

The Role of Management Accounting in Ancient India: Evidence from the Arthashastra

Vijaya Murthy¹ · Jim Rooney¹

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Abstract The various forms of accounting practice have a long history. However, the focus of historical accounting scholarship examining premodern times has tended to be the genesis of double-entry book-keeping techniques. In particular, very few scholars have examined influences on the adoption of management accounting techniques in the ancient periods of India's long history. We respond to this lacuna by examining management accounting at an organizational level within an ancient and economically successful society, namely the Mauryan period (322–185 BC). The aim is to explore management accounting practices implicated in the enforcement of economic and ethical behavior in the daily lives of Mauryan organizational actors. Drawing on a translation of original records in the form of a collection of texts known as the *Arthashastra* (*lit. the science of wealth*), this paper explores the intended uses of management accounting and, in particular, controls to persuade organizational actors to adapt the values and norms of wealth generation within the boundaries of socially acceptable roles. Our contribution is to highlight the society-oriented role of management accounting within Mauryan organizations.

Keywords Management accounting · Management control · Accounting history · The Arthashastra · Mauryan Empire

✉ Jim Rooney
jim.rooney@sydney.edu.au

Vijaya Murthy
Vijaya.murthy@sydney.edu.au

¹ Discipline of Accounting/Business School, The University of Sydney, Sydney, USA

Introduction

Management accounting, comprising a range of foundational techniques observed within modern multinational enterprises, has been associated with the exercise of power in order to secure sufficient resources by mobilizing individual and collective actions towards given organizational ends (Langfield-Smith 1997; Alvesson and Karreman 2004). These techniques have been shown to work in unison with those of industrial relations and human resource management to observe, examine, and normalize employees' performance and behavior at work (Marsden 1998, p. 104). Hence, workers' activities are seen as represented in, dependent on, and ultimately affected by financial figures and calculations (Knights and Collinson 1987).

While a number of management accounting techniques can be traced to the Industrial Revolution of nineteenth century Britain (Tyson 1998; Brackenborough et al. 2001) or earlier (Scorgie 1997), forms of accounting aimed at the control of worker performance can also be found going back to ancient civilizations. For example, a study of officials in Middle Kingdom Egypt by Ezzamel (2004, p. 499) found that:

In allocating work duties, accounting can become central to the determination of work targets and definition of the locus of specific responsibilities. This could be followed by the development of appropriate accounting techniques that would trace out and report on actual achievements, compare these achievements against predetermined work targets and specify the extent to which performance exceeds or falls below expectations.

Related historical research on this phenomenon point to “the formative influence of social and cultural forces” (Boyce 1995, p. 360), highlighting the importance of ‘looking beyond the numbers.’ For example, Carmona and Ezzamel (2007) critiqued the literature on book-keeping practices in Mesopotamia and ancient Egypt, finding that book-keeping and accountability was shaped by hierarchy and underpinned by social and religious norms and beliefs. They identify accounting practices as influenced by fear; fear of failing to preserve order on Earth (in Egypt) and fear of chaos (in Mesopotamia). While being set in diverse societal contexts, these findings are consistent with contemporary academic literature, identifying management control and less complex forms of management accounting as a calculative technology shaping and being shaped by society (Burchell et al. 1980; Miller and O’Leary 1987). In this context, management control is regarded as the combination of simple management accounting techniques such as budgeting as well as more complex manifestations of accounting such as non-financial performance indicators and behavioral norms that are “connected by many complementarity relationships” within an organization (Chenhall and Moers 2015, p. 1).

Despite these insights, the long tradition of studies of accounting history have tended to focus on the relatively recent European genesis of accounting technique in monastic organizations, and the development of double-entry accounting techniques for early merchant enterprise (For example, Ste and Croix 1956; Costouros 1978; Oldroyd 1995; Vollmers 1996). As a result, there have been few historical accounting studies undertaken on countries in the Asia Pacific region such as China (Fu 1971) or India (Scorgie 1990). This is surprising given that early references to accounting concepts can be traced as far back as the earliest texts written in Sanskrit. It is also relevant given that accounting history is more than simply the “...tracking the technical improvements in accounting techniques” (McKinlay and Pezet 2010, p. 489). By highlighting the accounting practices enrolled in the control of individuals of the Mauryan Empire, we can see hints of complex interactions of management control in modern organizations, consistent with Mattessich (1989, p. 82) in highlighting the ‘possibility’ rather than any ‘legitimate historical facts’ of such connections across time. In other words, “History cannot give us a program for the future, but it can give us a fuller understanding of ourselves, and of our common humanity, so that we can better face the future” (Warren 1961, p. 100).

As a consequence, the aim of this paper is to understand the role of management accounting techniques within organizations operating in an ancient non-European society where wealth creation and ethical behavior based on societal goals encoded in written form are seen

as mutually achievable within organizational and societal practice. We explore the Mauryan period (about 2500 years ago—from 322 to 185 BC), centered in the northern and northwestern parts of what is now the Indian subcontinent. This is achieved by drawing on an authoritative translation of original texts of the *Arthashastra* (translated as the ‘science of wealth’) describing the behavioral norms of Mauryan society in the pursuit and maintenance of wealth.

The *Arthashastra* is, in a sense, the result of the efforts of Hindu scholars and priests of the time to revive the old ideas of the *Chaturvarga* and, in particular, the four traditional duties of Hindu life namely, righteousness and moral order (*Dharma*), wealth and prosperity (*Artha*), worldly desires (*Kama*), and eternal bliss or liberation from earthly concerns (*Moksha*). It showed how these four goals were integrated and that *Moksha* could be attained by focusing the remaining three goals in a manner consistent with ethical behavior accepted within the society. These scholars pointed out that subjects owed duties to society but can also fulfill rightful desires by ethical and pious means. The *Arthashastra* taught how individuals within Mauryan society could mold their lives and be happy by regulating public conduct in such a way so as not to bring grief to others. Subjects were instructed to live for individual and group happiness in society by not disturbing others. Individuals were taught to follow moral standards that consist of showing due respect to the happiness and prosperity of others, refraining from injury or perfidy (Bandyopadhyaya 1982).

Arthashastra, as the name suggests, stressed the supreme importance of *Artha* (*wealth creation*) in the world and argued that *Dharma* and *Kama* depended on *Artha* for their realization. As a society steeped in well-established societal rituals, the expectations within Mauryan society was that economic behavior and the actions of individuals within economically significant organizations conformed to the norms of earlier ethical teachings and legal frameworks recognized within the society. As described in the next section, the focus of this paper is the role and intended meaning of management accounting inscriptions within economic organizations operating in this ancient society (Miller et al. 1991).

In terms of intended contribution, we explore the potential of management accounting within Mauryan organizations to facilitate wealth generation based on an ethic focused on societal benefit, in contrast to the notion of individual self-interest found in modern liberal societies (Cooper 2015). The hermeneutic lens adopted in this paper facilitates this exploration by supporting a focus on the interpretation of power and control encapsulated by inscriptions, with the possibility of both positive and negative outcomes for the individuals concerned. In addition,

this paper adds to the exiguous literature on the accounting history of India.

The remainder of this paper has four parts. First, we provide a review of previous literature that includes an overview of the key concepts addressed in this paper. The research site and methodology are then summarized. This is followed by an exploration management accounting in Mauryan organizations and discussion of the implications of our findings. We then conclude.

Literature Review

According to Sangster et al. (2008), the original purpose of Pacioli's double-entry accounting was to maintain records, indirectly providing merchants with a general financial overview of their business. While such record keeping, also known as mercantile accounting, is sufficient for a small and single-product firms, it fails to fully produce the financial data necessary for large complex corporations (Johnson 1972). Consequently, in the nineteenth century, mercantile accounting evolved into manufacturing accounting (Johnson 1972, p. 466) to facilitate internal planning and control (Kaplan 1984, p. 391). At the same time, the formation of corporations signified the need to provide owners with the account of how managers create value from their capital (Gleeson-White 2011, p. 123).

In light of the nascent literature on the presence of accounting techniques in ancient societies, were these more sophisticated uses of accounting also present in past eras? Scholars engaged in accounting history research identify evidence of sophistication in the absence of what we would recognize as a corporate organizational form (Carmona and Ezzamel 2007; Ezzamel 2009). For example, Ezzamel and Hoskins (2002, p. 360) in their study of accounting practices in ancient Mesopotamia found that "... there was never any primordial simplicity; the ancient relationships of accounting, writing and money are already both complex ... which still obtains in their modern relationships." The implication is that ancient societies were more complex in their adoption of accounting techniques than is usually assumed.

This recent research also indicates that understanding how and why these techniques were adopted may help articulate the antecedents to accounting practice in modern societies. Such an emphasis is particularly relevant for countries where there is a long history of human occupation and organizational activity, like India. For example, these historical antecedents are highlighted in recent scholarship on the relationship between scriptures adopted in ancient societies occupying what is now northern India and modern Indian legal frameworks. Olivelle and McClish (2015, p. 33) identify that "the origin of Indian

jurisprudence lies with state efforts to formalize and enforce the laws of public transactions." Of specific interest to this paper is their finding that, within the domain of trade and commerce, the Arthashastra (the same text examined in this paper):

...may well have played the central role not only in originating the legal tradition as we know it in classical South Asia, but in giving order to the multiplicity of legal domains operating within the state. (p. 46).

Text analysis by McClish (2014, p. 260), comparing the Arthashastra with a text on legal procedure estimated to date some 400–500 years after the end of the empire in which the Arthashastra was created, concluded that:

When the seventh *adhyāya* of the *Mānava Dharmaśāstra* is compared both broadly and narrowly with the *Kautilīya Arthasāstra*, Manu's direct dependence on Kautilya becomes undeniable.

While there is no available evidence that the *Mānava Dharmaśāstra* was actually used in legal proceedings (Davis 2010, p. 14), its influence can be clearly seen through analysis of relevant texts. For some scholars, these texts are, in turn, direct antecedents of British colonial law in India (Bilimoria 2011, p. 103), if not a partial source of jurisprudence in modern India (Davis 2010, pp. 13–16) that dates back to much earlier Hindu scripture dealing with legal matters referred to as "The Four Feet" (Olivelle and McClish 2015, p. 33).

There is no equivalent research on the antecedents and role of management accounting in these ancient societies. The adoption and use of accounting techniques and practices can be prompted by factors such as economic opportunity, political and social pressures, educational developments, and the influence of significant individuals (Oldroyd and Dobie 2009). One related insight from recent management accounting research has involved examination of the conflicts among actors that arise in fabricating management accounting processes, shaping complex and multifaceted management control practice (Preston et al. 1992, p. 564). In this sense, accounting is a product of the political interplay of people in and around organizations (see Qu and Cooper 2011). Such concern about management control practice indicates a need to embrace the meanings and actions of individuals in a local setting (Scapens 1990, p. 278) and to understand the practice as process (Ahrens and Chapman 2004, p. 13).

In identifying the factors that help understand the role and intended meaning of management accounting adopted in ancient organizations, we require an epistemology that supports the examination of discourse in exclusively written form. An interpretivist form of accounting research is

required, emanating from the need to understand accounting subjectively, an example being examination of the role of accounting that embraces a practice perspective (Burrell and Morgan 1979). The aim of such interpretive research is to understand the process of management control construction and use, exploring how it generates social order within an organization. Interpretive studies reveal “the many different rationalities of management accounting practice; the variety of ways in which management accounting practice is enacted and given meaning; the potency of management accounting technologies; ... and the ways in which management accounting practice is both constrained and enabled” (Baxter and Chua 2003, p. 97). We discuss this approach in the Methodology section below.

The use of theory to make sense of such evidence while at the same time using the evidence to refine theory (Ragin 1992, p. 225) produces insights on how management controls trigger action (Ahrens and Chapman 2004, p. 11). However, one of the weaknesses of this approach can be found when researchers introduce and summarize existing theory but fail to tightly connect the theory with research problems or use the theory to directly relate it to the empirical evidence (Vaivio 2008, pp. 76–78). Consequently, the evidence is crafted to fit the theory, which undermines the potential of interpretive management control research to engage audience (readers) to relate and understand the implications for audience’s work in practice (Chapman 2008, p. 250). Therefore, producing just another “theoretically informed case study” (Ahrens et al. 2008, p. 843) without a sense-making exercise will not contribute new knowledge to the field. As Chua and Mahama (2012, p. 80) argue:

...theorising is about drawing on an informing theory to make sense of an empirical research problem/question and to draw relationships between the research problem, the research context, and the underlying data with the view to advancing new or incremental theoretical and practical knowledge.

Consistent with the need for sense-making research in the context of management accounting within Mauryan organizations, illustration of a series of events that unfold through time using a process-based view may bring about interesting and unexpected outcomes (Yu 2011). In other words, organizationally grounded knowledge can only unfold through studying management accounting in the context it operated (Hopwood 2008). One notable example in historical research on ancient India is the body of work by Kosambi, adopting a Marxist theoretical framework to inform his interpretive studies of the ancient history of what is now modern India (Gurukkal 2008). In recognizing

the stratified characteristic of Indian societies over the millennia, adoption of a Marxist framework was used to support understanding of the historical interdependencies of economic and social influences on individuals.

At the same time, accounting studies of the Mauryan Empire are scarce and, consistent with other research into accounting before the colonial period of modern India, tend to focus on double-entry system or proving that accounting existed in the past. For example, Monsurur et al. (2014, p. 14) identify “that the pre-requisites for the establishment of the discipline of accounting already existed in India during the Mauryan period” but frame their evidence in terms of financial accounting and related technical constructs such as book-keeping, financial reporting, audit, and “check and balance” accounting. In earlier research, Bhattacharyya (1988) established that double-entry book-keeping existed in ancient India. Scorgie (1990) went further, using historical evidence to argue that algebraic double-entry was invented in India. Nigam (1986) examines a later period (the fifteenth century) to discuss the double-entry system. Choudhury (1982) focused on evidence on sources of revenue, types of expenditure, and internal control systems to prevent fraud. Kapadia (1972) gives an overall picture of the accountancy profession in India. Scorgie and Nandy (1992) also examine later period accounting records of the late eighteenth century. Sihag (2004) showed that accounting systems existed during the Mauryan period and was central to economic development.

While focused on management accounting practice, the social place explored here also requires examination of other forms of knowledge used to impose controls on organizational actors in the Mauryan Empire. Social relations, the collective bonds between two or more individuals, have personal meaning for an individual and provide knowledge that they belong to a socially defined group with emotional and communal significance associated with group membership (Hogg and Terry 2000). From an organizational perspective, social relations provide clues for individual actions and operate as a device for managerial action (Karreman and Alvesson 2004). Building on these clues, identity formation can be said to be the development of a distinct personality in relation to the organization to which an individual is associated. It defines the individual to others and to themselves (Alvesson and Willmott 2012).

A successful identity formation is recognized if an individual is able to treat the organization as if it were an extension of the self (Albert 1998). Alvesson and Willmott (2012) argue that the mechanisms of management control—rewards, leadership, division of labor, and organizational hierarchies—interact with the ‘identity’ of organizational members. From an organizational

perspective, ‘member identification’ presents a less explicit, and potentially more effective, means of control than methods that rely on ‘external stimuli’ (Barker 1998) as found in formal controls such as procedures and performance measures. As expressed by Fleming and Spicer (2014, p. 240), citing Clegg et al. (2006, p. 3) “... power need not always be regarded as something to be avoided. Power can be a very positive force; it can achieve great things.”

In this sense, we are consistent with Ezzamel and Hoskins (2002, p. 337) in exploring the role of management accounting in relation to other disciplinary practices such as writing. We are also consistent with the argument in Rahaman et al. (2010, p. 1099) that accounting can “...be used capriciously to demonstrate who has the ability to exercise power.” Our study of economic organizations operating within this ancient Indian society is concerned with the ‘hidden’ presence of the individual in text. Understanding individual ‘worth’ and ‘identity’ associated with work, as well as existence within this society, requires the supplement of writing and, in particular, ancient texts that describe expected ethical behavior, in order to be ‘recognized’ (Derrida 1976, p. 142). In this way, individual work is subordinated to roles promoted in texts accepted as authoritative. Behavior within Mauryan organizations may be more reflective of a way of life, analogous to that examined by Walker (2015, p. 1677) in a study of accounting and culture in agrarian America of the 1930s and 1940s, being “associated with stable communities” and “expressed through shared norms, rituals [and] patterns of social order.”

The Arthashastra, invoking the authority of the ancient texts, supplemented the presence of individuals conforming to the form of control prevalent in the Mauryan Empire. It is both an addition and substitution for physical or natural human existence in Mauryan organizations as it affirms identity within the society as well as representing the ideals of existence within this society to both its subjects and those who follow in time. Examination of the Arthashastra shows the manner in which identity and presence were defined in terms of management accounting used by the Mauryan king to monitor and direct his subjects within institutions whose purpose was focused on economic as well as ethical outcomes.

Given the availability of the Sanskrit texts of the Arthashastra, the lacuna in our historical understanding of the intended role of management accounting within Mauryan economic institutions provides the motivation for this paper. As a result, the research question of interest is: How were management controls constructed and what was their intended meaning within Mauryan economic institutions?

Research Site and Methodology

Research Site: The Mauryan Empire and Kautilya’s Arthashastra

The Mauryan Empire from 322 to 185 BC has been identified as the world’s largest society in its time, founded by Chandragupta Maurya. Under his rule, the Empire expanded significantly, reaching regions formerly under Macedonian rule by defeating general in the army of Alexander the Great such as Seleucus I. Chandragupta initially gained control of a large part of what is now modern India, including the Ganges and Indus valley and parts of the Deccan delta following wars with the preceding Nanda Empire (Modelski 1964) (see Fig. 1).

This was the period when internal and external trade expanded, agriculture and economic activities flourished. These trading activities grew following the creation of an efficient system of finance, administration, and security, under the guidance of Kautilya (also known as Vishnugupta Chanakya). Kautilya was a Brahmin, the priestly class of the Hindu society (Mathew and Jones 2013), and an acharya (teacher) serving as Chief Minister to Chandragupta (Sihag 2004); after helping to place him on the throne in 321 BC, Kautilya was also responsible for the education and later policy guidance of Chandragupta (Modelski 1964). There is no known biography of Kautilya, except that he was commended as highly successful in diplomacy and highly proficient in the discipline of government (Bandyopadhyaya 1982). He was noted for his skills as a writer on polity, compared to Machiavelli in terms of his influence (Boesche 2002). He was considered

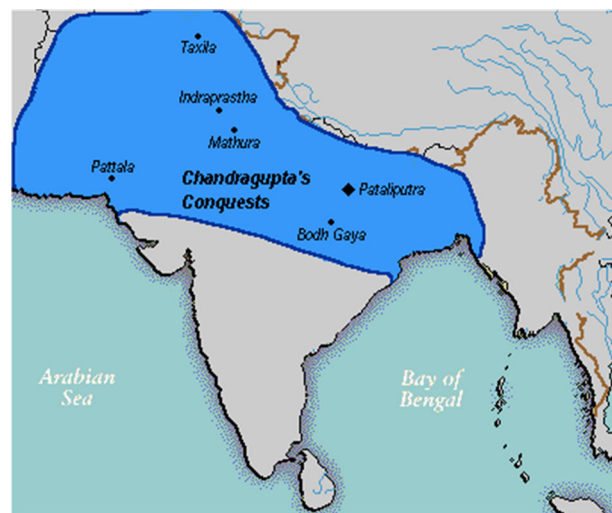


Fig. 1 The extent of the Mauryan empire (source: Wikipedia retrieved on 6.12.2012 from http://en.wikipedia.org/wiki/Maurya_Empire)

to be a brilliant statesman with a pragmatic outlook who developed the practices of government, including the duties of the king, ministers, and officials (Shamasastri 2005). His principles are contained in his treatise, called *Arthashastra* and written in sutra (prose-poem) style to fulfill his goal of the political unification of India (Mukherjee 1976).

Kautilya's *Arthashastra* contains details on business practices and, for example, the keeping of accounts in the office of accountants. It provides details of matters that should be recorded, registers to be maintained, a system of examination of accounts, and even details of punishments for default. These records do not resemble the modern accounting records, but, nevertheless, show that commercial record keeping existed in at least a nascent form (The Chartered Accountants 2006). The *Arthashastra* has been accepted as a cogently reasoned Sanskrit treatise (Modelski 1964), used as the means for acquisition and protection of the earth (Kangle 1986, p. 1). Translated as 'science of wealth,' it proposes practices by which the king will rule successfully. According to Kangle (1986), the *Arthashastra* has a twofold aim. First, it instructs a ruler on how he should protect his territory. This protection (*Palana*) refers to the administration of the state. Second, it shows how territory should be acquired. This acquisition (*Labha*) refers to conquest of territory and administration of foreign affairs. *Arthashastra* was influential, after which it disappeared. Shamasastri rediscovered it in 1905, publishing the first English translation in 1915. According to Shamasastri, the central argument of the *Arthashastra* is for an autocracy that manages an efficient and wealthy economy. It discusses the ethics of economics along with the duties and obligations of a King. Its scope seems to be far wider than statecraft, offering an outline of the legal and bureaucratic framework for administering a kingdom.

The *Arthashastra* comprises six thousand sutras (or concise thoughts), is divided into fifteen books, and contains one hundred and fifty chapters (Jha and Jha 1998). It has three parts: (1) national security issues including foreign policy; (2) administration of justice including crime and punishment issues; and (3) policies related to economic development, taxation, labor management, and financial management (Sihag 2004). These 15 books can be classified in the following manner: Book 1 on 'Fundamentals of Management,' Book 2 dealing with 'Economics,' Books 3, 4, and 5 on 'Law,' Books 6, 7, and 8 on 'Foreign Policies,' and Books 9–14 dealing with 'War.' Book 15 deals with the methodology and devices used in writing the *Arthashastra*. It also focuses on issues of welfare (for instance, redistribution of wealth during a famine) and, in particular, the social practices considered necessary to hold a society together (Shamasastri 2005).

Thus, the *Arthashastra* was a framework for building societal and individual wealth, welfare, and wellbeing. Following this framework, the Mauryan government was set up as a highly centralized and hierarchical public administration. It was framed to promote agriculture, production, and mining, to regulate tax collection, trade, and commerce, to maintain economic and social statistics as well as to regulate the welfare of subjects, foreigners, and public places including markets and temples (Shyam and Sunder 2008). Economic wealth was considered to be the most important element of a successful kingdom. International trade in goods and services was recognized as a vehicle for increasing the sovereign's wealth and that of his subjects. The *Arthashastra* also advises how the wealth and wellbeing of the subjects could be advanced by fair and efficient taxation (Waldauer et al. 1996).

Kautilya appeared to understand the importance of accurate measurement of economic performance and linked it to economic growth. Detailed books of accounts were maintained in order to account for and to manage wealth. Kautilya's *Arthashastra* prescribed a large body of officials including administrators and officers for the safe custody of treasure and account keeping, along with a chief collector to maintain revenue records (Mattessich 1998). The manuscript contains a separate chapter on 'The Business of Keeping Accounts in the Office of Accountants' with references to supervising, checking, and external auditing of accounts on a regular basis. There is also evidence of budget preparation for revenues and expenditure, fixed and variable costs, and manufacturing accounts. It even provides guidance on the collection of non-financial information (Sihag 2004; Shyam and Sunder 2008).

Kautilya's view on society was to create a welfare state ruled by a King with utmost purity and sobriety who works for the happiness of subjects to create welfare, wellbeing, happiness, and prosperity (collectively known as *yoga-kshema*) for all subjects in return for obligations to the King and society (Sivakumar and Rao 1996). Kautilya's strategy was built on acknowledgement of human values linked to ancient scriptures on ethical behavior that connects subjects and their leaders. Accordingly, the *Arthashastra* contains detailed principles of righteousness in management and politics as the essence of kingship. For example, according to the *Arthashastra*, a leader must possess values such as truthfulness, reliability, gratefulness, liberal views, promptness, long-term vision, and respect for the advice of elders. Furthermore, the text argued that the essence of leadership is focused on finding the right balance between the inner self and the social world. Training and learning is seen to destroy unrighteousness, poverty, and hatred.

There is, accordingly, a need to adopt an analytical framework that supports interpretation of the intended

meaning of management accounting and control in this context. This need leads to the adoption of a hermeneutic perspective.

Research Methodology: Hermeneutics

Our interest in this paper is in the adoption of a management accounting context to “access to the conceptual world in which our subjects live so that, in some extended sense of the term, converse with them” (Geertz 1993, p. 24). For ancient societies with a written history, a form of hermeneutics is necessary that provides a semiotic interpretation of those aspects of Mauryan culture affecting organizations operating in this society. This is achievable by adopting a framework for the interpretation of culture developed by Clifford Geertz. The focus is on ‘thick description’ of organizational culture in Mauryan times with the aim of undertaking an “analysis of social discourse,” a diagnostic rather than predictive endeavor (Geertz 1993, p. 26). Specifically, the task is to uncover the conceptual management accounting and, in particular, control structures that “inform our subjects’ acts” and “construct a system of analysis in whose terms what is generic to those structures... will stand out against other determinants of human behavior” (Geertz 1993, p. 27).

We use hermeneutics to analyze the Arthashastra texts and make interpretations. Hermeneutics in the field of qualitative research is a mode of analysis used specifically to interpret artifacts, especially those written in another time or in a context of life different from our own (Thiselton 2009). Originally, ‘hermeneutics’ referred to the interpretation of biblical texts, but as a result of the contributions of researchers such as Heidegger, the term is now defined as “the theory and practice of interpretation and understanding in different kinds of human contexts” (Odman 1988, p. 63). Within the field of qualitative research, this term still holds the connotation of “interpretation” of language, an artful form of understanding (Wiehl 1990).

A hermeneutics approach is justified on the basis that it allows us to explore the implications of knowledge codified in management controls adopted by Mauryan rulers and administrators, incorporating knowledge inscribed in the technologies used within organizations (Callon and Bowker 1993). Using hermeneutics, we make interpretations and gain an in-depth understanding of the researched phenomenon. Unlike scientific enquiry that looks for objective results, hermeneutic research lays an emphasis on subjective interpretations in the research of meanings of texts. Hermeneutics focuses primarily on the *meaning* of qualitative textual data (Myers 2009). Hermeneutics is an approach that lends itself to in-depth analyses of social and organizational situations and its main purpose is human understanding: understanding of what people do and say,

and why (Myers 2009). Interpretation, in the sense relevant to hermeneutics, is an attempt to make clear, to make sense of an object of study. This object must, therefore, be a text, or a text-analog, which in some way is confused, incomplete, cloudy, seemingly contradictory—in one way or another, unclear (Taylor 1976, p. 153). Therefore, using hermeneutics as a research method for analysis is suitable for our study since Arthashastra was written (approximately 300 BCE) in a language other than English, was lost for a long time, and rediscovered in parts in 1904. It is incomplete and sometimes contradictory and unclear.

While the subjectivity of analysis conducted within a hermeneutic framework is criticized for this very subjectivity (see Lukka and Modell 2010, p. 468), the absence of living witnesses or available testimony of actors within Mauryan organizations means that alternative analytical methodologies are limited in a practical sense. Given the absence of research on the role and meaning of management accounting techniques, the adoption of theoretical perspectives derived for modern historical context needs further epistemological and methodological support. As a result, rather than adopting a critical theoretical framework found in related studies (for example, a synthesis of Foucault and Derrida in Ezzamel and Hoskins 2002), our interest is more in “gaining access to the conceptual world in which our subjects live so that, in some extended sense of the term, converse with them” (Geertz 1993, p. 24). Hence, we adopt a form of hermeneutics that provides a semiotic interpretation of those aspects of Mauryan culture affecting organizations operating in this society: a framework for the interpretation of culture developed by Clifford Geertz. The focus is on “thick description” of organizational culture in Mauryan times with the aim of undertaking an “analysis of social discourse,” a diagnostic rather than predictive endeavor (Geertz 1993, p. 26). Specifically, the task is to “uncover the conceptual structures that inform our subjects’ acts” and “construct a system of analysis in whose terms what is generic to those structures... will stand out against other determinants of human behavior” (Geertz 1993, p. 27).

The sources used in this paper are secondary given that the original text is written in the Sanskrit language, unfamiliar to the English-language audience. Primary evidence could not be used as it was in Sanskrit language. Nevertheless, efforts have been taken to ensure the authenticity of the data. This required a compilation of many accepted translations, coupled with input from one the Authors familiar with the text. Reference material has come in the form of translated books. In addition, meetings with Sanskrit scholars at the Kuppuswami Sastri Research Institute in India have also helped in collecting secondary data.

In particular, we focus on the adoption of the ‘hermeneutic circle,’ a dialectical movement between text

and context, part and whole (Gadamer 2004). Of particular interest to the authors of this paper, a researcher understands by comparing the object of inquiry with what they already know. However, they cannot fully understand a finite object (a sentence or a statement) unless they relate it to the whole context in which it exists (the intention or idea of the author). In this manner, the text has to be understood as the author would have intended it, requiring rigorous literary and historical analysis. The concept of hermeneutic circle suggests that there is an expectation of meaning from the context of what has gone before (Myers 2004, p. 186). Thus, the topic is understood by viewing “the whole in terms of the detail and the detail in terms of the whole” (Gadamer 2004, p. 291). The dynamic movement of understanding from projection to topic to new projection, and from whole to part to whole, constitutes the hermeneutic circle of understanding. In doing so, we aim to ‘reveal a totality of meaning in all its relations’ (Gadamer 1997, p. 471) through a process of interpretation, manifesting that which was hidden by going ‘beyond what is directly given’ (Spiegelberg 1982, p. 712).

We apply this approach in the next section.

Understanding Management Accounting in Mauryan Organizations

The Arthashastra emphasized management accounting within its organizations based on three key characteristics—hierarchy, shared societal ethics, and an explicit control structure to reinforce duties to create wealth while behaving ethically. After discussing these characteristics in turn, we illustrate the multilayered and codependent nature of these characteristics within Mauryan organizations.

Overall, the Arthashastra placed an emphasis on control of human behavior through a combination of self-discipline and self-enlightenment. The target of control was Mauryan individuals and the aim was to reinforce the values, norms, and ideas as prescribed in the Arthashastra texts. It explicitly emphasized a common incentive (‘service to the state’), an economic incentive (‘share the wealth’), and a moral incentive (‘the heaven that awaits’). Individuals were encouraged to believe in honest work with integrity, the fulfillment of which was intended to elicit confidence that such behavior would be recognized with promotion and rewards.

Individuals constructed their identity (of being honest) and self-esteem as the Arthashastra sought a shift in control brought about from within the individual through consensual approval. Mauryan individuals developed their identity and self-esteem through social relations and training within both organizational and social enclosures in which they worked, forming values on the basis of identity as

projected to them. In particular, by invoking the authority of ancient Hindu texts and ethical concepts observed over preceding centuries, the Arthashastra encouraged subjects to accept that they had to observe the Hindu construct *Dharma* (righteousness) as they believed that this will lead them to heaven and eternal bliss. Thus, Arthashastra directed people’s thoughts and emotions by prescribing what an ideal individual should be—‘a person that follows Dharma, adheres to the customs and follows the rules will find joy here and in the hereafter’ (1.3.14–17, The Arthashastra, Shamasastri 2005).

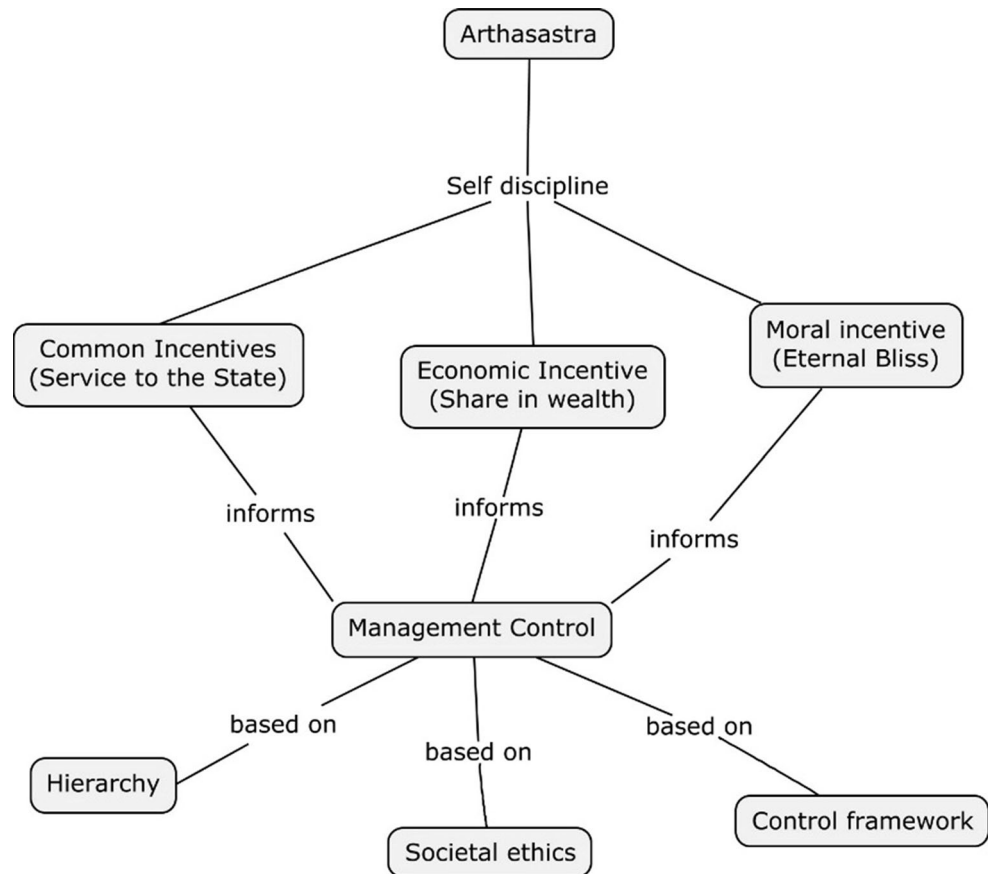
The Arthashastra invoked these ancient texts in a way that was fundamentally different to the practice observed in the historical age that preceded it (i.e., the Vedic Period). This difference had significant economic consequences. The end of the Vedic Period was considered as a ‘Dark Age’ in Indian history since the old values lost their relevance and new values were not yet established (Chaturvedi 2012). The Arthashastra can be seen as a reaction against the teachings and ideals of this preceding Period. For example, in the late Vedic Period, there was a belief that life was associated with sorrows perpetuated by cycles of rebirth and of *Karma*—of good and evil springing from human desires. This had led to gloom and pessimism where people had a general fear of the miseries of life, evils of enjoyment, and dread of rebirth (Bandyopadhyaya 1982). Although the society emphasized four goals of human life (*Chaturvarga*), namely *Dharma* (righteousness and moral order), *Artha* (wealth and prosperity), *Kama* (worldly desires), and *Moksha* (liberation), people in the Vedic Period yearned for death and sought to attain salvation (or *Moksha*), neglecting the other three Hindu goals.

With this perspective in mind, the following paragraphs discuss the three characteristics of control mentioned at the beginning of this section and summarized in three nodes at the end of Fig. 2 below.

First, while control was hierarchical, it was also exercised on the King, covering the ways and means by which he¹ should manage the kingdom in consideration of the common interests of Mauryan subjects. Hence, the King was not excluded from the rituals and disciplines of control expressed in the form of social constraints contained in the Arthashastra. They were explicitly intended to facilitate compliance with society norms by king and subjects alike. His administrative duties were threefold, namely *raksha* or protection of the kingdom from external aggression, *Palana* or maintenance of law and order within the kingdom, and *yoga-kshema* or safeguarding the welfare (both material and spiritual) of the people (Rangarajan 1992). The King was bound by an implicit social contract whereby

¹ The possibility of a female ruler was not considered acceptable by male arbiters of succession rights.

Fig. 2 Management control



the aim of his role when managing his affairs should be to benefit his subjects (Tisdell 2003). The Arthasastra (Kangle 1986, p. 53) outlines the King's duties:

In the happiness of his subjects lies his happiness; in their welfare his welfare; whatever pleases himself he shall not consider good, but whatever pleases his subjects he shall consider as good.

To be selected as King, a person was meant to possess specific qualities and qualifications, related directly to the *Chaturvarga*. These included noble birth, high intelligence, prowess, divinity, truthfulness, scholarship, gratefulness, idealism, enthusiasm, prudence, polity, prosperity, resolution, and inquisitiveness. The Arthasastra also deals with the subject of training and development of a future king in detail. For example, Book 1 chapter 5 describes efficient learning as follows (1.5.7, The Arthasastra, Shamasastri 2005):

For from hearing (sutra) ensues knowledge; from knowledge steady application (yoga) is possible; and from application self-possession (atmavatta) is possible. This is what is meant by efficiency of learning (vidhyasamarthyam).

By keeping efficient learning and self-discipline in mind, a King was always required to associate himself with learned elders. The Arthasastra envisages that 'from continuous study ensues a trained intellect, from the intellect comes practical application, and from practical application, self-possession' (1.5.16, The Arthasastra, Kangle 1986). The Arthasastra points out the importance of training (from childhood).

The Arthasastra also emphasized the 'ideal' conduct of a king. Accordingly, a king should not indulge in excess on any one of the three human endeavors (*Dharma, Artha, or Kama*). He must put his interest behind the interest of his subjects. It was believed that subjects would emulate the King and an ideal king (with the qualities mentioned above) would enthuse his subjects to follow him. In this sense, his role was reduced to the role of a 'manager' who organizes the comfort of his subjects and manages the means and people to assist him in this endeavor (Shamasastri 2005).

Beyond the kingly presence, the organizational structures germane to wealth creation prescribed in the Arthasastra involved a clearly defined hierarchy of administrative bodies (*Nagara Palikas*), ministers, and officials. In summary, the elements which constituted the

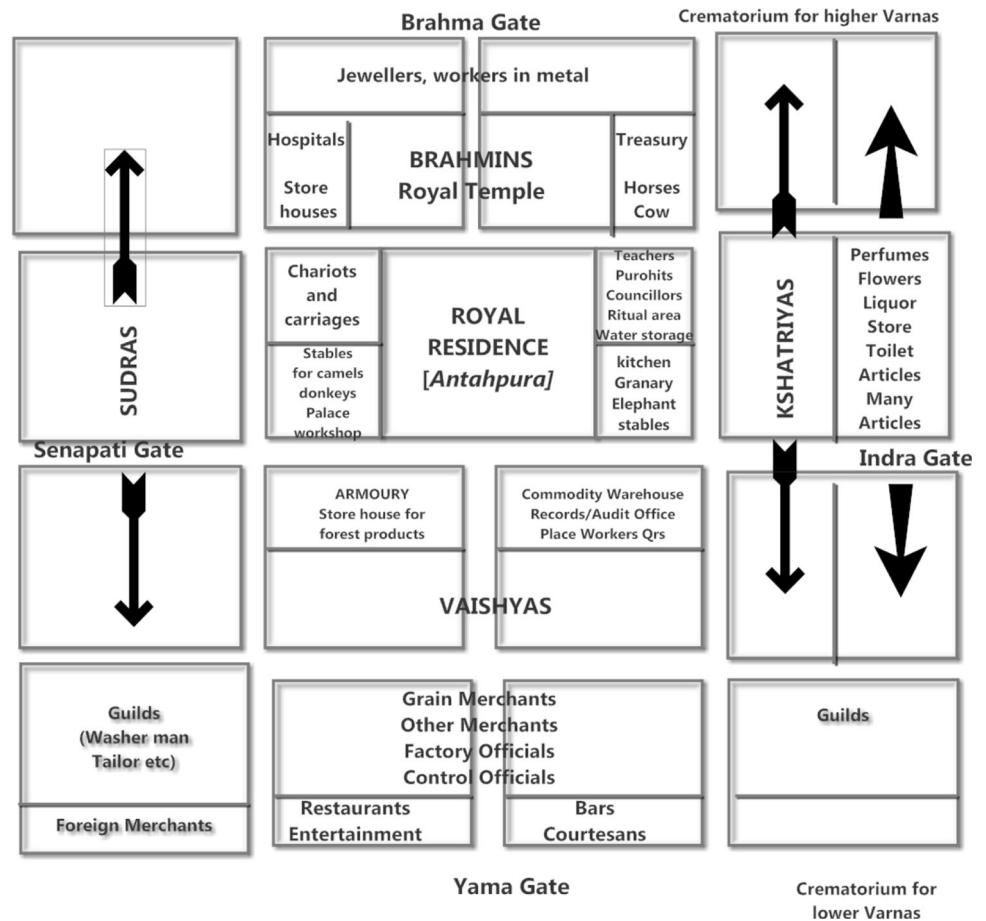
state were the King; the group of councilors, ministers, and other high officials (*amartya*); the territory of the state along with its population (*janapada*); the fortified towns and cities (*durga*); the treasury (*Kosa*); the forces of army; and the allies (6.1.1, The Arthasastra, Shamastry 2005, p. 511). An advisory council was responsible for policy formulation. Responsible ministers and a bureaucracy to carry out the detailed implementation of policy supported the councilors.

This hierarchical order also extended to the plan of Mauryan cities, typified in Fig. 3 below. The *Durga* or the fortified city is one of the constituent elements of the state, since it is because of the fort that the treasury and the army are safely kept. Therefore, the kingdom was built with the Royal residence in the center facing north or east direction, surrounded by people from different varnas grouped together according to the varna they belong to in four different directions (as depicted in Fig. 3). The city was in a square form, in order to comply with the cosmological principles of urban planning. On each side, three gates were located, allowing three royal roads to run east–west and three north–south, thereby dividing the interior of the city into sixteen wards (2.4.1.2, The Arthasastra, Rangarajan 1992).

In particular, the houses of individuals belonging to the four varnas were arranged in quarters: the northern quarter was allocated to *Brahmans*, the eastern to *Kshatriya*, the southern to *Vaisyas*, and the western quarter to *Sudras*. Together with the Brahmins in the north, were the residences of ministers to the crown, the royal tutelary deity of the city, monasteries, ironsmiths and jewelers; in the east were the elephant stables, store houses, expert artisans troops, and treasury; in the south, houses of merchants, warehouses and workshops, timber yards, stables, and arsenals were located; while in the west, as well as the houses of the lower classes, were the various groups of artisans working on textiles, skins, mats, weapons, and other goods required by the court and other inhabitants of the city (Kirk 1978).

As Varnas were based on professions and, at the time, not linked to spiritual teachings, this division of the city into four quarters (separating four varnas) appeared to be based on several non-religious factors. First, from the 5th century BCE onwards varnas played a vital role in the rise of the state power, conditioned its growth, and molded its laws (Sharma 1999). Second, as people had duties specific to their varna, locating people of same varna together facilitates sharing of knowledge, tools, and skills. Finally,

Fig. 3 The fortified Mauryan city (Source Rangarajan 1992 p. 165)



each quarter not only housed people belonging to specific varna, but also had other offices, facilities, and markets related to that varna. For example, in the east where *Kshatriyas* were housed there were elephant stables, storehouses, troops, and treasury, all of which is required by a *Kshatriya* who had a military occupation and duty.

A hierarchical structure covered state and private wealth creation. For example, trade and industry was characterized by an organization called the *Sreni*. It was a corporation of men (women being excluded) following the same trade, art, or craft, resembling the guilds of Europe. Crafts and commerce flourished through organizations operating under conditions of business competition (Kapadia 1972). Commercial partnerships were well understood with price determination made in accordance with the concept of the normal price as discussed by economists in more recent times. In this period, the kings seem to give great importance to the value of labor, treating them as resources that generated returns. There is evidence that a profession equivalent to accounting also existed (Kapadia 1972). Examples of established management accounting practice of the time included estimation of the cost of life lost in war and the use of intrinsic/extrinsic rewards for public administrators (Kapadia 1972).

The role of management accounting in this context was largely to facilitate control of resources, social/economic status, and the exercise of state power. It is found in the human resource and calculative practices expressed in terms of the rule and administration of economic institutions created within the Mauryan Empire. In adopting a mix of formal and social controls within Mauryan state institutions and commercial organizations, accounting makes the identity of Mauryan rulers and their subjects visible to other members of society. It reinforces their legitimate role in society as long as they abide by practices in the Arthashastra. With the authority of Hindu scripture, the disciplines of accounting, writing, administration, law, and money (expressed as wealth) were enrolled in a complex mélange of disciplinary practices.

Second, the attitudes, beliefs, emotions, and values of people and their duties towards the kingdom were implicit within individual relationships or group enclosures within the kingdom and its administrative structures as depicted in the Arthashastra. People saw the King as the guiding authority that regulated all personal or political relations and thus a person that played a leading part in their social, economic, cultural, moral, and spiritual life (Mukherjee 1976). Just as it was the duty of the King to protect his subjects, the subjects accepted state interference such that the King and his representatives could regulate their daily lives.

While the kingdom was actively involved in the promotion of happiness and welfare of its subjects, the

subjects too were motivated by the same common ideal for the greater good. The responsibility of maintaining social order was partly individual, whereby each member of the society must follow the dharma (righteousness) of his own Varna (caste) as part of the kingdom.

As summarized in Fig. 4 below, subjects were classified into four different castes, reflective of their work occupation. These divisions (Varnas) were, in order of importance, Brahmins (or Vedic priests), Kshatriyas (Kings, governors, and soldiers), Vaishyas (cattle herders, agriculturist, artisans, and merchants), and Shudras (laborers and service providers). The first three classes were considered superior and the Shudras were of the lowest caste, working as practitioners of unskilled trades. Each class had their own duties and responsibilities. Brahman duties involved studying, teaching, performing sacrifices for others, giving and receiving gifts. A Kshatriya studied, performed sacrifices, gave gifts, and had a military occupation and protected life. The duty of a Vaishya was studying, performing sacrifice, giving gifts, agriculture, cattle-breeding, and trade. A Shudra could engage in an economic calling (such as agriculture, cattle-rearing, and trade) and have a profession such as artisan or actor (1.3.5–9, The Arthashastra, Kangle 1986). Thus, each person performed their duties according to the Varna that they were born into.

Each householder also had to earn a living in accordance with the specific duties assigned to their Varna. Each individual (from any Varna) had the duty to abstain from injury (to living creatures), truthfulness, uprightness, freedom from malice, exhibit compassion, and show forbearance (1.3.13, The Arthashastra, Kangle 1986). The Arthashastra identified individuals observing their own duty as attaining infinite bliss (*Svarga*). The King and his officials did not allow people to swerve from their duties and, in turn, individuals believed that ensuring adherence to their special duty (*Dharma*) would help them find joy after

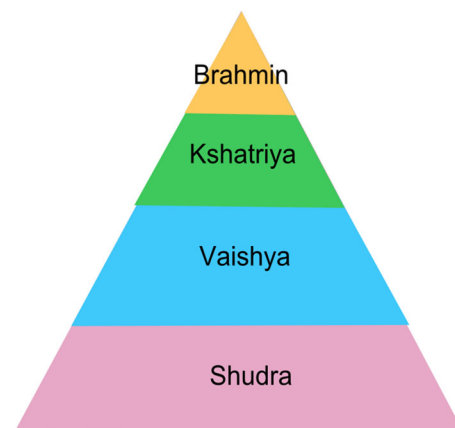


Fig. 4 The four Varnas

death as well as in this life (1.3.16, The Arthashastra, Kangle 1986).

Third, the Arthashastra documented practices as well as both intended and proscribed outcomes that guided the behavior of individuals. It was intended to impede instances of unethical behavior. The king was seen as a model of personal purity and sobriety who worked for the welfare of the people (Chunder 1970), which gave people a higher cause of service to the kingdom than their own (selfish) earnings. A sense of community, self-realization, and service was inculcated among subjects² who seemed to possess moral and ethical responsibility towards the kingdom and their king. The King, through state institutions, had a duty of care towards the society in general and those seen as weak in particular (explicitly including women as well as aged, sick, and handicapped subjects). For example, the institutions of the kingdom looked after the family of a government servant who died on duty (5.3.28–30, Arthashastra, Shamasastri 2005). In addition, an official whose property was liable to confiscation because he caused loss of revenue was spared the confiscation if he had many dependents (2.9.24, Arthashastra, Kangle 1986). In doing so, the King protected the life and livelihood of his subjects, thus securing the welfare of all subjects.

Within Mauryan bureaucratic organizations, the Arthashastra also prescribed management controls for selection, promotion, evaluation, incentives, and the development of kings and subjects alike. Starting with *selection*, the Arthashastra specifies character and conduct as major social and individual factors to be considered when appointing officials. Here, personal qualifications for officials included native birth; training in the arts; foresight; wisdom; strong memory; bold, eloquent; skillful; intelligent; enthusiastic, dignified; pure in character; affable; devoted; excellent conduct; strong, healthy and brave; and free from fickle mindedness, hatred, or enmity (1.9.1, The Arthashastra, Shamasastri 2005). These qualities were ascertained and tested by various controls. For instance, native birth would be ascertained from ‘reliable persons’; Educational qualifications, foresight, and affability were tested by successful application in works; eloquence, skills, endurance, enthusiasm, bravery, and purity of life were ascertained from intimate friends; and other intrinsic qualities were ascertained by personal experience (1.9.2, The Arthashastra, Shamasastri 2005).

Once selected, officials were expected to demonstrate personal integrity by passing four tests. These are tests of piety, material gain, lust, and fear. The Arthashastra

recommended that officials tested pure based on piety to be appointed in civil and criminal courts; those tested pure based on material gains shall be appointed as revenue collectors; those tested pure on grounds of lust shall be appointed to supervise the pleasure grounds (*vihara*); those tested pure on the basis of fear shall be appointed to immediate service; and the person that was tested pure in all four kinds of tests was employed as prime minister (*Mantrinah*) (1.10.6, The Arthashastra, Shamasastri 2005). These social norms had implications for organizational behavior within the Mauryan Empire.

In terms of *evaluation, incentives, and punishment*, the Arthashastra recommended incentives for all officials, agents, and subjects, where such material incentives were intended to strengthen the practice of ethics (Sihag 2004). The Arthashastra advocated a society based on ethical leadership and fair treatment of all subjects. This applied to all officials and workers within an organization. To motivate more efficient work performance, for example, Arthashastra proscribed that women who spin shall be given oil and myrobalan cakes (*tailamalakodvartanaih*) as a special favor. They shall be induced to work on festive days [and holidays] by giving them special rewards (2.23.3–4, The Arthashastra, Shamasastri 2005). Also, weavers of silk, wool, and cotton fabric were rewarded with gifts such as scents, garlands of flowers, and similar presents of encouragement (2.23.6, Arthashastra, Shamasastri 2005). Special favors were shown to those who did things that benefitted other subjects, such as building embankments, roads, and bridges or beautifying villages (10.3.46, Arthashastra, Kangle 1986).

The rewards for visible demonstration of such behavior were also prescribed in the Arthashastra. For example, officials who make as much as or more than an agreed amount of revenue were honored with promotion and monetary rewards (2.9.3, The Arthashastra, Shamasastri 2005). The King was encouraged to endow officials with power and success in accordance with their integrity (6.2.30, The Arthashastra, Shamasastri 2005). In the military, the king was encouraged to promote troops that demonstrated bravery, skill, nobility, and loyalty and not cheating in matters of money and honor to the middle ranks of service (10.3.38, The Arthashastra, Kangle 1986). For instance, the Arthashastra prescribed that soldiers be kept happy with a higher reward for killing enemy kings (100,000 panas³), half the money for killing a prince, one-tenth for killing a division chief along with double their normal wages, and any booty they seize (10.3.19 The Arthashastra, Shamasastri 2005).

Within the constraints of these three characteristics of management accounting, people within the Mauryan

² We adopt these terms in the sense of a social contract involving rights and responsibilities without aiming to engage in the debates conducted in the ethics, politics, or political economy literatures. For example, given that the Mauryan Empire was a Kingdom, suffrage was not part of the concept in this paper.

³ Currency system during Mauryan times.

Empire were subjected to the social norms of the Arthashastra, in both home and working duties, supported by the ‘truths’ of accounting, administration, and the Veda-based law of the time. In return, they identified with the society and the King as its ultimate embodiment. The disciplines of writing, accounting, and money encapsulated in the Arthashastra became self-evident, reinforcing the benefits of being seen to be a ‘good’ subject of the society and thereby gain some of the benefits of the economic success of the institutions and commercial organizations. So, it appears that there were both constraint and reward in adherence to the social norms inscribed as formal controls documented in the Arthashastra, possibly because it applied to all those identifying as Mauryan. Within the Mauryan Empire and Indian societies since, its incarnation in the Hindu caste system provides the daily microsocial constraints within which the form of self-discipline of the Arthashastra could be experienced.

The ancient Veda texts helped form individual identity that prompts both observation and self-discipline by subjects within the Mauryan Empire. The power of these texts enacted through the disciplines of writing, accounting, and money interacted to facilitate observation and self-discipline. Consistent with Foucault (1980, p. 119), this exercise of societal power on subjects of the Mauryan Empire was not simply a constraint on individual behavior:

What makes power hold good, what makes it accepted, is simply the fact that it doesn’t weigh on us as a force that says no, but that it traverses and produces things, it induces pleasure, forms of knowledge, produces discourse. It needs to be considered as a productive network which runs through the whole social body, much more than as a negative instance whose function is repression.

The duties and constraints reinforced by the disciplines of writing, accounting, and money encapsulated in the Arthashastra can be summarized in Fig. 5 below.

Consistent with these duties, the Arthashastra also supported a process of continuous learning and development for all subjects (not just the King). Here it was emphasized that association with experienced and knowledgeable people was essential. It stated that training imparted self-discipline from the King downwards in the organizational hierarchy. The Arthashastra recommended that all individuals develop themselves to achieve disciplined living by controlling one’s senses. According to these teachings, the basis of true happiness is righteous conduct (dharma); the basis of all dharma is wealth (*Artha*); the basis of all Artha is kingdom (*rajya*); the basis of stability of the kingdom lies in control over the senses (*indriya*); and conquering the senses is rooted in training and discipline (*vinaya*). This highlights the significance placed by the Arthashastra on

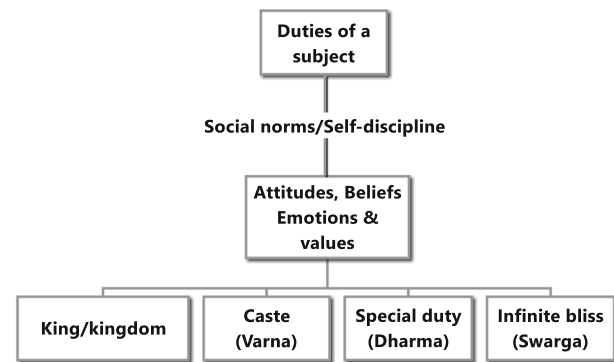


Fig. 5 Duties of individual as depicted in Arthashastra

training that emphasizes an individual’s character and attitude not simply towards employment but in molding their belief and the way they conduct their life.

While there are many more examples of the guidance and control documented in the Arthashastra, we suggest that the preceding interpretation allows discussion of the implications of this text on the self-governing organizational person in the Mauryan Empire. In particular, the authority of texts provides a sense of observation, control, discipline, and identity seen as necessary to achieve wealth and piety in Mauryan society. The significance of this concern with ‘human productivity’ and the application of systematic practices and technologies (if not scientific in the sense understood today) was teleological in the sense that it aimed to enhance the authority of the King through social controls for the material and spiritual good of all subjects. As evidence of the performance of duties inscribed in the Arthashastra, management accounting, particularly in its more complex and multifaceted form of management control, provided a means of classifying, evaluating, and enforcing wealth creation as well as ethical behavior within Mauryan organizations.

Discussion

Based on our interpretation of the Arthashastra, there are implications for our understanding of management accounting within organizations operating in Mauryan society. In particular, we find that many of the characteristics and concerns of organizational power relations found in modern states are also present in the Mauryan Empire. As indicated in the findings above, Mauryan subjects developed their identity and self-esteem through social relations, self-discipline, and ongoing training within both the society and the organization in which they worked. In doing so, they formed individual values on the basis of identity as projected to them. The Arthashastra placed an emphasis on control of human behavior through self-

discipline and self-enlightenment. The target of control of the Arthashastra was on sculpting the behavior and attitude of Mauryan individuals and was successful in persuading people to adapt to the values, norms, and ideas as prescribed in the text (i.e., the Arthashastra). People accepted the fact that they had to observe *Dharma* (righteousness) as they believed that this will lead them to heaven and eternal bliss. Thus, Arthashastra directed people's thoughts and emotions by prescribing what an ideal individual should be—'a person that follows Dharma, adheres to the customs and follows the rules will find joy here and in the hereafter' (1.3.14–17, The Arthashastra, Shamasastri 2005).

In Mauryan organizations, the Arthashastra also performs a role consistent with New Kingdom Egypt found in the concept of *Maat* (Ezzamel 2009, p. 354) in that inscribed Vedic texts are used to describe power relations as verifiable facts. Encoded in the Arthashastra, the authority of ancient texts founded on ethical principles as the basis of disciplinary narrative in Mauryan organizations is in contrast to the ubiquitous use of numbers as the 'regime of truth' in the modern counterparts (Ezzamel and Hoskins 2002, p. 337). Hansen and Muhlen-Schulte (2012, p. 457) point to the "... massive global spread of numerical performance measures over the past three decades" in an apparent quest to reduce complexity and increase both the stability and mobility of the concerns being measured. Consistent with the work by Robson (1992) and Vollmer (2009), numbers extract specific properties that need to be made visible to those authorities wishing to observe and discipline the 'abnormal' behavior of its subjects. In other words, while evident, the ubiquitous use of numbers we see today does not seem to be the focus of Kautilya in writing the Arthashastra. Numbers are collected and used in the Arthashastra but they are not privileged as the sole arbiter of behavior.

In Mauryan organizations, the key focus of control is the daily written practices of subjects in accordance with the Arthashastra that needed to be performed in order to be observed. There was a need for an audience within the society and a classification scheme by which to judge whether it is 'normal' in so far as it is within societal norms defined by the Arthashastra. Performance by an individual Mauryan subject was the act of becoming an accepted member of the society and being identified as such within the caste system it entails. Referencing the acting metaphor developed by Smith and Northcott (2013, p. 12), performance "... must be seen as a constant process of enacting the unifying expectations of the audience."

In Mauryan organizations, the common concerns for wealth and ethics based on the ethical norms of the society inscribed in the Arthashastra support a focus on management accounting and its use in the activities of 'officials' in a "... context where space and time are intertwined, and

where accounting rituals play a key part in underpinning such interconnection as part of the created reality of an ordered society" (Ezzamel 2009 p. 337). This influence is felt as a local organizational level as well as throughout the society. As Quattrone (2009, p. 87) identifies, "... accounting is never merely 'local' or merely 'global' but intertwined with various codes and detailed procedures which link everyday life in organizations to shared rules of conduct defining a community and a society in ways still to be explored." In exploring how management accounting can be perceived for its semiotic power in organizing and defining what counts as knowledge, Quattrone (2009, p. 114) emphasizes the importance of understanding "where these signs are recorded—where this 'imagination' happens (i.e., in a book or in a virtual ledger)."

This paper has attempted to explore intended meaning of management accounting within these broader societal aspects of behavior in a premodern organizational context. Thus, in the work enclosures of the Mauryan Empire described in the Arthashastra, interaction between accounting and related technological and ethical knowledge germane to social control links labor force commitment and economic development based on societal and individual levels rather than just individual enumeration evident in more recent sites of control (see Kanappan 1969).

While acknowledging the possibility of alternate mechanisms of control associated with the reflexive individual (see Garrety 2008, p. 94) and social norms (even 'false' norms as described by Willer et al. 2009) in the organizational psychology literature, identification of social identity and meaning can provide an explanation for conformity to the control mechanisms described in the Arthashastra. Here, acceptance of caste is identified as part of a successful society (when 'measured' in comparison to norms found in scriptures accepted within the society) allowing agency and social identity "... not with who I am as the world reflects my 'substance' back to me but rather with what I do and its consequences" (Roberts 2005, p. 639).

Hence, the classification of acceptable organizational behavior defined within caste boundaries and the 'intrusion' of these classifications into the business social "sphere" is well established in the Arthashastra. As outlined in Walker (2008, p. 474), "... classifications applied by social agencies tend to reflect the perceptions and objectives of those in positions of power." In the case of Mauryan society, social and occupational classifications embodied in the caste systems were based on Vedic precedent described in written form. In more recent societies, 'normal' categories are captured by terms such as 'healthy,' 'better subject,' and 'productive' that can be found in the legal precedent. In the Mauryan Empire, legal prescriptions are found in the Arthashastra grounded on earlier Vedic texts.

Exploration of the links between wealth and societal norms at a microsocial level highlights the enactment of control that requires the intervention of professionals and experts in writing and other disciplines valued within the society. In the Mauryan Empire, these disciplines were embodied in castes such as the Brahmins, based on their expert interpretation of the Vedic texts used to justify and legitimize the inscriptions contained in the Arthashastra. Management accounting technologies are embedded and justified in this context. Qu and Cooper (2011, p. 346) point to “A growing body of research has sought to examine the role of inscriptions in the development of accounting technologies and their ‘power to act’ upon distant contexts.” In other words, “... the effects of inscriptions are indeterminate without the support of powerful allies” (Qu and Cooper 2011, p. 359). In the Mauryan Empire, the Vedic texts that underpin the Arthashastra were this ‘powerful ally.’ As Chua (1995, p. 116) identifies, “Inscriptions further enable the exercise of comparative, normalizing judgment. This in turn permits action from a distance.” Consistent with Chua (1995), the role of judgment is apparent at a micro- or local level or both the caste and the organization operating in the Mauryan Empire:

The rules which were used in this process were no different from the everyday, economic rules of managing social life. Judgments were made as to which problems could be fixed quickest, which would yield more benefits for the same resource investment, which were too hard and would have to wait till the next run (Chua 1995, p. 138).

In contrast to modern market-focused societies, based on personnel files and other forms of identity creation and visibility (see Walker 2008, p. 456), conformance with the Arthashastra provided the material structure for social identity within Mauryan economic organizations. Reinforced by the disciplines of writing, accounting, and money, it encapsulated both social identity and control defined in terms of economics and politics. Caste classifications and associated normalizing judgment created and maintained the self-disciplining subject.

As a result, we argue that the relevance of this historical analysis can be found in the “contextualization of our historical accounts, not only retaining what happened, but to convey what it was like to be involved, to explain how and why things happened as they did, and to attempt to relate any connection between what was to what is now...” (Gomes et al. 2011, p. 7). Arguably, for the purposes of this paper, the particular insights of a hermeneutics framework are suited to further exploration of the link between State power and everyday organizational life in periods earlier than our present time.

We summarize our paper next in the concluding section.

Conclusion

The foundational idea of Kautilya’s Arthashastra was that humans have freedom to act within ethical boundaries for the good of the King as well as all recognized members of the society. An individual could mold his or her own life; could by individual effort modify the adversities in his or her path. However, an individual must attain a moral standard that shows respect to the happiness of the society for which self-discipline is necessary and must not be guided merely by individual will—in other words, a self-governing member of Mauryan society. Such an ethical life with respect to the society would lead to individual self-enlightenment (Bandyopadhyaya 1982). Therefore, control of an individual cannot be achieved from outside but must be inculcated and developed from within. To achieve this individual outcome, behavior consistent with the narratives of the Arthashastra, monitored in reference to the numbers of the accounting, was required. In this paper, we have examined these societal norms as they apply to individual behavior within Mauryan economic organizations, a micro-level of analysis.

In contrast to the representation of ancient societies as exhibiting simple power relationships dominated by a singular focus on regal welfare, this paper recognizes that exploring the historical traces of management accounting is important to understanding the complexity of ancient economic institutions. In particular, we argue for examination of the processes that influence how accounting is enrolled in the control of workers and rulers alike. In examining the microsocial processes of accounting at an organizational level, we can also highlight the influence of societal behavioral norms. This focus allows exploration of “...the extent to which the documented dominance of numbers in Western societies as a means of governing life ... is culturally specific to the West” (Ezzamel 2009, p. 337). As a result, we emphasize that the past is complex and understanding how and why social control was realized may help trace the antecedents to accounting practice in modern societies.

As explored in the previous section, management control practice within organizations operating at the time of the Mauryan Empire exhibited some of the foundational characteristics seen in modern counterparts while emphasizing the ethical norms of Mauryan society. Consistent with Ezzamel and Hoskins (2002, p. 356), we find that traces of the “...symbiotic relationship...” between accounting, writing, and money that is more obvious within modern societies. In particular, the notion of wealth and wellbeing expressed in the Arthashastra aimed to observe and make visible the productive use of resources for the betterment of the King and, in turn, his subjects.

We follow Ezzamel and Hoskins (2002, p. 337) in highlighting what kind of practices are involved and how they interact. Acknowledging the critiques of this perspective (see Rowlinson and Carter 2002), we focus on management accounting practices that result in the creation and use of artifacts at the boundary of organizational and societal behavior including personnel records and other work-related procedures (Fleischman and Tyson (1997), p. 121). Our findings are also consistent with Ezzamel and Hoskins (2002, p. 360) in their study of accounting practices in ancient Mesopotamia where "... there was never any primordial simplicity; the ancient relationships of accounting, writing and money are already both complex ... which still obtains in their modern relationships." As a result, the antecedents of present-day management control may help understand constraints on choices available to later day decision-makers. In other words, "... accounting history matters... as time unceasingly transforms the present into the past it does so without erasing its relevance" (Gomes et al. 2011, p. 17).

In response to these findings and their implications, we call for detailed exploration of specific contexts of management accounting techniques and control, focused on the role of both narrative and calculative devices in the projection of their 'scientific' and social 'benefits' in order to better understand the relationship between wealth and societal ethical norms that contrast with modern societal privileging of economic outcomes. In the words of Baxter and Chua (2003, p. 111):

The indeterminism of actions makes it increasingly difficult to identify the costs and benefits of particular policies and practices, rendering many calculable spaces unmanageable and unknowable.

As identified by Chatterjee (2009, p. 159), 21st century organizations "may benefit profoundly from the wisdom literature of the Indian tradition that attempts to harmonize the technical, moral, cultural and human dimensions."

In considering the results of this paper, the following points of caution should be kept in mind. First, the elemental nature of the evidence examined here means that they should not be considered as complete. Only a fraction of the Arthashastra was recovered after being hidden from sight for ages. Much of it remains hidden or lost. The broken threads have been joined with great difficulty by a number of dedicated scholars specializing in ancient Sanskrit manuscripts. Second, the extent to which the translated script demonstrates the exact meaning of the original Sanskrit text may not be clear, in spite of the fastidious efforts of the translators concerned. Hence, reliability of translated work cannot be guaranteed. Third, modern terminologies (such as management control) have been used in this paper to explain ancient Indian management

practices. This is unavoidable but problematic. Finally, the readers must note that the Arthashastra was a book written for the King with an instructional tone and is not a descriptive history of any particular kingdom. This paper projects an ideal society as depicted in the Arthashastra. In reality the society could have been different.

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