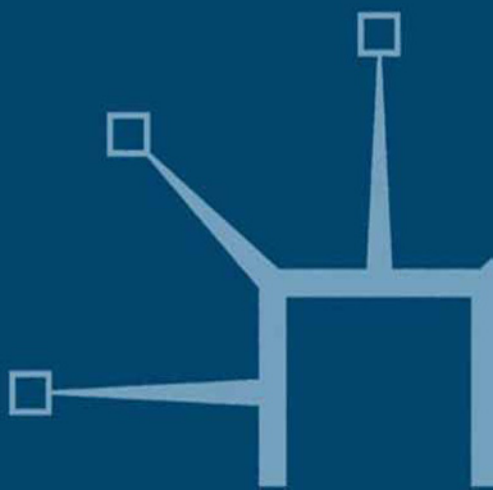


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# Asian versus Western Management Thinking Its Culture-Bound Nature

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Kimio Kase  
Alesia Slocum  
Ying Ying Zhang



## Asian versus Western Management Thinking



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**Its Culture-Bound Nature**

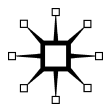
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*To Mercedes and in tender memory of Gabriel; and to Miguel and Grita – KK*

*To my beloved, cross-cultural, global-spirited family – AS*

*To Lee, to illustrate a world that he may get to know more – YYZ*



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*Kimio Kase*  
*Alesia Slocum*  
*Ying Ying Zhang*

# Foreword

To what extent are the theories of management universally applicable principles and to what extent are they specific to particular cultural, national and temporal contexts?

Business enterprises and the people who inhabit them are both products and members of the societies and the economic systems in which they are situated. As these societies and economic systems vary across countries, so the business sectors show distinctive national characteristics.

Among the English-speaking nations, business sectors tend to be dominated by large corporations with dispersed ownership whose shares are stock exchange listed. In China, state-owned companies dominate industrial activity. In Italy and some other southern European countries, family-owned businesses account for a major proportion of economic activity. In many emerging economies, the business sector features two distinct segments: a set of large, highly diversified business groups, and a wide range of industries (including agriculture and most service industries) composed of small, unincorporated family businesses.

Differences in firm strategy are also apparent across countries. During the early years of the twentieth century, Alfred Chandler observed how US and German industrial companies were willing to make massive investments in technology, industrial plants, and systems of marketing and distribution necessary to exploit economies of scale and vertical integration, while British companies followed more short-term, opportunistic strategies.<sup>1</sup> During the 1970s and 1980s, Japanese corporations such as YKK, Honda, and Toyota pursued international strategies based on global products, heavy investment in new product development, and exploitation of economies of volume and learning on an unprecedented scale. More recently, Chinese and Indian companies have emerged on the world stage pursuing strategies that we have yet to recognize and understand. In the case of Indian companies, Capelli et al. identify an orientation towards social goals and a commitment to employee welfare and development.<sup>2</sup>

However, these characteristics of firms and their strategies that differentiate the business sectors of different countries seem quite superficial as compared with the cultural and social features of countries that are reflected in the behaviour and cognition of their organizational members. As Hofstede and subsequent writers have shown, individual attitudes, characteristics of social relationships, and norms of perception vary substantially between different countries. These differences have far-reaching consequences for the nature of leadership, the design of incentives, the characteristics of hierarchical and peer relationships, patterns of communication, and a host of other management issues and practices.



The implication is that management is different in Italy from what it is in Ireland; in Thailand from what it is in Taiwan. As Kase and his colleagues clearly reveal, there are some distinctive differences in cognition, attitudes towards knowledge and learning, and patterns of sensemaking between Asian and Western managers. But what do these differences imply both for our theories of management as predictors of the characteristics of organization and management under different circumstances and for our principles of management as a prescriptive science?

The fact that different national circumstances produce differences in firm characteristics and management processes does not necessarily imply that management theories and principles are inevitably culturally and geographically bounded. Consider some of the differences in firms' strategy and structure between countries. In the US and UK, conglomerate firms, especially those organized around holding company structures, have all but disappeared. In emerging market countries (India, Indonesia, Brazil, and Thailand) and some advanced industrial nations (South Korea), the leading companies are widely diversified business groups.

Some four decades ago, Alfred Chandler and Richard Rumelt pointed to the superiority of related over unrelated diversification and the advantages of the divisional corporation. But, clearly, these findings have limited validity outside the advanced industrialized nations. The key issue here is whether the theory that explains these phenomena embodies implicit assumptions that limit its domain of applicability. Thus, implicit in the prediction that related diversification outperforms unrelated are the assumptions that, first, securities markets are reasonably efficient and, second, that factor markets – especially those for capital and labour – are not subject to substantial transactions. Once the presence of such market inefficiencies is recognized, the rationale for conglomerate companies in emerging market countries becomes apparent.<sup>3</sup> Thus, by viewing these national differences not as the result of unique national circumstances but as quantitative variations within particular contextual variables, observed international differences can be explained by existing theory.

The implication then is that, in order to recognize the extent to which theories are geographically or culturally bounded, we need to identify the assumptions that are implicit within them. Once we can recognize and then relax some of these assumptions, there is the potential to extend the domain of applicability of the theory.

In relation to issues of institutional structure, such implicit assumptions are relatively easy to recognize. Much more elusive are the psychological assumptions that underlie individual behaviour. If we return to our transaction cost explanation for the propensity for conglomerate forms to persist in emerging market countries, these explanations are rooted in assumptions of individual behaviour that presume opportunism. The assumption of opportunistic behaviour is based upon notions of human behaviour that

themselves rest upon premises concerning individualism and self-interest that are related to Western rather than Eastern cultural norms. Indeed, even with the context of Western society these implicit assumptions have been criticized.<sup>4</sup>

To the extent that all management theory rests upon microfoundations that comprise assumptions about individual behaviour and individual cognition, the cultural boundaries of established management theory become apparent. The great opportunity is that by recognizing the cognitive and behavioural assumptions that are implicit in our theories we become able, first, to identify the boundaries of theory and, second, to begin extending those boundaries by considering the implications of relaxing or broadening some of these assumptions. The recent work on open source communities offers some indication of this potential: evidence of production by unpaid volunteers is forcing reconsideration of our theories of motivation.<sup>5</sup>

It is this role of international differences in individual cognition and behaviour in limiting the universality of management theory and management practice that gives this book its interest and importance. By addressing differences in management thinking between the West and the East, the authors embark on an exciting journey with the hope of expanding the scope and depth of management theory and practice by inquiring into its cultural specificity. Progress along this path is unlikely to be fast. Two decades ago a special issue of *Academy of Management Review* addressed the international dimensions of management theory. The editors observed that:

most of the theories and literature that we in North America are familiar with and uphold as universal were primarily developed and applicable to a North American context. We now know enough about other cultures to realize that this assumption is incorrect, and it is time to move beyond the exclusive emphasis we have had in our research and writing on the North American perspective.<sup>6</sup>

As the balance of activity in the global economy shifts from the West to the East, so challenges arise, first of recognizing the distinctive management practices and management thinking of Asian companies and second of the increasing urgency of building culture-free theories of management.

Robert M. Grant  
Full Professor of Strategic Management  
The ENI Chair of Strategic Management in the Energy Sector  
Università Bocconi



# Prologue

As a proponent of the knowledge-based view of the firm or the Knowledge School of Management I heartily support the thesis advanced by Kase, Slocum and Zhang in this book.

I emphasized in my book entitled *Managing Flow*, co-authored with Professor Ryoko Toyama and Toru Hirata in 2008, that strategy is the creation of the future and that management's role is reading the flow of change, taking timely decisions and continually innovating.

I am firmly convinced that the view considering firms as a means for the earning of profit and the pursuit of the maximization of shareholders' economic value as the ultimate *raison d'être* of for-profit organizations fails to fathom the most fundamental meaning of firms: that they are not a mere aggregate of production functions, transactions and resources, but are entities centred on the creation of knowledge.

In other words, my view of the firm is *human-centric*. How and why so?

My research these last few years has mainly focused on the elucidation of the intricate process mechanism regarding the dynamic creation and use of organizational knowledge through interaction with environmental forces, that is to say, on the establishment of a dynamic theory of knowledge-based management predicated on dynamic management process.

The emphasis on the processual aspect of management entails the capturing of (1) the knowledge as a product that is born of dynamic relationships among individual workers and (2) the firm as a dialectical existence immersed in its relationships with the environment. From this viewpoint we do not dissociate the individuals and the knowledge, and individuals and their firms on the one hand from their environment on the other.

Individual humans are analysed and appreciated in the dynamic theory of knowledge management as leading actors who develop and play their role as change agents of environment, firms and society at large, availing themselves of their own judgement criteria and world-view.

In line with this thought Kase, Slocum and Zhang delve into the working of information processing and decision-making from the angle of cognition. Their thesis that between (Eastern) Asians and Westerners there is a difference in thought process, that is to say, the former using the inductive way and the latter the deductive way, certainly sheds light on the problem of why Asians do not seem to have strategy as understood by Westerners, which has always puzzled Western managers and academics. Other implications of their findings are discussed in their concluding chapter.

In summary, my endorsement of this book is derived from the fact that (1) their approach is human-centric, (2) their contribution signifies a step

forward in our understanding of knowledge in its various manifestations (tacit and implicit), (3) their thesis cautions the blanket use of management concepts regardless of their cultural provenance, and (4) the phenomenological instead of the reductionist interpretation of management phenomena is emphasized.

*Ikujiro Nonaka*  
*Professor Emeritus*  
*Hitotsubashi University*

# 1

## Introduction

When West meets East, cultures collide and minds can be opened to different viewpoints. In the business world, on the one hand, Asians have learned much about management systems from Westerners since World War II regarding how to develop their industries; on the other hand, Westerners have also been influenced by contemporary Asian management styles.

Starting from the 1960s and accelerating into the 1970s in the aftermath of the two energy crises, diverse Japanese multinational companies (MNCs) have gained relevant positions in the US market first, and then all over the world. The Japanese flourished not only in the automobile industry but also in consumer electronics, heavy equipment, photocopiers and steel, among others. The rise of Japanese enterprises took most of their American competitors by surprise, who then rushed to learn about just-in-time (JIT), Total Quality Management (TQM), Kanban or Kaizen.

Theoretical contributions from practice and observation of Japanese management include William Ouchi's 'Theory Z' and M-form companies (Ouchi, 1981, 1984; Ouchi & Jaeger, 1978) in the 1970s and 1980s, and Ikujiro Nonaka's *Knowledge Management* (Nonaka & Takeuchi, 1995), or redundant management (Nonaka, 1990), in the 1990s. Many of these concepts and theories already form an essential part of mainstream management thinking around the world.

The surge of interest on the part of practitioners and academics in Chinese management is due not only to its economic power and growth potential but also to the inroads made by Chinese MNCs in the international competitive arena. Huawei, Lenovo, Haier, and TCL are some of the companies that are penetrating the international market with different strategies – strategic alliances, acquisitions, or setting up their own laboratories and distribution channels. Nevertheless, Chinese (or Korean) management practices have not made a prominent theoretical contribution to management, barring the application of some classic theories or concepts to modern management such as 'the art of war', 'guanxi', and 'yin-yang'.

The differences in management styles seem to be obvious between the West and the East. However, this divergence is not the only trend. Convergence has also played a part in this process of West meeting East, referring specifically to the market share gained by the Western way of being and Western management systems in Asia (Abegglen, 1973; Aoki, 2003; Apospori & Papalexandris, 2008; Dore, 1973; Dunphy, 1987; Hickson, 1968; Jackson & Miyajima, 2007; Olivier, Thoenig & Verdier, 2008).

Since Japan opened its doors to the outside world in the mid-19th century under pressure from the US and Europe, it has been inundated by Western civilization, encompassing all branches of its sciences, both natural and humanistic. To cope with this overwhelming influence of the West, the Japanese gave vent to their frustration by coining phrases such as 'Japanese spirit and Western learning'. When forced to choose between traditional Chinese and Western medicines, Mori Ogai, at that time Surgeon General of the Imperial Army of Japan and a Germany-trained medical doctor as well as one of the founders of modern Japanese literature, declared that there were not two medicines but one, and that Western medicine was the right one.

Similar decisions in favour of Western technology, sciences, and political systems were taken by China, Korea, and other Asian countries. China's 'Self-Strengthening Movement'<sup>1</sup> in 1861–1895 is one such example. The West also thought then, and still thinks now, that if scientific facts are neither paradoxical nor conflicting, then there cannot be two ways of attaining scientific truth. School curricula and systems therefore follow the Western model. Mathematics, physics, chemistry, and logic are taught according to Western thinking.

Management teaching is no exception. Business schools have mushroomed everywhere in recent times. In China, schools such as China Europe International Business School (CEIBS) were established with the help of European management schools, including Spain's IESE Business School. In Japan, schools such as the International University of Japan opened with the collaboration of the US Tuck School. These schools are now assiduously teaching and educating future managers by diffusing the latest, albeit Western, management tools. Discounted cash flow technique, Porter's model for strategy, Kotler's marketing textbook, Hill's textbook on international trade, among others, are examples of the thinking that frames the minds of executives throughout the world.

However, the very assumption that management phenomena can or should be addressed by using a uniform set of management tools and concepts worldwide was challenged at the time of Japan's halcyon days, namely, two or three decades ago in the 1970s and 1980s. As a consequence of Japanese companies' apparent success over their competition from the West, and despite their lack of clear strategic orientation – apart from gaining market share in the world (Abegglen & Stalker, 1985; Chuma, 2006; Fruin, 1992; Hamel & Prahalad,

1989), demonstrating the value of emerging strategy concepts in contrast to designed or planned strategy (Mintzberg, 1990; Mintzberg & Waters, 1985), showing the importance of muddling through (Lindblom, 1959), using incrementalism in general management (Pucik & Hatvany, 1988; Quinn, 1980a, 1980b), emphasizing the importance of soft skills (Peters & Waterman, 1982), and highlighting the value of a corporate culture (Deal & Kennedy, 1982; Goffee & Jones, 1996; Hirota, Kubo & Miyajima, 2007; Kono, 1990) – these techniques were ‘discovered’ and ended up forming an essential part of what continued to be *Western* management teaching.

The subsequent lapses of Japan as well as its lacklustre economic performance during the Lost Decade (the 1990s) made it lose its ‘sheen’ and the world retracted its praise of Japan, transiting from ‘Japan bashing’ to ‘Japan passing’. Academia’s interest returned to its fold and both management academics and practising managers again turned their attention to Western management wisdom.

The emergence of China (and of Korea a decade ago) as world economic (and political) powers may be tipping the balance again in favour of divergence theory. In other words, the world may be ready soon to accommodate different ways of doing business, instead of converging on one type of management, namely, the Western management style. The emerging discussion of what Chinese management means, whether it is a contextual factor for the application of Western theories or whether we can talk of a Chinese theory of management (Barney & Zhang, 2009), is a proof of this movement.

Between this tension of convergence and divergence in Western and Asian management, our intention in writing this book is to elaborate on *how* business done can differ between or across cultures. We assert that, when faced by that unknown future, managers use their cognitive frameworks, gained from their past experience, their habits of mind, and/or their tacitly or explicitly learned ‘cultures’, to frame, understand, and then act upon the challenges they confront. The implication is, of course, that different people use a different ‘how’ to comprehend and act in their managerial environments.

Our book explores this by identifying two different approaches to understanding and acting that we assert are used by managers when making sense of the world around them, through philosophy, epistemology, cognition, and culture. We term these ‘inductive thinking’ and ‘deductive thinking’ (see our Appendix on the making of this book). We also argue that these two approaches can be identified as general tendencies in the way that Asian managers, as opposed to Western managers, strategically think and manage. We then propose a framework for how managers can first identify these different ‘how’s in others, and then embrace elements from both ways of thinking to create better strategic and managerial solutions across borders. By providing our readers with a variety of cases, written by and about both Asians and Westerners, we hope that they can begin to identify



and apply 'inductive' and 'deductive' thinking themselves as a way to better understand managerial situations and to strategically approach broader solutions. Finally, the implication of divergence and convergence in Asian and Western management thinking is discussed, exploring the workings of inductive and deductive integration in the cognitive process.

## Objectives

We have tried to fulfil three major objectives in writing this book. Initially, we have sought to evaluate old and new theories of culture, knowledge, and cognition, exploring the differences between how these originated and are perceived in Asia<sup>2</sup> and how they originated and are perceived in the Western world,<sup>3</sup> and as they apply to the way in which different managers manage.

To some degree, in doing this we have taken into account Nisbett (2003), who elaborated on the substantial differences in the way that Asians and Westerners think. However, we have also taken his approach a step further into the realm of management, by writing a literature review and summary of what we consider to be the relevant philosophical origins, epistemological approaches, advances in cognitive science, and advances in cross-cultural management perspectives that might apply to an analysis and understanding of how different international managers think and act.

To do this, we have also compared and contrasted the prevalence of some of these theories in Western and Asian management cultures, and then provided very specific cases (forming Annex 2) upon which to evaluate these theories.

Our second objective has been to propose a theoretical framework for understanding the differences in thinking by Asian and Western managers, by defining what we call 'inductive' and 'deductive' approaches to managerial cognition (by taking Boisot and McKelvey (2010), as well as others, a step further).

Because of its systematic approach to learning and its potential to provide a more complete understanding of content at various levels of performance, we have used Swanson and Law's (1993) 'Whole-Part-Whole' model to identify, deconstruct, and then reconstruct a definition of what we mean by 'inductive and deductive thinking', and have developed example tables of some major cognitive 'schemas' that could be considered to be held by different inductive or deductive thinkers.

Our third objective is pedagogical, that is to provide researchers, students, and practitioners with a book of international cases and a framework for working through these cases, using an 'inductive/deductive' lens and elaborating upon this in an 'open content' way. We have proposed an analogical framework for helping students, researchers, and managers to evaluate and apply the myriad theories they are faced with for themselves.

## Questions addressed in this book

Based on the earlier view of Asian and Western differences in management, we also observe the divergence in terms of business diversification. Diversification is an important corporate-level decision for companies: should they diversify or not; if so, in what fields, related field or new ones, and so on.

From multiple observations, we can see many examples of unrelated diversification in Asia. *Zaibatsu*, *keiretsu* and *chaebols* are typical formats in Japan and Korea. Similar groups can be found in the West, too. Sweden's Wallenberg group is one example. Corporate-level strategy attributes the emergence of these diversified corporations to value creation by plutocrats or well-connected people with access to sources of finance or political networks in underdeveloped economies.

However, the phenomenon of unrelated diversification probably is much more extended in Asia, and the base of their decision-making is more than mere financial and political resources. The thesis of this book is, as mentioned above, that there is a cultural difference in the cognitive processes which influence the way Asians and Westerners construct their discourse: Asians follow an inductive approach and Westerners follow a deductive approach.

Accordingly, we phrase our questions as follows (they will be repeated and analysed in Chapter 7):

1. Assuming that there are differences in philosophical and epistemological background which are reflected in cognitive processes, doubt may be felt as to how much this is due to a collective phenomenon or whether it can be put down to personal traits.
2. Accepting that the difference in cognitive processes can be captured on a collective basis, to what degree can such a trait provide an explanation for the behaviour of incumbent executives? Does it fully explain the most important phenomena of the executives analysed?
3. Is the division between induction and deduction a permanent one? Or can a person change his/her way of approaching management phenomena, for example, from induction to deduction, or vice versa? And, related to point 2, is a person always inductive or is he/she sometimes inductive and on other occasions deductive?

Related to these questions are others, such as:

4. Are the perceived differences between Westerners and Asians due more to personal traits or may we use collectives of Asians and Westerners as units for analysis?
5. Can a person or a group of like-minded people switch from induction to deduction or vice versa?

6. Further to these questions, what implications for management exist, if our thesis is deemed to be grounded in reason? This could be subdivided into the following sub-questions:
- If the basic understanding and cognition of management phenomena differs from one region to the other, how can we teach the same business models?
  - If the competitive environment undergoes change, is it possible to continue using a way of thinking that, until now, has provided success?
  - If the environmental changes require another, different treatment of human resources, can we do this? And how?
  - If the two ways of thinking (inductive and deductive) meet, how can each cope with competition from the other?
  - If the business environment remains more or less the same, can we infer that one way of thinking is better adapted to it?

## Methodological approach

Following the method used in Kase, Sáez-Martínez and Riquelme (2005), we ultimately used heuristics, as shown in Figure 1.1.

For the case writing, Kase et al. (2005) was followed as to the method of gathering information and data. Figure 1.2 illustrates the procedure.

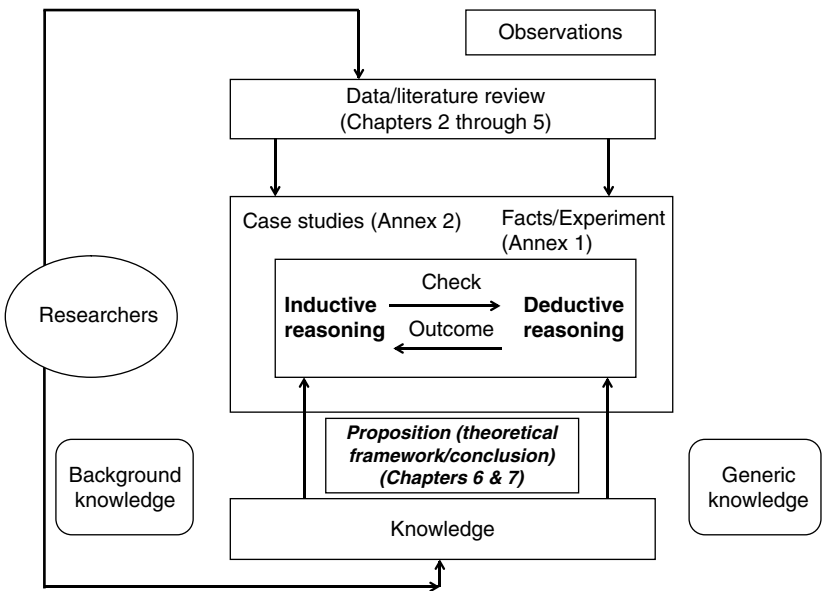


Figure 1.1 Methodological approach

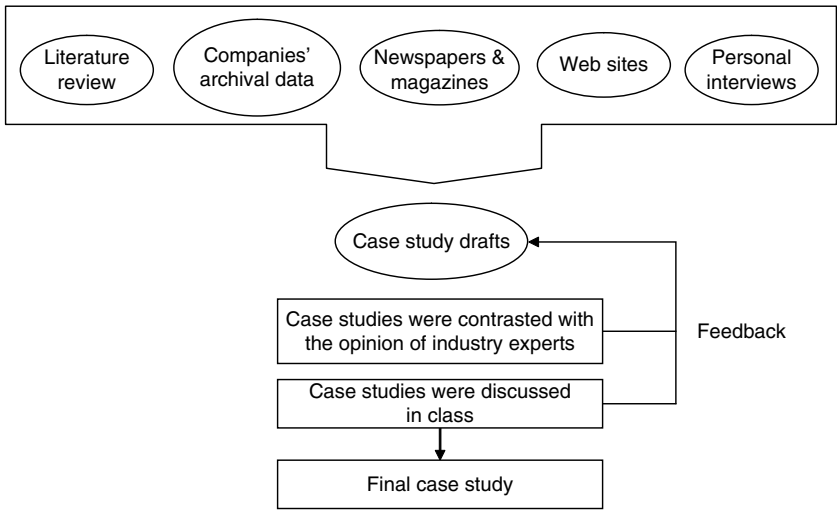


Figure 1.2 Methodology for case study elaboration

Source: Adapted from Kase et al. (2005: p. 7).

## Structure of the book

We begin by providing a literature review in four chapters.

Chapter 2 reviews the literature in philosophy concerning cognition and knowledge both in the West and the East, focusing on how induction and deduction are treated in both regions. In consideration of its reduced accessibility, more space is devoted to Asian philosophy, comprising Buddhism and Confucianism in their different tracks and schools.

Chapter 3 centres more on the epistemological analysis of induction, deduction, and abduction.

Chapter 4 discusses the literature in the area of cognitive psychology, where there exists a large body of research literature on cognition and language learning in different languages and regions of the world.

Chapter 5 treats the literature on cross-cultural management in support of our thesis that management decisions and phenomena can be analysed taking regional cultures as analytical units, as well as considering the trend of convergence and divergence of management thinking and practice in the global business world.

Chapter 6 epitomizes our thesis on the difference of cognitive and thought processes between Asia and the West by proposing a theoretical framework for better understanding the workings of the two ways of thought. The Asian and Western cases in Annex 2 are analysed in the first part and a theoretical framework is advanced in the second part.

Chapter 7 summarizes and concludes our exposition and suggests a direction for future studies after analysing the limitations that our own study may have.

Annex 1 replicates some of the empirical surveys conducted in the field of cognitive psychology to analyse the cognitive differences between Asians and Westerners, as a verification of our thesis.

Annex 2 comprises eight case studies we have carried out as a basis for our inference embodied in Chapter 6.

Figure 1.3 graphically represents the structure of the book and its flow of argument.

### Suggestion for executive readers

For those readers who do not wish to or do not have the time to dwell on the intricacy of our arguments and counterarguments, on the clarification of ‘subtle’ shades of meaning in different affirmations, we advise the following steps, which will help them quickly capture the message we aspire to convey.

First, read through Chapter 1 ‘Introduction’, and then proceed to Chapter 6 on the theoretical and practical frameworks that can be used for

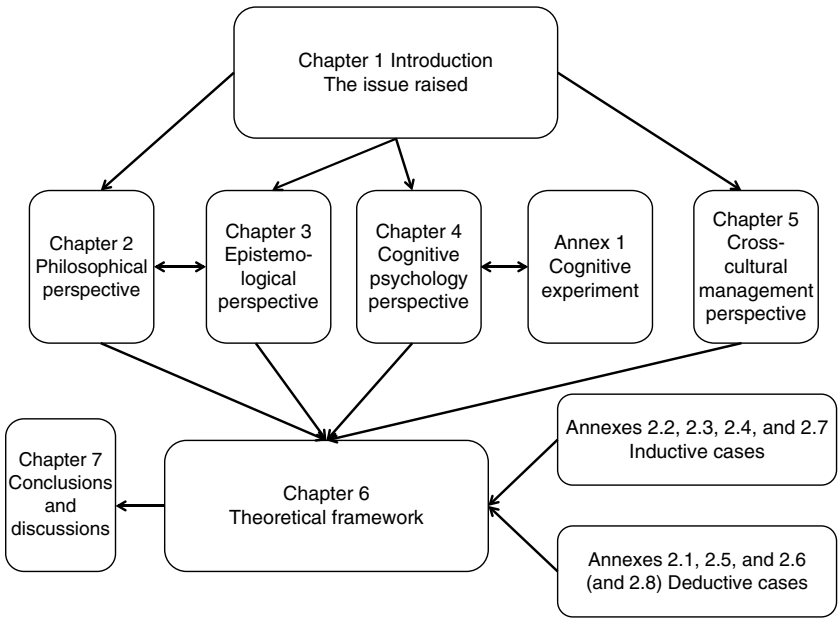


Figure 1.3 The structure of the book and its argument flow

the case analyses. Chapter 7 'Conclusions and Discussion' may also help their understanding.

Annex 2 may be visited if the reader wishes to gain greater depth on the basis of viewing the situations more in the round. It may not be necessary to read them all. One or two cases from each category (inductive and deductive) may be sufficient for a thorough understanding.

## **Appendix: the making of this book**

The idea that there is a difference between Asian and Western approaches to management has always been intuitively felt and tacitly shared by the authors throughout the process of writing this book.

The background of each of the authors is international in many senses. Each of us has faced frictions and difficulties in our personal and business challenges. This is, most probably, due to the different ways that we approach problems and to the different viewpoints we cherish. These may derive from the differing cognitive processes we have found to exist between different cultural origins, which are quite different from what we regard as personal traits. Our individual profiles are also diverse, including our family structure: all of us are married to a spouse from a different cultural background from our own.

One of the authors, of Japanese nationality, worked for a Japanese company for 10 years, for a British international audit and consultancy firm for nearly a decade, for a multilateral development bank based in Washington, DC, for two years, and taught in schools in Spain, Bolivia, Japan, and Peru, among others. He has therefore participated in negotiations and transactions involving various nationalities over many years. Another author, of Spanish nationality but Chinese origin, worked for several companies operating in Spain and doing business with China before entering her academic career. She has also pursued learning and knowledge-sharing in different nations such as Singapore, the UK, Denmark, Peru, and the USA. Still another, a US citizen, worked for an international audit and consultancy firm in Spain, and then for various multinational firms in the UK, where she was responsible for projects that spanned four continents and covered over 30 countries at any one time. All of the authors were educated in their own countries up to their undergraduate studies, and then obtained their doctorates either in Spain or in the UK.

In writing this book, we encountered problems similar to the different inductive or deductive approaches we have been studying in this book. Our Japanese author launched the basic idea for the book about two years ago. He proposed a generic idea based upon his intuition and sense that the same facts may be interpreted differently by different general groups or cultures. Accordingly, the sense-making process itself bifurcated when two people from different geographic areas, in this case Asia and the West, were involved.

The original team was composed of an East Asian with a Swiss PhD, a European with a Swiss PhD, and the above three members. Landmark dates were set for progress of the writing and the division of tasks was decided. After six months, it was discovered that the work had not progressed. Lack of time, no serious dedication to the assignments, and other personal reasons were alleged. Finally, these two members of the team left. The remaining three pushed forward. But in the last stage, in which the theory part was to be written, we reached an impasse and little progress was made for some months.

It has taken many months of impasse and lack of advance to produce the book. Finally, we identified the cause of these difficulties: it appeared to us to be linked to the topic of the book itself – the great ‘divide’ between deductive and inductive approaches.

While the Japanese author’s proposal was in favour of each one working on an assigned part based on a general idea so that the contributions from each individual could be put together at a later stage and discussed and analysed by all, the US author insisted on a clear picture of the entire work with a specific model established from the beginning and sought a thorough thrashing-out of viewpoints before even starting the project. Meanwhile, the Chinese author was more familiar with the inductive way and appeared to deal with it with a certain ease.

These personal perceptions from our own daily lives are not just anecdotal, but also confirm our conjecture that the way a Chinese or Japanese person thinks is very different compared with a Spaniard or North American person, and that this is not due only to personal character traits. Without performing a meticulous analysis of our behaviour and cognition in this process, we recognized that we may have to examine our own personal trajectories in more detail in the future, in order to specifically distinguish which elements contribute to our deductive system and which to our inductive system for functioning. This may also offer interesting insights regarding the questions raised.

As all three authors claim to have this combination of inductive and deductive thinking, integrating these two apparent opposites seems to have been the key to finishing this book. Ultimately, we could argue that a ‘middle way’ – that is, combining in some way both the deductive and inductive approaches – is probably the best way to address a rapidly globalizing world.

# 2

## Literature Review: Philosophical Perspectives on Knowledge and Cognition

In Chapter 1, we proposed exploring the difference between cognition processes used by Westerners and those used by Asians. We also elaborated on a list of issues to be addressed in relation to this.

Before discussion of our main topic (that is the difference between how Asians and Westerners use inductive and deductive thinking in strategic business situations), as well as various ancillary issues related to this (discussed in Chapters 6 and 7), we conducted a literature review. Our purpose has been to examine the issue from various angles, which, albeit not exhaustive of all possible approaches, will shed light on the aspects we consider relevant to our study. Thus, the chapters on our literature survey will comprise the following four perspectives:

- Chapter 2: philosophical perspective;
- Chapter 3: epistemological perspective;
- Chapter 4: cognitive psychology perspective;
- Chapter 5: cross-cultural management perspective.

In this chapter, therefore, we survey the literature on the issues of cognition and knowledge (specifically, induction and deduction) from the philosophical viewpoint, in the belief that the different approaches to the analysis of this reality must be influenced by the mental framework prevalent in one's country or the milieu where one has been brought up. Chapter 3 reviews the literature on epistemology in more detail.

We contend that the survey of philosophy in this chapter bears upon the subject of this book in that: (1) Western philosophical thought gave rise to different epistemological approaches from those produced in Asia. These have, therefore, given rise to different degrees of dependence on deduction, as is obvious from the influence exerted by empiricism on science and technology. Essentially, Westerners avoid the construal of reality



from purely theoretical speculation. (2) Both in Europe and in Asia, there exists a divide between those who believe that we can comprehend reality through speculation and those who insist that this must be achieved through the use of sensory data. (3) In Asia, highly speculative Buddhist thinking was converted into a more intuitive, and therefore perhaps more inductive (and even, perhaps, more practicable) thought system, above all, in China and Japan, though both ways of thinking coexist side by side in modern times. And (4) a similar process seems to have taken place in Neo-Confucianism, as evidenced by the transition of the systematic and highly speculative *Songxue* to the more practical *Yang-Ming School*.

However, from points (1) and (2), and as an explanation of Asian and Western approaches, we will settle for the presumption that we can describe these differences by applying the generalized terms 'deductive and inductive thinking' to the also generalized categories of people, 'Westerners' and 'Asians', albeit with the caveat that all Western people may not necessarily be deductive thinkers (see Annex 2.7, the Richard Branson case). Similarly, from (3) and (4) we may conjecture that all Asians may not be given totally to the inductive approach. We do assert, however, that they are more often than not, 'inductive thinkers'.

Without aspiring to be exhaustive, in our first section we review Western philosophies where a dichotomy between the two opposing viewpoints has always existed. In the second section, we analyse the highly speculative and deductive Indian philosophy embodied as Buddhist teaching, that we later synthesize into an approach that is more intuitive and inductive. Pure Land Buddhist and Zen schools, as well as Chinese autochthonous Confucianist teaching, are reviewed. More space is also dedicated to the Asian philosophy because in management literature it is not frequently accessed for relevant information.

## **Review of Western thought**

### **Dichotomy in Western philosophy**

A common thread throughout most of Western philosophy, we argue, is the contrast made between induction and deduction. These are also conceived as universals (or mind) and particulars (or reality). In essence, the individuation of phenomena is either subsumed into universals or affirms itself in the form of particulars. In the West, this process takes shape through philosophies such as Plato's stance on moving from the general to the particular, that is 'in order from that position to elucidate and explain the data of experience' or Aristotle's proposal that we move from the particular to the general, that is through 'derivation of general inferences and results from a sum of given facts and phenomena' (Schwegler, 2010: p. 97). Induction gives relevance to the particulars whereas deduction concedes importance to the universals.

Nominalism and Realism are the second forms of this contrast, which originated in the Middle Ages. The nominalists did not believe in universal concepts (*universalia*), holding that they were mere names or *flatus<sup>1</sup> vocis<sup>2</sup>* without reality (Schwegler, 2010: p. 145). Therefore, with nominalism there were no general notions or *genera*. 'All that is, exists only as a singular in its pure individuality' (Schwegler, 2010: p. 145). Nominalism fostered empiricism, which then led to experimental science (Watanabe, 2005: pp. 218–219). Roscellinus (c. 1050–1125) and William of Occam (c. 1285–1349) are examples of its principal proponents (Shimizu, 1994).

The realists, disciples of Plato, 'held firm to the objective reality of the universals – *universalia ante res*' (Schwegler, 2010: p. 145; Marías, 2008). Thomas Aquinas (1224–1274) and John Duns Scotus (c. 1266–1308) represented this school (Shimizu, 1994).

Both Aristotle and Aquinas held an intermediate position between Plato and Scotus, on the one hand, and Occam, on the other (Schwegler, 2010; Russell, 1995). For Aristotle and Aquinas, universals had no existence independently from the things they were embodied in (contrarily to Duns Scotus); and they only had existence in the *cognoscens's* mind. The difference with nominalism consists of the view that there is something in 'things' (essence) that is a sufficient basis for the rationality of the universals we have in our minds (Marías, 2008).

The third form settles on Idealism and Realism (Marías, 2008; Miller, 2010; Schwegler, 2010): 'idealism is the philosophical theory which maintains that the ultimate nature of reality is based on the mind or ideas. In the philosophy of perception, idealism is contrasted with realism in which the external world is said to have an apparent absolute existence.'<sup>3</sup> Realism in this context represents empiricism, sensualism or materialism (Schwegler, 2010: p. 177). Therefore, idealism approximates deduction, while realism makes use of induction.

The fourth form of dichotomy<sup>4</sup> encompasses Empiricism and Rationalism (Lacey, 2005a, 2005b). The former view holds that our knowledge is based on experience through the five senses (Locke, 1997). Rationalism, on the contrary, stresses the role of reason, and includes intuition in contrast to sensory experience (Descartes, 1968a, 1996; Lacey, 2005b).

Fifth, we note that this dichotomy also occurs in Asia. Apart from the general differences between Asian and Western philosophies (practice-orientation vs. theory-orientation, religion-basedness vs. logic-basedness) (Nishitani, 1982; Suzuki, 2002), even within Asian or Chinese thinking, for example, if we look at Confucianism, we find two different streams: the subjectiveness school vs. the objectiveness school. The former, which is theory-oriented, attaches importance to the attainment of virtue (*ren*) through reflection, while the latter, practice-oriented, sets store by acts and the exercise of propriety (*li*) for the same purpose (Watanabe, 2005: pp. 148–149).

Out of the above-mentioned dichotomies, and by virtue of its relevance to our research, we centre on deductive and inductive thinking as represented by Plato and Aristotle (and by the latter's interpreter, Thomas Aquinas), though we also review very briefly the contrast between continental rationalism and British empiricism as represented by Descartes and Locke.

## Deduction versus induction

### *Plato: deduction*

Rowe (2006: p. 13) holds that the interpretation of other philosophers is easier than that of Plato, since Plato addresses his readers indirectly, not appearing as a character himself in his *Dialogues*. Moreover, Socrates, who is the main character in the majority of *Dialogues*, is represented as heard by 'someone' or some named individuals.

With this caveat, we can then follow the line set out by Russell (1995: p. 163) who contends that in Plato 'there is a doctrine that there is nothing worthy of being called "knowledge" to be derived from the senses, and that the only real knowledge has to do with concepts'. He also points out that 'Theaetetus' and its enquiry of 'what knowledge is' (Plato, 1989) is a work which deals with Plato's strong criticism of the view that knowledge could be the same thing as perception (Hamilton, 1989).

Regarding knowledge (Guthrie, 1986; Plato 1989: 145d8–145e5) advances the following arguments:

1. What makes people wise is wisdom (145d11).
2. Learning about something means becoming wiser in that matter (145d8–9).
3. People are wise in the things of which they have knowledge (145e5)

Silverman (2009) considers (1) as being circular, while he thinks that (2) implies (3), and poses the question: 'what is knowledge?'

Runciman (1962) cited by Chappel (2009) raises the question of whether Plato distinguished (1) knowledge of objects (knowledge by acquaintance or objectual knowledge) – 'knowing what' –, from (2) knowledge techniques (tekhnē) – 'knowing how' –, and (3) knowledge of propositions – 'knowing that'.

Chappel (2009) argues that Plato considers tekhnē to be incidental to a discussion of epistēmē. He conjectures that the Greeks treat propositional knowledge as a special case in objectual knowledge, due to its grammatical structure. Here, instead of using a 'that'-clause, it treats the object of propositional knowledge as a 'thing considered as having a quality'. Therefore, a sentence such as 'I know that Socrates is wise' becomes 'I know wise Socrates', as it would also be in Latin – *cognosco Socratem* and *scio Socratem (esse) eruditum*.

To Socrates's question ('what is knowledge?'), Theaetetus's first response is to offer examples. This is rejected by Socrates on the argument that for any *x*, examples of *x* are neither necessary nor sufficient for a definition of *x*, because they are irrelevant and not sufficient (because they presuppose understanding of a definition to be sought) (Chappel, 2009).

Chappel points out that 'for the Platonist, definition by examples is never even possible; for the empiricists, definition by examples is the natural method', which suggests that Theaetetus's argument is levelled against empiricism.

From Plato (1989: 151–187), Chappel (2009) identifies the definition of knowledge (D1) as perception following the word of Theaetetus who opines that 'knowledge is perception' (Plato, 1989: 151e4).

This opinion leads to (a) PS (phenomenal subjectivism) – things are to any human just as they appear to him or her – in (Plato, 1989: 151d–e) and (b) the theory of flux – things are not stably existing objects with stably enduring qualities – in (Plato, 1989: 152a–160e), both of which are ultimately rejected by Socrates.

D1 is criticized on the ground of several arguments (Chappel, 2009).

The first objection holds that if all perceptions are true, then there is no reason to think that animal perceptions are inferior to a human being's perceptions, which Socrates finds absurd (Plato, 1989: 160e–161d).

Chappel (2009) argues, however, that this objection ought to be considered to be against judgements about perceptions rather than about perceptions *in sensu stricto*, since many animal perceptions are superior to human perceptions.

The second objection (Plato, 1989: 161d–162a) criticizes the implication that no-one is wiser than anyone else.

The third objection (Plato, 1989: 162c2–6) relates to the implication that animal perceptions are not inferior to human perceptions, as all perceptions are true, which Chappel (2009) qualifies on the grounds that Greek gods may not be different from humans with respect to their perceptions, but they may be different in their power of judgement about perceptions.

The fourth objection (Plato, 1989: 163a–169c) holds that, if perception is knowledge, then anyone perceiving an utterance in an unknown language should understand (know) that utterance.

The fifth objection (Plato, 1989: 163a–169c) is based on the relations between memory and perception: remembering is knowing them, but not perceiving them.

The sixth objection (Plato, 1989: 163a–169c) argues that, if perception is knowledge, seeing an object with one eye and not seeing it with the other would mean knowing it and not knowing it.

The final objection by Socrates to D1 (Chappel, 2009; Plato, 1989: 183c4–187a9) states that the mind makes use of a range of concepts which it could not have acquired through the senses: existence, sameness and difference, for example; and therefore knowledge is not perception.

The second definition (D2) according to Chappel (2009), based on Plato (Plato, 1989: 187b–202c), proposes that ‘knowledge is judgement about immediate sensory awareness’, which begs the question of how judgements or beliefs can emerge from immediate sensory awareness.

Plato argues that there is no way for the empiricist to construct ‘contentful’ belief from sensory awareness alone and that we need something else beside sensory awareness to explain belief, since empiricists claim that sensation is the source of all beliefs (Chappel, 2009).

Plato (1989: 200d–201c) refutes the thesis that knowledge is true belief with the example that a skilled lawyer can bring jurymen to a state of true belief without bringing them to a state of knowledge, thus showing that knowledge and true belief are different states.

The third definition (D3) proposed by Plato (1989: 201d–211a) is that ‘knowledge is true belief with an account (logos), and where no account can be given of a thing, it is not “knowable”.’

Several interpretations of what logos is are advanced: (a) logos as ‘speech’ or ‘statement’; (b) ‘logos of O’ as ‘enumeration of the elements of O’; (c) logos of O which signifies the sign or diagnostic feature (wherein x differs from everything else or everything else of O’s own kind) wherefore knowledge of Theaetetus consists of true belief about Theaetetus plus an account of what differentiates him from every other human being (Silverman, 2008).

Chappel (2009) contends that D3 does not solve the problem faced by D2; that the jurymen example applies to D3 as well; and that we cannot define knowledge as true belief unless we have an account of false belief.

Socrates in Plato (1989: 210a–211b) states that:

[N]othing could be sillier than to say that it is correct belief together with a *knowledge* of differentness ... So ... neither perception, nor true belief, nor the addition of an ‘account’ to true belief can be knowledge.

By way of summary, Harvey (1986: p. 332l) may be cited:

[I]n some of his earlier dialogues is found one of his principal contributions to philosophical thought, the Theory of Ideas. The Idea or form of a thing ... is something of the nature of our abstract conception of that thing, but having a real existence outside the world of sense; it is the unchanging reality behind the changing appearance. The knowledge of these ideas is to be attained only by pure reason (*nous* or *dianoia*<sup>5</sup>) unaffected by sensation, and proceeding by dialectic. The supreme idea is that of the Good, on which all the others are ultimately founded ... virtue is knowledge, knowledge of this supreme idea. Plato’s later doctrines ... appear to have included a system of logical categories and a tentative identification of the ideas with numbers.

### Aristotle: induction

Aristotle (2001a: I.1 71a1–3) postulates that ‘all teaching and all intellectual learning come about from already existing knowledge’. Ferejohn (2009) attempts to clarify this seemingly anti-foundationalist<sup>6</sup> principle.

Ferejohn (2009: pp. 66–67) sustains that Aristotle refers to ‘knowledge *simpliciter*’, the highest form of knowledge, when he expresses the above postulation, which is ultimately demonstrated knowledge.

Regarding demonstrated knowledge and otherwise Guthrie (1990); Aristotle (2001a: i.1 72b3–10) compares two schools (sceptic and circular arguments): those holding that there is no scientific knowledge because of the need to know the primary premises; and those who think that there is, but that all truths are demonstrable.

The first school assumes that there is no way of knowing but by demonstration and that if behind the prior stands no primary knowledge, we fall into an infinite regress; but if there are primary premises, and if they are not knowable by demonstration, then they are not scientific knowledge but are based on mere supposition. The second school holds that demonstration can be circular and therefore that all truths are demonstrated (Aristotle, 2001a: I.1 72b10–20).

Aristotle’s own doctrine is that ‘not all knowledge is demonstrative... knowledge of the immediate premises is independent of demonstration’ (Aristotle, 2001a: I.1 71a4).

In this connection, Ferejohn (2009: p. 69) argues that Aristotle recognizes the existence of undemonstrated knowledge arising from *some cognitive capacity*. Aristotle (2001: 99b35–6) calls this ‘perception’ and explains (Aristotle, 2001a: 101a) that out of sense-perception we have memory, out of repeated memories we develop experience, out of experience we develop the skill of the craftsman and the knowledge of the man of science. He concludes that these states of knowledge are neither innate nor developed from other higher states but are from sense-perception.

However, Aristotle states that there are first principles that cannot be induced (but rather, we are born with). We find these principles in our consciousness by way of intuitive knowledge – they work as a condition of possibility in every other thought and are the principle of no contradiction (for theory) and the *synderesis*<sup>7</sup> (‘do good and no evil’, for practical reasons) (Aristotle, 2001b). However, nothing can be derived from the first principles; they work instead, as stated, as a background against which all other thinking is possible (Aquinas, 1993).

Aristotle (2001a: 71b9–13) defines science as knowledge of the causes of why things must be as they are. For Aristotle (2001a: 71b 18–19), science depends on demonstration, which is a ‘scientific syllogism’, namely, ‘a syllogism such that we have science by virtue of possessing it’ (Smith, 2009b: p. 51).

Accordingly, Aristotle's logic revolves around one notion: deduction (*sullogismos*) (Smith, 2009a).

Aristotle says:

A deduction is a discourse in which, certain things having been stated, something other than what is stated follows of necessity from their being so. (Aristotle, 1984: I.2, 24b18–21)

Anything stated is a premise of the argument, and what follows of necessity is the conclusion: the core of the definition is the notion of following from necessity and this corresponds to logical consequence, namely, X results of necessity from Y and Z, it being impossible for X to be false when Y and Z are true. (Smith, 2009)

Aristotle's logic is restricted to assertions or statements that are true or false, and only deals with subject–predicate or categorical statements (Keyt, 2009: p. 32).

Categorical statements relate to quantity, quality and modality; while in modality statements are assertoric (assertive), necessary, or possible, in quality they are affirmative or negative, and in quantity they are universal (all), particular (in part), singular, or indefinite or indeterminate (Aristotle, 1984: 25a1–5).

Excluding singular statements and indefinite statements,

...one is left with four types of assertoric categorical statement: (i) universal affirmative (P belongs to every S), (ii) universal negative (P belongs to no S), (iii) particular affirmative (P belongs to some S), and (iv) particular negative (P does not belong to some S). (Keyt, 2009: p. 33)

Statements of indeterminate or indefinite quantity (for example, 'Pleasure is good') are not much heeded in Aristotle's syllogistic, which may show Aristotle's sympathy for non-Procrustean logic (Keyt, 2009: p. 33).

As discussed before, therefore, the goals of science are attained by scientific deduction or demonstrative syllogism, and Aristotelian demonstrative science consists of primitive and demonstrable principles (which are known non-inferentially) (Anagnostopoulos, 2009: pp. 103–104).

The question now to address is: how do we arrive at the primitive or first principles? We have mentioned above the sceptical and circular arguments. Aristotle agrees with the sceptics in the need for there to be some kind of cognition of the first principles, but rejects the Platonic view of innate knowledge, and expresses his view that our knowledge of universals from particulars is predicated on induction (Anagnostopoulos, 2009: pp. 105–107).

Anagnostopoulos (2009: p. 107) summarizes the relationships between cognition, method and state of cognition in Table 2.1.

Table 2.1 Summary of the relationships among cognition, method and state of cognition

Type of things cognized	Method	State of cognition
Principles (axioms)	Induction (epagôgê)	Comprehension (nous)
Theorems	Demonstration	Understanding (epistêmê <sup>1</sup> )

Note: <sup>1</sup>‘The subject of the *Posterior Analytics* is *epistêmê*. This is one of several Greek words that can reasonably be translated “knowledge”, but Aristotle is concerned only with knowledge of a certain type (as will be explained below). There is a long tradition of translating *epistêmê* in this technical sense as science.’ (<http://plato.stanford.edu/entries/aristotle-logic/> accessed on March 17, 2010). In Chapter 3, we orient our work towards translating episteme as science, and therefore the study of how, more than the ‘what’ of knowledge. Some of this difference may be in translation, as pointed out above, for example, where our main argument about cognition ends up being that, although philosophy and schools of thought originated the bifurcation between induction and deduction, we think it is the ‘how’ that they are used that creates the main point of our contribution in this book – i.e., we are looking at how entire groups of Asians and Westerners perceive things differently based on how they tend to think in the first place.

Source: Anagnostopoulos (2009: p. 107).

*Nous* is understood as rational intuition, or mental vision grasping non-inferentially that some propositions are true, and Aristotle viewed that we cannot discern cognize nous as being true by any cognition but by induction (Anagnostopoulos, 2009: p. 107).

In summary,<sup>8</sup> although Aristotle used and really invented the concept of deduction, he was insistent that there was no way to have new knowledge that was not also innate (which he rejected). Therefore, philosophically, we have argued that there is a bifurcation between those who use induction vs. deduction, based upon the philosophical activity of arguing about, and accepting whether, knowledge is innate or not.

Derived from this is also the ontological discussion about whether a culture tends to accept something as true or not, again separating out those who see deduction as demonstrated, and therefore reliably true, or not. This should then segue into the next section on major schools of thought, pointing out that this original philosophy of separating inductive and deductive led to major schools that had to choose, or take a stand, on inductive and deductive thinking, as shown below.

### Rationalism vs. empiricism

#### *René Descartes: rationalism and mind-body dualism*

Unlike Aristotle, who proceeded from complex reality to unifying principles, Descartes goes from the idea to the thing, in other words, his method is deductive (Sutcliffe, 1968: p. 18).

The deductive path followed by Descartes begins with the idea of God, since he ‘himself believed that if he could get as far as establishing the