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MANAGEMENT ACCOUNTING AS A MULTI-PARADIGM DISCIPLINE OF SOCIAL SCIENCES

Summary: This paper is a brief metatheoretical study of the management accounting thought. The purpose of this paper is to present management accounting as a multi-paradigm discipline of social science. The term “paradigm” is defined and briefly analyzed. The framework of Burrell and Morgan [1979] concerning paradigms in social science is described. Various approaches to the management accounting paradigms (in a broad and narrow senses) are presented and discussed.

Key words: management accounting, paradigm, theory, research.

1. Introduction

For years management accounting has been focused on profit maximization and financial performance. In the field of contemporary management accounting the enterprise's performance is a significantly much more complex notion and embraces not only financial results [Masztalerz 2010]. The debate concerning performance measurement and management is currently one of the most important issues in the management accounting literature and may be regarded in a broader perspective as a discussion about paradigms.

This paper is a brief metatheoretical study of management accounting thought and its purpose is to present management accounting as a multi-paradigm discipline of social science. It is mainly a literature review and state-of-the-art paper that aims to synthesize briefly various approaches to identify and define management accounting paradigms.

2. Paradigm, normal science and scientific revolution

The notion of paradigm was popularized by Thomas S. Kuhn in 1962 in his book *The Structure of Scientific Revolutions* [Kuhn 2009]. A paradigm can be defined as a body of knowledge that includes theory, application and instrumentation, which produces particular coherent traditions. It is a set of practices that define a scientific discipline during a particular period of time. A paradigm is based on the common

models of thought that are used to establish rules of practice. A mature science is governed by a single paradigm that coordinates and directs the “puzzle-solving” activity of the groups of normal scientists who work within it.

The term “paradigm” is used by Kuhn in two different senses¹. In a **broad sense**, a paradigm is a disciplinary matrix that stands for “the entire constellation of beliefs, values, techniques that are shared by the members of a given community” [Kuhn 2009, p. 297]. In this sense paradigms are about what is to be studied, what kind of research questions are supposed to be formulated, with what methods these studies should be conducted, and how their results should be interpreted. In a **narrow sense** it denotes one sort of element in that constellation, the concrete puzzle-solution which, employed as models or examples, can replace explicit rules as a basis for the solution of the remaining puzzles of normal science.

Kuhn argued that scientific disciplines tend to have periods of “**normal science**”, when researchers tranquilly work “within the box” of the ruling paradigm. However, it is not untypical that research findings gradually start to bring forth anomalies, which do not fit into the current paradigm and persuade researchers to start thinking “outside the current box”. Sooner or later a new paradigm emerges to challenge the current one and thereafter a paradigm shift becomes a possibility².

Kuhn describes the catalysts that cause a body of knowledge to transform paradigms, which happens during the **scientific revolution**, and the impact on practice as a result of the changes. Kuhn’s work focuses on paradigms and revolutions in the context of the hard sciences (e.g. astronomy and physics), however, the process he describes provides insight about change in the social sciences as well. One difference between Kuhn’s scientific revolutions and the transformation in accounting is that the catalysts of change in the hard sciences are the physical laws of nature, while the catalysts of change in the social sciences are the social environments in which they operate.

3. Management accounting paradigms in a narrow sense

Szychta [2008] describes the evolutionary character of changes in management accounting methods, tools and practices. She underlines the multi-paradigmatic nature of this discipline. Szychta [1997] considers management accounting paradigms in a narrow sense. She analyzes the development and evolution of management accounting thought in the perspective of costing systems and distinguishes four coexisting paradigms:

- 1) full cost paradigm (since the 1900s),
- 2) fixed and variable costs paradigm (since the 1940s),

¹ Or even in 22 senses [Masterman 1970].

² A number of clear examples of paradigm shifts can be found from various disciplines. A major one comes from physics, where Einstein’s theory of relativity replaced Newtonian mechanics, positioning the latter as a particular case of a more general theory.

- 3) activity and processes costs paradigm (since the 1980s),
- 4) target cost paradigm (since the 1960s in Japan and the 1990s in the rest of the world).

Mielcarek [2005] analyzes the paradigm of the theory of constraints and concludes that management accounting is simultaneously positive and normative science with its own paradigm.

Considering the management accounting thought in a broader perspective, not only in the context of costing systems, we can distinguish two paradigms:

- 1) operational management accounting paradigm,
- 2) strategic management accounting paradigm.

In my opinion, these two paradigms are not competing but rather coexisting, they are not mutually exclusive but rather complementary. Management accounting is a social science defined by a pluralism of approaches, contrary to Kuhn's expectations. There now exists a multiplicity of "ways of seeing" management accounting which adds richness to the literature. Kelly and Pratt [1992] describe a number of theoretical-paradigmatic approaches and offer a typology to understand them. They distinguish eight paradigms – approaches to the study of management accounting [Kelly, Pratt 1992, p. 228-231]:

- 1) decision making approach,
- 2) systems/Cybernetic approach,
- 3) contingency theory approach,
- 4) agency theory approach,
- 5) markets and hierarchies, or organizations failures, or transactions cost approach,
- 6) information-economics approach,
- 7) societal approach,
- 8) critical approach.

Kelly and Pratt [1992, p. 242] argue that accounting has a plurality of observable purposes and approaches, and each approach (paradigm) can offer insights into what accounting does, but each will also lead towards the assumption of differing purpose(s) for management accounting.

4. Social science paradigms – the framework of Burrell and Morgan

Burrell and Morgan [1979] argue that any social science discipline can be analyzed along metatheoretical assumptions about the nature of science (the subjective-objective dimension) and the nature of society (the regulation-radical change dimension). Using these two dimensions Burrell and Morgan develop a coherent scheme for the analysis of social theory (Figure 1).

The first principal dimension is the subjective-objective aspect, which is prescribed based on philosophical assumptions related to:

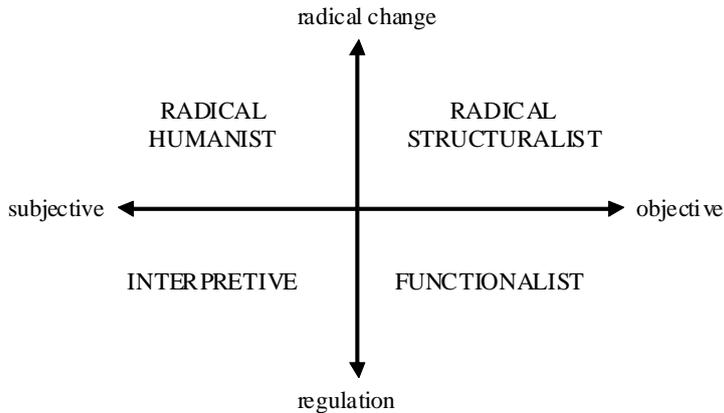


Figure 1. Sociological research paradigms

Source: adapted from Burrell, Morgan [1979].

1) **ontology** (realism vs. nominalism) – concerning the nature of reality, whether the reality is external from conscious or a product of individual consciousness:

- **nominalism** assumes that society is relative and the social world is names, concepts and labels that make individual structure reality;
- **realism** assumes that the real world has hard, intangible structures that exist irrespective of our labels and independently of our appreciation;

2) **epistemology** (positivism vs. anti-positivism) – debating the nature of knowledge, how knowledge can be acquired and how the truth can be found:

- **positivism** seeks to explain and predict what happens in the social world by searching for patterns and relationships;
- **anti-positivism** rejects that observing behaviour can help people understand it because social science cannot create objective knowledge of any kind;

3) **human nature** (voluntarism vs. determinism) – concerning the connection between human beings and their environment, whether people create their environments or they are products of their environments:

- **voluntarism** sees man as completely autonomous and possessing free will;
- **determinism** sees man as being determined by the situation and environment;

4) **methodology** (ideographic vs. nomothetic) – related to the approach taken in the process of conducting research, what methods of inquiry are appropriate for finding “truth”:

- **ideographic** (subjective and qualitative approach) focuses on detailed observation of society and how individuals create, modify and interpret the world; it employs methods such as observation, case study, in-depth interview;
- **nomothetic** (objective and quantitative approach) involves hypotheses testing and employs methods such as questionnaires, surveys and other standardized

research tools to collect quantitative data, which are then analyzed using statistical techniques;

5) **axiology** (value-free vs. value-laden) – concerned with the role of values in research:

- **value-free** contends that research is conducted without the imposition of values;
- **value-laden** contends that research requires the imposition of values.

Realist, positivist, determinist, nomothetic and value-free approach is typical for the objective dimension, whereas nominalist, anti-positivist, voluntarist, ideographic and value-laden approach characterizes the subjective dimension.

The second principal dimension is the regulation-radical change aspect, which is prescribed based on assumptions related to the two distinctive views and interpretations of the nature of society:

1) **social order** (integrationist view), which sees society as relatively stable and based on consensus, and concerns itself with maintaining the status quo, social integration and cohesion, solidarity, need satisfaction;

2) **social conflict** (coercion view), which sees society as constantly changing and disintegrating, and focuses on structural conflict, modes of domination, contradiction, emancipation, deprivation.

According to Burrell and Morgan [1979, p. 23] paradigms are very basic metatheoretical assumptions, which underwrite the frame of reference, mode of theorizing and modus operandi of the social theorists who operate within them. Burrell and Morgan consider paradigms in a broad sense, i.e. a paradigm is a commonality of perspective which binds the work of a group of theorists together.

Considering the assumptions about the nature of science and the nature of society Burrell and Morgan identified four paradigms based on the relationships of two principal dimensions i.e. subjective vs. objective and regulation vs. radical change:

- 1) the functionalist paradigm (objective and regulation dimensions),
- 2) the interpretive paradigm (subjective and regulation dimensions),
- 3) the radical structuralist (objective and radical change dimensions),
- 4) the radical humanist (subjective and radical change dimensions).

5. Management accounting paradigms in a broad sense

The framework proposed by Burrell and Morgan can be used in analyzing a wide range of social theories, including management accounting. Riahi-Belkaoui adopts four social science paradigms and explains their meaning in accounting theory [Riahi-Belkaoui 1996, p. 10-14]:

1) the **functionalist paradigm** views accounting phenomena as concrete real-world relations possessing regularities and casual relationships that are amendable to scientific explanation and prediction; This paradigm focuses on establishing the

functions of accounting needed for an efficient functioning of organizations, and it employs models and methods used in the natural sciences;

2) the **interpretive paradigm** aims to describe and understand the subjective experience of individuals involved in the preparation, communication, verification or use of accounting information. To the interpretists accounting is no more than names, concepts and labels used to construct reality. This paradigm focuses also on the role of accounting as a linguistic tool and other possible roles and images of accounting;

3) the **radical humanist paradigm**, in the form of critical theory in accounting, assumes that theories, bodies of knowledge and facts are mere reflections of realistic world views. It views accounting as creating a psychic prison and it states that accounting systems encourage and sustain alienation and conflict;

4) the **radical structuralist paradigm** views accounting as an instrument of domination, and it focuses on contradictions and crisis tendencies created by the accounting process, as well as on the link between accounting and the economic and political relations of domination.

Chua [1986] points some difficulties with the use of the Burrell and Morgan framework (with the assumptions about science and society) in accounting. Instead, she argues that accounting perspectives are differentiated with reference to underlying assumptions about:

- knowledge (epistemological and methodological assumptions),
- the empirical phenomena (physical and social reality) under study (ontological assumptions, human intention and rationality, societal order/conflict),
- the relationship between theory and practice.

Taking these assumptions under consideration Chua identifies three perspectives (paradigms) of accounting research (Table 1):

- 1) mainstream accounting,
- 2) interpretive perspective in accounting,
- 3) critical perspective in accounting.

The domination of the mainstream accounting is observed by many authors in recent years. Merchant [2010] proves that the leading accounting journals publish predominantly empirical tests of economics-based models, and some important research traditions (such as historical analysis, field research or survey research) are being starved out of the accounting academy. Lukka [2010] argues that management accounting is strongly dominated by the mainstream paradigm based on large archival data sets or analytical modelling (“hard-core accounting research”). Within this dominant paradigm, any debate around the notion of paradigm is typically regarded as a non-issue. As is typical of Kuhnian normal science, the mind-set goes along the following lines: “Why to talk about things such as paradigms as they are irrelevant – the correct way, the economics-based one, to conduct proper accounting research has already been found?” [Lukka 2010, p. 112]. This is what Malmi [2010] calls “paradigms in action”: the editor of a leading journal is allowed to define a problem,

Table 1. Paradigms of accounting by W.F. Chua

Assumptions	Mainstream	Interpretive	Critical
1	2	3	4
Beliefs about knowledge:			
epistemological	Theory is separate from observations that may be used to verify or falsify a theory. Hypothetico-deductive account of scientific explanation accepted.	Scientific explanations of human intentions sought. Their adequacy is assessed via the criteria of logical consistency, subjective interpretation, and agreement with actors' common sense interpretation.	Criteria for judging theories are temporal and context-bound.
methodological	Quantitative methods of data analysis and collection which allow generalization favoured.	Ethnographic work, case studies, and participant observation encouraged. Actors studied in their everyday world.	Historical, ethnographic research and case studies more commonly used.
Beliefs about physical and social reality:			
ontological	Empirical reality is objective and external to the subject. Human beings are also characterized as passive objects and not seen as makers of social reality.	Social reality is emergent, subjectively created, and objectified through human interaction.	Human beings have inner potentialities which are alienated (prevented from full emergence) through restrictive mechanisms. Objects can only be understood through a study of their historical development and change within the totality of relations. Empirical reality is characterized by objective, real relations which are transformed and reproduced through subjective interpretation.
human intention and rationality	Single goal of utility-maximization assumed for individuals and firms. Means-end rationality assumed.	All actions have meaning and intention that are retrospectively endowed and that are grounded in social and historical practices.	Human intention, rationality, and agency are accepted, but this is critically analyzed given a belief in false consciousness and ideology.

Table 1, cont.

1	2	3	4
social order/ conflict	Societies and organizations are essentially stable. Dysfunctional conflict may be managed through the design of appropriate accounting control.	Social order assumed. Conflict mediated through common schemes of social meanings.	Fundamental conflict is endemic to society. Conflict arises because of injustice and ideology in the social, economic, and political domains which obscure the creative dimension in people.
Relationship between theory and practice	Accounting specifies means, not ends. Acceptance of extant institutional structures.	Theory seeks only to explain action and to understand how social order is produced and reproduced.	Theory has a critical imperative: the identification and removal of domination and ideological practices.

Source: developed by the author on the basis of Chua [1986].

and he is allowed to provide a solution (inside the mainstream paradigm), but if someone disagrees and tries to provide an alternative (interpretive or critical) solution, it is not even discussable.

Nonetheless, Davila and Oyon [2008] argues that a mainstream paradigm does not dominate the field of management accounting in the same way as the economic/calculative/positivist school dominates financial accounting. Although the interpretive accounting research is excluded from the leading accounting journals, but looking at the evolution of management accounting, the economic approach that dominates financial accounting is balanced in the field of management accounting with a stronger presence of organizational theory studies, psychology-based work, and sociology and anthropology-based studies (such as interpretive accounting research).

Some authors discuss the possibility of mixed methods research (combining qualitative and quantitative approaches) in management accounting. Modell [2010] argues that it may help researchers bridge the divide between the economic-based, functionalist mainstream and the alternative (interpretive and critical) paradigms. In his opinion a useful approach for stimulating inter-paradigmatic dialogue is that of meta-triangulation (mobilization of multiple paradigms in examining a particular social phenomenon). Differences and similarities in research findings may then be systematically analyzed at the levels of ontology, epistemology and methodology.

According to Lukka [2010], from the philosophy of science viewpoint, the current state of accounting research is very interesting in the sense that while positivism is completely *passé* in the philosophy of science, it still seems to largely underpin the dominant mode of accounting research (which seeks primarily to discover law-like regularities that are testable with empirical data sets, and ignores unique phenomena which are regarded as uninteresting noise).

6. Conclusion

Management accounting as a social science is characterized by different (and sometimes mutually exclusive) paradigms. There is presently a considerable debate over competing theories and paradigms (in a broad sense) of management accounting, with ontological, epistemological and methodological issues at the heart of this debate. The raising question at this point is whether this crucial debate will divide or rather unite academia.

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RACHUNKOWOŚĆ ZARZĄDCZA JAKO WIELOPARADYGMATYCZNA DYSCYPLINA NAUK SPOŁECZNYCH

Streszczenie: Artykuł jest krótkim studium metateoretycznym poświęconym problematyce paradygmatów w rachunkowości zarządczej. Omówiono w nim pojęcie paradygmatu oraz naświetlono wieloznaczność tego terminu. Przedstawiono paradygmaty rachunkowości zarządczej w wąskim sensie. Zaprezentowano dwuwymiarowy model paradygmatów w naukach społecznych Burrella i Morgana [1979] i omówiono możliwości jego wykorzystania w rachunkowości zarządczej do określenia paradygmatów w szerokim sensie. Przedstawiono również koncepcję Chua [1986], a następnie naświetlono obraz paradygmatów we współczesnej teorii rachunkowości zarządczej.