j.cpa.2018.07.002>
- Eliwa, Y., Aboud, A., & Saleh, A. (2021). ESG practices and the cost of debt: Evidence from EU countries. *Critical Perspectives on Accounting*, 79(xxxx), 102097. <https://doi.org/10.1016/j.cpa.2019.102097>
- Elkington, J. (2011). *Cannibals with forks: The triple bottom line of 21st century business*. Gabriola Island, BC: New Society Publishers.
- Elkington, J. (2020). *Green Swans The coming boom in regenerative capitalism*. Fast Company Press.
- Farias, G., Farias, C., Krysa, I., & Harmon, J. (2020). Sustainability Mindsets for Strategic Management: Lifting the Yoke of the Neo-Classical Economic Perspective. *Sustainability*, 12(17), 6977. <https://doi.org/10.3390/su12176977>
- Farooq, M. B., & de Villiers, C. (2019). The shaping of sustainability assurance through the competition between accounting and non-accounting providers. *Accounting, Auditing and Accountability Journal*, 32(1), 307–336. <https://doi.org/10.1108/AAAJ-10-2016-2756>
- Fehrenbacher, D. D., Kaplan, S. E., & Moulang, C. (2019). The role of accountability in reducing the impact of affective reactions on capital budgeting decisions. *Management Accounting Research*, March 2018, 100650. <https://doi.org/10.1016/j.mar.2019.100650>
- Gallhofer, S., & Haslam, J. (2019). Some reflections on the construct of emancipatory accounting: Shifting meaning and the possibilities of a new pragmatism. *Critical Perspectives on Accounting*, 63, 101975. <https://doi.org/10.1016/j.cpa.2017.01.004>
- Gendron, Y., & Baker, C. R. (2005). On interdisciplinary movements: The development of a network of support around Foucaultian perspectives in accounting research. *European Accounting Review*, 14(3), 525–569. <https://doi.org/10.1080/09638180500041364>
- Gendron, Y., & Rodrigue, M. (2021). On the centrality of peripheral research and the dangers of tight boundary gatekeeping. *Critical Perspectives on Accounting*, 76. <https://doi.org/10.1016/j.cpa.2019.02.003>
- Gomez-Conde, J., Lunkes, R. J., & Rosa, F. S. (2019). Environmental innovation practices and operational performance: The joint effects of management accounting and control systems and environmental training. *Accounting, Auditing and Accountability Journal*, 32(5), 1325–1357. <https://doi.org/10.1108/AAAJ-01-2018-3327>
- Graham, C., & Grisard, C. (2019). Rich man, poor man, beggar man, thief: Accounting and the stigma of poverty. *Critical Perspectives on Accounting*, 59, 32–51. <https://doi.org/10.1016/j.cpa.2018.06.004>
- Gray, R. (2001). Thirty years of social accounting, reporting and auditing: what (if anything) have we learnt? *Business Ethics: A European Review*, 10(1), 9–15. <https://doi.org/10.1111/1467-8608.00207>
- Gray, R. (2010a). A reevaluation of social, environmental and sustainability accounting: An exploration of an emerging transdisciplinary field? *Sustainability Accounting, Management and Policy Journal*, 1(1), 11–32. <https://doi.org/10.1108/20408021011059205>
- Gray, R. (2010b). Is accounting for sustainability actually accounting for sustainability...and how would we know? An exploration of narratives of organisations and the planet. *Accounting, Organizations and Society*, 35(1), 47–62. <https://doi.org/10.1016/j.aos.2009.04.006>

- Gray, R. (2013). Back to basics: What do we mean by environmental (and social) accounting and what is it for?—A reaction to Thornton. *Critical Perspectives on Accounting*, 24(6), 459–468. <https://doi.org/10.1016/j.cpa.2013.04.005>
- Gray, R., Dillard, J., & Spence, C. (2013). Pesquisa em Contabilidade Social como Se o Mundo Importasse Um ensaio sobre nostalgia e um novo absurdismo. *Revista de Contabilidade e Organizações*, 7(17), 119–133. <https://doi.org/10.11606/rco.v7i17.59345>
- Hallin, A., Karrbom-Gustavsson, T., & Dobers, P. (2021). Transition towards and of sustainability—Understanding sustainability as performative. *Business Strategy and the Environment*, 30(4), 1948–1957. <https://doi.org/10.1002/bse.2726>
- Helfaya, A., Whittington, M., & Alawattage, C. (2019). Exploring the quality of corporate environmental reporting: Surveying preparers' and users' perceptions. *Accounting, Auditing and Accountability Journal*, 32(1), 163–193. <https://doi.org/10.1108/AAAJ-04-2015-2023>
- Higgins, C., Stubbs, W., & Love, T. (2014). Walking the talk(s): Organisational narratives of integrated reporting. *Accounting, Auditing and Accountability Journal*, 27(7), 1090–1119. <https://doi.org/10.1108/AAAJ-04-2013-1303>
- Hoi, C. K., Wu, Q., & Zhang, H. (2013). Is Corporate Social Responsibility (CSR) Associated with Tax Avoidance? Evidence from Irresponsible CSR Activities. *The Accounting Review*, 88(6), 2025–2059. <https://doi.org/10.2308/accr-50544>
- Hollindale, J., Kent, P., Routledge, J., & Chapple, L. (2019). Women on boards and greenhouse gas emission disclosures. *Accounting and Finance*, 59(1), 277–308. <https://doi.org/10.1111/acf.12258>
- Homero Junior, P. F. (2017). A Constituição do Campo Científico e a Baixa Diversidade da Pesquisa Contábil Brasileira. *Revista de Educação e Pesquisa Em Contabilidade (REPeC)*, 11(3), 314–328. <https://doi.org/10.17524/repec.v11i3.1565>
- Homero Junior, P. F. (2019). Pesquisa ou Propaganda? Análise da Literatura Acadêmica Brasileira sobre o Relato Integrado. *Sociedade, Contabilidade e Gestão*, 14(1), 18–31. [https://doi.org/10.21446/scg\\_ufrj.v0i0.14550](https://doi.org/10.21446/scg_ufrj.v0i0.14550)
- Homero Junior, P. F. (2021). Reflexões sobre a Prática da Pesquisa Crítica em Contabilidade no Brasil. *Revista de Educação e Pesquisa Em Contabilidade (REPeC)*, 15(2), 225–242. <https://doi.org/10.17524/repec.v15i2.2823>
- Homero Junior, P. F., & Carrieri, A. de P. (2020). Desenvolvimento sustentável e trabalho precário no relato integrado da Natura: pensando um contrarrelato. *Organizações & Sociedade*, 27(93), 199–215. <https://doi.org/10.1590/1984-9270932>
- Hörisch, J., Schaltegger, S., & Freeman, R. E. (2020). Integrating stakeholder theory and sustainability accounting: A conceptual synthesis. *Journal of Cleaner Production*, 275. <https://doi.org/10.1016/j.jclepro.2020.124097>
- Khan, A. S., Ur Rehman, S., Almaimouni, Y. K., Ahmad, S., Khan, M., & Ashiq, M. (2020). Bibliometric analysis of literature published on antibacterial dental adhesive from 1996–2020. *Polymers*, 12(12), 1–29. <https://doi.org/10.3390/polym12122848>
- Khan, H. Z., Bose, S., & Johns, R. (2020). Regulatory influences on CSR practices within banks in an emerging economy: Do banks merely comply? *Critical Perspectives on Accounting*, 71(xxxx), 102096. <https://doi.org/10.1016/j.cpa.2019.102096>
- Lamberton, G. (2005). Sustainability accounting - A brief history and conceptual framework. *Accounting Forum*, 29(1), 7–26. <https://doi.org/10.1016/j.accfor.2004.11.001>
- Lazkano, L., & Beraza, A. (2019). Social accounting for sustainability: A study in the social economy. *Sustainability (Switzerland)*, 11(24). <https://doi.org/10.3390/SU11246894>
- Liu, W. (2019). The data source of this study is Web of Science Core Collection? Not enough. *Scientometrics*, 121(3), 1815–1824. <https://doi.org/10.1007/s11192-019-03238-1>
- Luo, Y. (2005). How does globalization affect corporate governance and accountability? A perspective from MNEs. *Journal of International Management*, 11(1 SPEC. ISS.), 19–41. <https://doi.org/10.1016/j.intman.2004.11.003>
- Luo, Z., Miao, F., Hu, M., & Wang, Y. (2020). Research Development on Horseshoe Crab: A 30-Year Bibliometric Analysis. *Frontiers in Marine Science*, 7(February), 1–14. <https://doi.org/10.3389/fmars.2020.00041>
- Lys, T., Naughton, J. P., & Wang, C. (2015). Signaling through corporate accountability reporting. *Journal of Accounting and Economics*, 60(1), 56–72. <https://doi.org/10.1016/j.jacceco.2015.03.001>
- Mason, M. (2020). Transparency, accountability and empowerment in sustainability governance: a conceptual review. *Journal of Environmental Policy and Planning*, 22(1), 98–111. <https://doi.org/10.1080/1523908X.2019.1661231>
- Meho, L. I., & Yang, K. (2007). Impact of data sources on citation counts and rankings of LIS faculty: Web of science versus

- scopus and google scholar. *Journal of the American Society for Information Science and Technology*, 58(13), 2105–2125. <https://doi.org/10.1002/asi.20677>
- Mendes, D., Fonseca, A. C. P. D., & Sauerbronn, F. F. (2020). Modos de ideologia e de colonialidade em materiais didáticos de Contabilidade. *Education Policy Analysis Archives*, 28(99), 99. <https://doi.org/10.14507/epaa.28.5061>
- Merigó, J. M., & Yang, J. B. (2017). A bibliometric analysis of operations research and management science. *Omega (United Kingdom)*, 73, 37–48. <https://doi.org/10.1016/j.omega.2016.12.004>
- Meseguer-Sánchez, V., Gálvez-Sánchez, F. J., López-Martínez, G., & Molina-Moreno, V. (2021). Corporate social responsibility and sustainability. A bibliometric analysis of their interrelations. *Sustainability (Switzerland)*, 13(4), 1–18. <https://doi.org/10.3390/su13041636>
- Michelon, G., Pilonato, S., & Ricceri, F. (2015). CSR reporting practices and the quality of disclosure: An empirical analysis. *Critical Perspectives on Accounting*, 33, 59–78. <https://doi.org/10.1016/j.cpa.2014.10.003>
- Nadeem, M., Bahadar, S., Zaman, R., & Farooq, M. B. (2021). Does organisational capital influence environmental strategies? Evidence from environmental innovation. *Business Strategy and the Environment*, 30(8), 4121–4135. <https://doi.org/10.1002/bse.2860>
- Nicholls, J. A. (2020). Integrating financial, social and environmental accounting. *Sustainability Accounting, Management and Policy Journal*, 11(4), 745–769. <https://doi.org/10.1108/SAMPJ-01-2019-0030>
- Patten, D. M. (2013). Lessons from the Third Wave: A reflection on the rediscovery of Corporate Social Responsibility by the mainstream accounting research community. *Financial Reporting*, 2(2), 9–2.
- Pérez Cañizares, P. (2021). “Corporate Sustainability” or “Corporate Social Responsibility”? A Comparative Study of Spanish and Latin American Companies’ Websites. *Business and Professional Communication Quarterly*, 84(4), 361–385. <https://doi.org/10.1177/23294906211023799>
- Perkiss, S., & Moerman, L. (2018). A dispute in the making: A critical examination of displacement, climate change and the Pacific Islands. *Accounting, Auditing and Accountability Journal*, 31(1), 166–192. <https://doi.org/10.1108/AAAJ-06-2016-2582>
- Phiri, J. (2020). Tradition, power, and resource wastage: A neo-patrimonial and Weberian perspective of corruption and accountability in Zambia. *Financial Accountability and Management*, May, 1–22. <https://doi.org/10.1111/faam.12272>
- Pina, V., Bachiller, P., & Ripoll, L. (2020). Testing the reliability of financial sustainability. The case of Spanish local governments. *Sustainability (Switzerland)*, 12(17). <https://doi.org/10.3390/SU12176880>
- Purvis, B., Mao, Y., & Robinson, D. (2019). Three pillars of sustainability: in search of conceptual origins. *Sustainability Science*, 14(3), 681–695. <https://doi.org/10.1007/s11625-018-0627-5>
- Repiso, R., Castillo-Esparcia, A., & Torres-Salinas, D. (2019). Altmetrics, alternative indicators for Web of Science Communication studies journals. *Scientometrics*, 119(2), 941–958. <https://doi.org/10.1007/s11192-019-03070-7>
- Roberts, J. (2021). The boundary of the ‘economic’: Financial accounting, corporate ‘imaginaries’ and human sentience. *Critical Perspectives on Accounting*, 76, 102–203. <https://doi.org/10.1016/j.cpa.2020.102203>
- Roberts, R. W. (1992). Determinants of corporate social responsibility disclosure: An application of stakeholder theory. *Accounting, Organizations and Society*, 17(6), 595–612. [https://doi.org/10.1016/0361-3682\(92\)90015-K](https://doi.org/10.1016/0361-3682(92)90015-K)
- Sánchez-Hernández, M. I., Vázquez-Burguete, J. L., García-Miguélez, M. P., & Lanero-Carrizo, A. (2021). Internal corporate social responsibility for sustainability. *Sustainability (Switzerland)*, 13(14), 1–14. <https://doi.org/10.3390/su13147920>
- Sánchez-Teba, E. M., Benítez-Márquez, M. D., Bermúdez-González, G., & Luna-Pereira, M. D. M. (2021). Mapping the knowledge of csr and sustainability. *Sustainability (Switzerland)*, 13(18). <https://doi.org/10.3390/su131810106>
- Sareen, S., & Wolf, S. A. (2021). Accountability and sustainability transitions. *Ecological Economics*, 185(April 2020), 107056. <https://doi.org/10.1016/j.ecolecon.2021.107056>
- Senge, Peter M. (2017). The fifth discipline: the art and practice of the learning organization. New York: Doubleday/Currency,
- She, C., & Michelon, G. (2019). Managing stakeholder perceptions: Organized hypocrisy in CSR disclosures on Facebook. *Critical Perspectives on Accounting*, 61, 54–76. <https://doi.org/10.1016/j.cpa.2018.09.004>
- Sheehy, B., & Farneti, F. (2021). Corporate Social Responsibility, Sustainability, Sustainable Development and Corporate Sustainability: What Is the Difference and Does It Matter? *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3549577>

- Sinclair, A. (1995). The chameleon of accountability: Forms and discourses. *Accounting, Organizations and Society*, 20(2–3), 219–237. [https://doi.org/10.1016/0361-3682\(93\)E0003-Y](https://doi.org/10.1016/0361-3682(93)E0003-Y)
- Sinervo, L. M. (2020). Financial sustainability of local governments in the eyes of finnish local politicians. *Sustainability (Switzerland)*, 12(23), 1–16. <https://doi.org/10.3390/su122310207>
- Ullah, M. S., Muttakin, M. B., & Khan, A. (2019). Corporate governance and corporate social responsibility disclosures in insurance companies. *International Journal of Accounting & Information Management*, 27(2), 284–300. <https://doi.org/10.1108/IJAIM-10-2017-0120>
- Waltman, L., van Eck, N. J., & Noyons, E. C. M. (2010). A unified approach to mapping and clustering of bibliometric networks. *Journal of Informetrics*, 4(4), 629–635. <https://doi.org/10.1016/j.joi.2010.07.002>
- Wang, R., Zhou, S., & Wang, T. (2020). Corporate Governance, Integrated Reporting and the Use of Credibility-enhancing Mechanisms on Integrated Reports. *European Accounting Review*, 29(4), 631–663. <https://doi.org/10.1080/09638180.2019.1668281>
- Warde, P. (2011). The invention of sustainability. *Modern Intellectual History*, 8(1), 153–170. <https://doi.org/10.1017/S1479244311000096>
- Wong, A., George, S., & Tanima, F. A. (2021). Operationalising dialogic accounting education through praxis and social and environmental accounting: exploring student perspectives. *Accounting Education*, 30(5), 525–550. <https://doi.org/10.1080/09639284.2021.1919531>
- Yang, D., Dumay, J., & Tweedie, D. (2021). Accounting's role in resisting wage theft: a labour process theory analysis. *Accounting, Auditing and Accountability Journal*, 34(1), 85–110. <https://doi.org/10.1108/AAAJ-11-2019-4268>
- Zhu, J., & Liu, W. (2020). A tale of two databases: the use of Web of Science and Scopus in academic papers. *Scientometrics*, 123(1), 321–335. <https://doi.org/10.1007/s11192-020-03387-8>
- Zyznarska-Dworczak, B. (2020). Sustainability accounting—cognitive and conceptual approach. *Sustainability (Switzerland)*, 12(23), 1–24. <https://doi.org/10.3390/su12239936>

## **5. TOWARDS SUSTAINABILITY ENGAGED ACCOUNTING: A BEHAVIORAL APPROACH**

## TOWARDS SUSTAINABILITY ENGAGED ACCOUNTING: A BEHAVIORAL APPROACH

### CONTABILIDADE ENGAJADA COM A SUSTENTABILIDADE: UMA ABORDAGEM COMPORTAMENTAL

**ABSTRACT: Propose:** This research investigates how the accountants' attitudes, subjective norms and perceived behavioral control toward accountability, may influence the companies' sustainability performance, through the style of using the accountancy information. The theoretical framework of this study has been Theory of Planned Behavior (TPB), which is based on the theory of reasoned action. **Methodology:** This research used a quantitative approach, with data collection from a structured questionnaire. The research universe consisted of accountants that operate in Brazil. The sample was calculated by the method of non-probabilistic convenience. The research sample was composed of 383 accountants. The research data collection was performed through structured questionnaires, printed on paper and distributed with the help of accountants in a snowball approach, based on 32 initial contacts. The initial contacts were obtained from professional associations, local and federal boards and unions. **Results:** The results of this study have shown that accountability has a positive influence on organizational commitment and, therefore, accountability is important for sustainable organizational performance. **Implication/originality:** The results of this study contribute to the accounting literature, particularly in three ways. First, it builds on previous studies in the field, demonstrating that accounting has the potential to contribute to the sustainable development of organizations, and therefore, the TPB is a useful tool for the debate and promotion of sustainable development. Second, it contributes to the accounting literature by providing a better understanding of the role of accounting in the accountability culture, as a tool to support organizations in the achievement of their business goals. Third, it shows that the sustainability is important for the development of organizations, and that accounting is a relevant tool for organizations to use when developing their business strategies and achieving their business goals. **Limitations:** The data used refers to a specific moment of time and a specific moment of the Brazilian economic development.

**KEYWORDS:** Theory of Planned Behavior, Sustainable accounting, Behavioral Approach

**RESUMO: Proposição:** Este tem como objetivo investigar como as atitudes dos contadores, as normas subjetivas e o controle comportamental percebido em relação à prestação de contas, podem influenciar o desempenho de sustentabilidade das empresas, por meio do estilo de utilização das informações contábeis. O referencial teórico deste estudo foi a Teoria do Comportamento Planejado (TPB), que se baseia na teoria da ação racional. **Metodologia:** Esta pesquisa utilizou uma abordagem quantitativa, com coleta de dados a partir de um questionário estruturado. O universo da pesquisa foi composto por contadores que atuam no Brasil. A amostra foi calculada pelo método de conveniência não probabilística. A amostra da pesquisa foi composta por 383 contadores. A coleta de dados da pesquisa foi realizada por meio de questionários estruturados, impressos em papel e distribuídos com auxílio de contadores em uma abordagem bola de neve, a partir de 32 contatos iniciais. Os contatos iniciais foram obtidos de associações profissionais, conselhos e sindicatos locais e federais. **Resultados:** Os resultados deste estudo mostraram que a accountability tem uma influência positiva no comprometimento organizacional e, portanto, a accountability é importante para o desempenho organizacional sustentável. **Implicação/originalidade:** Os resultados deste estudo contribuem para a literatura contábil, principalmente de três maneiras. Em primeiro lugar, baseia-se em estudos anteriores na área, demonstrando que a contabilidade tem potencial para contribuir para o desenvolvimento sustentável das organizações e, portanto, o TPB é uma ferramenta útil para o debate e promoção do desenvolvimento sustentável. Em segundo lugar, contribui para a literatura contábil ao proporcionar uma melhor compreensão do papel da contabilidade na cultura de prestação de contas, como ferramenta de apoio às organizações no alcance de seus objetivos de negócios. Terceiro, mostra que a sustentabilidade é importante para o desenvolvimento das organizações, e que a contabilidade é uma ferramenta relevante para as organizações utilizarem no desenvolvimento de suas estratégias de negócios e no alcance de seus objetivos de negócios. **Limitações:** Os dados utilizados referem-se a um momento específico e a um momento específico do desenvolvimento econômico brasileiro.

**PALAVRAS-CHAVE:** Teoria do Comportamento Planejado, Contabilidade Sustentável, Abordagem Comportamental

## 1. INTRODUCTION

Organizations traditionally compete, and the way managers conduct their organizations for profit, generate harmful consequences for the social order and the environment (Elkington, 2020). Several accounting perspectives are launched in order to better understand the organizational dynamics and its consequences (Harney et al., 2021), however, many of them assume theoretical discourses on the action of economic agents (Roberts, 2021). Accounting understandings regarding the functioning of organizations, for the most part, seem to be contained in a way of thinking about the company in the essential molds of increasing shareholder wealth (Cooper, 2015; Wong et al., 2021).

It is remarkable the fact that, under fundamentally positivist (Chua, 1986), functionalist and neoclassical precepts (Ala & Lapsley, 2019; Harvie et al., 2021), accounting scientists have achieved conceptual breakthroughs in the way of understanding how people act in business environments. At the same time, the exhaustion of these kind of understandings, that seek to simplify the action of man in society, is remarkable. Especially by focusing exclusively on economically criteria of man behavior, limiting reflections on the real significance of these actions to society (Gendron & Rodrigue, 2021).

Ahrens (2020) and Roberts (2021) see the accountability as a set of understandings that allow to analyze the organizational actions from a social perspective. At the same time, Byrch et al. (2015), Lamberton (2005) and Gray (2001, 2010) carry out seminal accounting reflections on CSR, making it clear that organizational analysis of an environmental, social and economic nature, needs to be carried out, in an integrated way, searching for relevance in the social context they are part of. Boiral (2013), Brown and Dillard (2014) and Higgins et al. (2014) describe that the debate on CSR in the accounting field is dominated, mostly, by the economic legitimization perspective, not taking into consideration the awareness of sustainability. According to Sareen and Wolf (2021) this is one recognized theoretical accounting issue, highlighting the gap between the concepts of accountability and sustainability. Their point of view describes accountability as a way for organizations to become sustainable.

Unlike the traditional mainstream accounting approach, new accounting reflections emerge and are associated with a new paradigm, more critical and interpretive. A new approach that considers issues beyond economic aspects, therefore opening paths for understandings that relate to the current perspective of sustainability in business (Nicholls, 2020). The Theory of Planned Behavior (TPB) (Ajzen, 1991) may be used to address the influence and impacts of variables like attitudes, subjective norms and perceived behavioral control, as a way to predict behavioral intentions that can explain individual and organizational behavior towards the new accountancy approach.

To Ajzen (2005) the TPB can be used to a specific population to identify their behaviors. The TPB framework determines that human behavior is defined by their intentions, and these intentions are composed by a systematic of attitudes (ATT), subjective norms (SN) and perceived behavioral control (PBC). For Ferdous (2010), the framework informs that if ATT, SN and PBC are favorable about some specific behaviors, the intention to perform it is likely to increase. The TPB framework is used in this investigation to explain the shift in accountants and organizations' attitudes and behavior, towards a more engaged accountancy, and sustainability (Thoradeniya et al., 2015). To do this we assume that attitudes, subjective norms, and perceived controls aligned with the accountability approach can determine a "behavioral intent", which reflects on how motivated an accountant and a company can be to perform a sustainable behavior based on accountancy principles and practices.

Authors such as Boiral (2013) and Gray (2001) alert for the possibility of accounting analysis to consider environmental and social elements, at the same level of economic ones. Accounting scientists have been showing some concern with aspects that go beyond those traditionally considered in studies in this field (Viale et al., 2017; Javeed et al., 2020; Nicholls, 2020; Phiri, 2020; Becker et al., 2021; Connolly et al., 2021; Lambert, 2021). Many of these researchers in the accounting area, consider CSR as an important topic. In the same way, accounting studies about accountability are not new too. But only a few studies about the relationship between these two approaches (CSR and accountability), appear to demonstrate the emergence of an organizational perspective that can link the traditional economic analysis, to the sustainability perspective (Brown & Fraser, 2006; Thoradeniya et al., 2015; Cho et al., 2015; Clarkson et al., 2019).

Most of the traditional accounting debates established about the intersection of these issues have been addressed in studies related to voluntary disclosures. (i) authors such as Cho et al. (2015), Chaidali and Jones (2017), Mason (2020) and Nadeem et al. (2021) relate the topic with credibility or power. In this perspective there is a lack of credibility on companies' disclosures about sustainability that affects the stakeholder accountability. They point to the existence of one perspective of power in accountability that influence the real organizations' comprehension about sustainability. This line of reflections conducts the debate about the topic to the importance of accountability as a mechanism of sustainability transition, in an organizational way of thinking. (ii) Authors such as Villiers et al. (2014) and Malola and Maroun (2019), deepen the understandings about how the accuracy of these procedures contributes to the desired results. This perspective informs how the accountability and CSR behavior can assist the traditional organizational disclosures, to become more accurate, free of common failures, auditable and integrated with other organizational processes; (iii) authors such as Stubbs and Higgins (2014), Adams (2015), Christensen (2016), Chen et al. (2018) and McNally and Maroun (2018) inform how disclosure practices shape organizational activity in a certain direction. This line points to accountability and CSR as a way to conduct the disclosure process to the integrated reporting initiative, to new ways to mobilize resources in organizations, to change governance practices, organizational processes, value formation and stock performance.

This relevant debate about the topic demonstrates how associated attitudes, controls and subjective norms with accountability are important to build a context related to the way that information is used in organizations and thus, influences the business behavior toward sustainability (Bebbington et al., 2020). But what the mainstream accounting debate has been obscuring is the way that accountants understand what sustainability and accountability really are.

Therefore, this research follows three major gaps, the first linked to the accountant's attitudes, considering it as the way that accountants perceive their profession. In this study this perspective is associated with the tendency of accountants to assume one traditional business perspective, making efforts to attempt performance goals. In this movement, traditional to accountants, they end up setting aside innovative ways of dealing with information in organizations. A perspective that preserves support in the debate, already started, about the accounting profession that involves the existence of tensions between performance and creativity, as pointed out by Kaveski and Beuren (2020), Boedker and Chong (2022) and Su et al. (2022). The second gap is related to the element SN from the TPB (La Barbera & Ajzen, 2020). It is assumed that subjective norms are those related to the opinion, even pressures (Gomez-Conde et al., 2019) from stakeholders regarding the activity of accountants (She & Michelon, 2019). Therefore, it is relevant to discuss how accountants are able to shape their actions, emphasizing or hiding relevant information that they assume that the stakeholders (or stockholders) will not agree with. This perspective is supported by established debates that

address the lack of personal or organizational credibility as result of bad use of organizational reporting (Chaidali & Jones, 2017; Farooq & de Villiers, 2019; Helfaya et al., 2019, García-Sánchez et al., 2022). The third gap pointed by this investigation is related to how accountants find it easy, or difficult, to assume a certain position in relation to the way they conduct their activities. Therefore, we strive to understand what leads accountants to act in certain ways, even if this potentially contradicts their particular understanding of the profession, or even the awareness formed by others about how the accounting activity should be performed. Reflections that join approaches related to the intention of organizations to inform only what they want, as described by Boiral (2013), Diouf and Boiral (2017) and Melloni et al. (2017). In other words, many accountants restrict their actions to their particular beliefs about what accountants should do, avoiding acting on any aspect that they believe is beyond their competence. One problem that can be addressed by the PBC on the TPB (Ajzen, 2002), when dealing with sustainability (Byrch et al., 2015). Can accountancy remain neutral to corporate social responsibility and sustainability challenges (Gray, 2010), or should it be part of the solution, adopting an engaged position (Egan & Tweedie, 2018), namely on how accounting information is produced? with what results? and displayed to whom?

These actual reflections, that go beyond traditional paradigm limitations (Byrch et al., 2015), imposed by mainstream accounting (Gray, 2013), reinforce the discussion assumed in this paper that there is a context, formed by ATT, SN and PBC, related to the accountability, that impacts the way information is used in organizations, and promotes sustainable behavior in organizations.

Therefore, to fill these gaps, this research investigates how ATT, SN and PBC of accountants toward accountability, may influence the companies' sustainability performance, through the style of using the accountancy information. We argue that the more the accountant takes actions linked to accountability aspects the more sustainable the company is, through a different use of accountancy information. This investigation innovates on accounting field by the application of TPB as a theoretical framework, in order to clarify aspects related to the (accountant) human and organizational behavior. This paper seeks the comprehension that the human behavior cannot be simplified to an economic agenda, following the criticized mainstream accounting addressed by (Viale et al., 2017; Ala & Lapsley, 2019; Alawattage et al., 2019; Gilbert, 2021; Wong et al., 2021). It can have a critical role shifting the traditional accounting approach, making it more engaged, more accountable and more involved with sustainability issues.

This investigation is based on cross sectional data from a sample of 383 Brazilian accountants and respective companies, gathered through a structured questionnaire. In order to carry out the analysis of the collected data, that is, to test the hypotheses, structural equation modeling (SEM) was used, which covers a set of statistical techniques, used in order to measure and study relationships between observable (manifest) and non-observable (latent) variables (Beran & Violato, 2010).

In addition to this brief introduction, this article has four other sections: section two, Research background, gives a brief approach describing the study variables and the proposed hypotheses; the third section, Methodology, describes the methodological choices adopted in this analysis and a brief characterization of the sample; the Findings and discussion are presented in part four. Finally, the topic contributions, implications for management, and recommendations is showed, as well as its contributions and limitations.

## **2. RESEARCH BACKGROUND AND HYPOTHESIS DEVELOPMENT**

### **2.1 Style of use of information**

Many aspects are considered when addressing the use of information in organizations. An important part of these considerations necessarily involves accounting information, whether financial or non-financial (Pesci et al., 2020; Wang et al., 2020). However, from the accounting perspective, it is notable that when the use of information in organizations is addressed, there is only a consensus when the subject is treated under the validity of mainstream approaches. The mainstream accounting perspective commonly frames the activity of the accountant in the formation and use of information in organizations under a positivist (Chua, 1986) and neoliberal (Viale et al., 2017; A. Wong et al., 2021) vision. This perspective ends up disregarding elements that are beyond the economistic approach to human action. Going beyond the barriers of the mainstream accounting approach, it is noticeable that the way information is used in organizations is directly influenced by behavioral aspects (Ali et al., 2014; Bekoe et al., 2018). The TPB approach presents a plausible way for these considerations to be revisited and thus promotes new understandings about what makes accountants act in a certain way.

Considering the information as one preponderant aspect of accounting, Hazelton (2013) informs that the production of information by accountants, and the use of the information by people, are relevant aspects to promote policy changes. Hazelton (2013) affirms that there is a tension between the “need to know” and the “right to know” approaches. This tension involves: (I) the legitim privacy right of the companies, that points to organizational disclosures as a way to inform about their actions to society, could be tendentious in some cases (She & Michelin, 2019, Dillard & Vinnari, 2019; Luo et al, 2020 and Khan et al., 2020); (II) the social expectations of information about organizational attitudes, that point to corporate actions of listening, incorporating and interacting with public claims, could impose some credibility, performance and creativity problems to organizations (Flower, 2015; Diouf & Boiral, 2017; Gibassier et al., 2018). To Irvine and Moerman (2017) there is an actual debate about the use of accounting information by organizations that points to some activist organizations as important actors that produce complementary narratives, when companies' reports fail to contribute with relevant information to social problems caused by their activities. The debate established by these authors points to the use of information as a relevant aspect to induce the organizational behavior to attend sustainable goals.

The contemporary debate on the use of information on organizations indicates accountability as one attitude that can reduce the contradictions under private and public interest. Mason (2020) describes that accountability is a key factor in one critical power chain, that involves sustainability interests. The author points that the kind and the quality of organizational information produced and provided, is determinant to demonstrate the power-wielder in the relationship between the organizations and society. The “accountable” use of information is a way to induce social and environmental concerned behavior in organizations. In this way, Tetlock (1983) describes that accountability only induces more complex reflections, when people don't have enough information about those that they feel accountable with.

Exploring the criticism about the companies' information practices Khalid et al. (2019) point to the necessity of the integration between the organizational and social interests, as a way to avoid the “bad-faith” in the corporate narratives and the “inauthenticity” of the organizations to supply social demands. This perspective points to accountability as a mediation space of the needs and offers of information. This opens space for debate on the use of accounting information focused on strategic or control aspects:

In one hand (Strategic) accounting is a way for managers to perceive the importance of incorporating the use of accounting information into organizational practices in the short-, medium- and long-term, composing, in fact, the construction and execution of all organizational activities. According to Naranjo-Gil and Hartmann (2006) the style of information use in

organizations is related to motivation and coordination, and is capable of promoting continuous learning and long-term strategic changes. However, the way information is used in organization conditions, may influence organizational performance and the company goals (Su et al., 2015).

On the other hand, we can see the accounting profession by the traditional approach, as a fairly (and restricted) activity to constitute and disseminate financial information about organizational performance (Allain et al., 2021). In this paradigm, accounting is commonly seen as a way to meet the interests of managers, shareholders and stakeholders in recognizing, monitoring and predicting the economic performance of organizations (Alawattage & Wickramasinghe, 2021). The control dimension means to privilege a neutral accounting approach, versus the strategic approach that can be more engaged and influence the aims and the behaviors of the organization.

TPB can be used to understand the adoption of new behaviors, based on the perspective of accountants, about their profession. The element ATT of the TPB demonstrates a relevant perspective to understand the way that accountants perceive their role in the use of information in organizations (Ajzen, 2005). Moores and Yuen (2001) argue that the nature of information in a management control system needs to satisfy the needs of comparability and understanding of the information, in this way the information starts to present adequate levels of aggregation and integration, allowing to obtain global visions of the organization. For these authors the observation of the nature of accounting information involves the observation of three preponderant aspects, the first refers to the style of use of the information, the second to the nature of the information and the third to the characteristics of the information.

Another aspect that can be addressed based on TPB is related to the opinion of stakeholders on how the accounting profession should be performed. The SN of the TPB describe a dimension of human behavior that occurs based on established understandings about the expectations of others about it (La Barbera & Ajzen, 2020). Wong and Millington (2014) inform that stakeholders have an important role in the use of information on business. They inform that better understandings about the stakeholder's information needs can lead the organizations to obtain more trustworthiness and can change the corporate behavior from the traditional approaches. According to Tetlock (1983), people tend to use information according to the public they are interacting with. To Pesci et al. (2020) the organizational management can select and use specific information as a way to have a good image, to improve management and social control. Pesci et al. (2020) show that it is possible to use tailored documents to engage in dialogue with readers and induce them to participate in community life. To Boiral (2013) and Diouf and Boiral (2017) the significant negative events are usually not reported by organizations on disclosure practices. This behavior is related to the image management on organizations, that uses disconnected information of the impact of the business to deceive the public opinion.

One third issue considered on the TPB is about the ability of accountants to decide on the way in which they perform their profession. The PBC in TPB considers the fact that people tend to act in a specific way, even though they understand that they should act in a different way, because they consider that the decision to act is not part of their competence, or even if it is, it is easier to act in that way, considering the context (Ajzen, 2002). According to Dowling and Leech (2014) the style of use of information can promote changes in auditor behavior and audit teams. To this author this variable has influence on the methodologies of organizational policies development and is relevant to determinate aspects as compliance and internal or external transparency. The goals' achievement in organizations depends on how they use the information they have, that is, organizations use the information they have to motivate, monitor and reward the achievement of their goals (Fredenberger et al., 1997). As described by

Fredenberger et al (1997), this variable refers to the way in which the information provided by the management system and control is used, specifically, in relation to the ability to predict risk variations and insights into the organizational performance process.

Therefore, the use of TPB as a theoretical background proves to be a way to establish changes in the understandings of the accounting profession (Thoradeniya et al., 2015): expanding understandings that simplify the human action (Wong et al., 2021), understanding it repeatedly from economic perspectives, bringing accounting considerations closer to a current perspective on accountability (Dillard & Vinnari, 2019). In this way, we are contributing to the establishment of contemporary, and humanized understandings about the way that organizations become sustainable. Perspectives guided by a positioning focused on accountability, whether delimited by the use of accounting information in a strategic or control approach, may contribute to shift the organization goals and performance.

## **2.2 Accountant Attitude (ATT)**

Attitude, according to (Ajzen, 2001), is related to a person's willingness to respond favorably or unfavorably to an object, person, institution or event. According to this author, attitude represents an evaluation of something captured in dimensions such as good-bad, harmful, beneficial and pleasant-unpleasant. In other words, attitudes reflect people's opinion regarding what is presented in their reality, in the case of this study, the accounting profession. To Marriott and Marriott (2003) the accountant attitudes depend on their perceptions of the reality they experience. It is in this sense that Thoradeniya et al. (2015) report that behavioral beliefs predict accountants' attitudes, especially in relation to ethical and unethical decision-making. Singhapakdi et al (1996) understand, as socially responsible executives, those who hold beliefs that support as relevant aspects in business management, so, for these authors socially responsible behaviors are the result of socially responsible attitudes. A notion that corroborates with Adams and Frost (2008) when they indicate that the level of concern of companies to meet objectives linked to sustainability reflects the level of accountability performed by them. Therefore, organizations that take a sustainable perspective tend to promote attitudes towards accountability.

According to McDowall and Jackling (2010) is common the negative stereotypical perspective of accounting profession associated to numeric skills. This situation is the major cause of misunderstandings regarding accounting and the skills required to be an accountant (Marriott & Marriott, 2003). Jackling (2002) points to the fact that there is one perspective that the accounting profession is rule-based and consists of a set of rules memorized by professionals. Perspective that restricts the comprehension about what the profession really is (Marshall, 2003). These elements are important to understand the negative perception of accounting formed over time that has an important reflex on actual accountant attitude (Bekoe et al., 2018).

When accountants and organizations believe the accounting information process may have a short-, medium- and long-term impact and shape organizations' strategic options and decisions, namely, on an accountability approach, they tend to adopt a strategic approach on accounting information processing (Naranjo-Gil & Hartmann, 2006). Therefore, when sustainability issues become prominent in the organization practices and in the accountant attitude, the accounting process may become more strategical (Su et al., 2015). Consequently, the following hypothesis is proposed

H1.: Accountant Attitude (AAT) toward accountability is positively related to a strategical concerned Style of Use of Information (SSUI).

When the attitude is more traditional, based on the premise that an accountant acts in a control way, and that their profession is not made to change the paradigm or the way companies are running, they tend to adopt a rather controlling approach of accounting information (Allain et

al., 2021). This situation tends to persist even if accountability is considered in the accounting process (Pan & Patel, 2020) and whether or not the organization is oriented towards sustainability (Zyznarska-Dworczak, 2020). In this perspective, the following hypothesis is considered.

H2.: Accountant Attitude (AAT) toward accountability is positively related to a control concerned Style of Use of Information (CSUI).

## 2.2 Subjective Norms (SN)

To Ajzen (2005) the subjective norm reflects the personal understanding that others approve, or disapprove, that the person acts, or fails to act, in a certain way. Therefore, the subjective norm is the reflection of the sense of social pressure on an individual to behave in a certain way. The author explains that subjective norms can be defined as the perceived social pressure to perform, or not perform, a given behavior and can be obtained by asking about the importance given to the “important others”, about their approbation, or not, to a certain behavior. For Thoradeniya et al. (2015) the interests of the most important stakeholders can outline the interests and behaviors of managers and accountants. Therefore, stakeholders’ beliefs and preferences, tend to define the subjective norms that drive managers and accountants’ attitudes.

So, the managers’ attitudes depend on the intensity of pressure carried out by stakeholders, that is, their intention to get involved with the sustainability occurs due to the demand placed by stakeholders (Thoradeniya et al., 2015). According to these authors, organizations that are not involved with sustainability are those that do not have a positive relationship with stakeholders, or do not intend to have one. To Albu et al. (2014) and Van der Laan Smith et al. (2005) the society has sufficient influence to determine the CSR procedures that companies must follow. Ramanna (2013) shows that different institutions, in many countries, are important to create CSR rules and Bryson et al. (2006, 2015) describe that the contemporary concerned people with social problems agree that different society sectors may be relevant, and must collaborate, to effectively and humanely pressure organizations to respond to actual challenges. But it is important to consider that stakeholder empowerment is necessary to overcome the organizational resistance in the social and economic fields (Cooper & Owen, 2007).

These perspectives are noticeable around the world (Williams, 2015). Hrasky (2011) relates the increasing rates of disclosures related to ecological footprints in Australia. At the same time, however, the author noticed that while Australian companies - from carbon-intensive sectors - were practicing substantive action to comply with a legitimation strategy, - less carbon-intensive sectors - were working on it only in a symbolic way. Besley and Burgess (2002) show that in some places, in India, where the information flows with more intensity, an accountability concerned context is formed between companies and society. Christensen (2016) points that the U.S. companies that report their corporate accountability activities are less likely to engage in high-profile misconduct. Yasmin & Ghafran (2019) inform that Muslim NGOs operating in the U.K. are facing accountability problems related to the political, social and economic context, that are limiting their capacity to be accountable. Phiri (2020) describes how governmental patrimonialism practices increase the lack of accountability in Zambia organizations, removing the society from this debate.

When accountants perceive that the stakeholders take into consideration the accounting information and the accounting profession, as a strategically relevant aspects for business, the accountability approach becomes a driver for the processing and using information (Khan et al., 2020), and contributes to the promotion of organizational sustainability (Meseguer-Sánchez et al., 2021). Therefore, the following hypothesis is proposed.

H3.: Subjective Norms (SN) associated to accountability are positively related to a strategic concerned Style of Use of Information (SSUI).

From another perspective, even though accountants act from the perspective of accountability, they might be tempted to face the accounting activity in their traditional pattern (linked to control), since the opinion of stakeholders about accounting activities does not direct them to act otherwise (Bellucci et al., 2019). Additionally, control is a basic feature of the accountant practice and the accountancy process and might be improved when controlling sustainability issues become the standard (Gomez-Conde et al., 2019). Therefore, the following hypothesis is proposed.

H4.: Subjective Norms (SN) associated to accountability are positively related to a control concerned Style of Use of Information (CSUI).

### **2.3 Perceived Behavioral Control (PBC)**

Perceived behavioral control is the level of control over one's own behavior (Ajzen, 2002). That is, PBC refers to the control that is perceived over the performance of a certain behavior. One way to understand PBC is to note how much people understand their ability to perform a behavior. TPB introduces PBC as the main difference to the theory of reasoned action (Ajzen, 1991), giving PBC a central role that makes it more suitable to explain the accounting profession and the accountancy process in organizations (Ajzen, 2002). Thus, it is understood that the control perceived by accountants acts directly on their behavior (Thoradeniya et al., 2015) indicating how much a given person understands to be easy, or difficult, to perform a certain behavior (Bekoe et al., 2018). According to Ajzen (2002) the PBC is relevant to understand situations in which people are inserted but do not have complete control. In the case of accountants, this lack of control is noticeable in relation to the way they perform the accounting activity, because these professionals need to deal with a pre-established organizational and accounting context on the scope of their practices (Bekoe et al., 2018; Thoradeniya et al., 2015).

Analyzing studies such as those by Bebbington and Larrinaga (2014), Deegan (2013) and Gray (2001), Thoradeniya et al. (2015) identified that accountants may have positive attitudes towards the environment. However, they point out, based on Wilmshurst and Frost (2000) that although such attitudes exist, accountants are reluctant to support or get involved with sustainability, either because they understand that these concerns are beyond their competence, or because they consider that environmental aspects are not relevant to the business.

Therefore, when accountants perceive that the controls exercised over their professional activities are involved from an accountability perspective, the use of accounting information in organizations tends to lead them to a sustainable behavior and a strategic approach on accounting information (Yasmin & Ghafran, 2019). At the same time, a higher perception of control might lead space for accountancy to go far beyond their traditional practices and processing, adopting a rather strategic approach (Alawattage & Wickramasinghe, 2021).

H5.: Perceived Behavioral Control (PBC) associated to accountability is positively related to a strategic concerned Style of Use of Information (SSUI).

On the other hand, even in the presence of an accountability orientation, the need for control over their professional behavior, might lead to an accounting process rather traditional (Allain et al., 2021), based on control (Baud & Chiapello, 2017). Therefore, the perceived behavioral control over profession might lead to the need of a higher control over the results (Yapa et al., 2016), that is, increasing the control approach.

H6.: Perceived Behavioral Control (PBC) associated to accountability is positively related to a control concerned Style of Use of Information (CSUI).

## 2.4 Triple Bottom Line (TBL)

The concept of sustainability was introduced to integrate economic, social and environmental elements to human and business action (Christensen, 2014; Elkington, 2020). Elkington (2020) portrays sustainability as the integration of economic, social and environmental factors. In this way, the author proposes a model that considers, in an integrated way, these three drivers to be applied: (1) business case, when environmental and social factors are in the background in relation to the economic factor; (2) the human case, when environmental and economic factors are displaced due to the social factor; and, (3) the green case, when the economic and social factors are relegated due to the environmental factor.

The perspective uncovers a set of possible reflections on the theoretical barriers, faced by accounting scientists, must be overcome by them. Accounting authors such Byrch et al. (2015), Gray (2001, 2010), and Lamberton (2005) undertake seminal accounting reflections on sustainability, but studies of this nature are still uncommon in mainstream accounting research.

Addressing the fact that environmental and social aspects apparently are not compatible with accounting, Gray (2010, 2013) asserts that the traditional accounting practice, predominantly economic oriented, does not offer support for the use of a sustainability-oriented accounting. According to him, the sustainability perspective in accounting is necessarily conceived from an alternative and new accounting approach. Like Gray (2010) and confirming the understanding that mainstream accounting aspects are not capable of incorporating sustainability and its challenges, Deegan (2013) shows that only when accounting conventions and principles are set aside, such concerns can be perceived and integrated in the contributions of the area. The author understands that the rule-based standards, in accounting logic of reporting and measuring the organizational performance, end up expanding gaps between organizations and stakeholders.

Observing the crescent preoccupation of the companies in legitimizing their responsibility over society across the disclosure process, Cooper and Owen (2007) identify the accountability as a missing link in this relation. The authors describe how the current disclosure process is molded to minimize the stakeholder's opportunity to take action. In the same direction, Cho et al. (2015) indicate Corporate Social Responsibility as an emerging topic in accounting reflections. These authors inform that corporate social responsibility disclosure is used to focus on organizational image aspects rather than on the management of Accountability.

Therefore, when the accounting activity is developed at a strategic level, under the support of accountability, there is guidance for the alignment of organizational behavior with the perspectives of TBL (Tiwari & Khan, 2020). The adoption of a strategic approach introduces a vision, an orientation, and the will to positively interfere in the organizational paths, namely on sustainability performance (Gomez-Conde et al., 2019).

H7.: Strategical Style of Use of Information (SSUI) associated to accountability is positively related to a Triple Bottom Line (TBL) behavior.

On the other hand, when the traditional perspective of accounting is associated with the perspective of accountability, sustainable issues tend to be under the accountancy eye (de Villiers et al., 2014). This orientation towards organizational behavior linked to the TBL, makes control a tool to avoid waste and sustainability non-compliances (Flower, 2015). Therefore, the

control use of accounting information might lead to the improvement of the sustainability performance.

H8.: Control Style of Use of Information (CSUI) associated to accountability is positively related to a Triple Bottom Line (TBL) behavior.

In fact, subjective norm (Ajzen, 1991), attitude (Ajzen, 2005) and perceived control (Ajzen, 2002) may have an impact on sustainability performance, but this impact might be rather indirect (Ferdous, 2010; Thoradeniya et al., 2015). Based on TPB, showing how the accountability environment may impact the style of use of information, both in a Strategic (Su et al., 2015) and a control way (Allain et al., 2021), we perceive that, this use of information may impact the organization performance on triple bottom line (Purvis et al., 2019). Therefore, the links between the accounting environment, based on attitudes, subjective norm and perceived control, and the style of use of information, is closely linked with sustainable behavior (Byrch et al., 2015), and seems to mediate these relationships, with the TBL performance. Therefore, the following mediating hypothesis is proposed.

H9.: The style of use of information (strategic and control) mediates the relationship with the triple bottom line (TBL).

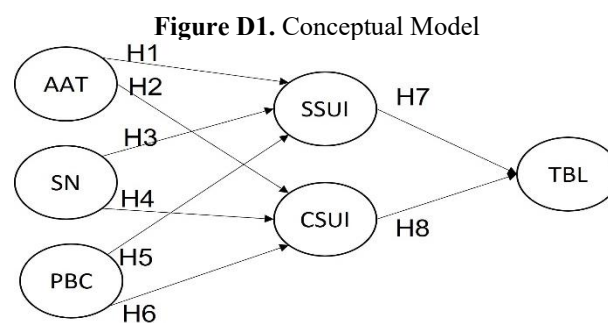
H9a.: The ATT has positive impact on the style of use of information and affects the organizational TBL performance.

H9b.: The SN have positive impact on the style of use of information and affect the organizational TBL performance.

H9c.: The PBC has positive impact on the style of use of information and affects the organizational TBL performance.

### 3. METHOD

The proposed research model presents a set of eight main hypotheses (Figure D1). Since the effects of the use of accounting information (strategical or control) vary according to accountants' attitudes, subjective norms and behavioral controls, as it varies their impact on sustainable performance, the accounting information has been investigated as a mediating variable in the relationship with sustainable performance, and an additional mediation hypothesis will be added. The research model is, therefore, presented in Figure D1.



#### 3.1 Sample and data collection

This research is based on data collected from a sample of 383 accountants that operate in Brazil, using a structured questionnaire printed and handed to them. The questionnaire was distributed with the help of accountants in a snowball approach, based on 32 initial contacts. The initial contacts were obtained from professional associations, local and federal boards and unions. Accountants were contacted between August and September – 2022, a total of 2.500 accountants were contacted by email and presentially. Only 393 agreed to participate in this

research, of which 383 were considered valid for using, given that the remaining 10 accountants did not actuate as accountants in the last 3 years. Respondents answered regarding the main company in relation to which they were responsible for the accounting. Table D1 shows the sample characterization.

<b>Table D1. Sample Characterization</b>		
<b>Accountant Characteristics</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Age</b>		
Less than 34	246	64,2
35 - 54	121	31,6
More than 55	16	4,2
<b>Gender</b>		
Male	199	52
Female	184	48
<b>Educational background</b>		
Higher education	284	74,2
Master degree	97	25,3
Doctor degree	2	0,5
<b>Acting in accounting profession</b>		
Less than 1 year	144	37,6
1 – 3	128	33,5
More than 3 years	111	28,9
<b>Income</b>		
Less than US\$ 500.00	179	46,7
US\$ 500.00 – US\$ 3,000.00	97	25,4
More than US\$ 3,000.00	107	27,9
<b>Accountant Activity</b>		
Outsourced	54	14,1
Accounter	325	84,9
Director	4	1
<b>Company Employees</b>		
Less than 10	79	20,7
10 - 50	107	27,9
More than 50	197	51,4
<b>Company activity</b>		
Services	201	52,4
Commerce	66	17,3
Industry	116	30,3

### 3.2 Measures and validity

In this study the variables that were used in the research hypotheses were adapted from previously tested scales (Su et al., 2015; Teixeira et al., 2022; Thoradeniya et al., 2015), translated into Portuguese, using back translation procedures, and were measured through a seven-point Likert scale. A pre-test with 15 respondents was performed. Table D2 shows the items for each of the five constructs. We used a seven-point Likert scale, where respondents were told to choose from 1 (“strongly disagree”) to 7 (“strongly agree”). The questionnaire started by asking respondents about the attitudes, subjective norms and perceived behavioral control related to the accounting profession. After that, the respondents were asked about the style of the use of the information in organizations and how it promotes the triple bottom line behavior. The AMOS® 22 software was used to perform confirmatory factor analysis (CFA) to analyze the psychometric properties of the scales and the measurement model. We used structural equation modeling (SEM) in order to perform statistical analysis. The SEM consists of the design and testing of “causal statistical models”, which begins with the formulation of

hypotheses, based on a conceptual model (Fontoura, 2019), conceived through “theories and/or prior knowledge” (Stein et al., 2012). Among the advantages of this method, is the fact that it can be used to analyze several relationships simultaneously, thus allowing a set of hypotheses to be tested (Dell’Olio et al., 2018), combining two statistical techniques, these being: factor analysis and linear regression (Marôco, 2010). There is a good fit of the final model  $IFI = 0.953$ ;  $TLI = 0.949$ ;  $CFI = 0.953$ ;  $RMSEA = 0.062$ ;  $CMIN/DF = 2.448$ .

**Table D2.** Results of confirmatory factor analysis

Construct	Metrics	SRW
<b>Accountant Attitude (ATT)</b> - Thoradeniya, Rebecca and Ferreira (2015)		
	It is good for the company to use accounting information to become sustainable	0,965
	It is rewarding for the company to use accounting information to become sustainable	0,935
	It is valuable for the company to use accounting information to become sustainable	0,903
	It is manageable for the company to use accounting information to become sustainable	0,937
<b>Subjective Norms (SN)</b> - Thoradeniya, Rebecca and Ferreira (2015)		
	Most of my company’s stakeholders (Shareholders, Employees, Community, etc.) think that my company should use accounting information to become sustainable	0,92
	Most of internal stakeholders (Employees and management) would approve the use of accounting information to my company become sustainable	0,847
	Most organizations, whose opinions are valued by my company, use accounting information to become sustainable	0,863
	Many companies similar to my company use accounting information to become sustainable	0,992
<b>Perceived Behavioral Control (PBC)</b> - Thoradeniya, Rebecca and Ferreira (2015)		
	It’s easy to my company to engage in Sustainability	0,962
	It is possible to my company to engage in Sustainability	0,966
	The decision to engage in Sustainability is under my company’s authority	0,874
	The decision to engage in Sustainability is under my company’s control	0,939
<b>Style of use of Information (SUI)</b> - Su et al. (2015); Mundy (2010) and Widener (2007)		
	Indicate what benefits your company derives from the use of information provided by accounting, in each of the situations reported below:	
<b>Strategic (SSUI)</b>		
	In setting goals and objectives	0,924
	Negotiating goals and objectives	0,945
	When debating hypotheses and action plans	0,932
	Alignment of organizational strategy to new organizational plans	0,912
	Monitoring and controlling significant deviations	0,955
	In maintaining a continuous interaction between the management bodies and those responsible for the operational departments.	0,804
<b>Control (CSUI)</b>		
	In the evaluation and control of subordinates	0,962
	Monitoring pre-defined plans and goals	0,966
	Alignment of performance measures with strategic objectives	874
	The performance evaluation	0,939
<b>Tirple Bottom Line (TBL)</b> - Teixeira, Coelho, Fontoura, Sá, Silva, Santos e Ferreira (2021); Inman and Green (2018) and Hussain et al. (2019)		
<b>Economic (TBLE)</b>		
	In the past year, our organization (...)	
	Has managed to reduce its operating expenses	0,925
	Has managed to improve efficiency in resource management	0,949
	Has managed to reduce the number of materials and/or consumables used in carrying out its activities	0,819
	Has improved its ability to deliver value to its internal and/or external customers, fulfilling established commitments (e.g., deadlines and business requirements)	0,809
	Has increased the quality of its products and/or services, ensuring the satisfaction of the needs and expectations of its stakeholders (e.g., employees, customers, suppliers, community, etc.)	0,957
	Has seen an overall increase in its operational performance	0,842
<b>Environmental (TBLEN)</b>		
	In the past year, our organization (...)	
	Has managed to reduce its operating expenses	0,934
	Has managed to improve efficiency in resource management	0,924
	Has managed to reduce the number of materials and/or consumables used in carrying out its activities	0,926

	Has improved its ability to deliver value to its internal and/or external customers, fulfilling established commitments (e.g., deadlines and business requirements)	0,898
	Has increased the quality of its products and/or services, ensuring the satisfaction of the needs and expectations of its stakeholders (e.g., employees, customers, suppliers, community, etc.)	0,929
	Has seen an overall increase in its operational performance	0,809
<b>Social (TBLS)</b>	In the last year, in our organization (...)	
	Has complied with applicable security procedures	0,868
	There has been an improvement in the working conditions of employees and suppliers	0,813
	Has seen an increase in its performance in health and safety at the workplace, in its business activities	0,873

We performed the Skewness and kurtosis to test normality. Most of the indicators presented values below 1, and three items presented values below 3. Therefore, we checked for multivariate outliers using Mahalanobis distance, compared to a chi-square distribution with the same degrees of freedom, and no outliers were found ( $p < 0.001$ ). Table 3 shows the Cronbach's alpha, standard deviations, square correlations, composite reliability (CR) and the average variance extracted (AVE). There is discriminant validity, given that the correlations between the constructs of the model are lower than the square roots of the correspondents AVE (Agyabeng-Mensah, Ahenkorah, et al. (2020)), and the correlations between the constructs are considerably less than 1 (Shiu et al., 2011). The CR is higher than 0.9 (Fornell & Larcker, 1981), and the loading value of all items is higher than 0.5 (Chiang et al., 2012), thus demonstrating the existence of convergence.

**Table D3.** Square Correlations, Cronbach's Alpha composite reliabilities, and average variances extracted

Constructs	SD	ATT	SN	PBC	SSUI	CSUI	TBL	AVE	CR
ATT	0,021	<b>0,890</b>						0,874	0,965
SN	0,056	0,339	<b>0,962</b>					0,823	0,948
PBC	0,036	0,144	0,113	<b>0,945</b>				0,876	0,965
SSUI	0,050	0,538	0,344	0,185	<b>0,831</b>			0,834	0,967
CSUI	0,047	0,430	0,267	0,190	0,536	<b>0,938</b>		0,774	0,931
TBL	0,050	0,591	0,635	0,218	0,587	0,448	<b>0,948</b>	0,801	0,983

Note: SD- Standard Deviation; Diagonal in bold - Cronbach's Alpha; CR - Composite Reliability; AVE - Average Variance Extracted

To control and minimize the risk of common method variance (CMV), all respondents were guaranteed confidentiality and anonymity. We performed a Harman's single factor test and a common latent factor analysis. Exploratory factor analysis showed the existence of 5 factors, accounting for 82,5% of cumulative variance, and the main factor accounted for 24% of the variance (Podsakoff et al., 2003). When loading all items into a single factor, only 32% of explained variance was achieved. The common latent factor analysis performed, by restricting all items to load on a single factor (Podsakoff et al., 2003), showed a bad model with a bad FIT (Hair et al., 2010). Therefore, it is not likely that CMV may influence the measurement and the estimation of the relationships.

#### 4 | FINDINGS AND DISCUSSION

A SEM was performed to test the proposed hypotheses and IBM SPSS® AMOS® 22 was used. There are two main approaches to SEM (Hair et al., 2012): (i) Partial least squares SEM, more suitable for exploratory analysis; and (ii) covariance-based SEM, usually used in more structured investigations grounded on solid theoretical foundations (Munir et al., 2020). We adopted covariance-based SEM, since our research is founded on a well-established body of literature, using multiple variables and relationships. The final model shows a good fit (IFI=0.953; TLI=0.949; CFI=0.953; RMSEA=0.062; CMIN/DF=2.448). To test the mediation effects, we conducted a bootstrap procedure, to generate bias-corrected confidence intervals. In presence of multiple mediator models, the assessment of indirect effects in Sobel test might be less strong than bootstrapping (Zhao et al., 2010). Thus, bootstrapping, a non-parametric resampling procedure, might be more used (Preacher & Hayes, 2008).

The respondents are composed of only one group of 383 respondents. Table 4 presents the results of the hypothesis test.

**Table D4.** Findings

HYPOTHESIS				r	C.R.	P	Support
H1	ATT	▷	SSUI	0,466	9,644	***	✓
H2	ATT	▷	CSUI	0,373	7,161	***	✓
H3	SN	▷	SSUI	0,185	3,976	***	✓
H4	SN	▷	CSUI	0,125	2,446	0,014	✓
H5	PBC	▷	SSUI	0,098	2,225	0.026	✓
H6	PBC	▷	CSUI	0,123	2,536	0.011	✓
H7	SSUI	▷	TBL	0,499	8,430	***	✓
H8	CSUI	▷	TBL	0,175	3,137	0,002	✓
MEDIATION				EFFECT		BOOTSTRAP	
H9a	ATT – SUI – TBL			0.195; [0.146, 0.260]		at 95% bootstrap confidence interval	
H9b	SN – SUI – TBL			0.083; [0.036, 0.118]		at 95% bootstrap confidence interval	
H9c	PBC – SUI – TBL			0.046; [0.023, 0.085]		at 95% bootstrap confidence interval	

✓ : Hypothesis supported | ⊗ : Hypothesis not supported | r: Standardized Estimate | CR: Critical Ratio | p: Significance

Results on table 4 show that ATT toward accountability has significant influence on the SSUI, H1 ( $r=0.466$ ;  $P=***$ ) and CSUI H2 ( $r=0.373$ ;  $P=***$ ). It is important to notice the relevance of accountability in this context, on that Bebbington and Larrinaga (2014), Deegan (2013) and Gray (2001) describe that the accountant has positive attitude towards the environment, but in most cases, they are reluctant to engage on their professional practices because they think that it was not within their purview. Thoradeniya et al. (2015) point to the necessity of analyzing this situation from a psychological perspective, not only from a pragmatic starting point, as a way to understand how systemic the variable attitude really is. As pointed out by Ajzen (1991) attitude leads the process of making one choice, which outlines a positive, or negative evaluation of behaviors and objects. According to Mala et al. (2018) the interactive effect of accountability on the style of use of information is noticeable for the accountants, and it is even more remarkable for less experienced accountants than for experienced ones. The results demonstrate that accountants that notice their attitude linked to accountability perspective can transfer this notion to the use of accounting information in business. Therefore, the results point to the fact that attitudes towards accountability when linked to sustainability, tend to guide the use of accounting information in organizations both in a strategic and in a control approach, but rather strategic.

The results show that SN associated to accountability have significative influence on SSUI, H3 ( $r=0.185$ ;  $P=***$ ) and on CSUI, H4 ( $r=0.125$ ;  $P=0.014$ ). To Ajzen (1991) the subjective norms have the power to make one person performs one given behavior believing that he/she is complying to the beliefs of the relevant persons or group. To Thoradeniya et al. (2015), in the business case, this relationship is relevant to understand the influence of stakeholders on organizational management. The subjective norms are relevant to determine the intention of the organizations to meet external expectations (Bebbington et al., 2020; de Villiers & Sharma, 2020; Farooq & de Villiers, 2019). This study shows that subjective norms that require accountants to be accountable with the organization impacts, will affect the use of accounting information in business. Thus, it is understood that subjective norms, when linked to accountability, establish a context of influence in the activity of accountants that lead them to act according to the precepts of sustainability, while at the same time privileging the use of accounting information in organizations both in a strategic and in a control approach, privileging the strategic one.

In the case of PBC associated with accountability, the results revealed that there is a significant influence on SSUI, H5 ( $r=0.098$ ;  $P=0.026$ ) and on CSUI, H6 ( $r=0.123$ ;  $P=0.011$ ). According to Thoradeniya (2015) Accountants shape their behavior according to preconceived precepts

about the accounting activity. So, the commonplace thinking about the scope of accountants' actions, leads them to search for control on their behavior in order to fulfill that expectation. These results also corroborate aspects pointed by Yasmin and Ghafran (2019), She and Michelon (2019), Bellucci et al. (2019) and Helfaya et al. (2019) about the need to organizations not only meet the stakeholders' expectations, but to engage them positively responding to their expectations, adopting a strategic approach. A sensation of higher control leaves accountants free to go beyond the traditional approach and engage with stakeholders (Bellucci et al., 2019) and with sustainability (Cho, Laine, et al., 2015). Moreover, when these expectations involve the need for accountants to assume a position linked to accountability, this seems to lead them to assume a strategic position, facing the style of use of accounting information.

At the same time, the need for a perceived control over the information processing and results, may lead accountancy to produce similar results on the adoption of control approach. One of the basic issues on sustainability performance is waste control (Owen, 2008) and sustainable non-conformities control (Cho, Laine, et al., 2015). Therefore, when an accountability approach is introduced or reinforced, the need for this control tends to increase (Toms, 2005) and stress the need for this style of information processes, the control one. Thus, both the traditional accounting approach and the introduction of sustainability, might be acting together in the sense of strengthening the control use of accounting information (Silva et al., 2020).

SSUI (H7:  $r=0.499$ ;  $P=***$ ) and CSUI (H8:  $r=0.175$ ;  $P=0.00$ ) approaches impact on TBL performance, therefore supporting H7 e H8. The traditional accounting paradigm cannot capture the real organizational behavior that assumes the triple bottom line pillars as a central goal in organizations (Abad-Segura et al, 2020; Gray, 2001). The mainstream accounting thinking still assumes that the economic element is, ultimately, the most relevant for organizations (Becker et al., 2021; Connolly et al., 2021; Lambert, 2021;). However, according to Andrew and Cortese (2013), there is difficulty for accountants to understand what the TBL actually is, because they are too attached to the traditional paradigm, and so Gray (2010, 2013) points out that this expanded understanding can only be achieved if the accountants see sustainability as new way to understand the organizational reality. Therefore, our results show that the use of accounting information in organizations, supported by an accountability perspective, is relevant to induce a sustainable behavior in organizations. Both the strategic and the control approaches, when linked to a sustainable framework, underlying their assumptions and practices, help improve the sustainable performance of organizations.

The overall results achieved suggest that ATT and SN have a greater impact on SSUI than in CSUI. Considering the result obtained to ATT regarding SSUI versus CSUI ( $r=0.466$ , against  $r=373$ ), we notice that accountants understand that the accounting profession is directly related to the development, and unfolding, of organizational strategies linked to sustainability, as pointed by Adams (2015) and Khan et al. (2020). That is, accountants perceive that the accounting activity has relevance on both short, medium and long term and they have an important word on the strategic options of the company.

Approaching SN in relation to SSUI versus CSUI ( $r=0.185$ , against  $r=125$ ), a similar result is verified. This result informs that accountants note that stakeholders are important in designing a context that impacts the accounting action, leading them to adopt certain postures to comply with this context (Yasmin & Ghafran, 2019). Thus, accountants perceive that the way they perform their activities is influenced by the opinion of stakeholders (Wong et al., 2021), and that stakeholders are concerned about sustainability issues, leading them to adopt a different approach. Therefore, an understanding emerges that accountants think that the accounting profession should not only be reactive to organizational management, but that it should happen together with it. This result also points to the fact that when the accounting profession is

considered from the perspective of accountability, as proposed by Dillard and Vinnari (2019), it is also understood as a strategic activity and not just a control one. Thus, the strategic approach seems to prevail when attitude and subjective norms are considered (Stubbs & Higgins, 2014; Zyznarska-Dworczak, 2020).

Contrarily, results regarding PBC show a greater impact on the CSUI compared to SSUI ( $r=0.123$  against  $r=0.098$ ). These results are related to the fact that accountants think that the way they perform their activities is not only under their own control, that is, accountants consider that they do not have the autonomy to exercise their profession as they prefer (Chow & Bracci, 2020). Therefore, even though they are involved by concerns related to accountability, accountants may be tempted to understand their activities in a traditional way, where they have more control, which leads to reinforcing this control approach, rather than the strategic one. This situation reveals a position linked to both efficiency and accommodation: in a context in which they have little interference in the way the profession is performed, accountants tend to normalize this situation, and get used to activities mostly related to management control (Yapa et al., 2016; Lambert, 2021).

Interestingly, SSUI presents a greater impact on the TBL, when compared to CSUI ( $r=0.499$ , against  $r=0.175$ ). These results show how a strategic approach on the accountant information, long-term oriented, may significantly contribute to a better sustainability performance (McNally & Maroun, 2018; Bebbington et al., 2020; Nicholls, 2020). It should be noted that the results presented refers to the fact that when there is an orientation for the flow of information in organizations according to accountability precepts, accountants understand that the organization adopts a behavior friendly to sustainability. Therefore, it is possible to consider that accountability is a relevant factor for organizations to behave in a sustainable way (Deegan, 2013; McNally & Maroun, 2018), pointing to the fact that accountability may induce the use of accounting information in organizations, in a strategic way, leading to superior sustainability performance (Albu et al., 2014).

Our results show that the style of use of accounting information, both strategic and control dimensions, mediate the relationship between the accounting environment, expressed in terms of accountability attitudes, subjective norms and perceived behavioral control. The results of our mediation tests are stronger for the variable ATT (0.195; [0.146, 0.260]), the for SN (0.083; [0.036, 0.118]) and for PBC (0.046; [0.023, 0.085]). ATT presents the strongest impact on the style of use of information, and, naturally, its indirect impact on sustainable performance is, therefore, the strongest too. ATT and SN are influencing rather the strategic side of information use (Bekoe et al., 2018), which is the dimension with greater impact on sustainability performance. These results show how an engaged attitude with accountability (Thoradeniya et al., 2015), combined with a long-term strategic orientation on the use of accounting information (Khan et al., 2020) have a stronger impact on the triple bottom line performance of the organization.

## **5. CONTRIBUTIONS, IMPLICATIONS FOR MANAGEMENT, AND RECOMMENDATIONS**

### **5.1 Theoretical Contributions**

This investigation aims to analyze how the style of use of accounting information impacts the companies' sustainability performance, using TPB to better explain the potential changes on the accountancy mainstream approaches. Therefore, it presents 3 main theoretical contributions:

The first contribution is based on the clear perception that a paradigm shift in the accountancy mainstream approach, has significant impacts on the assumptions and practices of the

accountancy process within the organization, that may impact the organizations' sustainable performance, on its triple bottom line.

The second contribution is linked to the use of TPB to explain how accountants and, therefore, companies, may adopt a sustainable and strategic approach of the accountancy activity and practice, to become more accountable and more sustainable. Understanding accountants through the lens of TPB is a way of opposing the mainstream and going beyond the economic perspective of human behavior.

The third contribution shows how a long term, accountable and strategic approach of the accountancy, rather than a merely management control approach, may give an important contribution to the organizational sustainability performance.

Finally, this investigation settles the chain of effects between the accountant and the organization accountancy environment that leads, through the information process approach, to the improvement of the organization's overall sustainability.

## **5.2 Implications for management**

The present study analyzed how accounting practice, through behavioral perspectives, influences the way information is used in organizations, and as a result contributes to sustainability. The findings presented highlight that both the attitudes of accountants and the subjective norms inherent to the accounting activity, lead the accounting practice to a rather strategic perspective, which in turn, leads to a better sustainable performance. Therefore, an organizational culture that is accountability-oriented, may bring a strong impulse to the adoption of a more sustainable behavior and better performance, and that is where accounting plays a central role. At the same time, the need for control may present similar results, even if through a different path. The need for control leads to a more conservative approach on accounting information use, that through control, introducing tighter rules, higher standards and minimizing nonconformities, may also contribute to sustainable performance. These results show how accounting may influence the organizational behavior and the organizational performance, namely on the sustainability aspects. Furthermore, an engaged accounting approach, far beyond the traditional paradigm, may produce stronger results, through a rather strategic use of the accounting process and strategic use of accounting information. The strategic use of accounting information in organizations, guided by an accountability perspective based on a more engaged attitude, give a significant contribution to the triple bottom line performance.

## **5.3 Limitations and recommendations for future research**

It is important to consider that the present study has some limitations. First of all, this is not a survey that focuses on a specific sector. Therefore, the results cannot be specific for particular cases, or for some singular sector. Future research may focus on specific areas, or on groups of specific sectors, such as services, industry or agribusiness. Secondly, the data used refers to a specific moment of time and a specific moment of Brazilian economic development. Therefore, they reflect a picture of the subject, and it is not possible to establish permanent causal conclusions about the connections between variables. In the future, a longitudinal study on the subject may better suit the need to establish a strict causality. Thirdly, the relationship between PBC and SSUI could be discussed in future studies since the results obtained demonstrate a different relationship and may need further investigation and discussion. Taking into account the mediation of the accounting information style of use, future studies may consider other variables such as ethics, internal capabilities, leadership and governance, that could clarify the relationships on organizational behavior regarding sustainability. Finally, future research may

focus on understanding how other variables may mediate this relationship between accountability, ATT, SN and PBC and interact with organizations' TBL performance.

## 6| References

- Adams, C. A. (2015). The international integrated reporting council: A call to action. *Critical Perspectives on Accounting*, 27, 23–28. <https://doi.org/10.1016/j.cpa.2014.07.001>
- Adams, C. A., & Frost, G. R. (2008). Integrating sustainability reporting into management practices. *Accounting Forum*, 32(4), 288–302. <https://doi.org/10.1016/j.accfor.2008.05.002>
- Ajzen, Icek. (2001). Nature and operations of attitudes. *Annual Review of Psychology*, 52, 27–58.
- Ajzen, Icek. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, 32(4), 665–683. <https://doi.org/10.1111/j.1559-1816.2002.tb00236.x>
- Ajzen, Icek. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Ajzen, Icek. (2005). *Attitudes, Personality and Behavior* (2nd edition). Open University Press.
- Ala, A. S., & Lapsley, I. (2019). Accounting for crime in the neoliberal world. *British Accounting Review*, 51(5), 100839. <https://doi.org/10.1016/j.bar.2019.100839>
- Alawattage, C., Graham, C., & Wickramasinghe, D. (2019). Microaccountability and biopolitics: Microfinance in a Sri Lankan village. *Accounting, Organizations and Society*, 72, 38–60. <https://doi.org/10.1016/j.aos.2018.05.008>
- Alawattage, C., & Wickramasinghe, D. (2021). Strategizing management accounting: liberal origins and neoliberal trends. *Accounting, Auditing and Accountability Journal*. <https://doi.org/10.1108/AAAJ-01-2021-5124>
- Albu, C. N., Albu, N., & Alexander, D. (2014). When global accounting standards meet the local context-Insights from an emerging economy. *Critical Perspectives on Accounting*, 25(6), 489–510. <https://doi.org/10.1016/j.cpa.2013.03.005>
- Ali, A., Elham, F., & Alauddin, A. (2014). Does Accountability Discharged through Performance Measurement System? *Procedia - Social and Behavioral Sciences*, 164(August), 421–428. <https://doi.org/10.1016/j.sbspro.2014.11.098>
- Allain, E., Lemaire, C., & Lux, G. (2021). Managers' subtle resistance to neoliberal reforms through and by means of management accounting. *Accounting, Auditing and Accountability Journal*, 34(3), 591–615. <https://doi.org/10.1108/AAAJ-12-2018-3799>
- Baud, C., & Chiapello, E. (2017). Understanding the disciplinary aspects of neoliberal regulations: The case of credit-risk regulation under the Basel Accords. *Critical Perspectives on Accounting*, 46, 3–23. <https://doi.org/10.1016/j.cpa.2016.09.005>
- Bebbington, J., & Larrinaga, C. (2014). Accounting and sustainable development: An exploration. *Accounting, Organizations and Society*, 39(6), 395–413. <https://doi.org/10.1016/j.aos.2014.01.003>
- Bebbington, J., Österblom, H., Crona, B., Jouffray, J. B., Larrinaga, C., Russell, S., & Scholtens, B. (2020). Accounting and accountability in the Anthropocene. *Accounting, Auditing and Accountability Journal*, 33(1), 152–177. <https://doi.org/10.1108/AAAJ-11-2018-3745>
- Becker, A., Pedell, B., & Pfaff, D. (2021). Management accounting developments in German-speaking countries: an overview and editorial reflections. *Journal of Accounting and Organizational Change*, 17(4), 457–470. <https://doi.org/10.1108/JAOC-03-2021-0046>
- Bekoe, R. A., Owusu, G. M. Y., Ofori, C. G., Essel-Anderson, A., & Welbeck, E. E. (2018). Attitudes towards accounting and intention to major in accounting: a logistic regression analysis. *Journal of Accounting in Emerging Economies*, 8(4), 459–475. <https://doi.org/10.1108/JAEE-01-2018-0006>
- Bellucci, M., Simoni, L., Acuti, D., & Manetti, G. (2019). Stakeholder engagement and dialogic accounting: Empirical evidence in sustainability reporting. *Accounting, Auditing and Accountability Journal*, 32(5), 1467–1499. <https://doi.org/10.1108/AAAJ-09-2017-3158>
- Besley, T., & Burgess, R. (2002). The political economy of government responsiveness: Theory and evidence from India. *Quarterly Journal of Economics*, 117(4), 1415–1452. <https://doi.org/10.1162/003355302320935061>
- Boedker, C., & Chong, K. M. (2022). The mediating role of accounting controls between supervisors' empowering leadership style and subordinates' creativity and goal productivity. *Accounting and Finance*, 1–28. <https://doi.org/10.1111/acfi.13009>
- Boiral, O. (2013). Sustainability reports as simulacra? A counter-account of A and A+ GRI reports. *Accounting, Auditing & Accountability Journal*, 26(7), 1036–1071. <https://doi.org/10.1108/AAAJ-04-2012-00998>

- Brown, J., & Fraser, M. (2006). Approaches and perspectives in social and environmental accounting: An overview of the conceptual landscape. *Business Strategy and the Environment*, 15(2), 103–117. <https://doi.org/10.1002/bse.452>
- Bryson, J. M., Crosby, B. C., & Stone, M. M. (2006). The design and implementation of cross-sector collaborations: Propositions from the literature. *Public Administration Review*, 75(5), 647–663. <https://doi.org/10.1111/j.1540-6210.2006.00665.x>
- Byrch, C., Milne, M. J., Morgan, R., & Kearins, K. (2015). Seeds of hope? Exploring business actors' diverse understandings of sustainable development. *Accounting, Auditing & Accountability Journal*, 28(5), 671–705. <https://doi.org/10.1108/AAAJ-08-2013-1438>
- Chaidali, P., & Jones, M. J. (2017). It's a matter of trust: Exploring the perceptions of Integrated Reporting preparers. *Critical Perspectives on Accounting*, 48, 1–20. <https://doi.org/10.1016/j.cpa.2017.08.001>
- Chen, Y. C., Hung, M., & Wang, Y. (2018). The effect of mandatory CSR disclosure on firm profitability and social externalities: Evidence from China. *Journal of Accounting and Economics*, 65(1), 169–190. <https://doi.org/10.1016/j.jacceco.2017.11.009>
- Cho, C. H., Laine, M., Roberts, R. W., & Rodrigue, M. (2015). Organized hypocrisy, organizational façades, and sustainability reporting. *Accounting, Organizations and Society*, 40, 78–94. <https://doi.org/10.1016/j.aos.2014.12.003>
- Cho, C. H., Michelon, G., Patten, D. M., & Roberts, R. W. (2015). CSR disclosure: the more things change...? *Accounting, Auditing & Accountability Journal*, 28(1), 14–35. <https://doi.org/10.1108/AAAJ-12-2013-1549>
- Chow, D., & Bracci, E. (2020). Neoliberalism, accounting, and the transformation of subjectivities in social work: A study on the implementation of personal budgets. *Financial Accountability and Management*, 36(2), 151–170. <https://doi.org/10.1111/faam.12231>
- Christensen, C. B. (2014). Human ecology as philosophy. *Human Ecology Review*, 20(2), 31–49. <https://doi.org/10.22459/her.20.02.2014.02>
- Christensen, D. M. (2016). Corporate accountability reporting and high-profile misconduct. *Accounting Review*, 91(2), 377–399. <https://doi.org/10.2308/accr-51200>
- Chua, W. F. (1986). Radical Developments in Accounting Thought. *Accounting, the Social and the Political*, 61(4), 55–66. <https://doi.org/10.1016/b978-008044725-4/50009-6>
- Clarkson, P., Li, Y., Richardson, G., & Tsang, A. (2019). Causes and consequences of voluntary assurance of CSR reports: International evidence involving Dow Jones Sustainability Index Inclusion and Firm Valuation. *Accounting, Auditing and Accountability Journal*, 32(8), 2451–2474. <https://doi.org/10.1108/AAAJ-03-2018-3424>
- Connolly, C., Hyndman, N., & Liguori, M. (2021). Legitimizing accounting change in charities: when values count more than regulation. *Journal of Accounting and Organizational Change*, 17(1), 23–49. <https://doi.org/10.1108/JAOC-09-2020-0128>
- Cooper, C. (2015). Accounting for the fictitious: A Marxist contribution to understanding accounting's roles in the financial crisis. *Critical Perspectives on Accounting*, 30, 63–82. <https://doi.org/10.1016/j.cpa.2014.08.002>
- Cooper, S. M., & Owen, D. L. (2007). Corporate social reporting and stakeholder accountability: The missing link. *Accounting, Organizations and Society*, 32(7–8), 649–667. <https://doi.org/10.1016/j.aos.2007.02.001>
- de Villiers, C., Rinaldi, L., & Unerman, J. (2014). Integrated reporting: Insights, gaps and an agenda for future research. *Accounting, Auditing and Accountability Journal*, 27(7), 1042–1067. <https://doi.org/10.1108/AAAJ-06-2014-1736>
- de Villiers, C., & Sharma, U. (2020). A critical reflection on the future of financial, intellectual capital, sustainability and integrated reporting. *Critical Perspectives on Accounting*, 70. <https://doi.org/10.1016/j.cpa.2017.05.003>
- Deegan, C. (2013). The accountant will have a central role in saving the planet. really? A reflection on “green accounting and green eyeshades twenty years later.” *Critical Perspectives on Accounting*, 24(6), 448–458. <https://doi.org/10.1016/j.cpa.2013.04.004>
- Dillard, J., & Vinnari, E. (2019). Critical dialogical accountability: From accounting-based accountability to accountability-based accounting. *Critical Perspectives on Accounting*, 62, 16–38. <https://doi.org/10.1016/j.cpa.2018.10.003>
- Diouf, D., & Boiral, O. (2017). The quality of sustainability reports and impression management. *Accounting, Auditing & Accountability Journal*, 30(3), 643–667. <https://doi.org/10.1108/AAAJ-04-2015-2044>
- Dowling, C., & Leech, S. a. (2014). A big 4 firm's use of information technology to control the audit process: How an audit support system is changing auditor behavior. *Contemporary Accounting Research*, 31(1), 230–252. <https://doi.org/10.1111/1911-3846.12010>

- Egan, M., & Tweedie, D. (2018). A “green” accountant is difficult to find: Can accountants contribute to sustainability management initiatives? *Accounting, Auditing and Accountability Journal*, 31(6), 1749–1773. <https://doi.org/10.1108/AAAJ-03-2017-2891>
- Elkington, J. (2020). *Green Swans The coming boom in regenerative capitalism*. Fast Company Press.
- Farooq, M. B., & de Villiers, C. (2019). The shaping of sustainability assurance through the competition between accounting and non-accounting providers. *Accounting, Auditing and Accountability Journal*, 32(1), 307–336. <https://doi.org/10.1108/AAAJ-10-2016-2756>
- Ferdous, A. S. (2010). Applying the theory of planned behavior to explain marketing managers’ perspectives on sustainable marketing. *Journal of International Consumer Marketing*, 22(4), 313–325. <https://doi.org/10.1080/08961530.2010.505883>
- Flower, J. (2015). The international integrated reporting council: A story of failure. *Critical Perspectives on Accounting*, 27, 1–17. <https://doi.org/10.1016/j.cpa.2014.07.002>
- Fredenberger, W. B., Lipp, A., & Watson, H. J. (1997). Information requirements of turnaround managers at the beginning of engagements. *Journal of Management Information Systems*, 13(4), 167–192. <https://doi.org/10.1080/07421222.1997.11518147>
- García-Sánchez, I. M., Hussain, N., Aibar-Guzmán, C., & Aibar-Guzmán, B. (2022). Assurance of corporate social responsibility reports: Does it reduce decoupling practices? *Business Ethics, Environment and Responsibility*, 31(1), 118–138. <https://doi.org/10.1111/beer.12394>
- Gendron, Y., & Rodrigue, M. (2021). On the centrality of peripheral research and the dangers of tight boundary gatekeeping. *Critical Perspectives on Accounting*, 76. <https://doi.org/10.1016/j.cpa.2019.02.003>
- Gibassier, D., Rodrigue, M., & Arjaliès, D. L. (2018). “Integrated reporting is like God: no one has met Him, but everybody talks about Him”: The power of myths in the adoption of management innovations. *Accounting, Auditing and Accountability Journal*, 31(5), 1349–1380. <https://doi.org/10.1108/AAAJ-07-2016-2631>
- Gilbert, C. (2021). Debt, accounting, and the transformation of individuals into financially responsible neoliberal subjects. *Critical Perspectives on Accounting*, 77, 102186. <https://doi.org/10.1016/j.cpa.2020.102186>
- Gomez-Conde, J., Lunkes, R. J., & Rosa, F. S. (2019). Environmental innovation practices and operational performance: The joint effects of management accounting and control systems and environmental training. *Accounting, Auditing and Accountability Journal*, 32(5), 1325–1357. <https://doi.org/10.1108/AAAJ-01-2018-3327>
- Gray, R. (2001). Thirty years of social accounting, reporting and auditing: what (if anything) have we learnt? *Business Ethics: A European Review*, 10(1), 9–15. <https://doi.org/10.1111/1467-8608.00207>
- Gray, R. (2010). Is accounting for sustainability actually accounting for sustainability...and how would we know? An exploration of narratives of organizations and the planet. *Accounting, Organizations and Society*, 35(1), 47–62. <https://doi.org/10.1016/j.aos.2009.04.006>
- Gray, R. (2013). Back to basics: What do we mean by environmental (and social) accounting and what is it for? -A reaction to Thornton. *Critical Perspectives on Accounting*, 24(6), 459–468. <https://doi.org/10.1016/j.cpa.2013.04.005>
- Hair, J., Black, W., Babin, B., & Anderson, R. (2010). *Multivariate Data Analysis* (7th ed.). Pearson Prentice Hall.
- Harney, S., Hanlon, G., & Mandarin, M. (2021). Periphery and center in comparative perspective: Opportunities for accounting praxis. *Critical Perspectives on Accounting*, 76, 102165. <https://doi.org/10.1016/j.cpa.2020.102165>
- Harvie, D., Lightfoot, G., Lilley, S., & Weir, K. (2021). Social investment innovation and the ‘social turn’ of neoliberal finance. *Critical Perspectives on Accounting*, 79, 102248. <https://doi.org/10.1016/j.cpa.2020.102248>
- Hazelton, J. (2013). Accounting as a human right: The case of water information. *In Accounting, Auditing and Accountability Journal* (26, 2). <https://doi.org/10.1108/09513571311303738>
- Helfaya, A., Whittington, M., & Alawattage, C. (2019). Exploring the quality of corporate environmental reporting: Surveying preparers and users’ perceptions. *Accounting, Auditing and Accountability Journal*, 32(1), 163–193. <https://doi.org/10.1108/AAAJ-04-2015-2023>
- Hrasky, S. (2011). Carbon footprints and legitimization strategies: symbolism or action? *Accounting, Auditing & Accountability Journal*, 25(1), 174–198. <https://doi.org/10.1108/09513571211191798>
- Irvine, H., & Moerman, L. (2017). Gambling with the public sphere: Accounting’s contribution to debate on social issues. *Critical Perspectives on Accounting*, 48, 35–52. <https://doi.org/10.1016/j.cpa.2017.05.002>
- Jackling, B. (2002). Are Negative Perceptions of the Accounting Profession Perpetuated by the Introductory Accounting Course? — an Australian Study. *Asian Review of Accounting*, 10(2), 62–80. <https://doi.org/10.1108/eb060758>

- Javeed, S. A., Latief, R., & Lefen, L. (2020). An analysis of relationship between environmental regulations and firm performance with moderating effects of product market competition: Empirical evidence from Pakistan. *Journal of Cleaner Production*, 254, 120197. <https://doi.org/10.1016/j.jclepro.2020.120197>
- Kaveski, I. D. S., & Beuren, I. M. (2020). Influence of management control systems and creativity on job performance. *Cadernos EBAPE.BR*, 18(3), 543–556. <https://doi.org/10.1590/1679-395120190024x>
- Khalid, S. M., Atkins, J., & Barone, E. (2019). Sartrean bad-faith? Site-specific social, ethical and environmental disclosures by multinational mining companies. *Accounting, Auditing and Accountability Journal*, 32(1), 55–74. <https://doi.org/10.1108/AAAJ-03-2016-2473>
- Khan, H. Z., Bose, S., & Johns, R. (2020). Regulatory influences on CSR practices within banks in an emerging economy: Do banks merely comply? *Critical Perspectives on Accounting*, 71, 102096. <https://doi.org/10.1016/j.cpa.2019.102096>
- La Barbera, F., & Ajzen, I. (2020). Control interactions in the theory of planned behavior: Rethinking the role of subjective norm. *Europe's Journal of Psychology*, 16(3), 401–417. <https://doi.org/10.5964/ejop.v16i3.2056>
- Lambert, D. (2021). Disciplinary power in corporate governance: A Foucauldian analysis of the emergence and development of proxy advisors. *Accounting History*, 26(3), 409–433. <https://doi.org/10.1177/1032373220986232>
- Lamberton, G. (2005). Sustainability accounting - A brief history and conceptual framework. *Accounting Forum*, 29(1), 7–26. <https://doi.org/10.1016/j.accfor.2004.11.001>
- Luo, Z., Miao, F., Hu, M., & Wang, Y. (2020). Research Development on Horseshoe Crab: A 30-Year Bibliometric Analysis. *Frontiers in Marine Science*, 7(February), 1–14. <https://doi.org/10.3389/fmars.2020.00041>
- Mala, R., Chand, P., & Patel, C. (2018). Influence of Experience and Accountability on Information Use and Judgments of Accountants. *Journal of International Accounting Research*, 17(3), 135–151. <https://doi.org/10.2308/jiar-52191>
- Malola, A., & Maroun, W. (2019). The measurement and potential drivers of integrated report quality: Evidence from a pioneer in integrated reporting. *South African Journal of Accounting Research*, 33(2), 114–144. <https://doi.org/10.1080/10291954.2019.1647937>
- Marriott, P., & Marriott, N. (2003). Are we turning them on? A longitudinal study of undergraduate accounting students' attitudes towards accounting as a profession. *Accounting Education*, 12(2), 113–133. <https://doi.org/10.1080/0963928032000091738>
- Marshall, R. (2003). Calling on tomorrow's professionals, *Chartered Accountants Journal*, Vol. 82 No. 1, pp. 4-9.
- Mason, M. (2020). Transparency, accountability and empowerment in sustainability governance: a conceptual review. *Journal of Environmental Policy and Planning*, 22(1), 98–111. <https://doi.org/10.1080/1523908X.2019.1661231>
- McDowall, T., & Jackling, B. (2010). Attitudes towards the accounting profession: An Australian perspective. *Asian Review of Accounting*, 18(1), 30–49. <https://doi.org/10.1108/13217341011045999>
- McNally, M. A., & Maroun, W. (2018). It is not always bad news: Illustrating the potential of integrated reporting using a case study in the eco-tourism industry. *Accounting, Auditing and Accountability Journal*, 31(5), 1319–1348. <https://doi.org/10.1108/AAAJ-05-2016-2577>
- Melloni, G., Caglio, A., & Perego, P. (2017). Saying more with less? Disclosure conciseness, completeness and balance in Integrated Reports. *Journal of Accounting and Public Policy*, 36(3), 220–238. <https://doi.org/10.1016/j.jaccpubpol.2017.03.001>
- Meseguer-Sánchez, V., Gálvez-Sánchez, F. J., López-Martínez, G., & Molina-Moreno, V. (2021). Corporate social responsibility and sustainability. A bibliometric analysis of their interrelations. *Sustainability (Switzerland)*, 13(4), 1–18. <https://doi.org/10.3390/su13041636>
- Moores, K., & Yuen, S. (2001). Management accounting systems and organizational configuration: A life-cycle perspective. *Accounting, Organizations and Society*, 26(4–5), 351–389. [https://doi.org/10.1016/S0361-3682\(00\)00040-4](https://doi.org/10.1016/S0361-3682(00)00040-4)
- Nadeem, M., Bahadar, S., Zaman, R., & Farooq, M. B. (2021). Does organizational capital influence environmental strategies? Evidence from environmental innovation. *Business Strategy and the Environment*, 30(8), 4121–4135. <https://doi.org/10.1002/bse.2860>
- Naranjo-Gil, D., & Hartmann, F. (2006). How Top Management Teams Use Management Accounting Systems to Implement Strategy. *Journal of Management Accounting Research*, 18(1), 21–53. <https://doi.org/10.2308/jmar.2006.18.1.21>
- Nicholls, J. A. (2020). Integrating financial, social and environmental accounting. *Sustainability Accounting, Management and Policy Journal*, 11(4), 745–769. <https://doi.org/10.1108/SAMPJ-01-2019-0030>

- Owen, D. (2008). Chronicles of wasted time? *Accounting, Auditing & Accountability Journal*, 21(2), 240–267. <https://doi.org/10.1108/09513570810854428>
- Pan, P., & Patel, C. (2020). Formal accountability, perceived accountability and aggressive reporting judgements. *Accounting and Business Research*, 0(0), 1–27. <https://doi.org/10.1080/00014788.2020.1836469>
- Pesci, C., Costa, E., & Andreus, M. (2020). Using accountability to shape the common good. *Critical Perspectives on Accounting*, 67–68, 102079. <https://doi.org/10.1016/j.cpa.2019.03.001>
- Phiri, J. (2020). Tradition, power, and resource wastage: A neo-patrimonial and Weberian perspective of corruption and accountability in Zambia. *Financial Accountability and Management*, May, 1–22. <https://doi.org/10.1111/faam.12272>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891. <https://doi.org/10.3758/BRM.40.3.879>
- Purvis, B., Mao, Y., & Robinson, D. (2019). Three pillars of sustainability: in search of conceptual origins. *Sustainability Science*, 14(3), 681–695. <https://doi.org/10.1007/s11625-018-0627-5>
- Ramanna, K. (2013). A framework for research on corporate accountability reporting. *Accounting Horizons*, 27(2), 409–432. <https://doi.org/10.2308/acch-50412>
- Roberts, J. (2021). The boundary of the ‘economic’: Financial accounting, corporate ‘imaginaries and human sentience. *Critical Perspectives on Accounting*, 76, 102–203. <https://doi.org/10.1016/j.cpa.2020.102203>
- She, C., & Michelon, G. (2019). Managing stakeholder perceptions: Organized hypocrisy in CSR disclosures on Facebook. *Critical Perspectives on Accounting*, 61, 54–76. <https://doi.org/10.1016/j.cpa.2018.09.004>
- Silva, A. R., Rodrigues, L. L., & Sangster, A. (2020). Accounting as a tool of state ideology to control captive workers from a House of Correction. *Accounting, Auditing and Accountability Journal*, 33(2), 285–308. <https://doi.org/10.1108/AAAJ-04-2018-3444>
- Stubbs, W., & Higgins, C. (2014). Integrated reporting and internal mechanisms of change. *Accounting, Auditing and Accountability Journal*, 27(7), 1068–1089. <https://doi.org/10.1108/AAAJ-03-2013-1279>
- Su, S., Baird, K., & Schoch, H. (2015). The moderating effect of organizational life cycle stages on the association between the interactive and diagnostic approaches to using controls with organizational performance. *Management Accounting Research*, 26, 40–53. <https://doi.org/10.1016/j.mar.2014.09.001>
- Su, S., Baird, K., & Tung, A. (2022). Controls and performance: assessing the mediating role of creativity and collegiality. In *Journal of Management Control* (Issue 0123456789). Springer Berlin Heidelberg. <https://doi.org/10.1007/s00187-022-00344-9>
- Teixeira, P., Coelho, A., Fontoura, P., José Carlos, S., Silva, F. J. G., Santos, G., & Ferreira, L. P. (2022). Combining lean and green practices to achieve a superior performance: The contribution for a sustainable development and competitiveness—An empirical study on the Portuguese context. *Corporate Social Responsibility and Environmental Management*, December 2021, 1–17. <https://doi.org/10.1002/csr.2242>
- Tetlock, P. E. (1983). Accountability and complexity of thought. *Journal of Personality and Social Psychology*, 45(1), 74–83. <https://doi.org/10.1037/0022-3514.45.1.74>
- Thoradeniya, P., Lee, J., Tan, R., & Ferreira, A. (2015). Sustainability reporting and the theory of planned behavior. *Accounting, Auditing and Accountability Journal*, 28(7), 1099–1137. <https://doi.org/10.1108/AAAJ-08-2013-1449>
- Tiwari, K., & Khan, M. S. (2020). Sustainability accounting and reporting in the industry 4.0. *Journal of Cleaner Production*, 258, 120783. <https://doi.org/10.1016/j.jclepro.2020.120783>
- Toms, S. (2005). Financial control, managerial control and accountability: Evidence from the British Cotton Industry, 1700–2000. *Accounting, Organizations and Society*, 30(7–8), 627–653. <https://doi.org/10.1016/j.aos.2004.07.003>
- van der Laan Smith, J., Adhikari, A., & Tondkar, R. H. (2005). Exploring differences in social disclosures internationally: A stakeholder perspective. *Journal of Accounting and Public Policy*, 24(2), 123–151. <https://doi.org/10.1016/j.jaccpubpol.2004.12.007>
- Viale, T., Gendron, Y., & Suddaby, R. (2017). From “mad men” to “math men”: The rise of expertise in digital measurement and the shaping of online consumer freedom. In *Accounting, Auditing and Accountability Journal* (Vol. 30, Issue 2). <https://doi.org/10.1108/AAAJ-12-2014-1887>

- Wang, R., Zhou, S., & Wang, T. (2020). Corporate Governance, Integrated Reporting and the Use of Credibility-enhancing Mechanisms on Integrated Reports. *European Accounting Review*, 29(4), 631–663. <https://doi.org/10.1080/09638180.2019.1668281>
- Williams, A. (2015). A global index of information transparency and accountability. *Journal of Comparative Economics*, 43(3), 804–824. <https://doi.org/10.1016/j.jce.2014.10.004>
- Wilmshurst, T.D. and Frost, G.R. (2000), "Corporate environmental reporting: A test of legitimacy theory", *Accounting, Auditing & Accountability Journal*, Vol. 13 No. 1, pp. 10-26. <https://doi.org/10.1108/09513570010316126>
- Wong, A., George, S., & Tanima, F. A. (2021). Operationalizing dialogic accounting education through praxis and social and environmental accounting: exploring student perspectives. *Accounting Education*, 30(5), 525–550. <https://doi.org/10.1080/09639284.2021.1919531>
- Wong, R., & Millington, A. (2014). Corporate social disclosures: A user perspective on assurance. *Accounting, Auditing and Accountability Journal*, 27(5), 863–887. <https://doi.org/10.1108/AAAJ-06-2013-1389>
- Yapa, P. W. S., Jacobs, K., & Huot, B. C. (2016). The field of accounting: Exploring the presence and absence of accounting in Cambodia. *Accounting, Auditing and Accountability Journal*, 29(3), 401–427. <https://doi.org/10.1108/AAAJ-02-2012-00942>
- Yasmin, S., & Ghafran, C. (2019). The problematics of accountability: Internal responses to external pressures in exposed organizations. *Critical Perspectives on Accounting*, 64, 102070. <https://doi.org/10.1016/j.cpa.2019.01.002>
- Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, 37(2), 197–206. <https://doi.org/10.1086/651257>
- Zyznarska-Dworczak, B. (2020). Sustainability accounting—cognitive and conceptual approach. *Sustainability (Switzerland)*, 12(23), 1–24. <https://doi.org/10.3390/su12239936>

## 6. FINAL CONSIDERATIONS

### 6.1. Results

The accounting has changed over time. In the past, accounting was considered to be a purely technical activity. However, in the contemporary world, accounting is increasingly considered to be a social activity. The role of accounting in society has changed over time. In the past, accounting was primarily concerned with the financial affairs of businesses. However, in the contemporary world, accounting is increasingly concerned with the social and environmental impact of business activities.

The debate proposed in the first article of this thesis is based on the fact that accounting is linked to ancient and (mainly) outdated philosophical principles when considering the current organizational reality. Thus, it is urgent to consider the fact that the way we deal with economic and financial issues is, at the very least, obsolete and are related to these principles of the 19th and 20th centuries, a situation that persists, even after more than two decades of the 21st century.

Some accounting concepts are supported in precepts of past centuries. One example is objectivity, a concept that has the predisposition to consider the accountant as a mere cataloger of facts. A perspective that, despite being ingrained in the area, is merely utopian, since the accountant is a human being, and in principle he observes and interprets the facts.

The idea of materiality in accounting is equally flawed, as it assumes that only relevant facts should be considered. However, considering whether something is relevant or not is a highly subjective procedure. Another precept tied to obsolete concepts is the notion of continuity, which starts from the premise that the company will keep operating in the future. Although it is widely known that companies tend to close down their activity in a very short time of operation.

The concept of accrual, which assumes that the company must record transactions when they occur and not when money is exchanged, obscures the fact that at the moment this does not always happen in practice, and there are companies that use the cash basis. Finally, the principle of consistent application, which establishes that the company must use the same accounting methods over time. However, this is not always the case, and there are companies that change their accounting methods as they see fit.

The philosophical precepts assumed in the accounting mainstream were umbilically mixed with a series of neoclassical economic precepts, a path, to a certain extent, common in different areas of knowledge. However, what happens in accounting science is that this union of perspectives has become hegemonic, to the point of being naturalized as the way to practice accounting.

These neoclassical economic understanding led accounting scientists to adopt the assumptions that individuals act rationally and selfishly, caring only about their own interests, and that the market is an efficient mechanism for assigning resources to their most efficient uses. With this, the accountants accept this perspective as a possibility to obtain a better understanding of the market, by analyzing the way it works and by identifying the problems that are inherent in it. The idea is that, by understanding how the market works, it is possible to find solutions to the problems that arise within it.

However, this perspective, accepted in a hegemonic way in accounting, ends up excluding other understandings that do not employ similar concepts, marginalizing divergent understandings to the point of disregarding the fact that to obtain a better understanding of the market, it is necessary to take into account different perspectives, including the social approach. The social

approach to the market is an alternative that should be considered in order to obtain a more comprehensive understanding of the market and its problems.

The way in which accounting is concerned with “the real world” is largely a result of this neoclassical understanding. The understanding is not necessarily a consensus among the accountants. One or two might have quite different understandings. However, what is shared is a belief that accounting is concerned with the individual business entity, with the sole aim of maximizing the economic value of this entity.

This understanding is derived from a reductionist view of the world and of the individual business entity. It takes a reductionist view of the world because it assumes that it can be understood as an amount of isolated entities which interact with each other. It takes a reductionist view of the individual business entity because it assumes that the business entity can be understood by looking at the effects of individual transactions and events in one business entity.

The reductionist view of the world leads to a view of accounting as a tool for measuring, recording and communicating the results of financial transactions and events. The reductionist view of the individual business entity leads to a perspective of accounting as a tool for measuring the financial performance of the business entity. This understanding of accounting is reflected in the way accountants approach practical issues. This approach leads accountants to identify the financial transactions and events as soon as they occur, in this way, they focus on measuring the financial effects of these transactions and events, as well as on recording these effects in financial statements, and to report them to users.

The reductionist view of the world and of the individual business entity is also reflected in the way accountants approach the problem of decision-making. The approach is to identify the relevant information, to analyze it, and to make decisions on the basis of this analysis. This process is based on the assumption that the decision-maker is rational and that he/she has complete information.

The third article addresses the theoretical background about the relation between accountability and sustainability. To recognize the connection over these themes, and not assume one accounting mainstream point of view, we need to keep in mind the onto-epistemic plurality of science. Focusing this relation (Accountability and sustainability) on scientific accounting literature, we found two lines of thought:

The first line of thought is based on the assumption that economic development is the key to sustainability, and that businesses need to be more socially responsible in order to achieve it. This “traditional” line of thought, represented by the stakeholder theory and the resource-based view, concentrates the economic dimensions of sustainability on business decisions. This approach sees sustainability as a business opportunity, and the challenge for business is to find ways to make money while protecting the environment and promoting social welfare. A key contribution of this research line is to identify the environmental and social costs and benefits of business activities, as well as to develop tools and methods for measuring and managing these costs and benefits.

The second line of thought is based on the belief that social awareness of sustainability is necessary in order for businesses to be truly sustainable. This line, represented by the social ecology and environmental justice perspectives, emphasizes the need to expand the social awareness of sustainability. This approach sees sustainability as a social and ethical issue, and the challenge for businesses is to find ways to operate in a form that they run environmentally and socially responsible. A key contribution of this line is to raise awareness of the

environmental and social impacts of business activities, and to develop tools and methods for assessing and managing these impacts.

The two lines of thought are not mutually exclusionary, and there is considerable overlap between them. However, they represent different perspectives on the nature of the challenge of sustainability, and on the role of business in meeting this challenge.

The fourth paper in this thesis addresses the fact that these theoretical subjects could refer only to a scientific aspect on accounting, and find no address when practical checks are carried out. With this speculative starting point in mind, the article addresses the understandings of Brazilian accountants regarding sustainable organizational performance, considering the way they perceive (and interact) with the culture of accountability. Thus, the article belongs to a restricted group of researches that analyzes the accountancy environment and how it influences the organizations' sustainable performance.

The article also presents a theoretical and empirical contribution linked to the Theory of Planned Behavior in the accounting area. At the same time, it deepens understanding about the promotion of sustainable development in organizations through accounting. This research helps to understand the roles that accounting plays (or assumes) in terms of accountability, as well as how accountability can contribute to driving accounting processes and promote sustainable organizational performance.

## 6.2. Contributions

Regarding the research question demand: (How does the accounting mainstream prevent disruptive understandings of accountability and sustainability?)

The accounting mainstream is a powerful institution that sets the agenda for what counts as knowledge in the field of accounting (Ala & Lapsley, 2019). Its members control the leading journals and research funding bodies, and they hold influential positions in universities and professional accounting organizations (Andrew et al., 2020). As such, the accounting mainstream has the ability to prevent disruptive understandings of accountability (Yasmin & Ghafran, 2019) and sustainability (de Villiers & Sharma, 2020) from being disseminated in scientific and practical accounting.

There are many reasons why the accounting mainstream may be resistant to change. First, the mainstream is often conservative and resistant to new ideas (Bryer, 2013). Second, the mainstream may have a vested interest in maintaining the status quo (Chua, 2019), as disruptive understandings of accountability and sustainability could threaten their power and position (Dillard & Vinnari, 2019). Finally, the mainstream may simply be unaware of alternative understandings of accountability and sustainability, or may view them as irrelevant to the field of accounting (Cho, Laine, et al., 2015; She & Michelon, 2019).

Despite the power of the accounting mainstream, there are many ways in which alternative understandings of accountability and sustainability can be disseminated. One way is through the work of accounting scholars who are critical of the mainstream. These scholars can publish their work in alternative journals or present their work at alternative conferences (Gendron & Baker, 2005). Another way is through the work of accounting practitioners who are critical of the mainstream. These practitioners can share their experiences and insights with others.

Table 2 shows how the study objectives were met.

**Table 2. List of objectives achieved**

Objective	Article	Result
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To demonstrate how the philosophical premises impact one the characteristics of the accounting field.	Article 1. Pages 35, 36 and 37	Accounting science assumes a set of philosophical premises originating from empiricist, critical rationalism and positivism lines.
To explain how the economic neoclassical perspective dominates the reflections on accounting.	Article 2. Pages 47 and 48.	The neoclassical approach to economics is a widely dominant epistemological perspective in accounting and stigmatizes divergent ones.
To analyze the major lines of thoughts in accounting literature about accountability and sustainability.	Article 3. Pages 70, 71 and 72.	Although there are two main perspectives in accounting studies on accountability and sustainability, they are complementary and follow similar ontological, epistemological and methodological guidelines.
To analyze how the accounting mainstream premises restrict the understandings of the practical accountants about accountability and sustainability.	Article 4. Pages 96 and 97.	Accounting practice suffers the same influences from the mainstream perspective of accounting, but it unfolds differently than in accounting science.
To constitute an analysis of how the accounting mainstream prevents disruptive understandings of accountability and sustainability from being disseminated in scientific and practical accounting.	Thesis. Page 107.	The philosophical assumptions of accounting are embedded in the accounting practice, in a way that the accounting practice is a source of assumptions for accounting theory. The accounting practice is the place where assumptions are made, and not only the place where they are applied.

### 6.3 Limitations and recommendations for future research

The study can be extended in a number of ways. First, multiparadigmatic approaches will be able to demonstrate, more clearly, the impacts of applying divergent philosophical premises on the same subject. Second, the use of epistemological paths, even if economically oriented but divergent from the neoclassical approach, is capable of leading accountants to insert new concepts and approaches in relation to problems already "pacified" in the area. Third, understanding accountability and sustainability when elaborated from scientific and practical perspectives, other than just those related to organizations, can be a way of proposing new solutions to problems already considered in accounting. Fourth, considering aspects related to accountability and sustainability from a cross-country perspective, can be a way of building even broader understandings of the relationships between the mainstream and the accounting practice around the world.

## 7. REFERENCES

- Ala, A. S., & Lapsley, I. (2019). Accounting for crime in the neoliberal world. *British Accounting Review*, 51(5), 100839. <https://doi.org/10.1016/j.bar.2019.100839>
- Alawattage, C., & Wickramasinghe, D. (2021). Strategising management accounting: liberal origins and neoliberal trends. *Accounting, Auditing and Accountability Journal*. <https://doi.org/10.1108/AAAJ-01-2021-5124>
- Albitar, K., Hussainey, K., Kolade, N., & Gerged, A. M. (2020). ESG disclosure and firm performance before and after IR: The moderating role of governance mechanisms. *International Journal of Accounting and Information Management*, 28(3), 429–444. <https://doi.org/10.1108/IJAIM-09-2019-0108>
- Andrew, J., Cooper, C., & Gendron, Y. (2020). Critical perspectives on accounting and journal rankings: Engaging in counter discourses and practices. *Critical Perspectives on Accounting*, 71, 102–169. <https://doi.org/10.1016/j.cpa.2020.102169>
- Andrew, J., & Cortese, C. (2013). Free market environmentalism and the neoliberal project: The case of the Climate Disclosure Standards Board. *Critical Perspectives on Accounting*, 24(6), 397–409. <https://doi.org/10.1016/j.cpa.2013.05.010>
- Antonelli, V., D'Alessio, R., Rossi, R., & Cafaro, E. M. (2017). Accounting in hybrid forms of capitalist/socialist enterprises: A multiple interpretative approach to the Royal Factory of Silk of San Leucio, 1802–1826. *Accounting History*, 22(3), 274–300. <https://doi.org/10.1177/1032373217694652>

- Baker, D. T., & Brewis, D. N. (2020). The melancholic subject: A study of self-blame as a gendered and neoliberal psychic response to loss of the 'perfect worker.' *Accounting, Organizations and Society*, 82, 101093. <https://doi.org/10.1016/j.aos.2019.101093>
- Bauman, Z. (2007). Vida líquida. In *Cuadernos de H Ideas* (Vols. 1, no). Zahar.
- Baxter, J., & Chua, W. F. (2003). Alternative management accounting research - Whence and whither. *Accounting, Organizations and Society*, 28(2–3), 97–126. [https://doi.org/10.1016/S0361-3682\(02\)00022-3](https://doi.org/10.1016/S0361-3682(02)00022-3)
- Bellucci, M., Simoni, L., Acuti, D., & Manetti, G. (2019). Stakeholder engagement and dialogic accounting: Empirical evidence in sustainability reporting. *Accounting, Auditing and Accountability Journal*, 32(5), 1467–1499. <https://doi.org/10.1108/AAAJ-09-2017-3158>
- Boiral, O. (2013). Sustainability reports as simulacra? A counter-account of A and A+ GRI reports. *Accounting, Auditing & Accountability Journal*, 26(7), 1036–1071. <https://doi.org/10.1108/AAAJ-04-2012-00998>
- Brown, J., & Dillard, J. (2014). Integrated reporting: On the need for broadening out and opening up. *Accounting, Auditing and Accountability Journal*, 27(7), 1120–1156. <https://doi.org/10.1108/AAAJ-04-2013-1313>
- Bryer, R. (2013). Americanism and financial accounting theory - Part 3: Adam Smith, the rise and fall of socialism, and Irving Fisher's theory of accounting. *Critical Perspectives on Accounting*, 24(7–8), 572–615. <https://doi.org/10.1016/j.cpa.2012.09.004>
- Chabrak, N., Haslam, J., & Oakes, H. (2019). What is accounting? The “being” and “be-ings” of the accounting phenomenon and its critical appreciation. *Accounting, Auditing and Accountability Journal*, 32(5), 1414–1436. <https://doi.org/10.1108/AAAJ-08-2017-3097>
- Cho, C. H., Laine, M., Roberts, R. W., & Rodrigue, M. (2015). Organized hypocrisy, organizational façades, and sustainability reporting. *Accounting, Organizations and Society*, 40, 78–94. <https://doi.org/10.1016/j.aos.2014.12.003>
- Chow, D., & Bracci, E. (2020). Neoliberalism, accounting, and the transformation of subjectivities in social work: A study on the implementation of personal budgets. *Financial Accountability and Management*, 36(2), 151–170. <https://doi.org/10.1111/faam.12231>
- Chua, W. F. (2019). Radical Developments in Accounting Thought? Reflections on Positivism, the Impact of Rankings and Research Diversity. *Behavioral Research in Accounting*, 31(1), 3–20. <https://doi.org/10.2308/bria-52377>
- Colander, D. (2013). The systemic failure of economic methodologists. *Journal of Economic Methodology*, 20(1), 56–68. <https://doi.org/10.1080/1350178X.2013.774848>
- Colander, D., Holt, R. P. F., & Rosser, J. B. (2004). The changing face of mainstream economics. *Review of Political Economy*, 16(4), 485–499. <https://doi.org/10.1080/0953825042000256702>
- Davidson, R. H., Dey, A., & Smith, A. J. (2019). CEO materialism and corporate social responsibility. *Accounting Review*, 94(1), 101–126. <https://doi.org/10.2308/accr-52079>
- Davis, J. H., Schoorman, F. D., & Donaldson, L. (1997). Toward a Stewardship Theory of Management. *The Academy of Management Review*, 22(1), 20. <https://doi.org/10.2307/259223>
- de Villiers, C., & Sharma, U. (2020a). A critical reflection on the future of financial, intellectual capital, sustainability and integrated reporting. *Critical Perspectives on Accounting*, 70. <https://doi.org/10.1016/j.cpa.2017.05.003>
- de Villiers, C., & Sharma, U. (2020b). A critical reflection on the future of financial, intellectual capital, sustainability and integrated reporting. *Critical Perspectives on Accounting*, 70, 0–25. <https://doi.org/10.1016/j.cpa.2017.05.003>
- Deegan, C. (2013). The accountant will have a central role in saving the planet . really? A reflection on “green accounting and green eyeshades twenty years later.” *Critical Perspectives on Accounting*, 24(6), 448–458. <https://doi.org/10.1016/j.cpa.2013.04.004>
- Dequech, D. (2007). Neoclassical, mainstream, orthodox, and heterodox economics. *Journal of Post Keynesian Economics*, 30(2), 279–302. <https://doi.org/10.2753/PKE0160-3477300207>

- Dillard, J., & Vinnari, E. (2019). Critical dialogical accountability: From accounting-based accountability to accountability-based accounting. *Critical Perspectives on Accounting*, 62, 16–38. <https://doi.org/10.1016/j.cpa.2018.10.003>
- Elkington, J. (2020). *Green Swans The coming boom in regenerative capitalism*. Fast Company Press.
- Feyerabend, P. (2011). *Contra o método*. Editora da UNESP.
- Fogarty, T. J., & Zimmerman, A. (2019). Few are called, fewer are chosen: Elite reproduction in U.S. academic accounting. *Critical Perspectives on Accounting*, 60, 1–17. <https://doi.org/10.1016/j.cpa.2018.09.001>
- Frezatti, F., Nascimento, A. R. do, & Junqueira, E. (2009). Desenvolvimento da pesquisa em Contabilidade Gerencial : as restrições da abordagem monoparadigmática de Zimmerman. *Journal of Accounting and Economics*, 2001, 6–24. <https://doi.org/10.1590/S1519-70772009000100002>
- Gallhofer, S., & Haslam, J. (2019). Some reflections on the construct of emancipatory accounting: Shifting meaning and the possibilities of a new pragmatism. *Critical Perspectives on Accounting*, 63, 101975. <https://doi.org/10.1016/j.cpa.2017.01.004>
- García-Sánchez, I. M., Hussain, N., Aibar-Guzmán, C., & Aibar-Guzmán, B. (2022). Assurance of corporate social responsibility reports: Does it reduce decoupling practices? *Business Ethics, Environment and Responsibility*, 31(1), 118–138. <https://doi.org/10.1111/beer.12394>
- Gendron, Y. (2018). On the elusive nature of critical (accounting) research. *Critical Perspectives on Accounting*, 50(2017), 1–12. <https://doi.org/10.1016/j.cpa.2017.11.001>
- Gendron, Y., & Baker, C. R. (2005). On interdisciplinary movements: The development of a network of support around Foucaultian perspectives in accounting research. *European Accounting Review*, 14(3), 525–569. <https://doi.org/10.1080/09638180500041364>
- Gibassier, D., Rodrigue, M., & Arjaliès, D. L. (2018). “Integrated reporting is like God: no one has met Him, but everybody talks about Him”: The power of myths in the adoption of management innovations. *Accounting, Auditing and Accountability Journal*, 31(5), 1349–1380. <https://doi.org/10.1108/AAAJ-07-2016-2631>
- Gilbert, C. (2021). Debt, accounting, and the transformation of individuals into financially responsible neoliberal subjects. *Critical Perspectives on Accounting*, 77(xxxx), 102186. <https://doi.org/10.1016/j.cpa.2020.102186>
- Goncharenko, G., & Khadaroo, I. (2020). Disciplining human rights organisations through an accounting regulation: A case of the ‘foreign agents’ law in Russia. *Critical Perspectives on Accounting*, 72, 102129. <https://doi.org/10.1016/j.cpa.2019.102129>
- Graham, C., & Grisard, C. (2019). Rich man, poor man, beggar man, thief: Accounting and the stigma of poverty. *Critical Perspectives on Accounting*, 59, 32–51. <https://doi.org/10.1016/j.cpa.2018.06.004>
- Gray, R., & Milne, M. J. (2015). It’s not what you do, it’s the way that you do it? Of method and madness. *Critical Perspectives on Accounting*, 32, 51–66. <https://doi.org/10.1016/j.cpa.2015.04.005>
- Helfaya, A., Whittington, M., & Alawattage, C. (2019). Exploring the quality of corporate environmental reporting: Surveying preparers’ and users’ perceptions. *Accounting, Auditing and Accountability Journal*, 32(1), 163–193. <https://doi.org/10.1108/AAAJ-04-2015-2023>
- Hernandez, M. (2012). Toward an Understanding of the Psychology of Stewardship. *Academy of Management Review*, 37(2), 172–193. <https://doi.org/10.5465/amr.2010.0363>
- Hopwood, A. G. (2007). Whither accounting research? *Accounting Review*, 82(5), 1365–1374. <https://doi.org/10.2308/accr.2007.82.5.1365>
- Hörisch, J., Schaltegger, S., & Freeman, R. E. (2020). Integrating stakeholder theory and sustainability accounting: A conceptual synthesis. *Journal of Cleaner Production*, 275. <https://doi.org/10.1016/j.jclepro.2020.124097>
- King, R. R., Davis, S. M., & Mintchik, N. (2012). Mandatory disclosure of the engagement partner’s identity: Potential benefits and unintended consequences. *Accounting Horizons*, 26(3), 532–561. <https://doi.org/10.2308/acch-50201>

- Legg, C., & Black, J. (2020). What is Intelligence For? A Peircean Pragmatist Response to the Knowing-How, Knowing-That Debate. *Erkenntnis*, 0123456789. <https://doi.org/10.1007/s10670-020-00301-9>
- Lyotard, J. F. (2009). *A condição pós moderna*. José Olympio.
- Macias-Chapula, C. A. (1998). O papel da informetria e da cienciometria e sua perspectiva nacional e internacional. *Ciência Da Informação*, 27(2), nd-nd. <https://doi.org/10.1590/s0100-19651998000200005>
- Nicholls, J. A. (2020). Integrating financial, social and environmental accounting. *Sustainability Accounting, Management and Policy Journal*, 11(4), 745–769. <https://doi.org/10.1108/SAMPJ-01-2019-0030>
- O’Connell, B. T., De Lange, P., Stoner, G., & Sangster, A. (2020). Impact of research assessment exercises on research approaches and foci of accounting disciplines in Australia. *Accounting, Auditing and Accountability Journal*, 33(6), 1277–1302. <https://doi.org/10.1108/AAAJ-12-2019-4293>
- Palea, V. (2017). Whither accounting research? A European view. *Critical Perspectives on Accounting*, 42, 59–73. <https://doi.org/10.1016/j.cpa.2016.03.002>
- Pan, P., & Patel, C. (2020). Formal accountability, perceived accountability and aggressive reporting judgements. *Accounting and Business Research*, 0(0), 1–27. <https://doi.org/10.1080/00014788.2020.1836469>
- Sareen, S., & Wolf, S. A. (2021). Accountability and sustainability transitions. *Ecological Economics*, 185(April 2020), 107056. <https://doi.org/10.1016/j.ecolecon.2021.107056>
- Sartre, J. P. (2011). *O ser e o nada* (20 ed.). Vozes.
- She, C., & Michelon, G. (2019). Managing stakeholder perceptions: Organized hypocrisy in CSR disclosures on Facebook. *Critical Perspectives on Accounting*, 61, 54–76. <https://doi.org/10.1016/j.cpa.2018.09.004>
- Singh, B., & Tiwari, A. A. (2020). Customer stewardship behavior and stewardship fatigue: a conceptual framework. *Marketing Intelligence and Planning*, 38(3), 386–399. <https://doi.org/10.1108/MIP-02-2019-0071>
- Tucker, M. L., & Block, P. (1994). Stewardship: Choosing Service over Self-Interest. *The Academy of Management Review*, 19(3), 592. <https://doi.org/10.2307/258942>
- Wang, R., Zhou, S., & Wang, T. (2020). Corporate Governance, Integrated Reporting and the Use of Credibility-enhancing Mechanisms on Integrated Reports. *European Accounting Review*, 29(4), 631–663. <https://doi.org/10.1080/09638180.2019.1668281>
- Williams, P. F. (2017). Jumping on the wrong bus: Reflections on a long, strange journey. *Critical Perspectives on Accounting*, 49, 76–85. <https://doi.org/10.1016/j.cpa.2017.10.004>
- Wong, A., George, S., & Tanima, F. A. (2021). Operationalising dialogic accounting education through praxis and social and environmental accounting: exploring student perspectives. *Accounting Education*, 30(5), 525–550. <https://doi.org/10.1080/09639284.2021.1919531>
- Yasmin, S., & Ghafran, C. (2019). The problematics of accountability: Internal responses to external pressures in exposed organisations. *Critical Perspectives on Accounting*, 64, 102070. <https://doi.org/10.1016/j.cpa.2019.01.002>