

Social research evolution in management accounting: reflection using Bunge's theory

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Abstract

Actually Management Accounting is considered for an important group of researchers as a social science. This is a consequence of an evolution from an economic view to social-oriented perspectives. Following Mario Bunge's theory, we establish that break point in 1980s. Until 1980s, the accounting research was dominated by an economic analysis with both *utilitarian* and *cognitive* objectives. The scientific growth was *in surface*, without any relevant change in the foundations of Management Accounting. The development of new concerns regarding social implications promotes a growth *in depth* in the 1980s. Socio-economic analysis, both in interpretative and critical research, is developed following *utilitarian* and *cognitive* objectives.

We defend that Management Accounting, to consolidate its status as a social science, needs an evolutionary, reflexive and trans-disciplinary thinking, in both theoretical and empirical dimension. *Utilitarian* and *cognitive* approaches must be developed and in a coordinated way. Dialogue between different theoretical perspectives will support the *utilitarian* objective. Dialogue between different methods and findings, in particular case studies, will contribute to both *utilitarian* and *cognitive* dimensions.

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1. Introduction: motivation and aim of the study

A part of the accounting community has been aware regarding social issues (Baker and Bettner, 1997; Hopwood, 1987). That new literature defends the scientific benefits that may

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derive from expanding the sphere of accounting studies from the economic or technical dimension to the social dimension.

The perspective in the study of Management Accounting is, then, widened. The most orthodox conceptions defend that economy and economic reality are decisive factors (Beckett, 1964; Belkaoui, 1985, 1990; Cañibano and Gonzalo, 1997). The alternative approaches, that we might call non-orthodox, put emphasis on social aspects such as culture, ideology, power, social relationships and so on (Mathews, 1993; Morgan, 1988; Nahapiet, 1988; Perera, 1989; Thomas, 1989).

Among the non-orthodox approaches, critical perspectives understand that accountants (researchers and practitioners) must be not only conscious of social aspects but also act in consequence. However, this is still a minority position. There is a lack of interpretative and critical research in mainstream accounting (Baker and Bettner, 1997; Howard and Nikolai, 1983; Lapsley and Mitchell, 1994; Scapens, 1994).

The new social concern has brought us to reconsider the scientific status of Management Accounting. In this paper we debate the evolution of Management Accounting as a science and, in particular, as a social science. We assess the state of current research being conducted in Management Accounting. We used the theoretical framework of Mario Bunge (1972, 1973, 1983). Bunge's theory facilitates an analysis of the orientation, quality and aims that scientific research activity possesses. That study has enabled us to draw about the current scientific situation and possible evolution in Management Accounting.

2. Scientific development in Management Accounting

2.1. Bunge's theoretical framework

The paradigm or common theory of Kuhn (1962) was the predominant idea in the scientific accounting community during many years. His thesis about periods of normal science and periods of crisis attempted to explain the accumulation and development of scientific knowledge. Others resorted to Popper's falsationism (1967, 1973). Over the past few decades this situation has undergone a certain evolution with the acknowledgment of the theses by Lakatos (1974, 1975), Stegmüller (1979), and that of Bunge (1983).

Bunge (1972, 1973, 1983) proposes a doctrine referring to scientific development and the nature and typology of research in a social science. His framework is built upon two contributions. First, he identifies two types of programs in the evolution of scientific knowledge, the *on-surface research program* and the *in-depth research program* (Bunge, 1972, p. 89).

The *on-surface research program* involves a growth in routine knowledge. It is a kind of working knowledge, without giving up the core of its beliefs. It allows the traditionally accepted theories of a scientific community to be improved by ironing out their anomalies and applying them to diverse fields. The *in-depth research program* offers a large-scale growth in knowledge. It provides substantially new ideas that uphold new views and perspectives from the information available. In the history of a science there are periods characterized by the predominance of one, or another, kind of growth.

The *on-surface growth* presents problems. It is blind and tends to paralyze scientific progress because the lack of alternative ideas. *On-surface growth* is necessary but

insufficient. We would expect science to ripen when research seeks to be expansive, deep and solid. That is, when it not only widens its field but also goes deeper into it and organizes it in a better way. The *in-depth growth* implies the risk of sinking into uncontrolled speculation. The science evolves most favorably when it combines both—a phenomenon known as *growth in volume* (Bunge, 1972, p. 89).

The second contribution of Bunge (1983, p. 43) comes into the social field. Any research whose aim is a social fact, generated by men and women in his daily life, must tackle two main objectives: *cognitive and utilitarian*. The *cognitive* or *intrinsic* objective analyzes “what is.” It provides scientific knowledge about the studied segment of social reality. The *utilitarian* or *extrinsic* objective is interested in “what should be.” This second objective makes an active contribution to the technological progress that increases the social welfare of that reality.

From Bunge’s perspective, research within social science can be defined as any activity or work performed by a researcher with the aim of obtaining further knowledge about a particular phenomenon. It implies the use of diverse theoretical versions for explaining, more or less successfully, the phenomenon. The relationship between the subjects who deal with the aforesaid phenomenon on a day-to-day basis must also improve by means of technical solutions, ideas, systems or models. They will increase their ability to understand the phenomenon and, thus, their capacity to handle it in their interests.

A social science should include both the *cognitive* and the *utilitarian* objectives. Both kinds of research must be closely related in a mutually dependent way to evolve correctly. The *cognitive* studies seek to understand the object under study. They base their research on the conceptual framework generated by *utilitarian* studies. Their theoretical premises help to build the initial hypotheses. They may also be a reference that upholds the explanations and considerations obtained from them. Likewise, the *utilitarian* studies provide a technical structure. It improves, to a greater or lesser extent, the subject–object relationship. The *utilitarian* approach cannot neglect the findings from the *cognitive* studies for its perfection, expansion or including innovation. The *cognitive studies* are the basis for *utilitarian studies* perfection, expansion or innovation. They provide a source of information about gaps, irregularities or peculiarities have not been dealt with in the *utilitarian* designs or models employed.

If the *utilitarian* or *extrinsic* objective of science is exaggerated, a gap between the research activity and the actual practical application will appear. In the same way, if the objectives of science focus on the pure knowledge of the subject being studied (*cognitive*), the obtained solutions will not enable to achieve greater control over the different problems encountered in practice. The results will really have a reduced application. Hence, both activities must be developed in a coordinated way.

2.2. Management Accounting research: an adaptation of Bunge’s theory

Bunge distinguishes between two kinds of research. One depends on the objectives this research must achieve in a social science. It is known as *cognitive* and *utilitarian*. Another is that of *on-surface* and *in-depth growth*. It is used for explaining how science evolves. Bunge’s doctrine allows us to establish a taxonomy of Management Accounting research, with four very clearly defined areas labeled A, B, C, and D (Table 1).

Table 1
Taxonomy of research into Management Accounting

Target character (of the research)	Growth character (provided by the research)	
	On surface research	In depth research
Utilitarian research	A	B
Cognitive research	C	D

Area A includes research focuses on the analysis of “what Management Accounting should be.” It has a *utilitarian* objective that rests on a doctrinal or conceptual base. The corresponding scientific community generally accepts that base. A follows an *on-surface growth*.

Area B takes in research that uses new doctrinal or conceptual bases. It brings about an *in-depth growth*. B works on innovative proposals that arise under a *utilitarian* objective. That is, basically, it assumes the idea of “what Management Accounting should be.”

Area C consists of publications that deal with “what Management Accounting is.” C puts emphasis on the *cognitive* objective. It lies on one or several of the doctrinal bases established. It acknowledged within the research community of the discipline, which generate an *on-surface growth*.

Lastly, area D contains work that proposes, from a social viewpoint, new means of analysis. It also adopts new methodologies for the investigation. The last aim of D is to offer a theoretical explanation of “what Management Accounting is.” It has both a *cognitive* objective and *in-depth growth*.

2.3. Social research in Management Accounting

In the last decade, a group of accounting researchers have been defending the following thesis: important scientific benefits can be obtained expanding the Management Accounting research activity from the economic dimension to the social dimension (Hopper and Powell, 1985; Roslender, 1996; Swanson and Gross, 1998). These benefits arise from the possibility of obtaining richer and deeper findings that satisfy better information needs in different social units.

Critical researchers recognize that to study social phenomenon is necessary to understand better the accounting in the real practice. For example, to consider the so-often underestimated role played by Management Accounting as a decisive factor in organizations, in particular, and in society, in general (Macintosh and Scapens, 1990; Thomas, 1989). Management Accounting guides and aids in formalizing the social processes and actions of organizations (Dermer, 1988; Nahapiet, 1988). Society also influences accounting science, practice and profession (Armstrong, 1985; Tinker, 1988).

As Belkaoui (1985, 1990) and Mathews (1993) affirm, the new social perspective has fundamental implications. We will now go on them using the Bunge’s theoretical framework, exposed previously.

That perspective manifests a growing interest in variables and factors of sociological nature with influence in Management Accounting, “*what should be*”—*utilitarian approach*. It

also implies a reorientation to an *in-depth research*. Following Bunge's theory it is classified into area B.

The origins of that interest lay in the concern for the generalizations made on the design of Management Accounting systems. Different authors (Cooper, 1988a, 1988b, 1988c, 1989, 1990a, 1990b, 1990c; Cooper and Kaplan 1988a, 1988b; Johnson and Kaplan, 1988; Kaplan and Atkinson, 1989), found inconsistencies in the empirical development of their *cognitive-on-surface* research (area C).

Most of accounting literature did not pay any attention to the cultural and contextual limits, as accounting research was mainly centered in agency theory (*utilitarian-on-surface* research, A). Agency theory was inspired by the conceptual position of marginalist and neoclassical economics (Berle and Means, 1932; Coase, 1937; Jensen, 1983; Milgrom and Roberts, 1988), which has been seen as a useful framework for giving objectivity to Management Accounting research.

Agency theory conceives Management Accounting as a pool of systems and techniques that provides economic information (Gago, 1996). Management Accounting information is useful because it reduces information asymmetries. It motivates agents for communication (Melumad and Reichelstein, 1987, 1989; Penno, 1984, 1990; Riordan and Sappington, 1987). Accounting information can be used for controlling the acts and outputs from the agent's decision-making (Antle and Demski, 1988; Baiman and Noel, 1985; Suh, 1988).

However, accounting researchers began to be conscious on the importance of introducing new variables concerning environment, human resources, power, politics, culture, social ideology, history, ethics, etc. into the design of Management Accounting models (Macintosh and Scapens, 1990; Neu, 1992; Oliver, 1991). They understood that the election of an accounting system can be governed by the search for power, the limitations on performing certain activities, the encouragement of particular lines of management and so on (*utilitarian-in-depth* research, B). All were economically oriented actions but with social implications. Previously, those issues were not a direct concern for the researchers. Studying them, they gain a better understanding, analysis and interpretation of certain phenomena with economic effects on the entity.

Technical prescriptions in Management Accounting are based upon economical and deterministically oriented *macro proposals* developed many years ago (Backer and Jacobsen, 1970; Beckett, 1964; Boter, 1958; Brett, 1940; Chandler, 1969, 1977; Davidson and Trueblood, 1961; Gordon and Shillinglaw, 1969; Gillespie, 1957; Hansen, 1951; Johnson, 1981; Kaplan, 1984; Mephan, 1988; Paris, 1959; Paton, 1943; Pollard, 1965; Reed, 1948). A group of accounting researchers adjusted those approaches to the heterogeneity and variety of different contexts, trying to be more close to the socio-cultural reality (Amat and Ripoll, 1997; Bayou, 1993; Foster and Gupta, 1990; Hogarth, 1993; Scapens and Roberts, 1993). These proposals are conducted using, generally, the case study method as basic tool to approximate the real context (Eisenhardt, 1989).

The research named "what Management Accounting is" has also experienced a relevant change influenced by the social conscience (D). The positivist theories opened up the possibilities for research that existed until the 1970s (Lawrence and Lorch, 1967; Lorch and Morse, 1979). They treated Management Accounting systems as an endogenous variable together with the organizational structure, production processes, environment, etc. (Bruns and Waterhouse, 1975; Hayes, 1977; Khandawalla, 1972).

That research activity puts a high emphasis on proving any hypothesis and resorting to empirical research. Positivist theories divide systems in individual parts, using them as building blocks to construct knowledge about the whole (Quattrone, 2000). Proofs are based upon econometrics and statistics. Sometimes concerns regarding the adequacy of the method employed appear to become more important than the theory or the results achieved (called “ R^2 syndrome”) (Keys and Reding, 1992).

As a reaction, a group of academics defend the benefits of alternative research methods and epistemological perspectives (Czariawska-Joerges and Jacobson, 1989; Thomas, 1989). Interpretative and/or critical approaches are better suited to collecting qualitative aspects into a socio-economic science than alternative methods. Case study becomes a useful methodological tool for constructing new theories.

2.4. *Methods for the cognitive research*

Since late 1960s (Dyckman and Zeff, 1984; Watts and Zimmerman, 1978, 1979, 1990; Zeff, 1991), accounting research has revealed a growing interest in the *cognitive* objective (C research). It let the traditional *utilitarian* analysis having being completed. Indeed, empirical research in Management Accounting was not too used until the 1970s (Barrachina et al., 1999; Catelló et al., 1985; Ged, 1986).

The concern was *how* and *why* Management Accounting really performed in practice. Researchers investigated practices, relationships and roles of Management Accounting systems within organizations. These studies used the positivist methodology (Daft and Macintosh, 1978; Gordon and Miller, 1976; Hopwood, 1972).

An empirical approach was the use of Contingency Theory (Gordon and Narayanan, 1984; Ryan and Hobson, 1985). However, it did not turn out to be a successful trend. The static timeless was one of its main limitations. The analysis of multiple influencing factors associated with the context in which the company operates took on *multilaterality* (Otley, 1980; Weill and Olson, 1989).

From an epistemology perspective, the first *cognitive* approaches used in C are closely linked to the research methods used in econometrics and statistics. To obtain universal laws of the reality observed is their last purpose. They are predominantly economic oriented. They did not make use of methodologies developed in other areas of the social sciences.

Actually C research still maintains the foundations of neoclassical economics—economic rationality and balanced markets. It does not take into account other dynamic and political factors in order to understand how and why Management Accounting works in practice (Scapens, 1994).

However, that *cognitive* program, conducted by positivists, represented an important step forward for Management Accounting. It facilitates to complete the *utilitarian* objective of A. According to Bunge’s theory, the combination of both objectives guarantees an adequate development for research in a social science. However, such condition is not sufficient for an adequate development of a social science as Management Accounting is.

Some researchers manifested an interest for the study of the social reality. They attempted to find out “what Management Accounting was” in the real world (C). Inconsistencies appear for supporting their findings with the existing theories (A).

During 1980s, new theories were proposed (B) and, at the same time, new *cognitive* methods began to be applied (D) (Barrachina et al., 1999). As Roslender (1996) observed, this coordination had ever existed.

Thus, an increasing group of researchers defended that the empirical activity in Management Accounting (D) may be reinforced throughout case study methodology (Scapens, 1988). The reasons for supporting that utilization were diverse.

Case studies let researchers, and also practitioners, to understand the ways in which Management Accounting systems were used on a day-to-day basis, and on particular organizations. Case study methodology carried out an intensive examination of one single entity or a few of them. That examination provided a description of the present situation as regards aspects like the administrative and organizational context. Data were analyzed throughout qualitative descriptions and interpretations of the context of company studied (Kaplan, 1986).

Case study played an important role in understanding why problems appeared importing accounting theories and practices from other countries. For example, Japan accounting practices are heavily influenced by the national culture. In USA or Europe, they had to be adjusted to the new cultural parameters (Makido, 1992; Sskurai, 1990; Takeouchi and Nonanka, 1991; Urakawa, 1993).

3. Future: consolidation of Management Accounting as a social science

3.1. Correcting existent gaps in research and in practice

Research in a social science, and therefore research in Management Accounting, is an activity, or a work, that a researcher should perform with an open-mind. Its last purpose is to obtain further knowledge of a particular phenomenon.

The group of researchers that develops its activity, or work, in Management Accounting uses a wide variety of different theoretical frameworks (social, critical, psychological, etc.). Most of them are still emerging (B *research*). The pacific coexistence of different frameworks, especially those critical with the most popular or dominant, will guarantee the scientific progress in Management Accounting at long term.

Still there is an interface at the meeting points between the *cognitive* social research in Management Accounting (D) and the *utilitarian* branch (B). Quite frequently they operate without any connection, resting effectiveness to the overall scientific activity.

Moreover, to be really effective, management research must propose technical solutions for the practice, as a materialization of the ideas, systems or models generated in “what should be” (B) and to deal with “what is” (D). In general, social researchers, and especially critical researchers, aim to improve the relationships observed in each social phenomenon studied. They try to expand their ability to understand it and, therefore, their capacity to handle it and, including, change it. If there is a gap among what researchers study and what practitioners need, the success of the research is not guaranteed. To ignore practitioners’ necessities implies to assume important risks of failure, not achieving the desired influence in the real world.

We agree on Quattrone’s concern (2000, p. 134): “. . . although inter-disciplinary research has certainly brought new useful insights into accounting research . . . its contribution has

been made within the hierarchical scheme of the “Encyclopedia,” avoiding an integration with the prior conventional perspectives. As a result of this, it has continued to maintain the fragmentation between areas of knowledge, generating some new problems, such as the incommensurability amongst divers theoretical positions (even within the “critical” side of accounting research) and the lack of dialogue with the economical and managerial approaches.”

Accountants and managers should be provided with tools for acting in practice. This does not mean that researchers should be conditioned to practitioners’ demands. We think that social researchers must provide feasible techniques looking for a positive social impact.

3.2. Case study methods in social research

Case study methods may be used for developing the research inside *in-depth research* (B and D). They help to solve particular and contextual problems observed in the *cognitive research* (D). The *utilitarian* perspective may be used to overcome the debating alternatives approaches, building critical theories, etc. (B). They also may contribute to the integration and coordination between the findings in B and D.

Nevertheless, researching with this method implies accepting a series of limitations, facing to its validity and reliability. As Scapens (1990, p. 269) states: “a case study is only a small sample from which it is difficult to make a statistical generalization about the population from which it was drawn.” This limits the current possibilities of case studies in the *in-depth research* (B and D).

Actually, case study research does not allow the researchers to extend their results. This limitation conditions its utilization of the findings to improve social reality, the subject–object relationship and the technical progress of the discipline. It must be solved facing to a future development of *on-surface research* (A and C) in social Management Accounting. In order to achieve an empirical trans-disciplinary framework, researchers must cooperate, looking for different feasible alternatives. We defend the validity of initiatives such as a process for compiling or summarizing case studies.

If case study research methods present important shortcomings for external validity, to look for an analytical generalization based upon shared knowledge from different cases may be a solution. It will consolidate the *in-depth research* (futures A and C). The objective of analytical generalization would not be to translate particular results of any case study to another, but would facilitate to help or to guide other researchers to find or to recognize certain relationships in similar contexts. That also will let to develop the *on-surface research* (futures A and C).

Different authors have defended the convenience of achieving a theoretical saturation with case studies (Eisenhardt, 1989; Lukka and Kansen, 1995). We think that the potential for generalizing from case studies is greater than is commonly considered. By generalization we mean the derivation of and argumentation for conclusions. They covered a number of cases of a certain type based on observations of the real world. That generalization is not statistical and automatic. The idea of generalization from research results in case studies could be substantiated by their “transferability” or “commonalties.” A theory found in a case study must be tested through replications of the findings. Ideally, researchers could stop adding cases when theoretical saturation is reached. That is to say, the iteration process

between theory and observation should stop when the incremental improvement of theory is minimal.

The results obtained in different individual or contextual studies must be available for comparisons, further analysis, etc. That proposal claims the need of “reliability” in case studies. To develop criteria (Harvard Business School-Bruns and Kaplan, 1987; Yin, 1993, 1994; McKinnon, 1988), to interchange experiences and problems detected during the realization of case studies, to interchange case protocols, etc. will contribute to improve the research design and its development.

4. Conclusions

As a general conclusion, we think that the research in a social science cannot center its objectives on the pure knowledge of the matter it studies (*cognitive research*). It needs obtaining solutions that can be used to achieve a greater control over the different social problems (*utilitarian research*). Both *utilitarian* and *cognitive* approaches must be developed and in a coordinated way. Actually still there is an interface at the meeting points between the current *cognitive* social research and the *utilitarian* branch.

After a stage of *in-depth* research conducted into social Management Accounting, a stage of *on-surface* research will appear. In the second stage the *in-depth* results are developed on, consolidated and applied, or alternatively, rejected. That avoids the occurrence of uncontrolled research speculation.

Research achievements must be converted into technical proposals. Vice versa, technical proposals should be proved in particular organizations. The accounting research observe their suitability to a certain organizational context, examining the potential problems of its implementation. A higher integration may be a barrier for the technical speculation without relevant findings.

Management, as a social science, needs an evolutionary, reflexive, and trans-disciplinary thinking. It has a theoretical and empirical dimension. Whilst the theoretical would focuses in the dialogue between different theoretical perspectives, the dialogue between different findings in particular case studies would support the empirical dimension.

Case study is proposed as the main research method, rejecting the rigorous use of universal laws and statistical and econometric generalizations. Case studies provide Management Accounting with a *cognitive* foundation for the reality studied. They permit accounting researchers to obtain a contextual perspective for interpreting accounting within organizations and society. Using case studies, to investigate how organizations and individuals make sense of accounting techniques is feasible. The understanding is deeper than the one obtained through the application of other alternative methods. Case studies do not seek just to obtain simple, universal relationships between concrete variables—they look into organizations. Case studies allow the research to theorize individually about different phenomena. They also let to take into account alternative relationships and different variables or factors. They generate a rich and diverse knowledge regarding the reality studied.

We agree on opinions manifested by Quattrone (2000), about not bringing new wine (e.g. new theoretical perspectives and methodologies). Social research in Management

Accounting needs new bottles (e.g. a re-directional process may comprises an integration of theoretical and empirical findings).

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