

Articulation profile of contribution and knowledge production in Controllership and Management Accounting

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Abstract

Objective: Analyze the articulation of the contribution of Controllership and Management Accounting articles published between 2010 and 2016 from the perspective of Boxenbaum and Rouleau (2011).

Method: Data on 190 articles published for the Anpcont congress, in the theme area Controllership and Management Accounting, between 2010 and 2016, were collected and categorized according to each epistemic script, using descriptive analysis.

Results: The dominant research perspective is the evolution type, showing the research in the area adopts Karl's (1959) philosophical perspective and assumes that the researchers in the Brazilian community are engaged in a common search and gradual knowledge advance. This results also fits into Kuhn's (1962) perspective of normal science. In other words, it can be affirmed that the form of articulation Management Accounting researchers use in Brazil is the detection of a "gap" in earlier research.

Contributions: The study furthers the understanding of the sense of contemporary Management Accounting studies' articulation on the contribution to research, evidencing the paradigmatic, theoretical and methodological approaches, and highlights which alternative knowledge production script(s) prevail(s) among scientific researchers.

Key-words: Knowledge; Management accounting; Research-Scripts.

1. Introduction

In the past 25 years, the advance of Management Accounting research has been discussed during celebrations of decades of research by the two main management accounting journals in the world, the first being European, Management Accounting Research (MAR) and the second North-American, the Journal of Management Accounting Research (JMAR). In Europe, editorials of Management accounting research: 20 years on (Scapens & Bromwich, 2001); Management Accounting Research: the first decade (Scapens & Bromwich, 2010); Management Accounting Research: 25 years on (Bromwich & Scapens, 2016) have presented the main aspects of the development of scientific knowledge production in Management Accounting according to expert research reports. Furthermore, in the United States, the debate on Management Accounting research took place during the 25th anniversary of the Journal of Management Accounting Research (JMAR).

Several Management Accounting research issues were addressed, such as the barriers for knowledge creation in Management Accounting research (Salteiro, 2015) and the establishment of Management Accounting knowledge (Shields, 2015), but the articulation profile of Management Accounting research remains a focus for future research that lacks empirical evidence. In this context, investigating the script used for knowledge production consolidates existing epistemological research in Management Accounting.

In Brazil, in October 2013, Management Accounting researchers met during the I Encounter of Management Accounting/Management Control Faculty promoted by the University of São Paulo School of Economics, Business Administration and Accounting (FEA-USP) to discuss the development of this area in the country. In this context, the scientific community in the area has striven to reflect on the progress of Management Accounting knowledge production, particularly the status of the management accounting area, development difficulties and possible opportunities for the future (Frezatti, Aguiar, Wanderley & Malagueño, 2015).

Although earlier studies in the international (Berry, Coad, Harris, Otley & Stringer, 2009; Helford, Lee, Van der Stede & Young, 2006;) as well as in the Brazilian context (Araújo & Silva, 2010; Cruz, Costa, Espejo & Almeida, 2011; Frezatti, Nascimento & Junqueira, 2008; Lunkes, Ripoll Feliu & Rosa, 2011; Nascimento, Junqueira & Martins, 2009) revised research on the Management Accounting literature through bibliographic, bibliographic and epistemological analyses, none of these surveys directly addressed the contributions and articulation alternatives for scientific knowledge production in Management Accounting. Contribution to research is considered as the enhancement the research can offer to the background knowledge on a given topic. This enhancement is not mandatorily revolutionary in any case (Berland, Stolowy & Piot, 2012).

Although several forms of analyzing a study's contribution exist in the literature (Croom, 2001; Gendron, 2008), Boxenbaum and Rouleau (2011) present a structure that addresses some knowledge production constructions and theoretical contributions to research, emphasizing three epistemic scripts, called: evolution, differentiation and bricolage. The authors argue that evolution is an investigation that guides the researchers towards a better view of an existing study. Differentiation is not based on any research; the intention is to produce knowledge that discontinues existing knowledge, that is, it is a new study. And bricolage refers to the set of different elements of research knowledge, which can originate in several academic disciplines. Although Gendron (2008) raised issues such as "how does one consider the contribution to research in recent times?" "How does the latter articulate in Accounting research?" Reflection is due on this epistemological question, which has not aroused much research in the context of accounting studies thus far, despite contribution being a core reference in daily life. Based on these foundations, the interest in Boxenbaum and Rouleau's (2011) research contribution models is justified, as well as their empirical study based on Management Accounting research articles, considering researchers' growing reflections on the knowledge advances produced in this scientific area. In view of the above, the research problem is as follows: **Which knowledge production scripts influence the articulation of the contribution by controllership and management accounting studies published for the Anpcont (Brazilian Association of Graduate Programs in Accounting) Congresses?**

Therefore, the study objective is to analyze the articulation profile of the contribution of Controllershship and Management Accounting articles published between 2010 and 2016 from the perspective of Boxenbaum and Rouleau (2011). The study is justified, on the one hand, by the lack of epistemological studies that analyze the knowledge production scripts researchers in this area adopt. On the other hand, the goal is gain empirical evidence on the phenomenon at Anpcont, being the main event that theoretically joins Brazilian graduate researchers, concentrating discussions on Controllershship and Management Accounting (CMA) and permits knowing different foci the studies in this area adopt.

This article contributes to the literature in different manners. First, it provides an empirical analysis focused on Controllershship and Management Accounting researchers, allowing the researchers to better understand the sense of the articulation of contemporary Management Accounting research on the contribution to research. Second, it evidences the paradigmatic, theoretical and methodological approaches underlying the knowledge production scripts that influence research in Management Accounting. Third, the study highlights which alternative knowledge production script(s) prevails(s) among scientific researchers in Management Accounting, particularly which epistemological philosophy guides the articulation of Management Accounting research on the contribution to knowledge production in Brazil. Finally, this study is expected to contribute to the clarification of whether the knowledge production scripts the Brazilian researchers have adopted are responding to the criticism experts in the area have raised on the bottlenecks for the advancement of the knowledge production in Management Accounting.

Besides this introduction, the article is structured as follows. Next, the theoretical framework is presented with the epistemological characteristics of Management Accounting research, emphasizing Brazil and the international context, the contribution to scientific research and Boxenbaum and Rouleau's (2011) three epistemic scripts on knowledge production in the organizational sphere and its implications in Management Accounting. Next, the methodological procedures are presented. Then, the results are analyzed and discussed. The last section presents the final considerations and highlights the limitations and suggestions for future research.

2. Theoretical Framework

2.1 Contributions to scientific research and Boxenbaum and Rouleau's (2011) three epistemic scripts

According to Berland, Schwarz, Krist, Kenyon, Lo and Reiser (2012) - contribution can be considered as the extent to which the article enhances existing knowledge on a given topic. This contribution should not be mandatorily revolutionary in any case. Broad-ranging contributions would of course be ideal, but these are knowingly rare and hard. Most contributions address exact points in a theoretical corpus and contribute to Accountancy by means of incremental advances.

The contribution is of interest because it enriches earlier research and is well argued, clear and precise. Rather than a revolution, the contribution can be a simple evolution of the knowledge status. It is thus a confirmation, inference, new proposition. The confirmation is a contribution intended to show that existing, previously formulated propositions are still valid. Unfortunately, many articles propose replications of earlier studies, without further originality. If replication is legitimate in science, publication is necessary each time this replication modifies the existing model in an original manner, permitting a broader application field of the theory that is tested. The modifications need to address characteristics of theoretically intriguing nature. Replicating a study developed in the United States in France or in Tunisia is interesting if the author manages to show that the institutional context a priori sheds doubts on the validity of the theory in this context (Berland *et al.*, 2012).

Originality is not an end in itself. A question should never be formulated for the mere reason of not being of great interest. Therefore, the interest in the formulated question should be justified; a large number of articles submitted for publication fail in this essential aspect. The interest of the formulated question (and the answer provided) can involve many aspects: management, theoretical, methodological, pedagogical, epistemological, etc. There is clearly a wide range of possible research results, and the reviewers are always keen on and open to any form of innovation on the matter.

Berland *et al.* (2012) alert that one of the most frequent causes for rejecting articles in the journal “*Comptabilité - Contrôle - Audit*” is the insufficient contribution, that is, substantial increments the article offers to the knowledge. A good article should advance the science. The two main routes (which are sometimes mixed up) are: the production of a theoretical contribution and the production of new outlines for education. In this context, two fundamental questions emerge, namely, how does one consider contributions in research at present? How does it articulate in Accounting research, particularly in Management Accounting? That is the framework to present studies, aiming to reflect on these epistemological aspects that have not aroused Accounting research thus far, despite contribution being a core reference in the researchers' daily live (Gendron, 2013).

Boxenbaum and Rouleau (2011) presented one alternative consideration of contribution. According to these researchers, in the Contemporary Organizational theory, three epistemic scripts exist which scholars use to conceive and present the new organizational knowledge. These are evolution, differentiation and bricolage, visually displayed in Figure 1. Each label corresponds to a key resource that distinguishes one thematic script from the others. They represent ideal types experts can simultaneously use while producing knowledge.

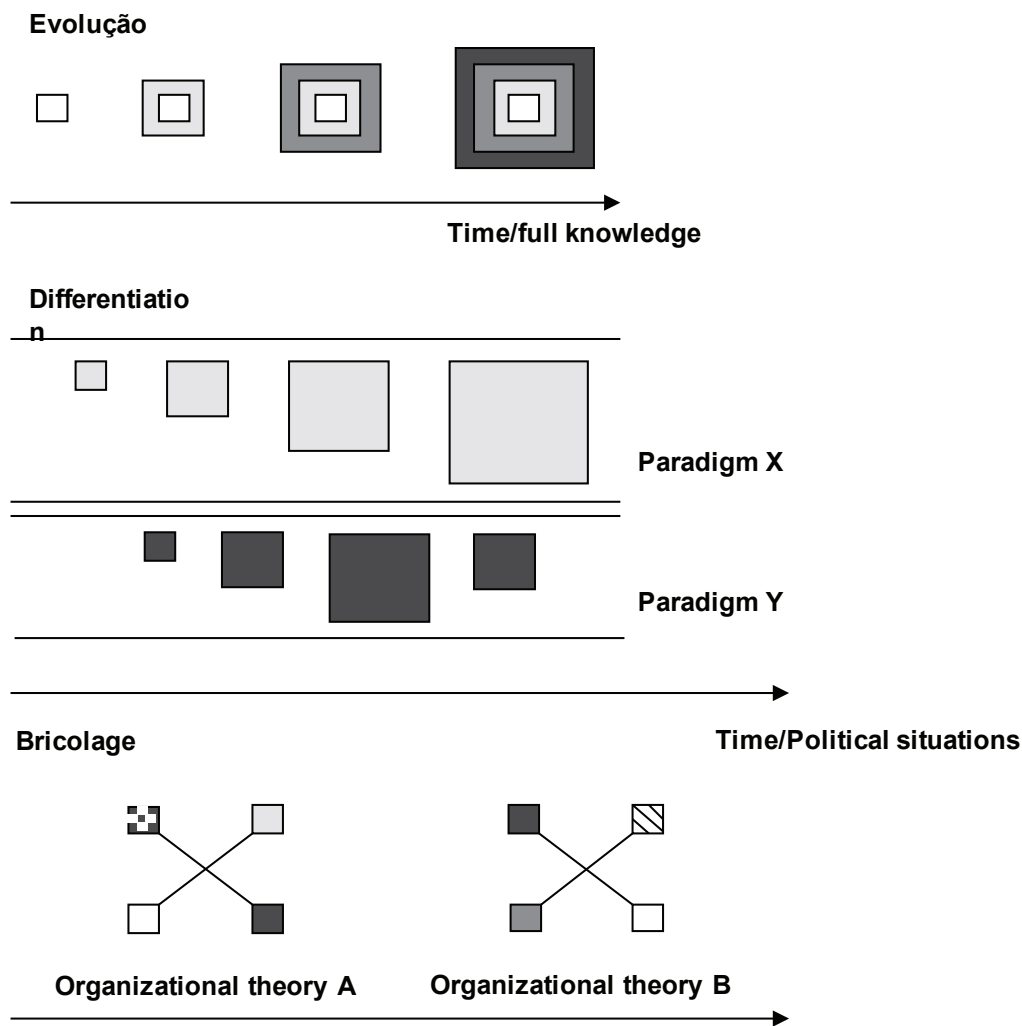


Figure 1. Evolution, differentiation and bricolage scripts.

In short, evolution attempts to produce knowledge based on gaps identified in earlier studies. Differentiation does so by rupturing ways of looking at the problem (paradigms, theories). Bricolage is based on a combination of different paradigms and theories, aiming to shed a new light on a certain research problem. As for the evolution script, generally, the contribution is presented in the study with very firmly established assertions, as if those contributions were definitively and unambiguously constituted. The originality in this type of script is to solve, at least partially and temporarily, one of the enigmas raised by the paradigm the researcher adopts (Kuhn, 1983). As for the differentiation script, a study will “contribute” by highlighting the distinction, that is, by explaining how the study’s interpretations and conclusions differ from the established corpus (Gendron, 2013). In terms of originality, differentiation emphasizes the distinction between the studies’ advances and current knowledge by changing the research paradigm. Finally, according to Boxenbaum and Rouleau (2011), instead of inventing a new theory or paradigm, the bricolage script fixes or remodels existing theories, combining several theoretical concepts, ideas and readily available observations. Thus, it is reasonable to suppose that knowledge production scripts are used in Management Accounting research, being an area with multiple epistemological perspectives, in which researchers use different paradigms and theories from other knowledge areas.

2.2 Epistemological characteristics and knowledge production scripts of Management Accounting research

In Brazil, epistemological studies in Management Accounting research have shown that researchers articulate their studies to produce contributions, based on various paradigms that guide their theoretical and methodological approaches. Nevertheless, the functional paradigm is more predominant than the critical-interpretive paradigm, the use of accounting concepts or legislation or the economic, sociological or psychological theory in relation to the theories, and field research and descriptive surveys in relation to documentary research or studies explaining the research strategies (Nascimento, Junqueira & Martins, 2010). This evidence is ratified in the study by Frezatti et al. (2015), when they reveal that, based on the analysis of 2013, Brazilian researchers' Management Accounting studies are mainly quantitative, although mainly restricted to one of the methodological possibilities in quantitative designs, leaving aside other approaches that could also be used more in this sphere, such as analytic studies, data evaluation and experiments.

Comparing Management Accounting research in Brazil and abroad based on the European and North-American scientific events (Conference on New Directions in Management Accounting and Management Accounting Section Midyear Meeting), Frezatti et al. (2015) highlight that, while the European event suggests a predominance of qualitative studies, using case studies, closely followed by surveys as the main quantitative approach, at the North-American event, the quantitative approach is the paramount and preponderant research approach, emphasizing the use of archival data and experimental studies instead of surveys, with but a small number of qualitative studies.

In France, Berland et al. (2016) also investigated the characteristics of publications on management control in the main national journal, "*Comptabilité-Contrôle-Audit (CCA)*", over a 20-year period and found that, among the research methods used, literature reviews were predominant, followed by case studies, surveys and interviews. In addition, those researchers noted a progressive slow-down of historical studies and a steep drop in literature reviews. On the opposite, interview-based studies had developed in the previous 20 years. Quantitative methods remain little explored in the management control publications in the CCA journal. These are more used in international journals, including the use of structural equations. This suggests that French management control research is strongly based on a qualitative approach. Furthermore, according to the French researchers, the theoretical framework for management control research are linked to sociology, Structuration theory or the Actor-Network theory, as well as the theoretical construct of Simons' management control systems.

Besides this empirical evidence on the epistemological aspects of Management Accounting research, the scientific community in the area has formulated some epistemological criticism underlying the stagnation of the scientific production in Management Accounting. These include the paradigmatic, theoretical and methodological perspectives the researchers adopt to determine how the research should be articulated to produce knowledge. Based on our analysis, it was verified that the main current reflections on how management accounting research should be articulated to contribute to the knowledge production are related to Boxenbaum and Rouleau's (2011) three (3) knowledge production script models.

The first knowledge production script, evolution, is the dominant perspective in organizational science to articulate the research contribution (Gendron, 2013). It rests on Karl's (1959) philosophy and assumes that, in a given community, the researchers are engaged in a common search and gradual knowledge advance. Gendron (2013) adds that, based on this perspective, the main objective in the period Kuhn (1983) calls normal science is not intended to question the body of knowledge, but to strengthen, brick by brick, pieces of a knowledge "wall" focused on a given problem. The specific research question that stimulates the researcher is typically linked to the detection of a "gap" in earlier research, which Sandberg and Alvesson (2011) called the gap-spotting technique. If the research in question is developed rigorously, the gap would be completed at least partially. Thus, the contribution would result from the successful result of the type error test the researcher attempted to apply.

From the perspective of the evolution script, Management Accounting researchers have called attention to the need for continuity in research with a view to guaranteeing the establishment of the produced knowledge. To give an example, Shields (2015) argues that one important obstacle that limits the knowledge production in Management Accounting is the small number of studies that investigate theoretically consistent evidence on a same base of variables. Management Accounting research will produce more established knowledge if more comparative research exists with consistent results. When the results of a study are not consistent with the comparative studies, this permits knowing the causes of the inconsistency and how they limit the established knowledge production in Management Accounting.

According to Boxenbaum and Rouleau (2011), the second knowledge production script that can be used to consider contribution is differentiation, which presupposes that the same research problem can be considered in different ways and that examining it from a single angle can never exhaust the knowledge potential inherent in that topic. Gendron (2013) mentions that, in other words, building a single knowledge wall, based on the same theoretical base, will probably result in less important and obvious contributions. In terms of research practice, differentiation implies that the researchers will submit to the production of studies that discontinue the established knowledge (Boxenbaum & Rouleau, 2011).

The second knowledge production script, differentiation, is based on the premise that there exists no shared reference framework to cover the full range of the academic knowledge on the organizations. Instead, different perspectives coexist within Organizational theory which cannot be ranked (Burrell & Morgan, 1979; Scherer & Steinmann, 1999). In the context of Management Accounting research, various researchers have highlighted the paradigm change, from positivism to interpretivism and/or Critical theory as a fundamental point for Management Accounting research to be able to contribute to the knowledge advance (Frezatti *et al.*, 2015; Hopper & Bui, 2016). This paradigm change reflects the differentiation script and Kuhn's (1962) science philosophy. One of the fundamental principles of this philosophy is that knowledge production develops within an academic community that shares a set of epistemological principles and ontologic suppositions on the world, which together constitute what is known as a paradigm. A paradigm refers to a knowledge base that is mutually immeasurable with that of another paradigm, which means that its fundamental premises on the world and its knowledge production modes cannot be mutually integrated (Scherer & Steinmann, 1999).

The third production script, bricolage, refers to an assembly of readily available elements. With this knowledge production lense, the researchers combines different materials at hand to produce new knowledge based on a set of intuitions and deductions, a distinct analytic angle, summarizing some theories, metaphors and/or methods (Boxenbaum & Rouleau, 2011; Gendron, 2013). In Management Accounting research, researchers have also called attention to the use of different paradigms, theories and methods. To give an example, Modell (2010) highlights the use of mixed methods and dialogue using multiple paradigms. What the combination of theories is concerned, its use to articulate the knowledge production in Management Accounting remains very limited when compared to the use of a single research theory, such as economic theory and the theoretical constructs of management control systems (Bromwich & Scapens, 2016; Frezatti *et al.*, 2015).

Based on Boxenbaum and Rouleau's (2011) three knowledge construction scripts in the organizational area, it is hard to tell if the Management Accounting studies fit into the evolution, differentiation or bricolage script. To a large extent, studies in this field focus on research that seeks to complete gaps and develop constructs, in a development process to expand the knowledge field (evolution type) (Shields, 2015). On the other hand, there is ongoing debate to differentiate paradigms, theories and methods, using the differentiation script (Bromwich & Scapens, 2016; Frezatti *et al.*, 2015; Modell, 2010).

3. Methodological Procedures

To develop the research, the scientific articles published during the Anpcont congress were analyzed, due to its representativeness of the Brazilian scientific community, and also because it is the scientific discussion forum of the main Brazilian graduate programs in accounting. In addition, the choice of this base is justified because the Coordination for the Improvement of Higher Education Personnel (Capes) has classified the event under Qualis A.

In that sense, this study was based on a descriptive analysis through a survey of scientific articles published on Controllershship and Management Accounting between 2010 and 2016 for one of the main scientific accounting events in Brazil, Anpcont (National Association of Graduate Programs in Accountancy), aiming to characterize and analyze the knowledge production scripts Brazilian researchers use, as well as to confront the trend of the research contribution types found in the suggestions by Bromwich and Scapens (2016), Frezatti *et al.* (2015), Shields (2015); Salteiro (2015) on the difficulties and obstacles in the advance of Management Accounting knowledge.

The research was developed by consulting the database where scientific articles published in the annals of the annual congresses are available: <http://www.anpcont.org.br>. The articles published on the theme "Controllershship and Management Accounting" were used to investigate the three knowledge production scripts, as illustrated in Table 1. As articles before 2010 were unavailable, we considered that studying articles published between 2010 and 2016 would grant knowledge on the status of the knowledge production scripts in Controllershship and Management Accounting.

Table 1
**Sample of articles published in the theme area
between 2010 and 2016**

Year	Articles Published: Quantity
2010	23
2011	26
2012	28
2013	28
2014	27
2015	32
2016	25
Total	190

As regards the selection of the articles, earlier studies were epistemological as well as bibliometric, with a similar time interval (Cardoso, Pereira & Guerreiro, 2007; Machado, Nascimento & Murcia, 2009; Nascimento, Junqueira, & Martins, 2009; Nascimento, Junqueira & Martins 2010; Oliveira, 2002, Teóphilo & Iudícibus, 2009). Between 2010 and 2016, 190 articles were presented at that congress. After the elaboration of the theoretical platform, the data were defined that would be collected for each article, according to the arguments that supported the research question from the epistemological viewpoint, that is, identifying arguments in the articles that lead to the classification in function of Boxenbaum and Rouleau's (2011) three scientific knowledge production scripts - evolution, differentiation and bricolage. The arguments were extracted from the theoretical base of the study, defined in categories, as shown in Figure 2.

Categories	Arguments
Evolution	Presentation of new knowledge claims as being the continuation of background knowledge. Identification of gap in earlier research. Application of the gap-spotting technique. The product of the proposed knowledge advances the knowledge frontier.
Differentiation	Presentation of highlights on the distinction, that is, the explanation of how the interpretations and conclusions of the study differ from the established corpus. Presentation of emphasis on the distinction between the study's advances and current knowledge.
Bricolage	Presentation of a set of intuitions and deductions, a distinct analytic angle, summarizing some theories, metaphors and/or methods. Presentation of a new light on a certain research problem, but based on an analytic angle and a research strategy based on the new search for meanings departing from known elements.

Figure 2. List of arguments of knowledge production scripts per category.

To classify the data, the researchers read the articles, emphasizing the introduction, theoretical framework, methodology and conclusion, specifically looking at the epistemological conception, that is, the concept of the research problem and the theoretical and methodological approaches. The software Excel was used to process the collected data by classifying the articles per theme, contribution type (evolution, differentiation and bricolage), number of the theoretical approach and number of the method. The contribution types were classified according to Boxenbaum and Rouleau's (2011) three proposed knowledge production scripts, while the theoretical approaches were classified based on the adaptation of the theories adopted in the study by Bromwich and Scapens (2016).

4. Analysis and Discussion of the Results

4.1 Paradigmatic approaches of the scientific articles in controllership and management accounting published between 2010 and 2016

Table 2 displays the research paradigms adopted in the scientific articles published in Controllershship and Management Accounting between 2010 and 2016. As noticed, 97% of the articles analyzed were classified in the research paradigm positivism and post-positivism, while the remainder ranked under interpretivism (1%) and critical theory (2%), respectively.

Table 2

Research paradigms of scientific articles in Controllershship and Management Accounting at the Anpcont congress between 2010 and 2016

Research Paradigms	Quantity	Percentage
Positivism and Post-Positivism	185	97%
Interpretivism	1	1%
Interactionism	-	-
Symbolic	-	-
Phenomenology	-	-
Hermeneutics	-	-
Critical Theory	4	2%
Feminism	-	-
Post-modernism	-	-
Total	190	100%

These results ratify evidence previously shown in the study by Nascimento et al. (2010), where it was shown that 97% of the studies address the functional perspective, that is, adopting a positivist perspective. In addition, the few articles developed under the interpretive and critical paradigm are studies that adopt theories like the Actor-Network theory, Structuration theory and Social Representations theory. In addition, it can be affirmed that this evidence goes against the results found in the Conference on New Directions in Management Accounting, in which 49% of the studies use an ontology located more to the left on Burrell and Morgan's (1979) matrix, looking at management problems from the interpretive, structuralist, post-structuralist and critical theory's perspectives (Frezatti et al., 2015). Thus, it can be argued that research published in Controllershship and Management Accounting uses little paradigm change as shown in Figure 1, to produce knowledge according to the differentiation script.

4.2 Theoretical approaches of the scientific articles in controllership and management accounting published between 2010 and 2016

After describing and analyzing the research paradigms adopted in the scientific articles published for the Anpcont congress between 2010 and 2016, we attempted to identify the theoretical perspectives used in these studies. Figure 3 displays the distribution of the theoretical approaches according to the theoretical diversity Bromwich and Scapens (2016) address. In the same figure, the predominance of theoretical constructs from management systems and control (34%) and economic theories (28%) is shown. This also reveals that the use of theories in the framework of the economic and organizational paradigm still prevails in research in the area. The most present economic theories in the articles were Agency theory, Prospect theory, Expected Utility theory, Institutional theory, Construct theory of management systems and control, with great variations, such as alternative performance assessment models, such as the Balanced Scorecard. Next, the use of other theories coming from organizational theories was found in 20 articles. In 13% of the scientific articles, the theories used could not be identified, due to a lack of clarity or identification of a theory.

Theoretical approaches of scientific articles on controllership and management accounting between 2010 and 2016

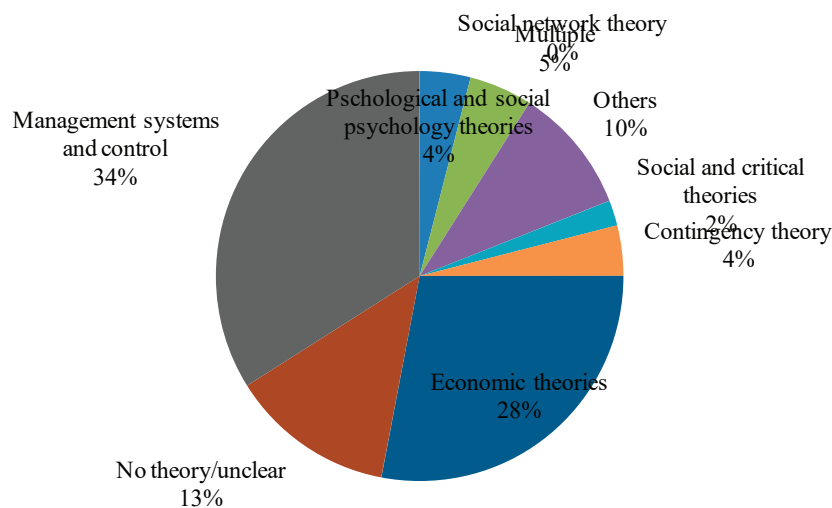


Figure 3. Theoretical approaches of the scientific articles published between 2010 and 2016

Source: elaborated by the authors based on the research data

Also according to Figure 3, the small number of articles that used the Social and Critical theory (2%), Social Network theory (0%) and Multiple theories (5%) stands out, revealing that the Controllership and Management Accounting studies published for the Anpcont congress between 2010 and 2016 did not adopt theoretical perspectives within the interpretive and critical paradigm. In addition, the use of multiple theories was not found to support a knowledge production based on a bricolage script. These evidences contrast with the recommendations of the European journal Management Accounting Research, in that research in the area should expand the theories towards an interpretive and post-structuralist perspective (Hopper & Bui, 2016).

Finally, the limited use of Psychological and Social Psychology theories (4%) and Contingency theory (4%) should be highlighted. Once again, concerning the latter, according to Bromwich and Scapens (2016), management accounting research has presented an increase of the Social and Critical theories.

4.3 Research method approaches of the scientific articles in Controllership and Management Accounting published between 2010 and 2016

Figure 4 displays the profile of the research methods used in the scientific articles published for the Anpcont congress between 2010 and 2016. According to the same Figure 4, as observed, 64% of the investigated studies used quantitative research methods, thus confirming the mainstream method adopted in Management Accounting research. It should be highlighted that 18% of the studies were qualitative, while the remainder was distributed between quali-quantitative (13%) and non-empirical (5%). These results support the analysis by Frezatti *et al.* (2015) on the stage of Management Accounting research in Brazil. Quantitative studies are predominant in Management Accounting research, specifically using surveys. In addition, when the qualitative dimension is observed, case studies have been the most used among Management Accounting researchers. The predominance of these two methods is in line with Nascimento *et al.* (2010), who found that these two methods are the most common at the main academic Accounting events (including the Meeting of the National Association of Graduate Programs and Research in Business Administration - Enanpad) between 2005 and 2008.

Profile of research method approaches

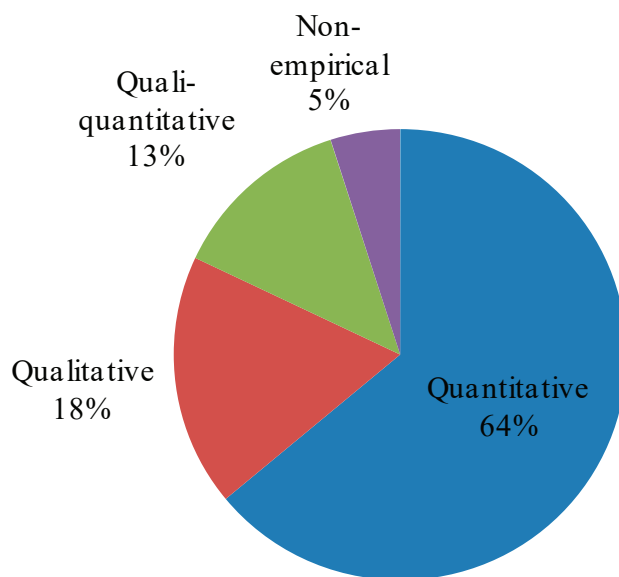


Figure 4. Profile of the research method approaches used in the scientific articles published for the Anpcont congress between 2010 and 2016.

In addition, a slight increase is observed in the use of the quali-quantitative method, in line with the methodological standard of international research in Management Accounting, increasingly seeking to integrate quantitative and qualitative research. In this sense, studies developed in Brazil and published in Anpcont support Modell (2010), who underlined that the mixed methods are widely examined in the context of Management Accounting research and Brazilian researchers focused on the dialogue based on multiple paradigms.

4.4 Classification of the scientific articles in Controllershship and Management Accounting by type of contribution

Table 3 displays the number of scientific articles in Controllershship and Management Accounting per type of knowledge production script. As verified, out of the 190 articles published in Anpcont between 2010 and 2016, 163 articles were classified in the knowledge production script of the evolution type, representing approximately 86% of the total. Next, 22 articles were classified in the bricolage script, equivalent to 11% of all articles. As for the differentiation script, the same Table 3 shows a small number of articles with this type of contribution. In view of these data, initially, it can be observed that, overall, the knowledge production in Controllershship and Management Accounting in the study period shows that the contribution perspective of the evolution type is predominant. In addition, the small number of studies that seek knowledge using the bricolage script also stands out.

Table 3
Frequency of knowledge production scripts in the total period

Knowledge production scripts	Quantity	Percentage
Evolution	163	86%
Differentiation	5	3%
Bricolage	22	11%
Total	190	100%

As can be observed in Table 3, throughout the analysis period, 86% of the articles adopted the evolution script between 2010 and 2016. More than 80% of the articles published each year adopt the evolution script, reaching a frequency of 96% in 2013, showing a predominance of this contribution perspective in the articles published in Anpcont. In addition, the use of this knowledge production script is to a certain extent stable during the analysis period.

Table 4
Frequency of contribution types per year

YEAR	RESEARCH CONTRIBUTION TYPES							
	EVOLUTION	%	DIFFERENTIATION	%	BRICOLAGE	%	TOTAL	%
2010	19	83%	1	4%	3	13%	23	100%
2011	22	85%	2	7.5%	2	7.5%	26	100%
2012	24	86%	-	-	4	14%	28	100%
2013	27	96%	-	-	1	4%	28	100%
2014	24	89%	-	-	3	11%	27	100%
2015	25	78%	1	3%	6	19%	32	100%
2016	21	84%	1	4%	3	12%	25	100%
TOTAL	163	88%	5	3%	23	11%	190	100%

As regards the bricolage script, relative frequencies inferior to 20% of all articles published in Controllershship and Management Accounting at each edition of the Congress were found. This reveals that the scientific production in this knowledge area does not follow this research contribution perspective for knowledge production in Controllershship and Management Accounting. What the differentiation script is concerned, about 8% was found in 2011, showing that few articles were classified in this type of contribution. This reveals that the studies published and analyzed in Controllershship and Management Accounting do not seek mutual differentiation to produce new knowledge in the area. In short, based on the descriptive analysis, departing from the diagnosis of the knowledge production scripts in the articles published in Controllershship and Management Accounting, the use of the evolution script perspective is predominant. This evidence confirms the use of the mais common contribution perspective by the general scientific community in Controllershship and Management Accounting research for the Anpcont Congress.

4.5 Evolution of the contribution types of the scientific articles in function of the study period

As the main objective of this study was to analyze the dominant perspective of the contribution to Controllershship and Management Accounting research, the evolutionary behavior of the knowledge production script should be analyzed throughout the study period. Figure 6 shows the evolution of the three knowledge production scripts in Controllershship and Management Accounting at the editions of the Anpcont Congress held between 2010 and 2016. Overall, as can be verified in the same graph, the evolution script prevails over the other - differentiation and bricolage - scripts.

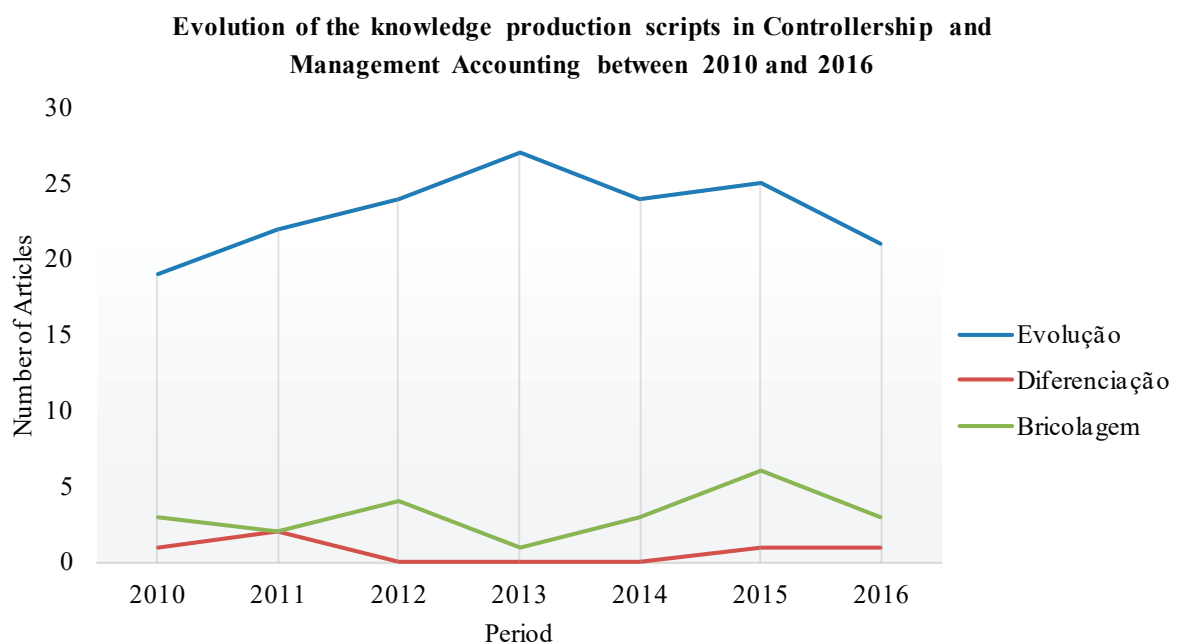


Figure 6. Evolution of the knowledge production scripts in Controllershship and Management Accounting between 2010 and 2016

In the first subperiod, between 2010 and 2013, the use of the evolution script increases in research published in this theme area, while the use of the bricolage script remains constant in the first two years (2010 and 2011), corresponding to about 13% of the all articles published at each edition. Between 2011 and 2012, an increase (14%) is observed, followed by a decline (4%) in the use of this script between 2012 and 2013. The growth in the use of the bricolage script was further enhanced in 2014 and 2015. In the second subperiod, from 2013 to 2016, Graph 3 shows an increase in the use of the bricolage script until 2015, against a decline followed by oscillation in the use of the evolution script among Controllershship and Management Accounting researchers. The use of the bricolage script in 6 articles (19%) published in 2015 should be highlighted, showing an increasing interest in paradigmatic, theoretical or methodological pluralism, although still insignificant in view of the predominance of the evolution script.

5. Final Considerations

This study aimed to assess the progress in Management Accounting research in general, defined in the thematic area of one the main Brazilian Accounting events. In addition, we aimed to conduct this discussion in the light of the recent publication of editorials in two renowned specialized international journals in the area, Management Accounting Research and Journal of Management Accounting Research (JMAR), specifically focused on the development of Management Accounting research. Thus, based on the study developed, it was verified that the dominant research perspective in Controllershship and Management Accounting is the evolution type, showing that research in the area adopts Karl's (1959) philosophical perspective and assumes that the researchers in the Brazilian community are engaged in a common search and gradual knowledge advance. This results can also fit into Kuhn's (1983) perspective of normal science, when he argues that the evolution script is not intended to question the body of knowledge, but to strengthen, brick by brick, pieces of a knowledge "wall" focused on a given problem. In other words, it can be affirmed that the form of articulation Management Accounting researchers use in Brazil is the detection of a "gap" in earlier research, which Sandberg and Alvesson (2011) called the gap-spotting technique.

This evidence further confirms the predominance of the positivist paradigm and the incipient use of alternative paradigms, such as interpretivism and Critical theory. Thus, research published in Controllershship and Management Accounting uses little paradigm change to produce knowledge according to the differentiation script. Although the results show a slow evolution in the use of this knowledge production script in recent years, they also showed that Management Accounting research in Brazil has attempted to alternate paradigms in order to investigate the same research problem.

Concerning the theoretical approaches, theoretical constructs from management systems and control and economic theories are predominant. This also shows that the use of a single paradigm based on economic theory still prevails in research in the area. In the study, a small number of articles that use the Social and Critical theory, Social Network theory and Multiple theories was also emphasized, revealing that the Controllershship and Management Accounting studies published for the Anpcont congress between 2010 and 2016 did not adopt theoretical perspectives within the interpretive and critical paradigm. In addition, the use of multiple theories was not found to support a knowledge production based on a bricolage script. These evidences contrast with the recommendations of the European journal Management Accounting Research, in that research in the area should expand the theories towards an interpretive and post-structuralist perspective (Hopper & Bui, 2016). Contingency theory, which Bromwich and Scapens (2016) present as the most used to obtain established knowledge in accounting, was hardly used in the studies.

Concerning the profile of the research method approaches used in the scientific articles published for the Anpcont congress between 2010 and 2016, the results revealed a predominance of quantitative studies in Management Accounting research, specifically using surveys. In the qualitative dimension, case studies have been the most used among Management Accounting researchers. In addition, an insignificant increase was observed in the use of the quali-quantitative method, in line with the methodological standard of European research in Management Accounting, increasingly seeking to integrate quantitative and qualitative research (Lukka, 2010; Modell, 2010).

Finally, this study presents limitations in the classification of the articles according to the epistemological, theoretical, methodological approaches and knowledge production scripts. The results are also restricted to the articles published in the Anpcont database and to the study period. As suggestions for future research, studies could analyze the dominant production script perspectives per theme with a view to identifying which studies are being consolidated for the sake of knowledge production in the area (Hesford et al., 2006; Otley, 2016).

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