Master's thesis Strategic management, M.Sc.

The ancient past and the present phenomenon of strategy

Creation of important purposes and the management of purposeful behavior

Gísli Jón Kristjánsson



University of Iceland Faculty of Business Administration Supervisor: Runólfur Smári Steinþórsson April 2011

Acknowledgements

I would first and foremost like to thank my wife for all her support on this long journey.

I like to thank my family, especially Danielle and Steinari Trausta for their encouragement and support.

Last but not least, I would like to thank my supervisor, Professor Runólfi Smára Steinþórssyni for his interest, dialogue and helpful comments.

Abstract

This study explores the phenomenon called strategy. Strategy as a term or concept has numerous definitions and there exists no universally conscious or agreed definition. The phenomenon strategy is an important conception in many fields of science including the field of strategic management.

In exploring strategy as a phenomenon, the focus was on its: importance, existence, emergence and evolvement, from the ancient past, throughout history and on its present existence. The study is thus a quest through time and space in an effort to investigate the thoughts and actions that have been labeled as strategy. It explores the possible origins that might explain the reasons why this type of behavior exists in humans, human organizations and the emergence of modern thinking on strategy. Multidisciplinary literature is used to form a basis for an exploration or quest that might provide answers to the questions asked.

Charles Darwin understood the role of strategy in man's evolution. That early man anticipated *future events* and used a variety of *stratagems* or strategies to provide for food and defense. Strategy is grounded in some important purpose consciously and/or unconsciously. This purpose is on the other hand based on human needs, desires, emotions and/or beliefs that influence both strategic decisions and actions. Indications and findings from various scientists support the observation that humans are most likely *natural born strategists*.

The conclusion of this study shows that in spite of numerous views and definitions of strategy there is more agreement among scholars than disagreement on the basic constructs of the phenomenon. The study shows as well that there are mounting indications that suggest that the phenomenon called strategy is a human (evolved) trait. That strategy is used by both individuals and organizations. It guides behavior through human decision-making and actions more effectively and efficiently. Thus, the value of strategy is not to be underestimated.

Ágrip

Stefna byggir á tilgangi og verður til bæði meðvitað og/eða ómeðvitað. Tilgangur verður hins vegar til vegna mannlegra þarfa, langana, tilfinninga og/eða skoðana sem hafa síðan áhrif á stefnumarkandi ákvarðanir og aðgerðir.

Þessi rannsókn beinist að stefnu sem fyrirbæri. Stefna gegnir mikilvægur hlutverki á mörgum fræðasviðum meðal annars á sviði stefnumótunar og stjórnunar. Fjölmargar skilgreiningar eru til á hugtakinu stefna en ekki ríkir sameiginlegur skilningur á merkingu orðsins. Við skoðun á stefnu sem fyrirbæri var áhersla lögð á eftirfarandi þætti: mikilvægi, tilveru, tilkomu og þróun fyrirbærisins frá fornum tíma, í gegnum söguna og til nútímans. Rannsóknin er þannig leit í tíma og rúmi að ummerkjum um stefnumótandi hugsun og aðgerðir. Hún beinist meðal annars að mögulegum uppruna fyrirbærisins sem gæti útskýrt hvers vegna slík hegðun varð til hjá mönnum. Einnig er skoðað hvernig sagan útskýrir tilkomu nútíma hugsunar á fyrirbærinu stefnu. Þverfaglegar bókmenntir og rannsóknir eru notaðar sem þekkingargrunnur fyrir rannsóknina í leit að svörum við rannsóknarspurningum.

Niðurstöður rannsókna og vísbendingar frá ýmsum vísindamönnum styðja þá skoðun að stefnumótandi hegðun mannsins sé líklega meðfæddur eiginleiki. Einnig að stefna sé notuð af bæði einstaklingum og í stofnunum mannsins.

Niðurstaða þessarar rannsóknar sýnir að þrátt fyrir ýmsar skoðanir og skilgreiningar sé meira samkomulag ríkjandi en ágreiningur um helstu þætti fyrirbærisins stefnu meðal fræðimanna.

Stefna stuðlar að bættri ákvarðanatöku og markvissari aðgerðum. Þannig að gildi stefnu í mannlegu samfélagi ber ekki að vanmeta.

Table of contents

Acknowledgements	2
Abstract	3
Ágrip	4
Table of contents	5
List of figures	7
1. Rationale for studying the phenomenon called strategy	8
1.1 Research aim and questions	9
1.3 Methodology	10
1.4 Overview of the study	13
2. Man's use of strategy for survival	14
2.1 Man's evolution	16
2.2 Natural born strategists	19
2.3 Strategic instinct and behavior	20
2.4 Major cognitive shifts and the evolution of language	23
2.5 New interpretations of the origin of <i>modern</i> human behavior	25
2.6 Timeline and indicators of strategic behavior	26
2.7 Man and society	36
2.8 Summary	43
3. Strategy in warfare and business	45
3.1 Strategy and warfare	46
3.1.1 Cradle of civilization	47
3.1.2 Early military writings	50
3.1.3 The military mind-set in East Asia	53
3.2 Strategy and business	56
3.2.1 The early period 1938-1962	58
3.2.2 The middle period 1062, 1008	65

	3.2.3 The modern period 1998 and beyond	75
	3.3 Summary	77
4.	. Strategy – strategic management	80
	4.1 Historical origins of the word strategy	82
	4.2 Thoughts on the organization nature, purpose and strategy	83
	4.3 Modeling the strategy process	88
	4.4 Decision-making	91
	4.5 Definition of the term strategy	93
	4.6 A multidisciplinary approach to the study of strategy	95
	4.7 What is strategy anyway? Assumptions and disagreement	97
	4.7.1 Examples of various opinions and on the lack of consensus	99
	4.8 Potential gaps in understanding strategy	102
	4.9 Summary	105
5.	. Conclusion	112
	5.1 Answers to research questions	112
	5.2 Agreements and disagreements	113
	5.3 Purpose at the core	115
	5.4 On the nature of the phenomenon called strategy	117
	5.5 The creation of important purposes and the management of purposeful behavior	118
	5.6 Explaining the nature of the phenomenon called strategy	119
A	ppendix	123
	The Strategy as approach, examples from the literature	123
R	eferences	126

List of figures

Figure 1. A timeline showing some of the temporal intersections of diet, natural selection, changes in human morphology like brain size.	17
Figure 2 . Creation of human societies. Pair bonding facilitates cooperation and creation of social networks.	37
Figure 3. Estimate of variations in the human population size for the past 100,000 years.	41
Figure 4. Steps leading to the Agricultural Revolution.	42
Figure 5. From around 2,500 B.C. the peace side of the 'Standard of Ur'. Indicating new thinking, new technologies and need for advanced strategies.	48
Figure 6. Chester I. Barnard's basic approach to purpose, strategic decision-making, and acting in "The theory of strategic factor".	60
Figure 7. Whittington's generic perspectives on strategy	76
Figure 8. A history of ideas on strategy in the 20th century	78
Figure 9. Mintzberg's ideas on deliberate and emergent strategies.	90
Figure 10. Chester I. Barnard's basic approach to purpose, strategic decision-making, and acting.	108
Figure 11. The phenomenon called strategy as a combination of art, craft and science.	111
Figure 12. Some of the complex dimensions of the phenomenon called strategy	117

1. Rationale for studying the phenomenon called strategy

Important decisions and actions shape the existence of both individuals and human organizations. The causes for such decisions and actions are often complex. Usually they are labeled as being strategic in nature or called a strategy. This phenomenon called strategy may have a profound effect on the wellbeing and even survival of those concerned. Therefore to both understand it and acquire the necessary skills in using or doing strategy may be critical, for once they have been done they are usually difficult to undo or reverse. Because strategic decisions and actions can have a major impact on the existence of individuals and all human groups, many feel it is mandatory to study this phenomenon.

Strategy as a pattern or as a way of thinking and acting seems to be embedded in almost all human activities. It is used in games, sport, family, politics, business and warfare, to name a few examples. Given its potential power in guiding human behavior, many are interested in understanding strategy as a phenomenon and many have been studying it for years. A vast literature now exists on this subject but still there is no universally agreed definition of the term strategy, or on what strategy as a phenomenon precisely is.

The phenomenon called strategy is thus not straightforward, but has a dynamic nature. It may have more than a single conception or a lexical ambiguity (two or more separate meanings, and a structural ambiguity) depending on the context (Kay, 2008). This multifaceted nature is illustrated in Henry Mintzberg's (1987) observation of strategy as a plan, ploy, pattern, position. A good example of another perspective from Mintzberg (2007) is the combination of art, crafts and science.

Precisely because of the many and different views on strategy there is still a justification, a rationale or even an obligation to go on quest in an effort to get a better understanding of this important phenomenon in human nature. A holistic approach or investigation of the origin and nature of this phenomenon from the long gone past to

the present may still help in the search of a more unified or useful meaning of the phenomenon called strategy.

Such a quest on this *means to end* thinking may be based on two basic questions. The first is the question of importance of strategy in man's existence. The second considers the existence, emergent (materialization) and evolvement of strategy in history. This includes a broad overview of the field of strategy and the many different perspectives; that is a journey from the past to the present in studying the phenomenon called strategy.

Because of the significance of this phenomenon or concept called strategy for the Management sciences, and other disciplines or for practitioners, it is important that a consensus exists of the fundamental meaning of the phenomenon, if possible. Without a consensus of the meaning phenomenon under investigation, the interpretation and generalization of the results of studies may turn out to be difficult. Research results hence may not get the recognition they deserve.

1.1 Research aim and questions

The study is rooted in the desire to explore the phenomenon called strategy in the context of human nature and the role of strategy in history. Strategy may be viewed as either simple or an extremely complex phenomenon. Moreover, the different and often conflicting views on strategy added to the mystery. Why do people have so many different views on the subject?

The aim of research was to understand the phenomenon called strategy better, by searching for new answers that had deeper and more satisfying meaning. Thus, I embarked on this quest to get a holistic understanding of the phenomenon called strategy by answering the research questions.

Research questions

The research questions for the study are:

- ➤ How and why is the phenomenon called strategy important to man, both as an individual and in his organizations?
- ➤ How and why did the phenomenon called strategy come into existence, emerge, and evolve in history?

New knowledge or better understanding

Secondly, to see if the findings from the research questions might add, establish new knowledge or provide a better understanding of the phenomenon.

1.3 Methodology

This study is primarily a quest or exploration an approach to the phenomenon called strategy. The approach of this thesis is conceptual, historical and exploratory in nature. It is a kind of holistic approach or a meta-analytic view at the phenomenon. The aim was to develop new insights and perhaps different understanding of the nature of strategy.

Data collection

The thesis required a study of a huge amount of literature from many different fields of study that had some connection to the phenomenon. Then the task of reviving, analyzing and selecting the small fraction that ended up in the text.

The *how* and *why* research questions in studying the phenomenon required a selective data to be used from the vast literature concerning strategy.

Nature of the data

The nature of the data is historical, evolutionary and explanatory with the emphasis on conceptual, historical and holistic approach. Such a quest relies on secondary data or the findings and research of others.

Main sources were academic research publications, books, full text articles, journals, on-line academic research publications.

Evaluation of the data

The evaluation is based on the researchers experience in management, leadership along his study on the phenomenon.

Illustrative examples were selected with an emphasis on explanatory relevance from the vast literature concerning the phenomenon strategy. The research path follows the chain of indicators from the origins of strategic thinking in human evolution to traditional discussion on strategy in business or war.

Reliability and validity

Personal feelings, beliefs, research design, bounded rationality and various biases are a threat to any research. This one is no exception but it has tried to approach the phenomenon under study holistically and open-minded in an effort to avoid biases.

Validity

"By validity, I mean truth: interpreted as the extent to which an account accurately represents the social phenomena to which it refers." (in Hammersley, 1990, p. 57, see Silverman and Marvasti, 2008, p. 258).

Using selective data collection always runs the risk of selection bias. However, by keeping an open mind might reduce the risk of such bias. The integrity of the conclusions is largely based in the scholarly works of many scientists, scholars and commentators and their written observations. Selection and the interpretation of works of others is always a problem for a researcher.

Thus in order to establish increased credibility, transferability, dependability and confirm-ability an emphasis was placed on relevance, being open-minded and a selection of ideas following a chain of indicators that had been written down in a serious manner. The aim here was to establish a better and perhaps a new understanding of the phenomenon under study. This applies especially to the internal validity or the difficult problem of causality.

Reliability

"Reliability refers to the degree of consistency with which instances are assigned to the same category by different observers or by the same observer on different occasions." (see Silverman and Marvasti, 2008, p. 258).

The issue of reliability, or whether the findings may be repeatable, is less of an issue because the propositions for the conclusions are based on publicly accessible data, ideas and knowledge.

1.4 Overview of the study

Basic structure

Rationale for studying the phenomenon called strategy Research aim and questions Methodology Man's use of strategy for survival Strategy from warfare to **business** Strategy - strategic management **Conclusion**

2. Man's use of strategy for survival

Some of the many scholars studying the phenomenon called strategy and organizations have realized that strategy is deep rooted in man's nature and existence. This chapter will focus on man's evolution and research that which indicate that from the emergence of the genius Homo, or *Man*, strategic thinking and acting of individuals and groups was from the beginning a necessary trait for survival. Thus, the nature of the phenomenon called strategy is in general embedded into man's existence. Modern science has made significant breakthroughs that make it possible to get at least a broad outline of man's origin and evolution of his intelligence and cognation. Furthermore, in the last ten years or so, new discoveries indicate that early man was more intelligent and skilled than was previously acknowledged.

Detecting the phenomenon called strategy as defined by man's behavior has been addressed in the strategy literature by scholars like Henry Mintzberg (2007, p. 1) and Herbert A. Simon (1957, p. 67). Furthermore, Mintzberg's descriptions of strategy as a "Plan, Ploy, Pattern, Position or Perspective" (1987) may be used to study man's behavior over his 2.5 million years of existence as his methods, tools, societies and cultures became evermore complex. Even though there is no agreement on the definition of the phenomenon called strategy, Paul C. Nutt and David C. Wilson provide a useful definition on the nature of "strategic decision making" (2010, p. 3):

...is often used to indicate important or key decisions made in organizations of all types. The term *organization* includes any collective social, economic or political activity involving a plurality of human effort. Strategic decisions emphasize the social practice of decision making as it is carried out among and between individuals in the organization. When studying decision making, both the organizing of decision activity as a collective phenomena and the cognitive processes of individual decision makers take centre stage.

Strategic decision making is more than computation carried out to make judgements and choices.

Nutt and Wilson recognize that the phenomenon called strategy can *both* be *collective* and *individual* based phenomena. Even as *collective* phenomena "the cognitive processes of individual decision makers take centre stage" (p. 3).

Early man's (genius Homo) organizations like clan's are estimated to be around 2.5 million years old. Though they evolved as man did, clan's as organizations still exist. Over this long time span, as indicators show, *Man* made decisions that can be labeled important, collective, social, economic or political "involving a plurality of human effort" (p. 3). Thus, the phenomenon called strategy may as well be labeled as an evolved human *trait*. The mental skill in the use strategy (or effective and efficient strategic decision-making and acting) increased over time as man's cognitive abilities increased with gene-culture co-evolution.

Now scholars in various fields of science like economics, strategic management, leadership, genology and psychology are indeed looking at man's evolution. Some have written books linking our current behavior to early man. The timeframe spans millions of years of man's history. An example of such work are; Eric D. Beinhocker *The Origin of Wealth: Evolution, Complexity, and the Radical Remaking of Economics* from 2006, Gregory J. Feist *The Psychology of Science and the Origins of the Scientific Mind* from 2006, Spencer Wells *Pandora's Seed: the Unforeseen Cost of Civilization* from 2010 and Paul R. Lawrence book *Driven to Lead: Good, Bad, and Misguided Leadership* from 2010.

When we study our genius Homo, or *Man* over time that spans hundreds and millions of years, we have to keep at least two things in mind. First, that the man's population was small. Second, that extreme change in weather conditions (like ice ages, mega droughts, volcanic activity) has destroyed most evidence of man's early existence. For these reasons alone, the volume of data, artifacts, information and knowledge gathered is surprising.

2.1 Man's evolution

Modern man is an outcome of a specific evolutionary process that is believed to have started around four to seven million years ago with the split between the hominin and chimpanzee- bonobo linage. On this journey, species of hominins came into existence and some evolved further acquiring bigger brains and more intelligence while others did not survive the hardships of nature. Life was not easy for man who had to deal with ice ages, volcanic eruptions and rapid extreme climate changes. He had to adapt to survive in both harsh and competitive environments.

Having now populated the planet, acquired language, learned to read, write, developed advanced mathematics, new technologies, put men on the moon and living in advanced societies, man is still at nature's mercy (Relethford, 2008; Scarre, 2009).

However, man's existence is deeply rooted in the past. For example the oldest skeleton of potential human ancestor *Ardipithecus ramidus* that walked upright was recently found in Aramis, Ethiopia in Africa and dates back 4.4 million years. (See *Science*, October 2009) It is interesting that the oldest fossil remains of anatomically modern humans, the Omo skulls from around 195,000 years ago, were also found in Ethiopia.

The genus Homo, or *Man*, is first recognized in Africa around 2.5 million years ago. (Babbitt, Warner, Fedrigo, Wall & Wray, 2010) On his evolutionary path, man has had to depend on his intelligence, or in other words his brain, to device strategies that provided resources and security. Some 1.8 million years ago, early Homo is described as a successful ambush predator or hunter (Bunn & Pickering, 2010).

Around this time (1.8 million years ago), a rapid enlargement of the brain started. Man's average brain size went from around 575 cubic centimeters (cc) to around 1,500 cc some 80,000 years ago along with bigger and more robust bodies. However, since then man's brain and body have *shrunk* and the average brain volume today is estimated to be around 1,350 cc. At least two major factors are believed to have contributed to this evolution of big brains are: (a) high energy protein and fats (meat

eating) and (b) the use of fire for cooking food (Babbitt, Warner, Fedrigo, Wall & Wray, 2010).

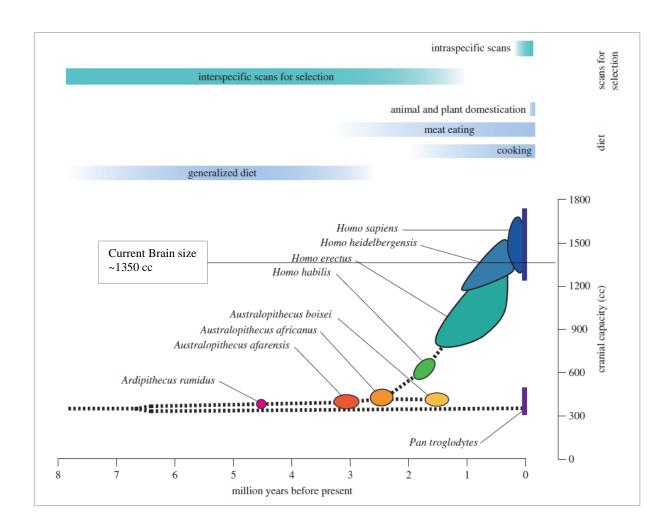


Figure 1. A timeline showing some of the temporal intersections of diet, natural selection, changes in human morphology like brain size.

Source: Babbitt, Warner, Fedrigo, Wall & Wray, 2010, (p. 3). Green bars indicate the temporal range on which different methods for scanning for selection are optimized to identify relevant changes in the genome. Blue bars indicate the times in which there is evidence for shifts in human dietary intake. The colored bubbles are a general schematic of the time and range in size of cranial capacity found in various hominin species adapted from Schoenemann with additional data from White *et al*.

The so-called Acheulean period lasted from around 1.5 million to 200,000 years ago, with the presence of new tools and bigger brains. That includes the well-known

Acheulean hand-axes and cleavers (choppers) in the so-called Acheulean stone tool industry of Homo erectus. The first bifaces (also called hand-axes) date to around 1.7 million years ago in Africa (Pelegrin, 2009). Homo erectus who appeared in Africa around 2 million years ago might even have survived until some 53,000 – 27,000 years ago (Relethford, 2008).

Homo erectus may be the first hominin to expand out of Africa into Europe some 1.75 million years ago. Around and after that time, early man traveled to Asia, Eurasia and perhaps India, then into Western Europe. During the Acheulean period, the brain size increased rapidly, as noted before, especially from around 700,000 years ago, to 250,000 years ago.

Hominin were collecting *ochre* (iron ore) some 1.5 million years ago and made bifaces (stone tools) which indicates a sense for planning, volume, and the use of various materials and color (Relethford, 2008; Scarre, 2009).

Homo sapiens were not the first hominin to use tools and fire. The oldest known use of fire is from 1.5 million by Homo ergaster (erectus). Man may have had to master the use of fire for warmth and cooking before colonizing Eurasia. The oldest widely accepted verifications are from modern China and dates about 500 – 240 thousand years ago. The same thing can be said about advanced tool making like stone handaxes and blades. There is more disagreement about the origin of art (Scarre, 2009).

Man's success and survival was thus from the start based on his foresight, organization, planning, cooperation, teamwork, intelligence, knowledge gathering, positioning, tool use (technology), important decision-making, including risk taking to get resources and for the defense of the group. *Doing strategy* was thus a fundamental *behavioral trait* for man as a basis for his *survival* (Darwin, 1871; Osvath & Peter Gärdenfors, 2005; Jeffares, 2009, 2010: Bardone, 2011).

2.2 Natural born strategists

Charles Darwin had a keen eye for human nature, evolution and strategic behavior as well. After publishing his work *On the Origin of Species by Means of Natural Selection*, in 1859, outlining his theory of evolution by natural selection he published his ideas on human evolution in *The Descent of Man*, and *Selection in Relation to Sex* from 1871. Darwin notes that early man "anticipates future events" and uses the word "stratagem" (strategy) (p. 166) as one of the human *traits*. He observes in chapter; *On the Development of the Intellectual and Moral Faculties during Primeval and Civilised Times*, (pp. 158, 166):

For man is enabled through his mental faculties "to keep with an unchanged body in harmony with the changing universe." He has great power of adapting his habits to new conditions of life. He invents weapons, tools and various stratagems, by which he procures food and defends himself. When he migrates into a colder climate he uses clothes, builds sheds, and makes fires; and, by the aid of fire, cooks food otherwise indigestible. He aids his fellow-men in many ways, and anticipates future events. Even at a remote period he practiced some subdivision of labour.

There can be no doubt that a tribe including many members who, from possessing in a high degree the spirit of patriotism, fidelity, obedience, courage, and sympathy, were always ready to give aid to each other and to sacrifice themselves for the common good, would be victorious over most other tribes; and this would be natural selection. At all times throughout the world tribes have supplanted other tribes; and as morality is one element in their success, the standard of morality and the number of well-endowed men will thus everywhere tend to rise and increase.

To Darwin it was obvious that early humans cooperated in organizations and that the phenomenon called strategy (strategic instinct) was a fundamental part of the human mental makeup needed for survival. Darwin hypothesized that humans did, and do, use various stratagems or strategies to get food (hunting, gathering and later farming) and to protect him from predators and other humans. He was well aware of our dualist nature of both aggression and altruism.

Ancient man tried to control the elements with the use of tools, fire, foresight and ritualistic behavior. His cooperative and competitive behavior included hunting,

defense and primitive conflict. He constantly had to deal with the natural elements and furthermore in and between clans' issues such as: death, sickness, health, hunger, violence, fairness, wealth, mating, racing children, power, politics, status and so forth.

2.3 Strategic instinct and behavior

There are only seventeen years (1994) since the discovery of the oldest reliably identified hunting weapons were announced by the German archeologist Hartmut Thieme. His team discovered in Schöningen Germany the remains of four two-meter long spears sharpened at both ends and scraped smooth. Along with the spears, the butchered remains of more than ten horses were found. These effective and efficient weapons were almost 400,000 years old.

The steps necessary to produce and use of these spears and the complexity of this procedure rivals that of modern non-industrial technologies. (Coolidge & Wynn, 2009) Thieme notes on his find of the wooden spears and strategic behavior (1997, p. 807):

Here I describe some wooden throwing spears about 400,000 years old that were discovered in 1995 at the Pleistocene site at Schöningen, Germany. They are thought to be the oldest complete hunting weapons so far discovered to have been used by humans. Found in association with stone tools and the butchered remains of more than ten horses, the spears strongly suggest that systematic hunting, involving foresight, planning and the use of appropriate technology, was part of the behavioural repertoire of pre-modern hominids. The use of sophisticated spears as early as the Middle Pleistocene may mean that many current theories on early human behaviour and culture must be revised.

At Schöningen some 400,000 years ago, man (or H. Heidelbergensis) had evidently used the 5P's for his *means to an end* purposes using his advanced mental abilities.

There are even much older confirmations of butchered animal remains like for example the 1.8 million years old remains at Olduvai Gorge in Tanzania (Bunn & Pickering, 2010) where man hunted by a lake in a savanna–bush–woodland habitats

as an ambush predator. Then he transported his large pray (estimated 48 large mammals) and by using his tools, systematically butchered fully fleshed limbs into specific amounts of meat. This type of big game hunting is as well based on the same fundamentals of foresight and Mintzberg's 5P's as well as *tool use* for the hunt, dismembering the pray for transport. Then finally to cut the meat further into smaller parts or portions.

Hunting was a team effort based on cooperation, organization, foresight, purpose, strategic planning and action. This kind of strategic instinct and risk taking behavior is thus deep rooted in man's consciousness (Osvath & Gärdenfors, 2005; Rabinovich, Windheuser & Inbar, 2008; Jeffares, 2009, 2010; Bardone, 2011).

Cognitive studies on the behavior, use of tools, forms of symbolic language and cognitive development of the early humans and hominins indicate that they were strategic thinkers. Hominins may have had a personal level of awareness but remained focused and co-operated for future strategic goals (foresight) without any direct stimulus from the outside environment.

The book *The Sapient Mind: Archaeology Meets Neuroscience*, from 2009, highlights the co-evolution of cognation and long-term goal oriented thinking of humans and hominins. The book addresses both the neurological and cognitive evolution of complex goal-directed actions, which indicates strategic thinking. Renfrew, Frith and Malafouris observe (See introduction):

Tool-use abilities also constitute one of the most easily identifiable points at which neuroscience and archaeology meet, given that it is now possible using the new brain imaging methods to explore their neurological foundation in the modern human brain. In this context, Stout *et al.* (2008) present important new results from a PET study during experimental stone toolmaking, which support a coevolutionary hypothesis linking the emergence of language and toolmaking. In particular, their imaging data show that neural circuits supporting stone toolmaking partially overlap with language circuits, which suggests that these behaviours share a foundation in more general human capacities for complex, goal-directed action and are likely to have evolved in a mutually reinforcing way.

More importantly, they suggest new and important interactions between brain and culture, which may help us understand why it is that only humans have developed such an extensive and universal material culture.

In the paper "The Evolution of Technical Competence: Strategic and Economic Thinking" (2009) Ben Jeffares argues that the archaeological record related to hominins show changes that lie behind the emergence of the ability for strategic thinking. The emergence of tools whose making require such modularized tasks as; raw material acquisition, tool manufacture, and tool deployment are being reintegrated cognitively. Furthermore, they are made in the context of broader *strategic* and *economic* concerns.

These tools made by Archaic Homo Sapiens (a term used to describe a number of varieties of the homo species living from 500,000 to 200,000 years ago (including H. Heidelbergensis, and H. Neandertalensis), demanded additional mental skills, specialization, more directed learning, and social organization. To some scientists it seems highly probable that all the Archaic Sapiens were *language-using* species to some extent and form. This allowed behavioral patterns to be integrated with strategic and multifactor information. Behavioral tasks are conducted with a strategic *means* and ends in mind. Jeffares observes (pp. 168, 169):

The pressures of larger and more heterogeneous day ranges exploited by Early Homo forced their behavioral sequences to stretch over longer time frames and more diverse environments. Those individuals who could maintain linked behaviors in the face of distractions —who could bear tasks 'in mind'—would be advantaged by their greater flexibility Tasks and goals would become de-coupled from immediate stimuli. With the emergence of Archaic Sapiens, increasing exploitation of larger range sizes and the buffering of skills by more directed pedagogy and social organization allowed behavioral sequences to be integrated with strategic, multifactor information. Hominins could engage in behaviors without direct stimulus, but with long-term goals and high-level constraints in place. Hominins, from this point on, are strategic thinkers.

In a more resent paper, Jeffares takes his argument even further back in time. In the paper "The co-evolution of tools and minds: cognition and material culture in the hominin lineage", from 2010 he observes that tools and minds co-evolve. Thus, the archaeological record is a critical source of information about the evolution of human cognition. Tools create "feedback loops between elements of the environment and cognitive processes 'in the head.", (p. 505). The use of stone tools of the Homo

genus from approximately 2.6 million to 1 million years ago expresses "active components within the cognitive economy of hominins. Tools become capable of playing multiple roles within the hominin world", (p. 518), including strategic decisions and awareness. Jeffares notes (pp. 512, 513) that:

...general point is well made; attention must shift between various aspects of the world. One must monitor the world as one navigates through it, and have in mind a final destination. An individual might need to know what they are doing at that particular moment in time, but equally, understand how this sub-task fits into the broader picture of the project. Faced with short-term distractions, one needs to be able to deal with those distractions, but then move swiftly back to the accomplishment of the strategic goal.

...they help maintain a personal level of awareness during activities. So they assist an individual in remaining focused on strategic goals in a world without immediate stimulus, and in moving through a world of distractions.

Evolving in an unforgiving environment

Man co-evolved both genetically and culturally in an unforgiving environment; ice ages that come roughly every 100,000 years (Rapp, 2009) and had to adapt to other climate extremes. As an example, there is evidence of a *mega-drought* that hit Africa 135,000 years ago and lasted for 65,000 years (until 75,000 years ago). Some large lakes like Lake Malawi lost at least 95 per cent of their water volume. Furthermore, around 70,000 years later another climate extreme, a *dramatically* wetter conditions, started. Scholz *et al.* (2007) argue that such drastic climate changes may have lead to man's migration out of Africa.

2.4 Major cognitive shifts and the evolution of language

In his book *The psychology of science and the origins of the scientific mind* (2006) Gregory J. Feist suggests that in evolutionary terms the mind or major cognitive shifts broadly went through three phases. These major cognitive shifts occurred, first

around 4.5 million years ago, second around 2.0 million years ago and finally around 200,000 years ago. Feist uses the example of how the human mind and cognitive capacities change in children with age as an analogy or metaphor (pp. 172-185). The three phases of major cognitive shifts are:

- Phase 1: Pre-representational (or immediate) thought The thought processes are tied to thinking about immediately detectable and directly sensed events and experiences. However, "the capacity for reflection and consciously represented beliefs were not yet possible, chiefly because language did not exist in any form that we know it" (p. 177).
- Phase 2: Representational thought Or the "cognitive ability of "re-presenting" an idea or concept mentally, either visually or verbally once the object is no longer being directly sensed. Here at least we have some verbal and propositional (suggestions) representation. Gestures and nonverbal expressions are crucial to communication, (protolanguage). Some degree of advanced shared or joint attention with others, or to communicate effectively is required (theory of mind) (p. 178).
- Phase 3: Meta-Representational thought It "emphasizes the continuity and growth out of the earlier stages. Ideas are first immediate, implicit, and pre-representational and then capable of being represented mentally, concretely, and intuitively" for example with language (p. 183).

Thus if Feist is right then after phase two and beyond early groups of man could use their increased intelligence more effectively and with more efficiency. Man could communicate and devise strategies that gave them a *competitive edge* in hunting, gathering, and in defending the group from predators.

In his article from 2009 "Language as gesture", Michael C. Corballis notes that language may have evolved for the last 2 million years, where he observes (p. 556):

Language can be understood as an embodied system, expressible as gestures. Perception of these gestures depends on the "mirror system,"

I argue that human speech evolved from manual gestures, with vocal gestures being gradually incorporated into the mirror system in the course of hominin evolution. Speech may have become the dominant mode only with the emergence of Homo sapiens some 170,100 years ago, although language as a relatively complex syntactic system probably emerged over the past 2 million years, initially as a predominantly manual system.

Despite the present-day dominance of speech, manual gestures accompany speech, and visuomanual forms of language persist in signed languages of the deaf, in handwriting, and even in such forms as texting.

Thus with time, increased cognitive abilities, communication skills and technological skills lead to more advanced capabilities of strategic thinking and acting (or doing strategy) by early man.

2.5 New interpretations of the origin of *modern* human behavior

In a paper, by Sally McBrearty of the University of Connecticut and Alison S. Brooks of George Washington University, entitled "The Revolution That Wasn't: A New Interpretation of the Origin of Modern Human Behavior", in the *Journal of Human Evolution* (2000) the authors argue that many of the components of *modern* human behavior *said to* have emerged between 40,000 and 50,000 years ago were visible tens of thousands of years earlier. For example in Katanda in the Democratic Republic of the Congo at three sites, Brooks and John Yellen of the Smithsonian Institution found elaborate barbed *harpoons* carved from bone that they say date to at least 80,000 years ago, which would place them within the Middle Stone Age (Wong, 2006). McBrearty and Brooks observe (p. 453):

Proponents of the model known as the "human revolution" claim that modern human behaviors arose suddenly, and nearly simultaneously, throughout the Old World ca. 40–50 ka. This fundamental behavioral shift is purported to signal a cognitive advance, a possible reorganization of the brain, and the origin of language. Because the earliest modern human fossils, *Homo sapiens sensu stricto*, are found in Africa and the adjacent region of the Levant at >100 ka, the "human revolution" model creates a time lag between the appearance of anatomical modernity and perceived behavioral modernity, and creates the impression that the earliest modern Africans were behaviorally primitive. This view of events stems from a profound Eurocentric bias and a failure to appreciate the depth and breadth of the African archaeological record. In fact, many of the components of the

"human revolution" claimed to appear at 40–50 ka are found in the African Middle Stone Age tens of thousands of years earlier.

If on anatomical and behavioral grounds *H. helmei* is sunk into *H. sapiens*, the origin of our species is linked with the appearance of Middle Stone Age technology at 250–300 ka.

The artifacts display a level of sophistication comparable to that seen in 25,000-year old harpoons from Europe. Not only are the artifacts interesting in terms of the complexity and design but the choice of raw material. The use of bone and ivory in tool manufacture was not thought to have occurred until the Later Stone Age and Upper Paleolithic.

2.6 Timeline and indicators of strategic behavior

There is much evidence that support the idea that the phenomenon called strategy is an evolved trait in man. Both the fact that man was a physically weak creature in the wilds of Africa compared to (and competing with) other evolved hunters like lions and the remarkable increase in man's brain size (compared to his body). To survive in the wild man had to rely on his intelligence and device strategies for both short-term and long-term gains for the group (his organization). Evidence for intelligence like stone tools and the use of fire are only indicators. We can only imagine the kind of tools and devices early man might have used made of wood and other materials. The literature on man's evolution gives us some indication of how man made and carried out risky decisions that can be labeled as *strategic*.

Here are some examples or *indicators* of early man's cognition and strategic thinking.

Indicators of the evolution of early man's strategic thinking and acting

- 1. 1.8 million years ago Tanzania Big game hunting and the use of tools to cut meat
- 2. 1.7-1.8 million years ago Georgia First hominins go into Europe
- 3. 750,000 years ago Israel Continual fire making for 100,000 years
- 4. 500,000 years ago Syria More than 10,000 bifaces (stone tools) found
- 5. 285,000-510,000 years ago Kenya, the Baringo people Symbolic behavior
- 6. 500,000 year ago Kenya knives or blades used
- 7. 400 to 600,000 years ago Spain Ritual, belief systems, burials and afterlife
- 8. 400,000 year ago Schöningen Germany Wooden spears found for big game hunting
- 9. 154-160,000 years ago Bouri-Herto in Ethiopia Human skull used as a relic, for rituals
- 10. 70-145,000 years ago The Aterian people in North Africa Extensive social networks
- 11. 90-100,000 years ago Jebel Qafzeh in Israel Red ochre and ritual behavior
- 12. 70-90 thousand ago Blombos in South Africa Engraved "ochre" (iron ore), bone tools and beads (for personal ornaments)
- 13. 61-72,000 years ago Sibudu cave in South Africa Making glue, arrows and needles
- 14. 40,000 years ago The Mungo Man in Australia Ritualistic burial practice

Tanzania – Big game hunting and use of tools to cut the meat 1.8 million years ago

There are findings of butchered animal remains around 1.8 million years ago at Olduvai Gorge in Tanzania. Man hunted by a lake in savanna-bush-woodland

habitats as an ambush predator. Then transported his large pray and used tools to systematically butchered fully fleshed limbs into specific amounts (estimated 48 large mammals in total) (Bunn & Pickering, 2010).

Georgia - Europe's first hominins 1.7-1.8 million years ago

The Dmanisi lithic stone assemblage is in many ways comparable to Oldowan sites in Tanzania Africa. It is as well the oldest site of hominins outside of Africa and indication of dispersal of hominins (Mgeladze *et al.*, 2011).

Israel 750,000 years ago - Continual fire making for 100,000 years (controlled fire)

At Gesher Benot Ya'aqov, Israel, confirmation has been found that hominins had a profound knowledge of fire making and could make fire at will (controlled fire) around 750,000 years ago. Furthermore, there was *continual fire making* at the site for a period of about 100,000 years. Fire making was a powerful tool and was used with confidence by the hominins at Gesher Benot Ya'aqov. Other indications of possible fire-use are in African sites are some 1.5–1.0 million years old (Afil, 2008).

Syria - More than 10,000 bifaces (stone tools), from 500,000 years ago

In the desert of modern day Syria at Nadaouiyeh more than 10,000 bifaces (stone tools) from about 500,000 years ago were found. Nearly every piece is a work of art according to Michel Lorblanchet. He notes as well how advanced the control of color was among the Acheulean some 400,000 years ago (Lorblanchet, 2007).

Kenya, the Baringo people – Symbolic behavior 285,000-510,000 years ago

In an excavation in the 2004 by McBrearty's team, at a site near Lake Baringo in Kenya, the team found stone blades—once a *hallmark* of the Upper Paleolithic material cultures that dated more than 510,000 years old. Nearby at a locality and in levels dated to at least 285,000 years ago her team has uncovered vast quantities of red ochre (iron ore) and grindstones for processing. The Middle Stone Age people at Baringo were probably using the *pigment* (iron ore) for *symbolic purposes* as well. That is to decorate their bodies, as many humans do today. This discovery suggests that certain aspects of modern behavior arose before the origin of H. sapiens.

Baringo is not the only site of ancient indication of *ochre processing*. Twin Rivers Cave in Zambia has yielded similar material that dates back to more than 200,000 years ago. Other tool assemblages from Mumba Rock Shelter in Tanzania include flakes (crafted from obsidian) that came from a volcanic flow about 200 miles away and dated around 130,000 year old. This find may be a verification that the hominin who made the equipment *traded* with other groups for this special raw material (Wong, 2006).

500,000-year-old knives (blades) in Kenya

Then following the trend of new indicators uncovering the complex intellectual capacities and behaviors of our hominin ancestors Sally McBrearty and Cara Johnson published a paper in *Journal of Human Evolution* titled "500,000 year old blades from the Kapthurin Formation, Kenya" (2010). This data is significant because production of these *knives* or thin, sharp-edged stone tools flourished around 30,000 years ago among modern humans. Bruce Bower (2010) observes that "Behaviors and intellectual capacities that scientists have commonly attributed to the rise of *Homo sapiens* around 200,000 years ago actually appeared in other *Homo* species" at least as

early as 500.000 years ago. McBrearty and Johnson note in their article (pp. 193-200):

Here we announce the discovery of early blade production dating to 545–509 ka from the lower portion of the Kapthurin Formation, Kenya. This discovery adds an unexpected facet of variability to the repertoire of lithic technology in the East African Middle Pleistocene.

Historically, the presence of blades in some assemblages made by Homo sapiens spurred the repeated assertion in both the professional and popular literature that the manufacture of blades demands the special cognitive abilities of Homo sapiens, and that blades provided a competitive advantage over hominins armed only with flake tools.

The newly discovered blades described here were found in the lower portion of the Kapthurin Formation and date to 545–509 ka. They thus represent the oldest securely dated occurrence of blade technology, and increase the known time span of blade production worldwide by about 150,000 years.

It can therefore be inferred that members of the population ancestral to both species possessed the cognitive capacity, expertise, and skill to produce blades when the need arose.

These technological innovations contributed to the adaptive niche that was constructed by Middle Pleistocene hominins, and may have, to some extent, driven the anatomical changes seen in the hominin fossil record.

Spain - Ritual, belief systems, burials and afterlife 400 to 600,000 years ago

The earliest indication, so far, of *ritual* or possible belief in an afterlife (or in a higher power) is a grave or a pit in Sima de los Huesos, Sierra de Atapuerca, Burgos, in Spain. It reveals the emergence of a symbolic behavior between 400 and 600,000 years ago. In their paper, the authors Eudald Carbonell and Marina Mosquera, from 2006, observe (pp. 155, 156, and 159):

This discovery allows us to extend human complex behavior and symbolism of mortuary rituals 300 kyr earlier than broadly heretofore accepted.

This pit has yielded a number of 28 hominids dated around 400 kyr. This is the most complete collection of Middle Pleistocene Homo heidelbergensis around the world.

Recent radiometric dating situates the hominid deposit as between 400 and 600 kyr ago.

This complex behavior would be reflected in the fact of depositing a handaxe – the most widespread Acheulean tool –, into a context of intentional deposition of dead. This may have occurred 300 kyr before Neanderthals buried their dead, which places Sima de los Huesos at the first case of mortuary symbolism in human evolution.

Schöningen Germany - Almost 400,000-year-old wooden spears found

Four two-meter long spears sharpened at both ends, scraped smooth found in Schöningen Germany almost 400,000 years old and butchered remains of more than ten horses. The complexity of the procedure to make the spears rivals that of modern non-industrial technologies (Coolidge & Wynn, 2009).

Bouri-Herto in Ethiopia – Human skull as a relic, ritual from 154-160,000 years ago

In the article "The Evolutionary Road" by Jamie Shreeve in *National Geographic magazine* (2010) a child's skull (six or seven years old) was found in Ethiopia with cut marks showing that it had been cautiously defleshed after death while the bone was still fresh. The skull may be remains of an early human ritual. It has been dated to between 154,000 and 160,000 years ago. The polished surface on the skull suggests repeated handling and it is hypnotized that the skull was a treasured relic.

The Aterian people - A part of extensive social networks 70-145,000 years ago

North African hominin called Aterian at the site of Bir el Ater in eastern Algeria, tools that include triangular objects that some suggested were used as *arrowheads* or *spear points* that may date back some 70-145,000 years. At least 100 Aterian sites have

now been uncovered. In *SCIENCE magazine* (from Jan 7. 2011), Michael Balter observes (pp. 21, 22):

Rather than being a small, isolated population unlikely to go on the move, they apparently were part of extensive social networks that used ornaments to signal the identities of different groups that were in contact with one another, perhaps across long distances.

Jebel Qafzeh in Israel - Red ochre and ritual behavior from 90-100,000 years ago

In the Jebel Qafzeh Cave south of modern Nazareth in Israel, systematic burials sides of adults and children have been found. The burial is of several anatomically modern humans and 12 fossilized human skeletons have been found at the main rock shelter and in the Skhul cave south of the city of Haifa, Israel. These anatomically modern humans, both adult and infant, are now dated to about 90-100,000 years old. Many of the bones and shells are stained with red *ochre* (iron ore).

It is hypothesized that the red *ochre* was used in the burial process. That is considered a significant indicator of *ritual behavior*, and thereby symbolic thought and intelligence. In total, some 71 pieces of unused red ochre were found on that site. The presence of marine shells with ochre stains on some of the shells and holes that apparently served for hanging up shells (necklace). This suggests a level of symbolism currently associated with modern behavior. An engraved cortical flake (interpreted as having symbolic meaning), has also been discovered at the site.

Blombos in South Africa - Engraved ochre (iron ore) 70-90 thousand years old, 80,000-year-old bone tools and 75,000-year-old beads (personal ornaments)

Blombos Cave in Southern Cape coast in South Africa stands out as an extraordinary side with multiple verification of *symbolic behavior* and other traits that are unique to modern Homo sapiens.

Blombos contained an important assemblage of stone tools known as Still Bay points like a finely shaped narrow points. The cultural *industry* at Still Bay is now widely viewed as a phase of precocious and innovative technology in the Middle Stone Age of Africa. It was followed by another episode of *technological innovation* the so-called Howieson's Poort industry, including bladelike tools made blunt on one side and attached to a wooden handle to produce a composite weapon. But like Still Bay, the Howieson's Poort vanished. It is now estimated that the Still Bay *industry* perhaps existed for 1,000 years that is from approximately 72,000 to 71,000 years ago. Howieson's Poort industry started about 7,000 years later around 65,000 years ago. That *industry* is believed to have lasted about 5,000 years. Technology of similar sophistication does not appear again in the archaeological record until the Later Stone Age in Africa and the Upper Paleolithic in Europe.

However the importance of the Still Bay and Howieson's Poort lies not only in their advanced technological sophistication with what looks like hunting tools, but as well with the range of associated innovative *behavioral artifacts*.

The Blombos cave is now famous among archaeological sites especially by the discovery of pieces of *ochre* (iron ore) *engraved* with *abstract designs* and dated to about 70,000 years ago. Some 75,000-year-old beads with holes (necklace) made from seashells was found and about 80,000-year-old bone tools. Some of the earliest support of shell fishing and possibly fishing has been discovered and dates to about 140,000 years ago.

The date of engraved *ochre* (iron ore) is not firmly confirmed. Test results give the date between 70-90 thousand years old. There is question what the abstract art (or symbols) of the paleo-artist stand for but this usual problem in abstract art.

The use of this abstract symbolism on the engraved pieces of *ochre* and the presence of a complex tool kit suggests people in the Middle Stone Age were behaving in a *cognitively modern way* and had the advantages of *syntactical language* at least 80,000 years ago.

The *shell beads* from the 75,000-year-old *levels* at Blombos cave have aperture made with *bone tool* and have flattened facets produced by use wear. There are *ochre* traces inside some shells. More than sixty beads *manufactured* from seashells have been recovered. Twenty-seven of these beads may derive from a single personal ornament. Large numbers of small flakes found indicate on-site production of these artifacts like in a *lithic workshop*. More than a thousand fish bones, many from large fish, marine shells, seals and dolphins attest to extensive exploitation of aquatic resources and suggest exploitation patterns. Faunal remains show that wide ranges of terrestrial resources were exploited.

Hearths (a fireplace) for cooking indicate that the cave was a living site and the teeth representing both adults and children reveal that a family or a group dwelled there.

These relics of human cognitive advancement implies that an increasingly complex technological and social organization coincided with what some archaeologists now consider this a period in time a period of *expanded human population size* and *settlement density* in South Africa (Wong, 2006; Jacobs & Roberts, 2009).

Sibudu cave in South Africa - Making glue, arrows and needles 61-72,000 years ago

In another site the Sibudu Cave, not so far from the Blombos Cave, but on the west side of South Africa, confirmation has been found of modern humans dating from about 77,000 years ago. Humans there used advanced technology including probably the earliest *bone arrowhead*, dating from around 61,000 years ago and trace use analysis on the tips of the points are indication of compound adhesives or *glue* on their bases where they would have been hafted to shafts. The properties of bone for arrow point production are still favored by some hunter-gatherers in southern Africa today

Researchers by experimentally recreating the creation of the adhesive have concluded that the capacity for do this by Middle Stone Age humans at Sibudu would have required the multilevel *mental* operations and the abstract thought of modern people

have. The gum came from the plant Acacia Karroo when mixed with beeswax and ochre (iron ore) and carefully *heated* the combination or glue is flexible and easy to work with. Such tools performed well during some time of their usage. They are dated from around 72,000 years ago. The complexity of the skill needed to create and process such glues may confirm continuity between modern human cognition and that of early humans.

In their article "Implications for complex cognition from the hafting of tools with compound adhesives in the Middle Stone Age, South Africa" (2009), the authors Lyn Wadley, Tamaryn Hodgskiss and Michael Grant note (pp. 1, 4):

Replications reported here suggest that early artisans did not merely color their glues red; they deliberately effected physical transformations involving chemical changes from acidic to less acidic pH, dehydration of the adhesive near wood fires, and changes to mechanical workability and electrostatic forces. Some of the steps required for making compound adhesive seem impossible without multitasking and abstract thought.

Hunters' lives depend on reliable weapons. This dependency would have been a powerful incentive in the past to create trustworthy adhesives for composite weapons. Our experiments intimate that by at least 70 ka (and earlier evidence may eventually be found at sites other than Sibudu) people were competent chemists, alchemists, and pyrotechnologists.

Artisans living in the MSA must have been able to think in abstract terms about properties of plant gums and natural iron products...

A bone *needle* that was found is estimated to be around 61,000 years old and *shell* beads that where found are thought to be from around 71,000 years ago (Wadley, 2007; Wadley, Hodgskiss & Grant, 2009; Wadley, 2010).

The Mungo Man in Australia - Ritualistic burial practice around 40,000 years ago

The Mungo Man (also known as Lake Mungo 3) was an early human inhabitant of the continent of Australia, who is believed to have lived 40,000 years ago, during the Pleistocene epoch. His remains were discovered at Lake Mungo, New South Wales in

1974. The remains are the oldest anatomically modern human remains found in Australia to date, although his exact age is a matter of ongoing dispute.

The Mungo Man was discovered 1974 when shifting sand dunes exposed his remains. He was found near Lake Mungo, one of several dry lakes in the World Heritage listed Willandra Lakes Region. The body was sprinkled with *red ochre*, in what is one of the earliest incidences of such a sophisticated and *artistic* burial practice. This aspect of the discovery has been particularly significant to Indigenous Australians, since it indicates that certain cultural traditions have existed on the Australian continent for *much longer* than previously thought.

Mungo Man was buried lying on his back, with his hands interlocked over his groin. Based on findings it seems likely that Mungo Man was quite old when he died. New studies show that, by using the length of his limb bones, it is possible to estimate Mungo Man's height. He was abnormally tall or 196 centimeters (Wong, 2006; Scarre, 2009).

2.7 Man and society

Each individual cannot exist alone. His survival and welfare have always depended on kin, band, tribe, group or other *organizations* and society. Individual and organization survival have always been interdependent and both rely on man's intelligence and skill, especially *traits* which we associate with the phenomenon called strategy. Studies on how human societies may have evolved reveal that *unique behavioral patterns* underpin both the ancient and modern social structure.

Creation of social networks

Scholars like Bernard Chapais (2011) and Kim R. Hill *et al.* (2011) observe that human societies are based on an *ancient* and *deep structure* involving kinship, pair

bonding and cooperation within and between human groups (or bands). Man evolved distinctive social patterns by pair bonding (marital ties) between bands facilitating networks or structures of alliances and avoiding hostilities. These social patterns gave early man a *sustainable competitive advantage* over other species.

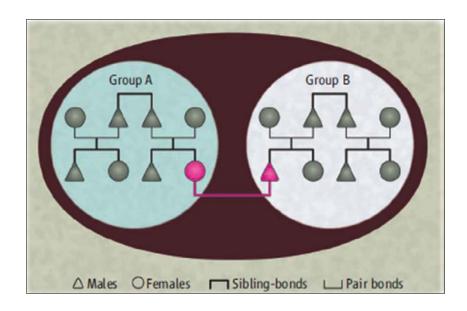


Figure 2. Creation of human societies. Pair bonding facilitates cooperation and creation of social networks.

Source: Chapais, 2011, (p. 1276). "The unique multi-group structure of human societies may have originated with the linkage of kinship bonds and spousal bonds after the evolution of pair bonding in the human lineage. According to that model, the elementary unit of between-group alliances was a pair bond (red) connecting the spouses' kin living in distinct groups (A and B) and linking the two sets of inlaws."

In Kim R. Hill *et al.* (2011) empirical study "Co-Residence Patterns in Hunter-Gatherer Societies Show Unique Human Social Structure" of 32 present-day foraging societies (hunter-gatherers) this network pattern between individual bands was confirmed. Each band consisted of about 28 individuals, ranging from around 6 to 82 individuals in each band. Furthermore, *primary kin* relations generally make up less than 10 per cent of each band. Hill *et al.* note in their study (p. 1286):

Contemporary humans exhibit spectacular biological success derived from cumulative culture and cooperation. The origins of these traits may be related to our ancestral group structure.

...We found that hunter-gatherers display a unique social structure where (i) either sex may disperse or remain in their natal group, (ii) adult brothers and sisters often co-reside, and (iii) most individuals in residential groups are genetically unrelated. These patterns produce large interaction networks of unrelated adults and suggest that inclusive fitness cannot explain extensive cooperation in hunter-gatherer bands. However, large social networks may help to explain why humans evolved capacities for social learning that resulted in cumulative culture.

Thus, *networks* among human groups (or formal organizations) are the *norm*, not an *exception*. Such networks of organizations form the *basis* or *the deep social structure* of societies.

As the *population* of humans increased and man *evolved* then societies developed broadly in four steps (Ronfeldt, 2006; Hill et *al.*, 2011). That is:

- 1. Networks based on kinship (clans)
- 2. Networks based on kinship and hierarchy (tribes, states and the emergence of armies and religious institutions)
- 3. Networks based on kinship, hierarchy and markets (states and the emergence of trading, banking and the firm)
- 4. Networks based on kinship, hierarchy, markets and civilians (states, the emergence of civil societies and multinational organizations)

However, step one covers all of man's existence while steps two to four only emerge after the adaption of *agriculture* and *domestication* of *animals* around some 12,000 years ago (Relethford, 2008).

Modern hunter-gatherer is born with the same qualities as other humans according to Marc Hauser: "What we can say with utmost confidence is that all people, from the hunter-gatherers on the African savanna to the traders on Wall Street, are born with the four ingredients of humaniqueness" (2009, p 32). According to Hauser the four qualities that distinguish the human mind from those of (other) animals are:

- 1. Generative computation It enables humans to create a virtually limitless variety of words, concepts and things.
- 2. Promiscuous combination of ideas It allows the merging of different domains of knowledge (like art, sex, space, causality or friendship) thus generating new laws, social relationships and technologies.
- 3. Mental symbols encode sensory experiences both real and imagined It forms the basis of a rich and complex system of communication (symbols like words or pictures).
- 4. Abstract thought It permits the contemplation of things beyond what we can see, hear, touch, taste or smell.

Other scholars like Jayne Wilkins notes in the paper "Style Symboling & Interaction in Middle Stone Age Societies" (2010) that societies 80,000 years ago and perhaps by 250,000 years ago; "probably exhibited the traits of modern hunter-gatherer societies with respect to style, symboling, and interaction" (p. 118).

Lyn Wadley points out in her paper "Compound-Adhesive Manufacture as a Behavioral Proxy for Complex Cognition in the Middle Stone Age" (2010, p. 117) that there appears to be a strong case for *advanced mental abilities* to people who lived 70,000 years ago in Africa.

Early societies and social competition

Scholars like David C. Geary (2009) point out that various forms of selection pressures and social competition had direct influence on human brain evolution. Geary notes on evolution, *competition* and *competitive advantage* between and within groups or clans (pp. 32, 33, 45):

I should note that social competition is nested between and within groups. The maintenance of ecological dominance in human populations requires extensive cooperation and a division of labor among members of the in-group, typically kin. These groups also cooperate in ways that allow them to better compete with other

groups for control of ecologically rich land and control of social and political dynamics between groups. Across species and for human populations, larger group size typically results in competitive advantage... and thus pressures for mechanisms that support in-group cooperation.

...my colleagues and I have argued that the complexity and dynamics of social competition and cooperation within and between groups is likely to have been the most potent selection pressure for human brain and cognitive evolution since the emergence of H. erectus.

Thus according to Geary *competition* between groups (or organizations) and *cooperation* and a *division of labor* within groups has been "the most potent selection pressure for human brain and cognitive evolution since the emergence of H. erectus" (p. 45). That means broadly that *competition* and the search for *competitive advantage*, including the use of strategy, between and within groups has been the *norm* for genius Homo, or *Man*.

Population bottlenecks

During the last 100,000 years, man constantly had to struggle for survival facing especially two powerful enemies. The firstly, as noted before, were the *extreme climate changes* and secondly and perhaps ironically *other human groups*. Compared to today's standard the human or hominin population fluctuated and was perhaps low most of man's evolutionary history or around 100,000 individuals some 100,000 years ago (Wells, 2010). Furthermore, man's existence has sometimes been in danger due to extreme climate changes.

One such bottleneck occurred around 70,000 years ago and it may have dropped the population to just over 10,000 individuals creating *limited genetic diversity* in modern humans. Some scholars argue that the *mega volcanic eruption* that occurred between about 73,000 and 71,000 years ago, in Mount Toba (what is now the island of Sumatra, Indonesia) may have had a major impact on the human and hominin population (Wells, 2010; Hetherington & Reid, 2010).

According to Wells (2010, p. 11), the population steadily increased after that climate crisis. Just before the dawn of agriculture, or around 20,000 years ago, man had migrated out of Africa (again) and multiplied to around one million individuals.

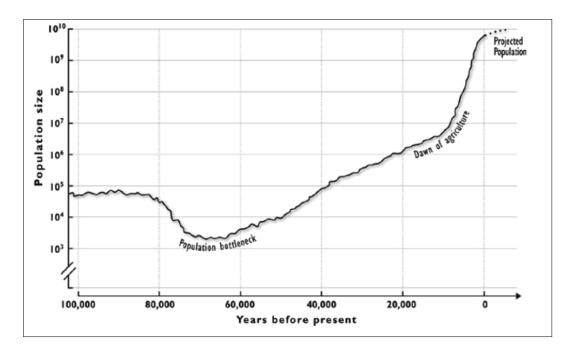


Figure 3. Estimate of variations in the human population size for the past 100,000 years.

Source: Wells, 2011, (p. 11). Note that the vertical axis uses a logarithmic scale $(10^3 = 1,000 \text{ and } 10^5 = 100,000 \text{ individuals}).$

Fixed settlements, agriculture and animal domestication

Man had lived and evolved in hunter-gatherer bands or societies for around two million years and now he had mastered the use of language, symbolic expression (like expressed in rock art found around the world). Some 12,000 to 9,000 years ago, many human societies slowly turned to agriculture and the domestication of animals around the world. Agriculture and animal domestication may perhaps be viewed as man's effort to *take control of his environment, and thus securing his food resources*.

What caused this major shift in man's behavioral patterns is debated. Hetherington and Reid argue in their book *The Climate Connection: Climate Change and Modern Human Evolution* (2010) that extreme climate changes were a major factor for man to resort to agriculture and animal domestication. The authors note (p. 141):

About 10 000 years ago, at a number of disparate locations around the world, humans began to ensure a more stable source of food through the development of agriculture and the domestication of animals. The appearance of agriculture and advances in its techniques usually coincided with major climatic changes.

Human populations had even become more *sedentary* (settled in one place) even before turning to agriculture (Relethford, 2008). Fixed settlements had a major impact on work patterns, the social structure, trade, politics and warfare (Hetherington & Reid, 2010, p. 235).

As the societies changed and the human population increased so did the strategic *behavioral patterns* of individuals and groups (organizations).

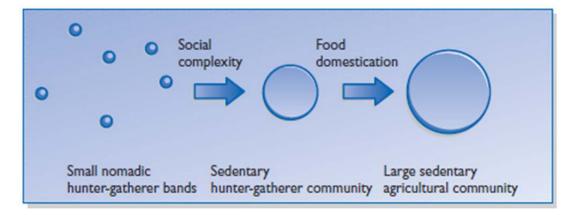


Figure 4. Steps leading to the Agricultural Revolution.

Source: Lewin, 2005, (p. 248). "Scholars have come to realize that the process probably included several steps, in which sedentism and domestication were separated. Intermediate between small nomadic bands and large, agricultural communities, therefore, were sedentary communities that subsisted on hunting and gathering."

From clans to firms

In their paper "A naturalistic approach The role of cooperation and cultural evolution" (2008) Cordes, Richerson, McElreath and Strimling address the question *why firms exist* and argue that firms rest upon the *social psychology* originally evolved from *anent tribal life* or life in clans (as other scholars define small groups). The authors observe (pp. 125-139):

Humans lived in tribal scale social systems based on significant amounts of infraand even intergroup cooperation for tens if not a few hundred thousand years before the first complex societies arose. Firms rest upon the social psychology originally evolved for tribal life.

Evidence from evolutionary and cognitive science suggests that humans have an evolved psychology that shapes what we learn, perceive, and think.

...humans have predispositions toward cooperation and group-beneficial behaviors that have resulted from a process of gene-culture co-evolution.

Norms and institutions are built up by cultural evolution within organizations, supporting a more cooperative regime than can be sustained by individual level processes acting alone. Therefore, when setting up a multi-person firm, it may not be transaction cost arguments that motivate this action, but rather reasons related to the cognitive and cultural evolutionary dimensions

Thus, modern individual and organization *actions* and *cooperative behavior* are an *extension* of long evolutionary path of humans.

2.8 Summary

The chapter has focused on early man and presented findings and arguments that support the idea that the phenomenon called strategy is an *evolved* human *trait*. There are indications that hominins and humans *were* and *are natural born strategists*. To survive in an environment that was often harsh and competitive early man had to depend on his mental capabilities including strategic behavior and instinct.

Studies on man's behavior, the use of tools, forms of symbolic language and cognitive development indicate that early humans and hominins were *strategic thinkers*. Increased cognitive abilities, communication skills and technological skills lead to more advanced capabilities of strategic thinking and acting (doing strategy).

A *purpose* based *strategic way of thinking and acting* was *needed* in hunting, gathering and in competition between and within groups (bands) or organizations for survival. However, networking is an ancient and deep structure of human societies involving kinship, pair bonding and cooperation within and between human groups. This *social bonding* reduces hostilities, creates culture and builds societies.

In short, intelligence, strategic thinking, adaptability and networking made it possible for man to endure. These kinds of behavior patterns may have been with genius Homo or *Man* from the beginning or for around 2.5 million years. Even though man has evolved, his basic dualistic nature of both aggression and altruism remains with us today.

Thus, in relations to the research question of *how* and *why* is the phenomenon called strategy *important* to man. Furthermore, *how* and *why* it came into existence, emerged and evolved in time. The simple answer is that it was *needed* from the *beginning* when the genus Homo *emerged* as a *basic trait* for *survival*. Without his intelligence and a *strategic way of thinking*, *Man* most likely would not have *survived* in the wild.

Man is *still evolving* and *at a rapid rate*. Since the emergence of agriculture societies and the domestication of animals around 12,000 years ago, along with big city societies some 5,000 years ago, hundreds of man's genes show evidence of changes. The brain has for example *shrunk* about 150 cubic centimeters in the last 5,000 years, or roughly about *ten percent* since the emergence of *civilization*. The current average is now around 1,350 cc (cubic centimeters) according to paleoanthropologist John Hawks at the University of Wisconsin at Madison (Choi, 2009).

3. Strategy in warfare and business

The phenomenon called strategy can be traced back in the texts of early military thinkers. It is for example found in Sun Tzu work *The Art of War* from around 500 B.C. and the work of Thucydides *The Peloponnesian War* from around 500 B.C. as well. Later writings like the work of Carl von Clausewitz's *On War*, from 1832 are also of significance. Scholars on strategy and strategic thinking and historians have studies empire builders like Alexander the Great that lived around 400 B.C and Ghinggis (Genghis) Khan that lived from approximately 1189 to 1227 A.D.

Partha Bose's book *Alexander the Great's Art of Strategy* from 2003 is educational and for example praised by professors like Alfred D. Chandler at Harvard Business School. Timothy May's book *The Mongol Art of War* (2007), is an informative book on strategy and the making of the Mongol empire. Ghinggis Khan as a leader of the Mongols was a known as an exceptional *strategic thinker*. He was able to build a formidable army and Mongol empire using much of Sun Tzu's wisdom in war. For example his emphasis on: leadership, communication networks, logistics, supply, training, espionage and he used the so-called *blitzkrieg* strategy in war.

In the strategic management literature, the phenomenon called strategy is traditionally associated with warfare. Various authors directly or indirectly refer to the phenomenon of strategy in a *business-warfare* context like for example Porter, M. 1980, Tung, R. 1994, Ries, A. & Trout, J. 2006, Chen, M. 2007, Kotler, P., Berger, R. and Bickhoff, N, 2010. This is not so surprising because both the understanding and use of strategy may be a matter of survival, security, success, competitive advantage, opportunities, welfare or other *means to an end* thought and action.

The use of strategy in a business context

The phenomenon called strategy covers a diverse number of topics and plays an important role in both business and economics. This includes subjects like decision-

making theory, organization theory, management theory, theory of the firm, the resource-based-view, transaction-cost theory or economics in general and many other issues or dimensions.

This concerns *strategies* for the creation of the *economic value* in firms to quote Manuel Becerra (2009, introduction) "...to show how firms can create value for customers and, at the same time, capture economic profits for their owners through business, corporate, international, and social strategies." The economist Oliver E. Williamson observed in 1991 (p. 90) "What is missing in business strategy, but is desperately needed, is a core theory."

Strategy is thus associated with motivational factors in business and economics, like purpose (or mission), values, vision, value creation, politics, economic actors, welfare and various other issues considered of high importance for both the economy or individual business organizations.

3.1 Strategy and warfare

With increased population pressures, the arrival of agriculture, domestication of animals, and technological advancements new types of sedentary (settling in one place) societies where born from around 12,000 years ago. These were tribal, chief or kingdom based societies that were centralized, stratified (further division of labor), hierarchical and more complex. The *value creation systems* or *entities* thus grew larger.

Competition for limited resources (like a fertile or resource rich land) gradually led to escalating conflicts (both agricultural and nomadic). William J. Hamblin argues in his book *Warfare in the ancient Near East to c. 1,600 B.C.* (2006) that as early as around 6,000 B.C. the "military threshold" was crossed. His definition of a "military threshold" is "the point at which warfare has essentially become endemic in a region,

and at which all peoples in a region are forced to militarize their societies to one degree or another" (p. 16).

3.1.1 Cradle of civilization

Archeological findings show that in the so-called *cradle of civilization* or Mesopotamia (the region of modern-day Iraq, with portions of Turkey, Iran, and Syria), villages were fortified, destroyed and then rebuilt with even stronger fortifications. Hamblin points out that all the new warlike royal dynasties had their origins in *prehistoric periods* (p. 24):

The creation of a military aristocracy centered around a warlord-king – a ruler with the economic, ideological, and coercive power to mobilize the entire society for war – was a crucial step in the movement to cross the military threshold.

Rulers for whom warfare was a means of ideological legitimization, personal aggrandizement, and increasing wealth were rulers who would be more likely to bring cities into war. The alliance of warlord-kings with priests was a key ingredient in the crossing of the military threshold. Priests, speaking in the name of the gods, could legitimize or even command the military endeavors of kings, while plunder from victory in battle would be shared with the gods by donations to the priest-controlled temple institutions.

All of these developments – social, economic, political, technological, and religious – had their origins in the prehistoric Neolithic and Chalcolithic period. By the time writing first appears in Egypt and Mesopotamia, both of those societies had already crossed the military threshold.

The Sumerian civilization (from around 3,300 to around 1,900 B.C.) located in the southern part of Mesopotamia between the Tigris and the Euphrates rivers, is an example of how humans societies fundamentally changed. Following an increased rivalry between different city-states, the Sumer people went from clan-based societies with *collective* type of strategic decision-making by the citizens to the adoption of the institution of kingship with a more *individual hierarchical* kind of strategic decision-making (Kuiper, 2011).

Just like in a shift from a small (kin based) organizations (like bands or clans) to a large multifunctional organization (like kingdoms of the city-states), the need for *control* of various economic and political factors had increased. This need eventually

lead to *new thinking* and *new technologies* like boats, metal tools, pottery and fortified cities around 5,000 B.C. Around and after 3,100 B.C. the earliest Sumerian *writing* (first known writing in the world) appears with texts of business and administrative character and the first *wheeled vehicles* that are known (like war chariots) and potter's *wheels* came into existence.

The Sumerian calendar was divided into seven-day weeks and furthermore during the Mesopotamian period the year was devised into a 12-month lunar calendar and divided into two seasons. Mesopotamian mathematics was a sexagesimal or base-60 system. It remains in use today in the 24-hour days and with 60-minutes in an hour. The final era of the Sumerian civilization saw the earliest *law code* yet discovered being published (Hamblin, 2006; Kuiper, 2011).



Figure 5. From around 2,500 B.C. the peace side of the "Standard of Ur". Indicating new thinking, new technologies and need for advanced strategies.

Source: British Museum, London, Standard of Ur, Image retrieved August 30 2010 from wikipedia.org (In public domain)

The Sumer people lived in a *world of violence* such as many if not all of later civilizations had to endure as well. After 1,900 B.C. when the *Amorites* conquered all of Mesopotamia, the Sumerians lost their separate identity in history. The Amorites

(from modern Syria), though originally nomadic, became farmers, city dwellers, and finally warlords. According to Hamblin (2006), a complex combination of factors contributed to the downfall of the Sumerian civilization. Both ecological factors combined with political and military weakness.

Warfare, as noted by Kuiper, (2011, p. 46), was "...one of the most characteristic phenomena in the history of Mesopotamia". Given the historical facts, it may be argued that *civilization* was born in extreme opportunism, conflict, aggression and bloodshed.

Warfare as a social phenomenon

Scholars like George R. Pitman (2010) argue that human warfare is a social phenomenon based on evolved behavioral *traits*. He notes (pp. 1-7):

...human warfare as a complex social phenomenon involving several behavioral traits, including aggression, risk taking, male bonding, ingroup altruism, outgroup xenophobia, dominance and subordination, and territoriality, all of which are encoded in the human genome.

If you are going to have a war or an insurrection, you will need an army of soldiers who are willing to fight and kill other human beings and risk their lives doing so. It turns out that it is easy to find such human beings. Take any group of young men between the ages of 18 and 25, put them through a course of basic training and imbue them with the virtues of their nation, religion, or political ideology, and *voila*, you have an army, ...eager to kill other humans and willing to risk or even sacrifice their own lives doing so. Unless warriors are willing to risk their lives in aggressive behavior, it is unlikely that human warfare would have ever evolved... Strange as it may seem to those who have never served in combat, many soldiers enjoy killing their enemy.

Kotler, Berger and Bickhoff point out in their book *The Quintessence of Strategic Management: What You Really Need to Know to Survive in Business* (2010) that there is a direct analogy between strategy in warfare and in business or management. The authors note (pp. 6, 7):

It was Carl von Clausewitz (1780–1831), a Prussian general and military theorist, who said, "Strategy is the economy of force," which is why he is often referred to as the first strategist. A look back at history, however, reveals that many military leaders before him, such as Caesar, Sun Tzu, and Machiavelli, designed and formulated militarily motivated strategies... And each of these military strategies, some of which date back to antiquity, holds true for management by analogy. After all, resource concentration, surprise, innovation, organization and communication, the coordination of objectives and resources, and the consideration of one's own strengths are watchwords for the decision makers of today in their everyday business in the market, competitive, and corporate arenas. Thus, the understanding of strategy has not changed, only the venue is a different one for managers.

Some of basic military strategies that still hold true for management today are according to the authors (p. 7):

- 1. Concentration of resources
- 2. The element of surprise
- 3. Selection of a theater of war according to one's own strengths
- 4. Organization and communication between generals and battalions is top priority
- 5. Precise coordination of strategic objectives and resources
- 6. Substantial advantage through innovation (type of weapons, type of warfare)

Furthermore, that the phenomenon called strategy is not limited to warfare or business it is *embedded* in our *daily lives* as individuals or groups (organizations). Kotler *et al.* note (p. 5):

The concept of strategy is not restricted to the business world – private life, sports, and politics are also marked by strategies.

3.1.2 Early military writings

Scholars often point out that thinking on the phenomenon called strategy can be traced back to the writings of early military thinkers. These include classics such as: the work of Sun Tzu, *The Art of War* from around 500 B.C. (as noted before); Sun Bin's

work *The Art of Warfare* from around 400 B.C.; the work of the Greek historian Thucydides, *The Peloponnesian War* from around 500 B.C.; and the work of the Prussian military thinker Carl von Clausewitz's *On War* from 1832.

One of the earliest and well-known texts known on the phenomenon called strategy is Sun's Tzu classic work *The Art of War*. This classic *military*, *political and economical* text on strategy was written in ancient China around 500 – 400 B.C. The text must be analyzed in the context of that time when a number of kingdoms relied on military strength to *secure* their *existence*. Strategy in Sun Tzu's time was *a matter of survival*. His work may look simplistic to the amateur but behind the surface lies deep knowledge or wisdom on *human nature*.

Military institutions (organizations) in ancient China formulated their strategy so that they were able to respond to emerging threats and grab opportunities against rival kingdoms. However, Sun Tzu's text is still used today *for a reason*. It opens and gives us a view into the *mind of the strategist*.

The Art of War is used today to teach strategic thinking in the military, political, economic and business context (Hanzhag, 2007, p. 10). It is used in teaching strategy by universities and in organizations like firms. Strategy may thus be of vital importance in everyday life, business competition and war.

Sun Tzu wrote (Griffith, 1963, p. 63):

War is a matter of vital importance to the State; the province of life and death; the road to survival or ruin. It is mandatory that it be thoroughly studied.

If the word *war* is replaced with *competition* and the word *state* with *firm* (organization), then by analogy the relevance of this statement to (life and death of) each firm or corporation in our modern business world is obvious. Or the phrase would be like this:

Competition is a matter of vital importance to the Firm; the province of life and death; the road to survival or ruin. It is mandatory that it be thoroughly studied.

This pattern of thinking can go further and replace the same words with, the words *environment* and *band* (or tribe). Then it reads:

The Environment is a matter of vital importance to the Band (or Tribe); the province of life and death; the road to survival or ruin. It is mandatory that it be thoroughly studied.

Now the sentence describes the way our ancient hunter – gatherer bands, tribes or organizations may have viewed their environment in the past. Moreover, these views are *more or less the same* in linking *external forces* to *survival*.

Min Chen observes on Sun Tzu in his book *Asian Management Systems* (2004, pp. 34-35):

Sun Tzu's *The Art of War* has been regarded as the most influential classical strategic thinking in East Asia. Together with Confucianism and other classical Chinese thinking, Sun Tzu's strategic thinking was introduced to Korea and Japan and had significant influence on their native strategists...

There is obviously some compatibility between enterprise competitions and military warfare...

We would be able to expand on those aspects of business that more closely resemble war, namely, business competition and competitiveness. Where business and war overlap, the comparison is sound, the strategies interchangeable.

Military scholars have struggled to define the phenomenon called strategy as observed by Williamson Murray and Mark Grimsley in the book *The Making of Strategy: Rulers, States, and War* from 1994, (p. 2):

The concept of "strategy" has proven notoriously difficult to define. Many theorists have attempted it, only to see their efforts wither beneath the blasts of critics. B.H. Liddell Hart's well-known definition — the art of distributing and applying military means to fulfill the ends of policy" — may suggest the limitations of the definitional approach, for this forthright but unhappy example restricts the word strictly to *military* affairs, whereas in practice strategy operates in a much broader sphere.'

Note that the focus here is more on trying to defining a concept of strategy but not the phenomenon called strategy.

3.1.3 The military mind-set in East Asia

Rosalie L. Tung noted in her article "Strategic management thought in East Asia" (1994, pp. 55, 56):

...they must understand the mind-set behind East Asian business dealings. This mind-set influences the East Asians' overall approaches toward business, including the way they define competition and cooperation. Consequently, it affects the way they formulate and execute business strategies.

There are, however, several ancient works from which East Asians generally draw their business philosophies. These books are widely disseminated and read in East Asia, but get little or no attention in the United States. They include the better-known "The Art of War" and "The Book of Five Rings", as well as "The Three Kingdoms" and "Thirty—six Stratagems". This article provides synopses of these works and analyzes their most significant themes. Most importantly, it discusses their influence on the East Asian's approach to business cooperation and competition, and to the formulation, reformulation, and implementation of business strategies.

Tung's arguments are perhaps similar in character to Kotler's, Berger's and Bickhoff's regarding the *universal nature* of phenomenon called strategy, which was referred to earlier.

The marketplace as a battlefield

The East Asian approach to strategy is holistic, in his book *Asian Management Systems* (2004) Min Chen observes in the chapter "Sun-Tzu's strategic thinking and contemporary business" (pp. 34, 35):

The Chinese expression, 'Shang Chang Ru Zhan Chang', is translated to mean, 'The marketplace is a battlefield'. This is how Asian people view success or failure in the business world. From the Asian perspective, the success or failure of a family business directly influences the survival and well-being of the family. The success or failure of a nation's economy affects the survival and well-being of a nation. Therefore, many of them truly treat business competition as life-and-death warfare. Many Western businesspeople, for example, have observed that the Japanese conduct business as if they were waging war; using the term 'waging business' to describe the intensity of Japanese competitive strategies. Since the marketplace, in the eyes of Asians, is a battlefield, military strategy is held to be very useful in guiding business activities. Many Asian business leaders have attached great importance to the classical Chinese military strategies. Many of the principles behind these strategies are even commonly applied to daily-life settings.

Her again the universal nature of strategic thinking and acting is stressed. Learned strategic principles are "commonly applied to daily-life settings" (p. 35) as well as in warfare and business as Chen observes.

Holistic and dialectic approach

Sun Tzu's work is explored further in the paper "Strategic leadership: Sunzi Art of War" in the book *Leadership and Management in China, Philosophies, Theories and Practices* (2008) by the authors Sun, Chen and Zhang. The authors observe (pp. 143, 156):

...we elaborate Sunzi's strategic situationalism into (a) creating positional advantage in the environment, (b) creating organizational advantage within the organization, (c) building morale within the troops, and (d) leveraging and adapting to situations.

It is evident that Sunzi's leadership theory is based on his holistic and dialectic approach to the participants, elements, and processes of military organization conception and operation. The holistic approach is manifested primarily in two ways. The first is the comprehensiveness, that is, the extent to which the analysis of a given phenomenon cover all possible constituent elements.

Applying the holistic view to leadership, it places the leader in a field of social actions that consists of other actors and forces, which may enable and constrain the leader simultaneously, and it is up to the leader to take strategic actions which maximize and leverage enablers but minimize the effect of constraints.

The analogy between warfare and business is transparent. Organizations in a *competitive environment* (either military or business) try to create positional and organizational *advantage*, build morale and *adapt* to new situations. Furthermore, the emphasis on the *holistic view* to leadership and leadership skills are stressed and they are in a sense similar to Chester I. Barnard's (1938) emphasis on the leadership's role (See pp. 175-184, 258-284).

Focusing on the whole

In the book *The Strategic Advantage: Sun Zi & Western Approaches to War* (1997) published in China (edited by Cao Shan) is one more validation on contemporary relevance of Sun Tzu's work on the phenomenon called strategy. The authors observe (p. 9):

The Art of War is a military work with an emphasis on morality. It is concise and comprehensive, and full of symbols and implications. It is typical of Chinese classical military thought characterized by logical reasoning. The work approaches the macroscopic question of "laying plans before waging a war" from the level of strategy. In short, the work focuses on the whole. On synthesis, and on the macro-views.

By the end of the 20th century, with the introduction of missile and nuclear technologies into the military sphere, and the rapid development of other sophisticated weaponry and high science and technologies in general, changes in war conditions and progress in military science has far surpassed the imagination of people in Sun Zi's time. Nevertheless, attention to and application of *The Art of War* in the West has been raised to a new level, both in scope and in depth.

The holistic approach in East Asia builds on *centuries* of *lessons learned*. Behavior of individuals and understanding of human organizations is studied with a comprehensive focus on the whole "field of social actions that consists of other actors and forces" in "the importance of knowing self and knowing the enemy" and in "the collective followership, or the unity and morale of the organizational members" (Sun,

Chen & Zhang, 2008, pp. 156, 165). Though studying the whole is important, a strong emphasis exists on studying the individual particularly as leaders in Sun Tzu's work. These are factors like; moral influence, foresight (or wisdom), self-knowledge, motivation, humanity, skills, fairness, trust and various psychological factors. In a sense, the essential factors for *human cooperation*.

Sun Tzu's approach to cooperation in organizations or to the whole and the role of leaders is in many ways similar (analogous) to Barnard's (1938) approach to the whole (the systems approach to formal organizations), executives (persons in positions of control of whatever degree) and its purpose. There is recognition of the needs and psychological factors affecting each individual and members of a formal organization. Both seek to understand human nature, the nature of organizations and the interactions with an ever-changing environment.

The knowledge of these elements creates the foundations for *better* strategic decisions and actions for the benefit of the organization and the individual.

3.2 Strategy and business

The phenomenon called strategy concerns both the micro- and macroeconomics perspectives to organizations and nation states. Strategic decision-making and acting occurs at both micro and macro levels. As societies became *industrialized* with monetary systems, markets and firms then economics and management (including strategy) gathered momentum. However, *modern thinking* on the phenomenon called strategy in the *Management sciences* is confined to a narrow timeframe in human history.

Some scholars in the academic field of strategic management point to dates like 1911 when the Harvard Business School started a course called Business Policy or to Alfred Dupont Chandler's work *Strategy and structure: chapters in the history of the industrial enterprise* from 1962. Other commentators like John McDonald (1950)

remark that the work of John von Neumann and Oskar Morgenstern, "Theory of Games and Economic Behavior" from 1944 on *Game Theory* to mark the beginning of the modern thought on the phenomenon called strategy. McDonald observes in his book, (pp. 13, 14):

The concept of strategy presented here is new in the history of human thought. It was originated by one of the chief participants in the development of the atomic bomb, the young and already great contemporary mathematician, John von Neumann, and developed in collaboration with the eminent economist, Oskar Morgenstern, under the title, Theory of Games and Economic Behavior.

John McDonald is known for mentoring Alfred Dupont Chandler on "the workings of big business and to think about the historical development of corporate structure and strategy", (McKenna, 2006, p. 114), as Chandler remarks in the *acknowledgments* of his influential book *Strategy and structure*. The 20th century, with its *unprecedented changes*, on so many levels of human society introduced the *contemporary thought* in business and economics.

Harvard Business School and Business Policy

The Harvard Business School started as early as 1911 to teach strategy under the term of business policy. The book *Business Policy Text and cases* (fifth edition 1982) by C. Roland Christensen, Kenneth R. Andrews, Joseph L. Bower, Richard G. Hamermesh and Michael E. Porter, tells the story of how the Harvard Business School started a course (as noted earlier) called Business Policy (i.e. now strategy) in 1911 (p. xi). The purpose was to educate senior managers. Thus, the focus of teaching Business Policy or Strategy for business was on big companies.

Out of many texts, *Business Policy Text and cases* (1982) gives one of the *most valuable accounts* of how *advanced* the field of strategy had become in its *early stages*. It takes into account many of the fundamental perspectives and problems that that the field is still struggling to resolve.

3.2.1 The early period 1938-1962

Already in 1938, Chester I. Barnard published his classic work *The Function of the Executive* a study on organizations and *strategy* as well. Barnard uses a holistic, dynamic and (the) *systems* approach in studying the organization (as cooperative systems). He uses the same approach in studying the individual as well. Barnard provides useful arguments that answer many essential questions in modern strategic management. Those are questions regarding the very *existence* of organizations (including firms) and strategic decision-making and acting. He developed an *integrative* theory that included *strategic*, *economic*, *organizational*, and *behavioral* factors into a framework. Moreover, this framework is dynamic, systemic and holistic in its nature.

Chester I. Barnard's contribution to strategic management

Barnard (1938) introduces his theory "of the strategic factor" to "the understanding of organization and the executive functions as well as, perhaps, individual purposive conduct" (p. 202) or the processes of *strategic decision-making and acting* or for "effective decisions", (p. 204). Barnard observes (pp. 42, 43, 86 and 200-231):

The necessity of having a purpose is axiomatic, implicit in the words "system," "coordination," "cooperation." It is something that is clearly evident in many observed systems of cooperation, although it is often not formulated in words, and sometimes cannot be so formulated. In such cases what is observed the direction or effect of the activities, from which purpose may be inferred.

A formal system of cooperation requires an objective, a purpose, an aim. Such an objective is itself a product of cooperation and expresses a cooperative discrimination of factors upon which action is to be taken by the cooperative system. It is important to note the complete distinction between the aim of a cooperative effort and that of an individual... It is an objective of the group efforts, from the results of which satisfactions accrue to the members of the group. In most cases, as we shall see, there is no danger of confusion of personal with cooperative aim - the objective obviously could not be personal. When the purpose of a system of cooperation is attained, we say that the cooperation was effective.

...the control of the changeable strategic factors, that is, the exercise of control at the right time, right place, right amount, and right form so that purpose is properly redefined and accomplished.

The strategic factor is, then, the center of the environment of decision. It is the point at which choice applies. To do or not to do this, that is the question.

...repeated decisions involving constant determination of new strategic factors are necessary to the accomplishment of broad purposes or any purpose not of immediate attainment. In an individual, this requires a sequence of decisions at different times and places. In an organization, it requires a sequence of decisions at different times and by different executives, and other persons, in different positions. A broad purpose and a broad decision require fragmentation of purpose into detailed purposes and of principal general decisions into detailed subsidiary decisions. The latter for the most part can only be effectively made in the proper order. It is; the series of strategic factors and the actions that directly relate to them that determine the course of events, not the general decisions.

It goes perhaps without further saying that the process of decision is one of successive approximations - constant refinement of purpose, closer and closer discrimination of fact – in which the march of time is essential.

The developments of processes, tools, and men are not equal in all directions. They are not equally good in respect to the various elements of the environmental situation. Every such situation to which the purpose of man applies always involves in some degree physical, chemical, biological, physiological, psychological, economic, political, social, and moral elements.

All *formal organizations* (and individuals) thus have *objectives, purposes or aims*, and therefore a strategy or strategies to *attain* their purpose (or purposes). Strategy or strategies, at *every given point in time* (See figure 6) are a *result* or *outcome* of *continuous interactions* between:

- a. The *purpose*, (or purposes) of an organization or for an individual. The purpose (or purposes) is based on; human needs desires or other emotions.
- b. *Strategic decisions*. Strategic (or effective) decision-making requires discrimination or choosing among a stream of "strategic factors" (the evaluation or discrimination among possibilities). Factors can be a limitation or offer new possibilities in view of the purpose (or purposes), requiring adaption, change or termination.
- c. Actions taken. Actions involve the implementation of a strategy or a stream of strategic actions. They do affect both the external environment and the

- *internal environment*. Actions can affect both decision-making and purpose (or purposes), requiring adaption, change or termination, and
- d. *Results of actions*. Results of (real or) actual actions that are taken. They do affect both the *external environment* and *the internal environment*. Thus they can affect strategic decision-making, strategic actions and the purpose (or purposes) requiring adaption, change or termination.

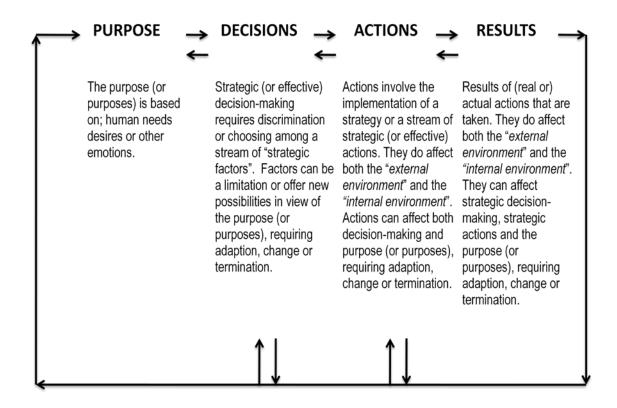


Figure 6. Chester I. Barnard's basic approach to purpose, strategic decision-making, and acting in "The theory of strategic factor".

Source: Figure based on *The Function of the Executive* (1938), "the theory of the strategic factor" (pp. 42, 43, 86 and 200-231).

Therefore, as Barnard points out it is *self-evident* that every organization has a *purpose* and/or purposes, and consequently a *strategy* or strategies that can be both implicit and/or explicit. Like an organization, the each *individual* has an implicit and/or explicit *purpose* or purposes as well. What is "correct" to an *individual* depends on his *purpose* (p. 10).

For an individual or members (and/or stakeholders) of an organization; "The attempt to limit the conditions of choice, so that is practicable to exercise the capacity of will, is called making or arriving at a 'purpose'" (p. 14). Thus, the purpose *emerges* out of some form of an *important* decision-making process (or processes).

Various *internal* and *external* forces affect all formal organizations (as well as individuals) as Barnard notes on cooperative systems (p. 46):

There are no cooperative systems in which physical, logical, personal, and social elements or factors are not present.

Strategy for an individual or an organization thus exists in general terms because of some *purpose* (or purposes) among members and/or stakeholders. The existing *important* purpose (or purposes) is in general terms the *foundation* for strategic decision-making, both for and individual or the members (and/or stakeholders) of an organization. To Barnard a strategy (or strategies) based on purpose (or purposes) can be *deliberate* and/or *emergent* in nature as he observes (pp. 194, 195):

Whatever the occasions or the evidences of decision, it is clear that decisions are constantly being made. What is the nature of the environment of decisions, the materials with which they deal, the field to which they relate? It consists of two parts; $\{a\}$ purpose; and $\{b\}$ the physical world, the social world, the external things and forces and circumstances of the moment.

All of these, including purpose, constitute the objective field of decision; but the two parts are of radically different nature and origin. The function of decision is to regulate the relations between these two parts. This regulation is accomplished either by changing the purpose or by changing the remainder of the environment.

Thus a *change* in the physical world or the social world may easily lead to a *change* in purpose (or purposes) and thus in strategy. Even though by a *formal organization*, he meant; "...that kind of cooperation among men that is conscious, deliberate, purposeful" (p. 4).

Chester I. Barnard on dynamic capabilities and strategic management

David J. Teece, (2009) argues in his book *Dynamic Capabilities and Strategic Management* (2009) that Chester I. Barnard (1938) did *ignore* the importance of the

strategic functions that managers perform in dynamic environments. Teece notes (pp. 69, 70):

The particular functions of management that Barnard recognizes include control, supervision, and administration (Barnard, 1938: 6), which are operational activities that relate to the business of keeping an organization functioning. Although these (managerial) functions must be performed, they ignore the importance of the strategic functions that managers perform in dynamic environments. Today, many of the firm's assets are intangibles, and flexibility, entrepreneurship, and adjustment and adaptation to competition and changing consumer needs are paramount.

Such criticism is perhaps not well grounded for Barnard indeed addresses dynamic capabilities and the strategic functions of managers, which he calls executives functions, or "all those who are in positions of control of whatever degree" and in all *types* of organizations (pp. 6, 7). Barnard certainly addresses both the dynamic nature of organizations and its environment throughout his book. For example on page 59, he notes:

A cooperative system is incessantly dynamic, a process of continual readjustment to physical, biological, and social environments as a whole.

Thus, a cooperative system is "incessantly dynamic" or *continually* dynamic. Such continual readjustments to both *limitations* and *opportunities* are obviously made by the *strategic functions* of *decision-makers* like managers. This "continual readjustment" concerns the fundamental question of the very "survival" of the organization (pp. 60, 61).

Some key concepts introduced or used by Barnard (1938) in his work are:

- > Purpose of an individual and common purpose
- > Cooperation, cooperative effort, cooperative behavior and cooperative system
- Formal organizations and informal organizations
- Creativity or cooperation is a creative process

- Origination
- > Internal and external environment
- > Effectiveness and efficiency
- Nature of the individual versus the nature of the organization
- > Individual limitations
- Executive functions or persons in positions of control of whatever degree
- > Incentives or inducements
- Satisfactions
- > Zone of indifference
- > Specialization
- ➤ Morals
- > Integration and conflict resolution
- Environment of decision and opportunistic decision
- ➤ Change and adaptation to conditions of environments
- > Strategic factors and effective decision-making
- > Leadership and authority

Oliver E. Williamson on Chester I. Barnard's work

Oliver E. Williamson addresses Barnard's work in his book *The Economic Institutions* of Capitalism: Firms, Markets, Relational Contracting (1985). Williamson observes (p. 6):

Barnard's remarkable discussion of internal organization thus asserts or develops the following:

- 1. Organization form—that is, formal organization—matters;
- 2. informal organization has both instrumental and humanizing purposes;
- 3. bounds on rationality are acknowledged;
- 4. adaptive, sequential decision-making is vital to organizational effectiveness; and
- 5. tacit knowledge is important.

Albeit lacking in comparative institutional respects—no firm or market comparison, for example, was attempted—a concept of the firm as governance structure was plainly contemplated.

Oliver E. Williamson again notes Barnard's work in the book *Organization Theory:* From Chester Barnard to the Present and Beyond (2003, p. 3):

...the book had a timeless character, and its current research significance was undervalued.

Not many academics write scholarly books. Not many scholarly books have a lasting impact on a field of study. The Functions of the Executive is a scholarly book that has had a significant and lasting influence on the study of organizations.

Joseph T. Mahoney on the works of Chester I. Barnard and Herbert A. Simon

Joseph T. Mahoney's in his book *Economic Foundations of Strategy* (2005), explores the classic works of Chester I. Barnard *The Functions of the Executive* from 1938 and Herbert A. Simon *Administrative Behavior: A Study of Decision-Making Processes in Administrative Organization* from 1945. Mahoney observes from Barnard's work, (p. 15):

In my judgment, this book is the most high-powered intellectual contribution to organization or economic theory ever written by a practicing manager. Barnard's (1938) purpose is to provide a comprehensive theory of cooperative behavior in formal organizations! Barnard (1938) observes that formal organization involves conscious, deliberate, and purposeful cooperation among people. One of the indispensable functions of an organization is to promote communication among these individuals. Another function is to maintain cohesiveness by regulating the willingness of various stakeholders to serve the organization, and by maintaining the stability of authority. A third function is to maintain a feeling of personal integrity, of self-respect, and of independent choice.

And from Simon, (p. 20):

Simon (1947) provides a brilliant synthesis of the practical teachings of Barnard (1938) and the evolving positive science of organization theory. As already noted, Simon (1947) is a landmark in organization theory as well as the economics of organization.

Barnard's and Simon's thinking on strategy

Thus, both Barnard and Simon address decision-making, strategic thinking and acting. Barnard frames that type of thinking and acting in his theory of *strategic factors*, (1938, pp. 201-211), and Simon in *decision-making*, *behavior alternatives and time*, (1945, p. 67).

Barnard's contribution to the understanding of the phenomenon of strategy is however *mostly* neglected when it comes to reviewing the modern literature on strategy and strategic management. It is a puzzle that so few authors studying the *art* and *science* of the phenomenon called strategy do not recognize the importance of Barnard's analysis and understanding on strategic thinking, both within an organization (like a firm) and by each *individual*. Strategy is after all created in the human *mind*, it changes in the *mind*, or it is replaced in the *mind* and it disappears from the *mind*. The most noteworthy exceptions are perhaps found in the works of Henry Mintzberg, Joseph T. Mahoney, Oliver E. Williamson and Herbert A. Simon.

3.2.2 The middle period 1962-1998

Chandler's landmark book *Strategy and structure: Chapters in the history of the industrial enterprise* (1962) was probably the turning point in *promoting* the concept or term strategy. It introduced the concept use of strategy to the *business community* and the usability for the increasing number of the new form of business (the industrial enterprise). Strategy and structure tell the story of how enterprises and markets had been growing larger following technological changes like the huge impact of a new railroad system in North America. Corporations began to try to *control* market forces and tried harder to influence their internal and external environment. In the book, Chandler *emphasizes* that a company's *structure follows its strategy*; long-term decisions are strategic but short-term decisions tactical. His approach has some

military flavor, as the roles of strategy and tactics play in decision-making functions indicate.

Strategy an academic field in 1965?

To some like Colin White (2004, pp. 9, 10) the academic field of strategic management as a *subdivision* of management studies was born in 1965. In that year, two momentous books on strategy came out, first as noted earlier *Business Policy, text and cases* (mentioned earlier) and second was H. Igor Ansoff's *Corporate Strategy*.

Business Policy, text and cases (1965)

The first book *Business Policy, text and cases* (1965) was written by Edmund P. Learned, C. Roland Christensen, Kenneth R. Andrews and William D. Guths. What is interesting is that this book was based on Harvard's Business Policy course, with the use of *cases* (Bower, 2008). Bower observes (p. 270):

With the development of case writing in the 1920s, the classroom visits were replaced with case discussions much like those with which we are familiar today. Cases evolved as methodology, resources, and access to companies improved. The foundations of the modern general management course were laid in the postwar period when a framework of situational analysis was introduced. Students were asked to "size up" the situation presented in the case, plan a course of action, and propose an organization to implement the plan, along with measures that would permit corrective action.

The book included Andrews SWOT model (Strengths, Weaknesses, Opportunities, Threats), and ideas from scholars like Chester I. Barnard (*The Functions of the Executive*), Philip Selznick (*Leadership and Administration*), and Alfred Dupont Chandler Jr. (*Strategy and Structure*) (Bower, 2008).

However, the term *policy* was *vague* and Barnard for example had criticized it and deliberately avoided using it. In a *Harvard Business Review* article in March 1940, (p. 296), Barnard notes: "I avoided the word 'policy' in any connection. I never use it if

I can dispense with the word without being pedantic, because its meanings are so numerous."

The book *Business Policy* (1982) reveals how the core idea of Corporate Strategy emerged. It was developed in Harvard under the leadership of Kenneth R. Andrews, C. Roland Christensen and Edmund P. Learned, (p. viii). In the process the term *strategic management* may have been born. At the time, it meant *the management of the strategic process* called, "strategic management for short" (p. 542).

Purpose, organized effort, human needs and organization processes

The book reveals even more, that is how the phenomenon called strategy and its *purpose* was *perceived* by the authors in 1982. For example, the authors note (p. 4) that the real:

...purposes of organized effort in business as elsewhere are usually somewhat unclear.

Furthermore, that the concept of strategy (p. 365) is a:

...human construction and in the long run must be responsive to human needs.

They not as well on the concept of Corporate strategy that it is viewed as an "organization process" and is in part *inseparable* from the "structure, behavior, and culture" of organizations like a company (p. 97).

Bounded rationality, biases and strategy

The authors recognize that humans are *biased* and can have "blind spots" and that managers have to be on guard against such phenomena if they are to avoid them (p.

178). Furthermore, the authors recognize that humans do have a *bounded rationality* and it *affects* strategy. They observe that (p. 110):

...identification of opportunity and choice of purpose are such challenging intellectual activities we should not be surprised to that persistent problems attend the proper evaluation of strategy.

Commitment, ethics and strategy as a key to simplicity

The human role of *dedication* is important to strategic actions and the others observe that "Strategy must ultimately inspire commitment" (p. 365).

In the book *Business Policy* the importance of the *morality* and *ethics* is recognized and the important view that these factors may "be considered a product of value" (p. 448). Another important observation is that strategy is in a way a key to *simplicity*, that it has a simplifying property (p. 551), the authors note (p. 554):

...a conception of strategy brings simplicity to complex organizations.

Strategy continuously evolves and is both deliberate and emergent in its nature

Yet a another important observation is that the formulation and implementation of strategy is an *intertwined act*, in other words both *deliberate* and *emergent* in nature, and its aim is as Barnard, (1938) had observed, to *accomplish* the *purpose* of the organization. Furthermore, (in line with Barnard's ideas) that strategy (p. 541):

...even when it has revealed it soundness it will continue to evolve.

Corporate strategy is the outcome of decision process. The authors define strategy that it is a "pattern of decisions" (p. 93) that: (a) determine shapes (structure), reveal objectives, purposes, or goals, (b) produces principal plans and policies for achieving these objectives, purposes, or goals, and (c) for a firm it defines the business the

company intends to be in, (d) defines the kind of economic and human organization it intends to be, and (e) defines the nature of the economic and noneconomic contribution its stakeholders and the general community.

In general, all individuals do strategy

It is noteworthy that the authors view of strategy and the individual in *Business Policy* is in line with Barnard's and Herbert A. Simon's ideas as well, that strategy or strategic decisions are in general made by *all individuals*, based on individual awareness, understanding, personal preferences, values and purpose, (pp.364-365).

The book is in line with the ideas of Chester I. Barnard (1938), Herbert A. Simon (1945) and Henry Mintzberg (1987). This is the *human approach* to strategy both for organizations and for individuals. Moreover, Barnard, Simon and Mintzberg are all referred to in a *positive* way. However, that does not mean that analytical tools of organizations and industries are ignored. They are embraced as well in *Business Policy* (1982). The book includes Michael E. Porter's tools for analyzing company environment, such as the five forces model and the competitor analysis model, though the book uses the term, "comparative advantage" (p. 188) but not "competitive advantage". Even though Porter did use both terms in his landmark book Competitive Strategy from 1980.

Corporate Strategy (1965) - Strategy as a detailed long-term strategic planning

The second significant book was by H. Igor Ansoff, *Corporate Strategy* (1965), with his systematic approach to strategy with techniques, models and analytical tools such as competence grids, flow matrices, charts and diagrams. Ansoff's approach was a *very detailed* but a *rigid form* of long-term strategic planning.

Strategy an academic field in 1980?

To scholars like Azar and Brock, (2008) the academic field of strategic management were established later or around 1980. The authors note (p. 782):

...it was only after the Academy of Management's establishment of a strategy division in the early 1970s and the birth of the Strategic Management Society in the early 1980s that the strategy field was able to proclaim its independence as a legitimate academic discipline.

Competitive Strategy (1980) - Using strategy to gain a sustainable competitive advantage

Michael E. Porter introduced a fresh perspective, new concepts and tools in his influential books *Competitive Strategy, Techniques for Analyzing Industries Competitors* (1980) and *Competitive Advantage* (1985) like the five forces model a widely used tool today in helping business firms for a structural analysis of industries. He highlighted the concepts of: *competitive advantage, positioning, competitor analysis framework, competitor intelligence system, competitive warfare, industry forecasting, the value chain, strategic groups, and clusters.*

His work provided guidance to managers, other practitioners and academic scholars on using tools based on microeconomic theory or industrial organizational economics, (the structure-conduct-performance logic, S-C-P) to study and aid in creating strategy for firms in a competitive environment.

Porter introduced his three generic strategies for a company to aim for what he calls, a "sustainable competitive advantage" (1985, pp. 11, 515), that is (pp.25, 26):

- 1. Cost leadership strategy (Becoming a low-cost producer in an industry)
- 2. Differentiation as a strategy (Based on the creation of some unique features of products or service for the customer)

3. Focus strategy (Focusing on a specific market segments or a narrow scope of customers in an industry)

The term sustainable has caused some confusion but today some scholars like Richard Lynch, (2006, p. 78), have remarked that is should mean is a "an advantage over competitors that cannot easily be imitated" and thus is usually a long term competitive advantage

Porter recommends that companies in a competitive environment should choose a clear strategy and avoid getting *stuck in the middle* of strategies. In *Competitive Strategy* (1980), Porter states (in the introduction to the book) that:

Every firm competing in an industry has a competitive strategy, whether explicit or implicit.

He includes the wheel of competitive strategy context, in which competitive strategy is formulated. (pp. xiii - xviii) Porter's book Competitive Strategy was in a sense a kind of a handbook for business firms on how to win in a competitive environment. Porter's other books and articles have been highly influential in both business and academy. The works of Chandler (1962), Ansoff (1965) and Porter (1980) have been categorized as belonging to the *Industrial organization* tradition of strategic thought (Jashapara, 2004).

Sun Wu's Art of War and the Art of Business Management (1984)

Almost at the same time, or in 1984, the book *Sun Wu's Art of War and the Art of Business Management*, by Li Shijun, Yang Xianju and Qin Jiarui was published in China (Sun Tzu called Sun Wu or Sun Zi). The book was in Chinese and dedicated to pioneer entrepreneur's enthusiasts for applying Sun Wu's Art of War to business management. This is a serious book on: *business competition, competitive advantage, intelligence gathering, competitor analysis, deception, decision-making, timing, administration, positioning, leadership, self-knowledge, unorthodox methods, strategy and more.* It is interesting that the authors note about the nature of management, "It is

as old as the conscious activities of mankind and human civilization" and that "Management is as much and art as a science" (p. 5).

Much like Porter's book *Competitive strategy*, the Chinese work, *Sun Wu's Art of War and the Art of Business Management* is a kind of a handbook for the *battlefield* of business. This book reveals that Japanese firms and corporations did and do study Sun Zi (Sun Tzu) classic work in order to strengthen both management and administration (p. 15).

Furthermore, both China and Japan were and are well aware of developments in modern American management theory. The book mentions some earlier works on strategy like the Japanese book *Management by Art of War* by Takeo Ohashi, who remarked that "This way of business management is even more rational and effective than that in the United States" (p. 15). Thus, in East Asia countries like China, Japan and Korea have and do study strategy and can apply *the best of both worlds* that is the Western and Eastern view of strategy (Chen, 2005).

Henry Mintzberg's Five Ps for Strategy (1987)

Henry Mintzberg is another highly influential scholar in the field of strategic management. Mintzberg, and others, have argued in his work that there is *more* to strategy than planning and long-term goals or a vision. Many factors in an *uncertain* external and internal environment do influence what kind of strategy is *really at work* in an organization and with individuals as well. Unpredictable factors can lead to *emergent* strategies that have not been planned. Strategy may need to be *crafted* and an organizational *learning process* is important. Mintzberg has pointed out that strategies in organizations can be the result of different forces. For clarification at least three kinds of strategies may emerge (usually some combination), that is *intended*, *realized* or *emergent* strategies.

Strategy Safari, a guided tour through the wilds of strategic management (1998)

The book *Strategy Safari*, a guided tour through the wilds of strategic management (the ten schools of strategic thought) by Henry Mintzberg, Bruce Ahlstrand and Joseph Lampel from 1998 is one of the better-known works on strategy and it revels the complex nature of the phenomenon.

Mintzberg's books like *The Nature of Managerial Work*, from 1973, and articles like "The Strategy Concept I: 'Five Ps For Strategy" (1987) and "The Strategy Concept II: Another Look at Why Organizations Need Strategies" (1987), and later books and articles with or without others scholars, including his book *Tracking Strategies: Toward a general theory* (2007) have been influential in both business and academy on the topic of strategy and strategic management.

Mintzberg's work along with the works scholars like Chester I. Barnard, Herbert A. Simon, Elton Mayo, Richard M. Cyert and James G. March and others on *human behavior*, *rationality* and *decision-making* in organizations have been categorized as belonging to the *Institutionalist* perspective on strategic thinking (Jashapara, 2004).

The resource-based view and Strategic Intent

From around 1984 (originating in Edith T. Penrose's work *The Theory of the Growth of the Firm*, 1959) to the present day, some scholars have started to focus on organizational *resources* as means to gain competitive advantage which is the resource-based-view (RBV) of strategy development. The main argument is that unique organizational resources (its assets, capabilities, processes, attributes, information, and knowledge) may enable strategies which improve both efficiency and effectiveness and thus competitive advantage. This view was promoted by scholars like Wernerfelt (1984), Rumelt (1984) and Barney (2001). The aim is to search or develop resources that can't easily be *imitated* to gain the so-called sustainable competitive advantage. Historically the origins of the resource-based-view can be traced to scholars like Coase, Selznick, Penrose, Chandler and

Williamson, where the emphasis is put on the importance of resources and their implications for firm performance (Rumelt, 1984, p. 557).

The influential concept of *Core Competence* was introduced by C.K. Prahalad and Gary Hamel, article "The Core Competence of the Corporation" (1990) as "The Roots of Competitiveness" (p. 81) emerged from resource-based view (RBV) and its implications for strategy.

Prahalad and Hamel also introduced the concept of Strategic Intent, (a long-term ambitious organizational strategy or purpose), in their article "Strategic Intent" (1989) after having studied how East Asian companies changed the rules of the game of strategy and became major competitors against corporations in the United States, on a global scale.

Tools and strategy

Currently there are hundreds of tools available to organizations for support in developing or doing strategy. Of the better known are tools like; Scenario planning, Balanced Scorecard, SWOT analysis, Value Chain, Porter's Five Forces, VRIN or VRIO analysis, PESTEL analysis, Strategy Canvas diagrams and Data Mining tools. These can *support* individual and collective learning, improve processes and facilitate an understanding of new perceptions.

Turf wars

Following the birth of the field of strategic management, the academic study of strategy got more arrogant, hostile and myopic in nature. In the last thirty years, the *debate* about the *concept* strategy has been aggressive among both academic scholars and practitioners. Stephen Cummings and David Wilson describe these "turf wars" in the book of *Images of Strategy* (2003, pp. 2-3):

Academic writing on strategy almost disappeared up an alley of its own making...'Turf wars' were fought over which 'school', image or set of maps most accurately represented strategy. Or by which set of criteria strategic decisions should be made.

Some claimed industrial economics as the discipline to which we must look for foundations. Others countered that psychology, history and political science were more useful means of grasping the strategy nettle. The disagreements became so fractious that scholars despaired that we could not even come up with a logically coherent definition of the field, and wrote editorials asking: 'Were the many decades of vigorous development wasted? Does anybody at least know what strategy is?'

3.2.3 The modern period 1998 and beyond

New perspectives on the phenomenon called strategy continue to emerge for example in his book *What is strategy – and does it matter?* (2001) Richard Whittington explores the dynamic nature of strategy from four *perspectives* or *theories* of strategy. These are the classical, evolutionary, processual and systemic perspectives on strategy. He introduces four basic conceptions of strategy, *the rational, the fatalistic, the pragmatic* and *the relativist* conceptions.

All have radically different implications on *doing strategy*. His aim was to encourage thinking about the value of each perspective and conception. Whittington's conclusion is that there "is no one best" way to *do strategy* (p. 120) but it is important to have a *sense for* and a good *understanding of* strategy.

Classical Strategy	Unitary and deliberate
Processual Strategy	Pluralist and emergent
Evolutionary Strategy	Unitary and Emergent
Systemic Strategy	Pluralist and deliberate

Figure 7. Whittington's generic perspectives on strategy.

Source: Rowe, 2008, (p. 17).

Creation of valuable empirical insights

Studies on can strategy give us *valuable insight*, for example Kathleen M. Eisenhardt's study "Making Fast Strategic Decisions in High-Velocity Environments" (1989, p. 544) revealed the value of teamwork. That involves the *right* individuals that make up the team and the *right* corporate culture. That *may* lead to a successful pattern of behavior or the success of dynamic cooperative effort that in turn creates *superior performance*. She notes:

Fast decision makers use more, not less, information than do slow decision makers. The former also develop more, not fewer, alternatives, and use a two-tiered advice process. Conflict resolution and integration among strategic decisions and tactical plans are also critical to the pace of decision making. Finally, fast decisions based on this pattern of behaviors lead to superior performance.

Strategy as Practice

A popular modern approach in the study of the phenomenon called strategy is one of the *strategy as* approaches (see appendix), that is Strategy as Practice. It focuses on "analysing what people do in relation to the development of strategy in organizations" requiring "a more micro level of understanding" (Johnson, Langley, Melin and Whittington, 2007, see introduction). Its approach is *pragmatic* and its aim is to help practitioners like managers to work more effectively. However, Strategy as Practice is rooted in the works of various scholars as observed by Golsorkhi, Rouleau, Seidl and Vaara, (2010, p. 3):

Strategy as Practice research developed from several sources. Classics of strategy process research (Pettigrew 1973; Mintzberg *et al*. 1976; Mintzberg and Waters 1985; Burgelman 1983) and various attempts to broaden and renew strategic management (Eisenhardt 1989; Gioia and Chittipeddi 1991; Knights and Morgan 1991; Johnson and Huff 1998; Langley 1989; Oakes *et al*. 1998) can be seen as its intellectual roots. However, despite its many important predecessors, it has only been within the last few years that Strategy as Practice has established itself as a clearly defined sub-field in strategy research, bringing together like-minded colleagues whose ideas might otherwise have 'remained marginal and isolated voices in the wilderness' (Johnson *et al*. 2007, p. 212).

3.3 Summary

Population pressures, the arrival of agriculture, domestication of animals, and technological advancements new types of societies where born from around 12,000 years ago. These societies were centralized, stratified, hierarchical and *more complex*. These *value creation systems* or entities grew larger. At the dawn of civilization, the *competition* for limited resources had escalated into warfare.

Indications of the use of strategy in warfare are numerous in history. Furthermore, the phenomenon called strategy was equally used in business as well. Most of the time business and warfare were closely connected or in some way integrated.

Modern thinking on the phenomenon called strategy is confined to a narrow timeframe in human history. Since the period from 1950 and especially from around 1975 and to this day, literature on management and business has been *growing rapidly*

in with numerous ideas for *business success*, solutions or on business education, (including fads and fashion). Pankaj Ghemawat observed (2002, p. 71) that:

It seems difficult to maintain, however, that all the patterns evident"..."conform to monotonic ideals of progress.

Illustration of ideas on strategy in the 20th century

In the article "Reinventing Strategic Management New Theory & Practice for Competence- based Competition" (1997, p. 305) the authors Ron Sanchez and Aimé Heene give an illustration of *their* understanding of the development of the strategy field in the 20th century. On the axes between economic and behavioral (or organizational) perspectives, multiple approaches to strategy have emerged, like *holistic, cognitive, systemic and dynamic* views. However, many of these ideas are *not* new at all. Their *origins* may be found in earlier texts. Thus, *in a sense*, some or many ideas or theories are *reinvented* from old ones.

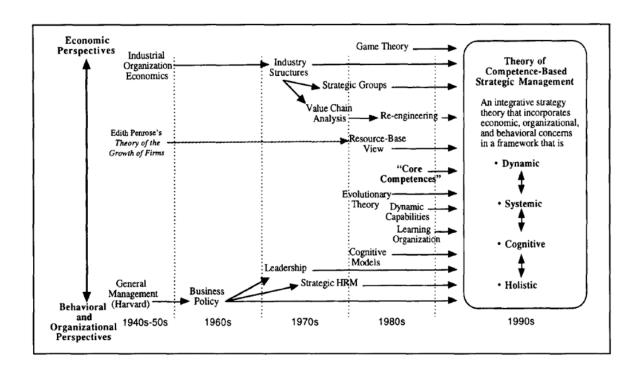


Figure 8. A history of ideas on strategy in the 20th century.

Source: Sanchez and Heene, 1997, (p. 305).

Again, by referring to Barnard's work (1938), as an *example*, there is no mention of his ideas in this illustration or the article. That applies as well to the *majority* of the literature on strategy. Barnard developed his integrative strategic approach or theory that included *economic*, *organizational*, and *behavioral* concerns in a *framework* back in 1938.

Furthermore, that framework is *dynamic*, *systemic* and *holistic* in nature, as was discussed earlier. Barnard's *pioneering approach* to strategy in organizations is thus largely *ignored*. This is surprising given the classic and timeless nature of his ideas that still have *much relevance* in today's academic and practical discussions on the phenomenon called strategy.

Strategy as *a way of thinking and doing* thus *evolved* throughout *human history* and became more formalized and *materialized* in the end as an academic field of study. The phenomenon called strategy is *valued* and its study as well.

4. Strategy – strategic management

Organizations, as observed by Richard L. Daft (2001) are: social entities, which are goal-directed, are designed as deliberately structured and coordinated activity systems and are linked to the external environment. Daft observes (pp. 12, 52 and 53) that they:

...are made up of people and their relationships with one another. An organization exists when people interact with one another to perform essential functions that help attain goals.

Organizations are created and continued in order to accomplish something.

...exist for a purpose. This purpose may be referred to as the overall goal, or mission. Different parts of the organization establish their own goals and objectives to help meet the overall goal, mission, or purpose of the organization.

To accomplish something they have a "strategy" to "achieve organizational goals" (p. 57).

Daft's observation though not new is an excellent reminder of how strategy exists because of an *important purpose* and that organizations exist because of a *purpose* as well. In fact, *each individual* usually belongs to a *number* of *various types* of organizations in today's society as noted by Barnard (1938). The importance of this observation is that *all* organizations, *by definition*, do have a strategy or strategies. This observation *seems simple* and is in harmony with earlier chapters of this thesis. However, there are different views about this *connection* and on what exactly is *meant* by the concept strategy and its nature.

The field of strategic management has mostly focused on one type of organizations *the firm*. This may be understandable for the firm is the fundamental apparatus in today's creation of economic value for customers, their owners and society. The emergence of the *modern firm* perhaps was a *natural* economic response, following a more effective and efficient way to perform various activities or work due to changes

in the society. This includes monetary systems, technological changes, new machines and public transportation.

The academic field of strategic management is thus rather myopic in the literature by focusing almost exclusively on *firms* in its study of phenomenon called strategy. A *holistic focus* on the *general nature* of all types of organizations and *their strategies*, i.e. including families, kin, friends, religious groups, armies or other public originations is *not* apparent. Neither is the study on the *use of strategies* by societies, kingdoms, states or nations apparent in the literature.

The many different views on the phenomenon called strategy have caused *confusion* for practitioners, academics and students of strategy. There are *gaps* in the literature, which need to be addressed and resolved. However, strategy can be *viewed* through many *different lenses* and *in a way* both as a *simple* and then again as an *enormously complex* phenomenon. This is perhaps because strategy is *intertwined* with so many human activities. Furthermore it may be influenced by or include a variety of things or ideas. To grasp strategy as *one truth* or as some *united one-whole* is difficult.

In studying strategy *multiple perspectives* should thus be *welcomed* even if there no general agreement on a certain point of view. People *do* change *their views* as well, or at least one should hope so. Furthermore, popular perspectives should not be *idolized* as the one and only *true* perspective as Mintzberg et al. (1998, p. 15) observed that "For every advantage associated with strategy, there is an associated drawback or disadvantage." This applies to definitions of terms and an explanation of a phenomenon as well.

This chapter focuses on the *many different aspects and views* on the phenomenon called strategy. Those perspectives are important and each has some *valid point* even though it may have its drawback.

4.1 Historical origins of the word strategy

The word strategy is young in our resent history according to the *Merriam-Webster Dictionary & Thesaurus*. The term dates to the early 19th century when it entered the English language. It comes from the French word *stratégie* and its origins are the Greek word *stratēgos* or generalship in warfare as many writers on strategy point out.

Strategy has its sibling in the English language, which is the word *stratagem* from the French word *stratagème* and the origins are the same: the Greek word *stratēgos*. The term *stratagem* is older in *the* English language and dates to the late 15th century according to the dictionary. According to William Duggan, (2010), the word strategy came from French (*stratégie*) in 1810 following a study on the military achievements of Napoleon Bonaparte. However, the older term *stratagem* for phenomenon is still in use.

It was only in the second half of the 20th century that the term became common in business and in the Management sciences. In the year 1950, John McDonald notes for example in his book *Strategy in Poker, Business and War* "No English dictionary defines the term except in the narrow military sense" (p. 12).

However, the focus should be on the *nature* of the phenomenon and not the term, because, as the anthropologist Leslie A. White (1975) reminds us, definition of concepts and terms (p. 4) are:

...man-made and may be used arbitrarily to designate anything, we may define the conception we please.

Strategy is now used as a popular *umbrella term* used by the public in general. For example, someone's strategy to try to get rich is to play in the lottery and someone else has a strategy to try to win a game of chess. In academic research, it is now *fashionable* to talk about a research strategy rather than a research design.

4.2 Thoughts on the organization nature, purpose and strategy

The traditional focus in the field of strategic management has been on the firm as a principal subject of study. It has sought, simply stated, to provide practitioners like managers in firms with practical knowledge, tools and frameworks in order for them to gain a *sustained superior performance* while competing with other firms. Furthermore, to both *explain* and *predict* firm's performance. However, practical knowledge, tools and frameworks all have their limitations as experienced practitioners and academics realize. There is no formula or framework, which *guaranties* success for any strategy (or strategies) that firms can use (or in a sense buy and implement). Creation of insights may help, but solving problems and using a particular strategy (or strategies) is a *complex activity* within organizations based on the *interaction between people*. Thus, expectations of practitioners like managers to knowledge, studies and research on strategy need to be *realistic* and *not* based on *unsound* wishful thinking.

This does not mean that education, knowledge, studies and research on strategy is not important. On the contrary, they are *essential* for all types of organizations that are seeking *better performance*. The necessary skill set for such organizations is among other things based on; *science* (analysis and/or evidence), *craft* (experience and/or learning) and *art* (creativity and/or vision), as Mintzberg observes (2007, pp. 362, 363 and 373). Or as Sun Tzu observed about strategy "It is mandatory that it be thoroughly studied" (Griffith, 1963, p. 63).

This implies that *important lessons* are not only confined to firms but to *all types* of organizations seeking effective and efficient use of strategy. Lessons learned from different organizations are most likely useful to both firms and various other forms of organizations as well. Practitioners or academics may ask *big questions* but history reveals that there are usually *no easy answers*. That applies to the phenomenon called strategy as well.

Why do organizations (including firms) exist?

In answering, the question *why do organizations exist* (including firms) Barnard observes that there is (and always has been) a *need* for *cooperation* among individuals, as he notes (pp. 11, 13, 14 and 23):

Human organisms do not function except in conjunction with other human organisms.

...the mutual reaction between two human organisms is a series of responses to the *intention* and *meaning* of adaptable behavior.

The individual possesses certain properties... These are (a) activities or behavior, arising from (b) psychological factors, to which are added (c) the limited power of choice, which results in (d) purpose... It is necessary to impress upon the reader the importance this statement of the properties of persons. They are fundamental...

I think, that no construction of the theory of cooperative systems or of organizations, nor any significant interpretation of the behavior of organizations, executives, or others whose efforts are organized, can be made that is not based on *some* position as to the psychological forces of human behavior.

Cooperation justifies itself, then, as a means of overcoming the limitations restricting what individuals can do.

Man's needs and desires both *create* and/or they are *based on* some *purpose* (purposes). This also applies to stakeholders and/or members of a given organization. These needs, desires or other emotions and purpose are the *triggers* for both an individual and collective *strategic decision-making and acting* in an organization (like and firm).

Cooperation is a *means* to overcome the limitations of each individual because it has a synergy effect. The whole is larger than the sum of the parts. Organizations exist for both economic reasons like the *transaction cost theory* points out and for *social reasons* (non-economic values) like *networking and socializing*. Networking being the *ancient* and *deep unique social structure* involving kinship, pair bonding and cooperation within and between human groups as noted earlier.

The successful organization is the exception, not the rule

For an organization (like firms) to be *successful* it needs to be effective in its difficult adaptation to, or the maintenance of equilibrium of, complex ever-changing internal and external environments as time passes. The tricky decision-making processes of leaders and personnel in organizations are a critical factor for *survival* as well. Barnard notes (pp. 6, 238 and 239):

The survival of an organization depends upon the maintenance of an equilibrium of complex character in a continuously fluctuating environment of physical, biological, and social materials, elements, and forces which calls for readjustment of processes internal to the organization. We shall be concerned with the nature of the external conditions to which adjustment must be made, but the center of our interest is the process by which it is accomplished.

Thus the executive process, even when narrowed to the aspect of effectiveness of organization and the technologies of organization activity, is one of integration of the whole, of finding the effective balance between the local and the broad considerations, between the general and the specific requirements.

No doubt the development of a crisis due to unbalanced treatment of all the factors is the occasion for corrective action on the part of executives who possess the art of sensing the whole. A formal and orderly conception of the whole is rarely present, perhaps even rarely possible, except to a few men of executive genius, or a few executive organizations the personnel of which is comprehensively sensitive and well integrated. Even the notion which is here in question seems rarely to be stressed either in practical or scientific studies. Any exposition of it must be an oversimplification and only suggestive.

This continuous need for adaptation or the maintenance of equilibrium between complex ever-changing internal and external environments is a *problem* that affects *all* formal organizations. Long-term success and survival of organizations is *not* the *norm* as history reveals. In short, there is *no magic success formula* that organizations (including firms) or individuals can follow that guaranties a sustainable (long-term) competitive advantage or survival.

However, the fact that organizations like firms *come* and *go* does *not* undermine their *importance* in every economy or society as *value creators*. From an evolutionary or economic perspective, the *constant renewal* of firms and other organizations may perhaps be a sign of *health* rather than a mark of *decay*.

Failure of organizations, a fact in human history

Barnard (1938) observes that successful cooperation in formal organization is the *abnormal* condition in society. This is a reminder of the *vulnerabilities* of modern organizations, especially *firms*. As Barnard observes (p. 5):

...in fact, successful cooperation in or by formal organization is the abnormal, not the normal, condition. We observe from day to day the successful survivors among innumerable organizational failures. The organizations commanding sustained attention, almost all of which are short-lived at best, are the exceptions, not the rule.

Failure to cooperate, failure of cooperation, failure of organization, disorganization, disintegration, destruction of organization – and reorganization – are the characteristic facts of human history.

As Barnard points out, the lessons from human history are that *numerous reasons* cause organizations (including firms) to be *short-lived*, *fail* and *disappear*.

Other scholars address this problem of *failure* from a different perspective. For example, Vinay B. Kothari observes in his book *Executive Greed: Examining Business Failures that Contributed to the Economic Crisis* (2010, pp. 13, 20, 21 and 36):

Management failure is associated with a host of factors, some external and others internal to the organization... One of the important tasks of corporate leaders is to analyze the dynamics of the external environment...Not doing so, not identifying and anticipating the potential strategic opportunities and problems, is poor management. Not making and implementing effective plans and decisions is a failure of corporate managers. Misjudging the competitive strengths relative to those of the rivals puts the firm at a disadvantage; it is like choosing the wrong "battlefield" to fight.

Often specific group-thinking, values, and norms are pushed through, and the conformity is expected.

Management failure is an individual or collective phenomenon within the organization.

The absence of good strategic decisions is evident in hundreds of recently reported business cases and events...Professional business managers talk about strategic

management, but they do not practice it. They play a self-serving game, endangering their organizations with their narrow focus and risky behavior.

Kothari points to the absence of *good* strategic decisions "are not odd examples or unusual cases" but a confirmation of *poor management*. His conclusion is that professional business managers only *talk* about the use of strategic management but *do not follow it in reality*. Rather these professional managers play a "self-serving game" (p. 36).

Why do some firms perform better than others do?

One of the traditional questions in the field of strategic management is; why do some firms perform better than others do? This focus on firms instead of organizations is questionable and given the forces of complexity, causality, situation specificity and human nature, this question is not easy to answer or perhaps possible to answer (for both firms and other types of organizations). Furthermore, it may be argued if this is the right question to be asked in the first place.

Given the findings from empirical studies and additional support from history and other fields of study, there still is an imperfect understanding of *how* and *why* human organizations *behave* as they actually do in real life settings. Human actions are for example only to a *limited extent* based on *logic* or *rationality*. Our brains are simply not *wired* that way. Many other evolved human *traits* and situations *guide our actions*.

Other fundamental questions might be asked like; why do organizations (like firms) come to exist and die so young? Or why do some individuals (economic actors) perform better in life than others? The phenomenon called strategy is relevant and important in trying to answer all these questions.

Successful (in the good sense) human organizations may be *essential* for our existence but thriving formal (and in a sense abstract) organizations like modern firms are indeed the *abnormal* and are usually *unsustainable* in the long run (Barnard, 1938).

Firms are thus usually *risky* and have a *short lifespan* as noted before. The *question* is; is that good or bad, or both, or neither?

The foundation or the *raison d'être* of the field of strategic management should perhaps be to study strategy in the *context of* "man as he is" to quote Coase (1984, p. 231) including individuals (economic actors) and strategy in all the various types of organizations. This means "...human nature as we know it by reference to bounded rationality and opportunism" as Oliver E. Williamson put's it (1985, p. 44). The connection between *bounded rationality* and *any* theory concerning *human behavior* and organizations like *firms* is, as Herbert A. Simon observes (1957, p. 200):

...the principle of bounded rationality lies at the very core of organization theory, and at the core, as well, of any "theory of action" that purports to treat of human behavior in complex situations.

Thus, the phenomenon called strategy is *grounded* in our *mental makeup* or in "man as he is".

4.3 Modeling the strategy process

Models are *symbols* and language is based on *symbolic thought* as well. Visual models are frequently used as tools to *simplify* and explain complex phenomena. They can be powerful, but each model can only show a rough outline of what may be called reality. A large number of visual models and tools have been created to explain the phenomenon called strategy and to help in the effort to create a *good* strategy.

Models of the strategy process are usually built with an organization like a *firm* in mind. These visual models seek to *explain* some different types of the processes in the *context* of strategic decision-making. Richard Lynch (2006, pp. 16-18) uses two basic models to explain the two possible but different approaches in strategy development for organizations. The first, it is a pure prescriptive (deliberate) model and the second is a pure emergent model of the strategic process. These models are

oversimplified (reductionism) *on purpose* used as tools to emphasize the different characteristics of the strategy process.

A prescriptive approach.

In the prescriptive strategic processes, the strategic objective has been defined in advance and main elements have been developed before the strategic actions start.

An emergent approach.

In the emergent strategic processes, the strategic final objectives are unclear and strategic elements are developed during the course of its life, as the strategy process continues.

These illustrative contrasting models are of two extremes of the strategy process. The *reality* is both *more complex* and *interactive*. The strategy process is sometimes divided into three core elements an *analysis*, *development* and *implementation*.

Models of the prescriptive and emergent approaches having been divided into these three core elements, however there are many variants of this basic approach. Furthermore, an understanding or knowledge of the organization environment is an essential part in the development of strategy.

"No such thing as a purely deliberate strategy or a purely emergent one"

Mintzberg notes on deliberate and emergent strategies in his article "Crafting strategy" (1987, pp. 66-75):

...there is no such thing as a purely deliberate strategy or a purely emergent one.

Effective strategies can show up in the strangest places and develop through the most unexpected means. There is no one best way to make strategy.

While strategy is a word that is usually associated with the future, its link to the past is no less central. As Kierkegaard once observed, life is lived forward but

understood backward. Managers may have to live strategy in the future, but they must understand it through the past.

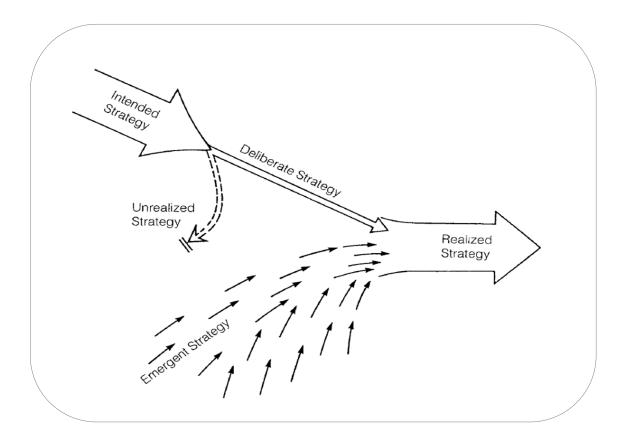


Figure 9. Mintzberg's idea on deliberate and emergent strategies.

Source: Mintzberg, 1987, (p. 14).

At least three kinds of strategies can emerge (or combinations), that is an *intended*, *realized* or *emergent* strategies. There is much empirical and historical realism behind Mintzberg's observation as has been pointed out in the literature.

Models and oversimplifications

The point of models and oversimplifications (reductionism) is raised in by Slack, Chambers and Johnston in their book *Operations Management* (2007). The authors note that; "the concept of 'strategy' itself is not straightforward" (p. 61) and observe in a *critical commentary* (p. 77):

The argument has been put forward that strategy does not lend itself to a simple 'stage model' analysis that guides managers in a step-by-step manner through to the eventual 'answer' that is a final strategy. Therefore, the models put forward by consultants and academics are of very limited value. In reality, strategies (even those that are made deliberately, as opposed to those that simply 'emerge') are the result of complex organizational forces. ...they argue, it is the articulation of the 'content' of operation strategy that is more useful than adhering to some oversimplistic description of a strategy process.

Thus, to *some* a coherent or reasoned expression of thoughts, ideas or feelings of the *content* or *substance* of strategy is more useful than an *oversimplification* of the strategy process.

However, models are often used *on purpose* to *simplify* and explain complex phenomena and can be powerful useful tools as such. Oversimplifications can take *many forms* including when thoughts, ideas or feelings of the content or substance of strategy *are expressed*. The point is that it must be *clearly communicated* and *clearly understood* by *users* of models and ideas that they are *intended* to be *simplifications* of *reality*.

4.4 Decision-making

Studies of decision-making are essential to gain a better understanding of the phenomenon called strategy, involving *important* decisions. In their article "A Brief History of Decision Making" by Buchanan and O'Connell (2006) the author's state that Chester I. Barnard "imported the term 'decision making' from the lexicon of public administration into the business world" (p. 33). Buchanan and O'Connell observe that:

...Barnard–and such later theorists as James March, Herbert Simon, and Henry Mintzberg– laid the foundation for the study of managerial decision making.

Humans make decisions every day and all day long. They are however affected by various mental or cognitive limitations, self-interest, politics, social norms, beliefs and other factors that play their part in decision-making. Therefore, decision-making in organizations is a *complex matter*. Nutt and Wilson (2010) observe about the *complex* nature of strategic decision-making (pp. 3, 4):

The study of decision making has spanned a number of levels of analysis, which range from individual cognition to the cultural characteristics of nation states.

...strategic decisions have the following characteristics:

- They are elusive problems that are difficult to define precisely.
- > They require an understanding of the problem to find a viable solution.
- They rarely have one best solution, but often a series of possible solutions.
- Questions about trade-offs and priorities appear in the solutions.
- Solution benefits are difficult to assess as to their effectiveness, in part because they lack a clear final end point against which effectiveness can be judged.
- ➤ Other problems in the organization are connected to solutions for a focal problem.
- ➤ High levels of ambiguity and uncertainty are associated with solutions.
- Realizing hoped for benefits has considerable risk.
- > Strategic decisions have competing interests that prompt key players to use political pressure to ensure that a choice aligns with their preferences.

However, this 'point of decision' approach is unable to capture the richness and complexity...

Theorists such as Drucker (1974) and Weick (1995) show how decision-making processes in organizations are as much about defining the question as they are about providing an answer.

A part from theories on *bounded rationality* by Simon, (1955, 1957) *decision-making* in organizations James G. March, (1958), and Richard M. Cyert, (1963), the works of Amos Tversky, Daniel Kahneman and Keith E. Stanovich on *heuristics*, *biases* and *dysrationalia* are confirmations our *mental* limitations and capabilities (Tversky and Kahneman, 1974, 1984; Stanovich, 2009).

Dysrationalia is interesting for it shows human *inability* to think and behave *rationally despite* having adequate intelligence, IQ (Intelligence Quotient) (Stanovich, 2009).

The implications of the *complexity* in strategic decision-making and the *limitations* of human rationality for the phenomenon called strategy are obvious.

4.5 Definition of the term strategy

A term may be defined as "a word or expression that has a precise meaning in some uses or is peculiar to a science, art, profession, or subject" (Merriam-Webster Dictionary & Thesaurus, 2010). Thus, to establish some meaning in particular fields of study terms are needed. This applies when the phenomenon called strategy is examined. However, a term may have a different meaning depending on the audience and/or their context. They can be defined broadly, narrowly or differently. Understanding the precise meaning of a term is preferable so misunderstandings or any ambiguity may be avoided. This is not the case regarding the term strategy and some other terms used in strategic management. The term strategy has similar but not the same precise meaning. This is important to realize, for practitioners like managers and academics may not be speaking the same language when it comes to discussing strategy. Here are examples of different definitions of the term strategy. Furthermore, how the academic field of strategic management defines (or may define) its role in relation to strategy.

In their research paper "What is strategic management, really? Inductive derivation of a consensus definition of the field" (2007) Nag, Hambrick and Chen look for a consensus or a *shared meaning* of *strategy* in the field of strategic management. They conclude that there is a *consensus* on what strategic management *means*. The definition of the field, in relation to strategy, is that (p. 944) strategic management:

...deals with the major intended and emergent initiatives taken by general managers on behalf of owners, involving utilization of resources, to enhance the performance of firms in their external environments.

This conclusion, *if taken literally*, is *narrower* than the *meaning* (or domain) of the concept strategy in many other definitions of the phenomenon. The focus is on the *firm* as a phenomenon and *general managers* as strategic decision makers on behalf of *owners*.

In comparison term or concept of strategy in the fifth edition of the *Thomson Gale*, *Encyclopedia of Management* (2006) is defined in the following way (p. 837):

...strategy is a road map or guide by which an organization moves from a current state of affairs to a future desired state. It is not only a template by which daily decisions are made, but also a tool with which long-range future plans and courses of action are constructed. Strategy allows a company to position itself effectively within its environment to reach its maximum potential, while constantly monitoring that environment for changes that can affect it so as to make changes in its strategic plan accordingly. In short, strategy defines where you are, where you are going, and how you are going to get there.

In the *Thomson Gale Encyclopedia*, the domain is an *organization* and a *company*. It involves the future, a move from a current state and courses of action are constructed to guide it to a *future desired state*. Strategy thus "defines where you are, where you are going, and how you are going to get there." However, by looking at the online version of the *Merriam-Webster Dictionary & Thesaurus* (2010) it defines the term (noun) strategy as:

- a. ...science and art of employing the political, economic, psychological, and military forces of a nation or group of nations to afford the maximum support to adopted policies in peace or war
- b. ...the science and art of military command exercised to meet the enemy in combat under advantageous conditions
- c. ...a variety of or instance of the use of strategy
- d. ...a careful plan or method or a clever stratagem
- e. ...the art of devising or employing plans or stratagems toward a goal,
- f. ...an adaptation or complex of adaptations (as of behavior, metabolism, or structure) that serves or appears to serve an important function in achieving evolutionary success

- g. ...a method worked out in advance for achieving some objective
- h. ...the means or procedure for doing something

The definition the term in the *Merriam-Webster Dictionary & Thesaurus* is *even broader* than in the *Thomson Gale Encyclopedia of Management*. Strategy is defined as both *science* and *art* involving utilization of various forces and economic resources for example by an army (organization), nation or group of nations. It implies the future and a *means to end* relations, "a method worked out in advance for achieving some objective", or "the means or procedure for doing something". In may include individuals, various or all types of organizations and even concerns the evolutionary success of a species.

Thus it is *important* to realize that the *precise meaning* (or domain) of strategy is *different* in scope or size depending on the approach to the phenomenon.

4.6 A multidisciplinary approach to the study of strategy

Some scholars have argued for a multidisciplinary approach to the study of strategy. David B. Jemison, in his paper "The Importance of an Integrative Approach to Strategic Management Research" (1981) stated for example (p. 606):

The challenge to strategic management researchers and educators is clear. We can continue to work in relative conceptual isolation by drawing on limited disciplinary bases for research purposes, and expect our results to be correspondingly limited in their usefulness and generalizability. Or, we can take steps to implement a multidisciplinary approach that reflects the richness and complexity of strategic management. The more that we are able to integrate the ideas and findings from a variety of disciplines, the greater will be our understanding of the phenomena involved and the more rapidly will this understanding be achieved.

Multidisciplinary approach, the fields of Anthropology, History and Social Psychology

More recreantly, Joseph T. Mahoney and Anita M. McGahan (2006) argued as well for a multidisciplinary approach, including the fields of Anthropology, History and Social Psychology. They call for the broadening of the research and teaching agenda in strategic management from a *strategic firm* to *strategic organization* (p. 81). In their paper "The Field of Strategic Management within the Evolving Science of Strategic Organization" (2006), they argue (pp. 81, 82):

In particular, we have much to learn from the fields of Anthropology, History, Political Science, Social Psychology and Sociology, and much to gain from collaborations with colleagues in these disciplines as well as those in Entrepreneurship, Finance, Organizational Behavior, Information Sciences, and Technology Management. Through collaborations with scholars in these fields, we can generate new knowledge and systematic original theory building. Some of these connections are happening already: interdisciplinary research studies that achieve the precise standards of each embedded discipline carry the potential to lead us toward important strategic insights (Postrel and Rumelt 1992). Much more research of this sort is needed.

Strategic management require insights from multiple disciplines

Mie Augier and David J. Teece stress how important insights from various disciplines in their paper "Strategy as Evolution with Design" from 2008 and they note (pp. 1189, 1201):

The problems addressed in the practice of strategic management require insights from multiple disciplines.

Most of this new discussion takes place within the analytical framework of evolutionary and behavioral theory, broadly speaking.

4.7 What is strategy anyway? Assumptions and disagreement

Study of the phenomenon of strategy is by its *nature* a *multidisciplinary* academic field. It has multiple approaches and competing schools of thought. (Haugstad, 1999) Moreover, it is based in part on different basic assumptions and disagreement about what the phenomenon called strategy should try to *explain*. There are many so-called *schools of thought* on the nature of strategy (Mintzberg, Ahlstrand, & Lampel, 1998) and numerous definitions on the meaning of the phenomenon called strategy or strategic management. However, *no consensus* exists nor has existed among scholars and practitioners about what the phenomenon called strategy *means* in practice. Richard Lynch writes in his book *Corporate strategy* (2006, p. 6) that: "...it has to be said that there is no universally agreed definition of strategy."

In 1979 Richard P. Rumelt in his article "Evaluation of Strategy: Theory and Models", (pp. 196-198), he wrote:

The formulation of organizational strategy, when it occurs, is problem solving of the most unstructured sort.

The term "strategy" has a range of related meanings and authors have generally felt quite free to use it quite idiosyncratically. For game theorists, strategies are concrete actions or rules for choosing actions in a conflict situation; for some strategy is "high-level" or "long-term" planning, while others see it as referring only to broad gauge issues of "mission." Still others use it to denote any decision that is "important."

It is a frequent observation that one person's strategy is another's tactics - that what is strategic depends upon where you sit.

When confronted by an ill-structured situation an individual or organization may either:

- (1) Classify it and apply standard procedures (the bureaucratic response); or
- (2) Seek some way of structuring the problem that is "meaningful," i.e., that suggests how

current knowledge and experience can be brought to bear.

Howard Thomas notes in his paper "Mapping Strategic Management Research", (1984) that:

...while the field is developing strongly, it suffers from an identity crisis about its paradigms and lack of consensus about appropriate research directions and traditions.

Some scholars on strategy and strategy research like for example Taieb Hafsi and Howard Thomas, are far from being happy about the many different and often *vague* definition of the phenomenon of strategy. They argue in their paper "The Field of Strategy: In Search of a Walking Stick" (2005) the academic field of strategy *suffers* because of the "lack of clarity" (p. 507) of this fundamental concept and note that vague definitions makes the search for meaningful research findings, and therefore *theory construction*, difficult. The authors observe (pp. 512-517):

...strategy in practice is about the behavior of the whole, and within which there is complex interaction between the parts.

...the complex interaction of the whole which is the raison d'être of strategic management.

Moving Closer to Reality. - General managers cannot manage a firm for sustainable performance and survival if they focus on the specialized activities of the business functions. They are forced to integrate them to provide meaning and justify development of these functions. The concept of strategy is the traditional instrument that helps in this process. Such a model of strategy remains a "down to earth" instrument. Its general character is the source of its explanatory power and of its capacity to guide collective action. We need to go beyond the "down-to-earth" so that we can understand the patterns of strategy; so we state as the raison d'être of the field of strategy: "helping through heuristics and creative methodologies to the understanding and transformation of reality".

We fear that if research were to continue to move away from such a goal, strategic management practice would be left alone and the academic field would die. Managers would lose interest in theory that neither helps to explain reality nor facilitates action designed to influence reality. This must be a source of major concern about the future of strategy as a field of academic teaching and learned research.

The field of strategy has no future except to become close to reality.

So they ask the *fundamental question* (p. 507): "What is strategy anyway?"

Hafsi and Thomas reviewed the literature and note (p. 507); "In probing further into definitions of strategy, one is faced with a multiplicity of strategies: some are corporate, others business, still others functionally-related. *Each author* has a *different definition*. To compound the problem, *each* of the functional fields of management has its own *strategy arm* — marketing strategy, financial strategy, production strategy, and so on, each has their own journals and set of dedicated scholars."

The implications according to Hafsi & Thomas (2005) for the Management sciences, the field of strategic management and among practitioners have been increased *confusion* and loss of *faith* in an academic discipline. The field has *failed* to deliver a theory on management and strategy and has no broad consensus about the phenomenon.

4.7.1 Examples of various opinions and on the lack of consensus

Numerous examples of different statements relating to a lack of consensus on the meaning of the phenomenon called strategy can be found in the literature.

Inkpen and Choudhury argue in their paper "The seeking of strategy where there is not: Towards a theory of strategy absence" (1995) that some firms or organizations don't have any strategy. These organizations are *strategy-less*. The authors observe (p. 313):

...cases of strategy *absence*, that is, where strategy is expected but is not. ...Rather than assuming that all firms must have a strategy, it may necessary to ask: Why is there no strategy here? What are the characteristics of the strategy-less organization?

In the book *The Quintessence of Strategic Management* (2010) Kotler, Berger and Bickhoff note about strategy (pp. 1-6) "*Nobody really knows what strategy is!*"... And to this day we are not a single step closer." In addressing the question of the

nature of strategy and organization Linstead, Fulop and Lilley argue in their book *Management & Organization: a critical text* (2009) that all organizations by definition have a strategy or strategies (p. 762) "Strategy, like structure and culture, is something that happens as a result of processes, which will emerge whether managers like them or not." Morgan, Levitt and Malek argue in their book *Executing your strategy: How to Break it Down and Get it Done* (2007) that (p. 3):

...the best indicator of strategic direction and future outcomes is an enterprise-wide look at what the company is *doing* rather than what it is *saying*-what the strategy makers are empowering people at the execution level to accomplish...What a company is *doing*-its *de facto* strategy-can be summed up by identifying the group of projects in which it invests.

De Wit and Meyer make the following observation in the introduction of their book *Strategy Synthesis: Resolving Strategy Paradoxes to Create Competitive Advantage* (2005, p. 3):

There are strong differing opinions on most of the key issues and disagreements run so deep that even a common definition of the term strategy is illusive. This is bad news for those who prefer simplicity and certainty. It means that the topic of strategy cannot be explained as a set of straightforward definitions and rules applied. ...strategy cannot be like an instruction manual that takes you through the steps of how something should be done.

Some scholars have addressed this *gap* in the strategy discipline for a long time. For example one of the best known is scholars that have studied this problem is Henry Mintzberg. For example in *The Nature of Managerial Work* (1973) where he introduces what he calls the "planning dilemma" (pp. 152-164), and different views or "schools of thought" about strategy. In Meyer's study "Mapping the Mind of the Strategist: A quantitative methodology for measuring the strategic beliefs of executives" (2007) he notes (pp. 6, 314):

For better or for worse, the 'mind of the strategist' remains a black box... To paraphrase Bertrand Russell, as our island of knowledge about strategy perspectives has grown, so has the length of its shores with the unknown.

In their paper "Strategists in an uncertain world: Practices and tools to face tensions" from 2009 Dameron and Torset *interviewed people* dealing with strategic issues in their organization, one CEO of a strategic consulting firm responded in the following way (p. 8):

Classical definitions lack the implementing part of strategy, I think strategy is an art of execution. Moreover, strategy must be desanctified. The butcher at the corner has a strategy because he observes people in the neighborhood, their buying power, their tastes and he adjusts his choice of meats, the quality level, prices. Doing so, he thinks strategically, he does strategy... It is a daily exercise because the environment always changes.

Hutzschenreuter and Kleindienst reflect on the current state and progress of strategy-process research in their article "Strategy-Process Research: What Have We Learned and What Is Still to Be Explored" (2006). The authore note (pp. 673, 710):

Is strategy-process research really in a crisis? Some scholars claim so. Certainly, the field is characterized by an ever-increasing plurality of concepts and frameworks.

...we are sure that it is *not*.

However, they do *not* share the view of Hafsi and Thomas *or* the view of Morgan, Levitt and Malek and *not* the view of Kotler, Berger and Bickhoff.

Thus *some* scholars believe that if organizations exist because of a purpose (mission) and by actions, (what organizations are doing) they create "*de facto*" their strategy, (means to ends) whether they like it or not. Every aspect of an organization, including stakeholders, has a function in its strategy. The purpose (or purposes) of an organization can be *both* short-term and long-term depending on its nature.

4.8 Potential gaps in understanding strategy

Gary Hamel addresses the topic of strategy in his article "Strategy innovation and the quest for value", (1998) and asks if strategy is *irrelevant*. Hamel observes that there is a "gaping hole in the middle of the strategy discipline". He criticizes the "The strategy industry - all those consultants, business school professors, authors, and planners" have "...a dirty little secret" because "Everyone knows a strategy when they see one." Hamel states (pp. 9, 10) that:

Strategists may have a lot to say about the context and content of strategy, but, in recent years, they have had precious little to say about the *conduct* of strategy — that is, the task of strategy making. No one seems to know much about how to create strategy.

Anyone who claims to be a strategist should be intensely embarrassed by the fact that the strategy industry doesn't have a theory of strategy creation! It doesn't know where hold, new value-creating strategies come from. There's a gaping hole in the middle of the strategy discipline. No, let me put that differently: there's no foundation to the strategy discipline.

What we need is a deep theory of strategy creation. Think about the amount of progress that has been made during the past fifteen years on the *content* of strategy: competitive rivalry, the resource-based view of the firm, hypercompetition, coalitions, knowledge management, etc. Now ask, how much progress has been made on the practice of strategy? Or compare the rate of innovation during the past twenty years in how companies develop products, manage the supply chain, or build quality into products with the rate of innovation in how they do strategy. Case closed.

Gap or gaps in the literature

How do scholars *understand* the nature of the phenomenon called strategy in the literature? Here are for example identifiable *gaps* or a *gap* between these four statements on strategy;

- a) "A kid has a "strategy" to get over a fence."
- b) "Japanese Companies Rarely Have Strategies."
- c) "The question therefore is not whether organizations need a strategy, as they will have one whether they like it or not."

d) "...a firm's strategy is defined as its theory about how to gain competitive advantages."

The first example is from Henry Mintzberg, (1979), explaining strategy as "Plan", the second is from Michael E. Porter, (1996), explaining that most Japanese companies imitate and emulate one another and thus have *no* strategy. "Japanese companies will have to learn strategy", Porter writes. The third statement is from Stephen Linstead, Liz Fulop and Simon Lilley (2009, p. 762) in answering the question "Do all organizations need a strategy?" The fourth and last is the definition of strategy for a firm in Jay B. Barney's and William Hesterly's book *Strategic Management and Competitive Advantage* (2008, p. 4).

Firstly, there is a strategy for an *individual* to get over a fence; secondly, Japanese companies in general *don't have any strategy*; thirdly, *all* organizations *have a strategy* whether they realize it or not; and fourthly, strategy is a firm's *theory* on how to gain competitive advantages.

In short: (a) there is a strategy as plan of an individual; then, (b) the idea that a company can exist without a strategy; next, (c) that all organizations have a realized and/or a tacit strategy; and finally (d) strategy as a firm's theory to gain competitive advantages.

Porter's dilemma

However, Porters' understanding of the phenomenon called strategy is a puzzle. In his influential book *Competitive strategy Techniques for analyzing industries competitors* from 1980 and in a republished edition with a new introduction from 1998 Porter's fundamental view on strategy *is the same*; that *every firm* competing in an industry *has a strategy*, whether it is *explicit* (clear) or *implicit* (hidden). As Porter writes in his introduction:

Every firm competing in an industry has a competitive strategy, whether explicit or implicit. This strategy may have been developed explicitly through a planning process or it may have evolved implicitly through the activities of the various functional departments of the firm. Left to its own devices, each functional department will inevitably pursue approaches dictated by its professional orientation and the incentives of those in charge. However, the sum of these departmental approaches rarely equals the best strategy.

The obvious question arises. How could Porter state in the 1996 article, and repeat in his updated and expanded book *On Competition* (2008, p. 41) that Japanese companies *rarely* have strategies? How does Porter's 1996 *definition of strategy* as: "a creation of a unique and valuable position, involving a different set of activities" compare with his 1980 or 1998 understanding of the *same* phenomenon? Furthermore, don't Japanese companies *participate* in competitive industries? Do some Japanese companies operate *without* any explicit or implicit strategies? If so, where is the evidence?

Porter and Mintzberg on complexity, situation specificity and the chain of causality

Important lessons may be learned from both Porter and Mintzberg on strategy and the problems of *causality*, *complexity* and *situation specificity* of organizations in their longitude studies.

Universal laws and constructs for theory building for the phenomenon called strategy are *problematic*. Harry Sminia's, paper "Process research in strategy formation: Theory, methodology and relevance" (2009) is an example of the *many problems* (complexity and causality) encountered in research on strategy. A good example exists in Porter's paper "Towards a Dynamic Theory of Strategy", in the book *Strategic development: methods and models*, from 1998. Here he addresses the phenomena of *complexity* and *causality*. In the text, Porter observes (pp. 81-109):

The complexity, situation specificity, and changing nature of the firm and its environment strains conventional approaches to theory building and hypothesis testing.

A second fundamental issue in creating a theory of strategy is where to focus the chain of causality... The literature in both strategy and economics addresses many different points in this chain of causality.

A third challenge for theory is the time period over which to measure and understand competitive success... Time period relates closely to position in the chain of causality.

Given the myriad of relevant variables in frameworks and the complex interactions among them over time, rigorous statistical testing of frameworks is also difficult, to say the least.

What makes some industries, and some positions within them, more attractive than others? ...But in answering these questions, we again confront the question of causality.

But what is a unique resource? ... There is once again a chain of causality, that this literature is just beginning to unravel.

...causality can become blurred over time.

This is in fact the *reality* that each organization and individual has to deal with and take into account when creating a strategy or forming a purpose.

4.9 Summary

The phenomenon called strategy has various *characteristics* and *significance*. In his work *The Anatomy of Meaning*, (2009), N.J. Enfield points out that in our ever-present puzzle of finding out what others are trying to say, that *symbols* and *signs* (including words) are "strategic, context-embedded efforts to make social goals recognizable." Thus, the use of words like *strategy* does depend on the *context*. In what context are terms used? More precisely, in what context does the phenomenon exist? Is the *meaning* of a *term* like strategy *recognizable* as a *social goal*, in time and space? To quote Enfield (pp. 1, 2 and 221):

In human social behavior, interactants build communicative sequences, move by move. These moves are never semiotically simple. Their composite nature is widely varied in kind: a word combined with other words, a string of words combined with an intonation contour, a diagram combined with a caption, an icon combined with another icon, a spoken utterance combined with a hand gesture.

Language is just a subset of the full resources necessary for recognizing others' communicative and informative intentions.

In solving the ever-present puzzle of figuring out what others are trying to say, our evidence comes in chunks: composite utterances built from multiple signs of multiple types. These composites are produced by people on trajectories of collaborative social activity. As communicative behaviors, they are strategic, context-embedded efforts to make social goals recognizable.

To give an explicit meaning metaphors are often used. One popular way in the literature is to *frame* strategy as a kind of *metaphor*, using the *strategy as* approach (*see appendix*).

One good example of good use of metaphors is Gareth Morgan's work *Images of Organization* (1997). Morgan uses the metaphors of: *machine*, *organism*, *brain*, *culture*, *politics*, *psychic prison*, *flux and transformation*, and *domination*. As a *combination*, the metaphors increase the depth of our understanding of a complex phenomenon that organizations are. Thus, words, text, labels or symbols may be viewed as *communication tools* even though their nature is to evolve and change.

Kenneth Andrews of Harvard Business School and collages came up with the concept of *Corporate strategy* (1950-1960), "...a kind of Everymans's conceptual scheme" and Andrews acknowledges that the "concept is far from complete" as he notes in *Business Policy* (1982, pp. vii-ix). For this purpose, his definition of corporate strategy probably *was*, and *still is*, *helpful* to firms. It grasps meaningful constructs for firms in modern society. Andrews defined strategy for a corporation (firm) in his book *The Concept of Corporate Strategy* (1980, p. 18):

Corporate strategy is the pattern of decisions in a company that determines and reveals its objectives, purposes, or goals, produces the principal policies and plans for achieving those goals, and defines the range of businesses the company is to pursue, the kind of economic and human organization it is or intends to be, and the

nature of the economic and non-economic contribution it intends to make to its shareholders, employees, customers, and communities.

There are *different approaches* in formulating the *meaning* of the phenomenon called strategy. Some scholars use *direct definitions* of strategy as a concept and others are more concerned with a *holistic understanding* and *explanation* of strategy as a phenomenon.

Strategy more as a concept

Here are some examples of definitions of strategy more as a concept.

Alfred Dupont Chandler defines strategy for an enterprise (1962, p. 13) as:

...the determination of the basic long-term goals and objectives of an enterprise, 'and the adoption of courses of action and the allocation of resources, necessary for carrying out these goals.

Michael E. Porter defines competitive strategy for an enterprise (1996, p. 68) as:

Strategy is the creation of a unique and valuable position, involving a different set of activities.

Richard Lynch (2006, p. 6) definition of corporate strategy is:

Corporate strategy is the pattern of major objectives, purposes or goals and essential policies or plans for achieving those goals, stated in such a way as to define what business the company is in or is to be in and the kind of company it is or is to be.

However, Richard Lynch observes about the use of terms (p. 6):

It should be noted that there are writers who use terms other than 'corporate strategy' to define strategy development: 'strategic management', 'business policy', 'competitive strategy', and so on. *Corporate strategy* is used here because it embraces every *type* of organization – large and small; public, non-profit and privately owned – and it is the most general expression of the *various levels* of strategy, including all the many lower levels within an organisation.

Strategy more like a phenomenon

Other scholars approach strategy more like a phenomenon.

As discussed earlier Barnard's (1938) approach to the phenomenon called strategy it holistic and to him it is self-evident that every organization has an important purpose or purposes and consequently a strategy or strategies that can be both implicit and/or explicit. Strategy is thus an outcome of continuous interactions between strategic decisions, strategic factors and the purpose (or purposes) of an organization. It is the continuous interactions between:

- a. The *purpose*, (or purposes) of an organization or for an individual. The purpose (or purposes) is based on; human needs desires or other emotions.
- b. *Strategic decisions*. Strategic (or effective) decision-making requires discrimination or choosing among a stream of "strategic factors" (the evaluation or discrimination among possibilities). Factors can be a limitation or offer new possibilities in view of the purpose (or purposes), requiring adaption, change or termination.
- c. Actions taken. Actions involve the implementation of a strategy or a stream of strategic actions. They do affect both the "external environment" and the "internal environment". Actions can affect both decision-making and purpose (or purposes), requiring adaption, change or termination, and
- d. *Results of actions*. Results of (real or) actual actions that are taken. They do affect both the "*external environment*" and "*the internal environment*". Thus they can affect strategic decision-making, strategic actions and the purpose (or purposes) requiring adaption, change or termination.

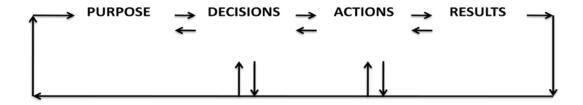


Figure 10. Chester I. Barnard's basic approach to purpose, strategic decision-making, and acting.

Source: Figure based on *The Function of the Executive* (1938), "the theory of the strategic factor" (pp. 42, 43, 86 and 200-231).

Thus all formal organizations by definition have an objective, a purpose or an aim, and thus a strategy or strategies to attain their purpose. Furthermore, like an organization, the each individual has an implicit and/or explicit purpose or purposes as well. What is "correct" to an individual depends on his *purpose*. (p. 10).

Herbert A. Simon's definition of strategy (1945, the 1957 edition, p. 67) in *Administrative Behavior: a study of decision-making processes in administrative organization* is that strategy is an ongoing process:

At each moment the behaving subject or the organization composed of numbers of such individuals, is confronted with a large number of alternative behaviors, some of which are present in consciousness and some of which are not. Decision or choice, as the term is used here, is the process by which one of these alternatives for each moment's behavior is selected to be carried out. The series of such decisions which determines behavior over some stretch of time may be called a strategy.

If any one of the possible strategies is chosen and followed out, certain consequences will result.

There is nothing which prevents the subject, or the organization, having chosen one strategy on Monday, from selecting a different one on Tuesday. But the Monday decision, in so far as it has been partly acted out before reconsideration, has already narrowed down the strategies available on Tuesday.

Thus Simon's view is that a *series of decisions* (for an individual or organization); "...which determines behavior over some stretch of time may be called a strategy".

In Henry Mintzberg's classifications of strategies, (1987, pp. 11-16), using his 5P's approach, he uses a diversity of definitions. He argues that strategy may be viewed as a:

- 1. Plan—"some sort of *consciously intended* course of action, a guideline (or set of guidelines) to deal with a situation."
- 2. Ploy—"specific 'maneuver' intended to outwit an opponent or competitor."

- 3. Pattern—"specifically, a pattern in a stream of actions . . . *consistency* in behavior, *whether or not* intended."
- 4. Position— "looks out"..."a means of locating an organization in its 'environment"... "usually identified with competitors."
- 5. Perspective—"looks inside the organization, indeed inside the heads of the collective strategist"…"an ingrained way of perceiving the world."

One of the strengths of his approach is its *dynamic* nature. Furthermore, that the number of classifications is *not limited* to these *five* views but are intended to give examples of some of the *possible* views of the phenomenon called strategy.

Mintzberg (like Barnard and Simon) notes that *various factors* may affect an intended strategy. According to Mintzberg in his article "Crafting strategy" (1987), a strategy is usually a mix of deliberate and emergent intensions. The result may be either or an unrealized strategy or a realized strategy. However, it may and perhaps usually do differ from the original intended strategy because of various *emergent* forces.

Mintzberg creates another holistic framework for the phenomenon called strategy in his books *Tracking Strategies: Toward a general theory* (2007, pp. 363, 373) and *Managing* (2009, p. 11). He addresses the different views on the nature of strategy that are still deep rooted in the study of the phenomenon called strategy.

In his books, Mintzberg formulates the complex nature of strategy process into a framework, which makes strategy an outcome of *three main forces* that is of: art (creativity and/or vision), craft (experience and/or learning) and science (analysis and/or evidence). These forces then form a triangle.

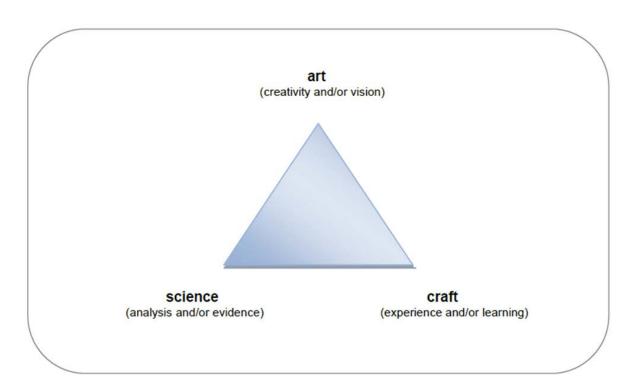


Figure 11. The phenomenon called strategy as a combination of art, craft and science.

Source: Mintzberg, 2007, (p. 363).

Or as Mintzberg notes (pp. 362, 363) that the figure:

...shows a triangle based on three main approaches to human endeavor: art; which is about creative insights, and is rooted in the imagination, usually of an individual; craft, which is about practical learning and is rooted in experience, often shared by many people; and science, which is about systematic evidence, and is rooted in analysis, often carried out by specialized experts.

Inside the triangle are located the various strategy formation processes...

5. Conclusion

The study had two broad purposes.

Firstly, to get a holistic understanding of the phenomenon called strategy by answering the research questions:

- ➤ How and why is the phenomenon, called strategy important to man, both as an individual and in his organizations?
- ➤ How and why did the phenomenon called strategy come into existence, emerge and evolve in history?

Secondly, to see if the findings from the research questions might add, establish new knowledge or provide a better understanding of the phenomenon.

5.1 Answers to research questions

Firstly, the findings from various scientists presented in the thesis support that observation that humans are *natural born strategists*. Having lived for millions of years as a hunter-gatherer and survival depended on foresight (strategic instinct) and cooperative efforts. Strategy was/is used in groups like kin, bands, tribes, village-kingdoms, firms or other kinds of organizations.

Being able to think strategically with the help of foresight, as an individual, or as a part of a group, was/is a matter of survival and wellbeing. Thus, the phenomenon called strategy is most likely an evolved *human trait*.

Secondly, the history of the phenomenon called strategy, its existence, emergent and evolvement supports the merits of Sun Tzu's, Barnard's, Simon's, Mintzberg's and others *holistic approach* in understanding the phenomenon called strategy. The works

of various scholars in different fields of study are *critical* in understanding *man as he* really is including his strategic decisions (strategic instinct) and actions. Strategy exists because of a *purpose* and organizations exist because of a purpose as well. It concerns: the matter of survival; security; success; competitive advantage; opportunities; wellbeing and other *means to an end* thoughts and actions.

Strategy addresses *a much larger domain* than that of a specific type of organizations or *firms*. To focus *only* on firms (even though they are important) is thus likely an error in knowledge gathering and in understanding the phenomenon called strategy.

Various perspectives on strategy are different but important for they *reveal* the complex nature of the phenomenon.

Thus, the *value* of a *better* understanding of the phenomenon called strategy, for individuals, organizations and human society, is not to be underestimated.

On new knowledge or better understanding

New and accumulated knowledge *has indeed* established a better understanding of the phenomenon and making it more likely that better hypothesis (or theories) may be constructed. New knowledge comes from *various fields of study* for example from researches on human behavior, human origins, human biology and others.

5.2 Agreements and disagreements

The view of the literature the meaning of the phenomenon called strategy is broadly similar. In general, there seems to be even more agreement than disagreement on basic constructs of the phenomenon. The agreements and disagreements in the literature reveal:

Agreement on factors like:

- 1. Decision or decisions
- 2. Choice (content)
- 3. Judgmental
- 4. Behavior
- 5. Important
- 6. Means to an end
- 7. Future orientated
- 8. Foresight (including strategic instinct)
- 9. Purpose, (Mission)
- 10. Action/ Effort
- 11. Process or processes
- 12. Context (internal and/or external)
- 13. Control
- 14. Resources (mental and/or physical)
- 15. Skill or ability (art and science)
- 16. Result orientated

Disagreement on factors like:

- 1. Unit of analysis, (individual, firm, enterprise or organization)
- 2. Only long-term decisions can be strategic
- 3. Everyone has a strategy (strategy-maker) vs. Some have no strategy
- 4. Competitive advantage vs. Means to an end, (in general)
- 5. Uniqueness vs. imitation (aren't all strategies *in a sense* unique, even imitation?)
- 6. Scope (whole vs. parts, organization, corporation, business or functions)
- 7. Position that is unique and valuable vs. Means to an end (in general)

5.3 Purpose at the core

Important purpose embraces the various different understandings and use of the phenomenon called strategy. An organization exists, in general terms, because of some *important purpose* (purposes) of its members, owners and/or other stakeholders. Existing important purposes or purpose is in general as well the *foundation* for strategic decision-making and acting for the organizational members, owners and/or other stakeholders. (Barnard 1938). Purpose (purposes) is in itself *not constrained by time*, (created/emerges) it and can have a *short time-span* or it may last for a *long time*. Purpose is thus the *basis* (or the roots) of strategy *on all levels*. Barnard (1938, p. 233) observes:

The formulation and definition of purpose is then a widely distributed function, only the more general part of which is executive. In this fact lies the most important inherent difficulty in the operation of cooperative systems-the necessity for indoctrinating those at the lower levels with general purposes, the major decisions, so that they remain cohesive and able to make the ultimate detailed decisions coherent; and the necessity, for those at the higher levels, of constantly understanding the concrete conditions and the specific decisions of the 'ultimate' contributors from which and from whom executives are often insulated. Without that up-and-down-the-line coordination of purposeful decisions, general decisions and general purposes are mere intellectual processes in an organization vacuum, insulated from realities by layers of misunderstanding. The function of formulating grand purposes and providing for their redefinition is one which needs sensitive systems of communication, experience in interpretation, imagination, and delegation of responsibility.

Communication and interpretation of a *common purpose* is therefore of *high importance* for all members (owners and/or other stakeholders) of an organization, especially *if* it is on a quest for more *effectiveness*, *efficiency* and wants to *survive*.

The *realization* of *purpose* followed by *strategy* (formulation, action and constant feedback) is as well about *sensemaking* as Karl E. Weick, Kathleen M. Sutcliffe and David Obstfeld observe in their paper "Organizing and the Process of Sensemaking" (2005, pp. 410-415):

Sensemaking involves the ongoing retrospective development of plausible images that rationalize what people are doing.

Sensemaking is not about truth and getting it right. Instead, it is about continued redrafting of an emerging story so that it becomes more comprehensive, incorporates more of the observed data, and is more resilient in the face of criticism.

...sensemaking and organization constitute one another: "Organization is an attempt to order the intrinsic flux of human action, to channel it toward certain ends, to give it a particular shape, through generalizing and institutionalizing particular meanings and rules".

Thus, *important purpose* involves *sensemaking* as a *rationalization* for strategy (its formulation and action). The strategy is more *comprehensive* and *defensible* but is necessarily *not*, *true* or *right*.

Furthermore, an important purpose *creates* and *shapes* the *mission* (or the purpose or purposes) and may provide the *foundation* for a *vision* to the organization. Furthermore, purpose provides the basis for strategic decision-making and action, *how* to achieve some goals that "*satisfices*" (Simon, 1957) *important purposes* or a purpose of the members, owners and/or stakeholders. That is *the means to an end* relationship of strategy.

Unrealized or realized the *important purpose* (purposes) and *strategy* (strategies) can, or usually do, *drift apart* (strategic drift). That can lead to *ineffectiveness* and *inefficiency* or can be a *matter of survival* for the organization, *unless* necessary *changes* are made *altering* the important purpose (purposes) or strategy (strategies). This is *the nature of change*.

This *constant interplay* is an *ongoing process*, as Barnard (1938) observed, for both an individual and a formal organization. An important purpose is in itself another *complex phenomenon* worthy of its own investigation. The point here is that the phenomenon called strategy *exits* in a *dynamic* environment and is *continuously* being tested or affected by the various internal and external forces.

5.4 On the nature of the phenomenon called strategy

It is clear that in exploring the phenomenon called strategy (including strategies) that the *label* strategy on decisions and actions is in the end (mentally) a *judgment-call* for each of us to make. However, labeling is our *deliberate choice* but the phenomenon called strategy is in view of the findings of this study, is *a specific natural thought process* and *behavior pattern* that *exists* and may be called a *strategic instinct* or evolved human *trait*.

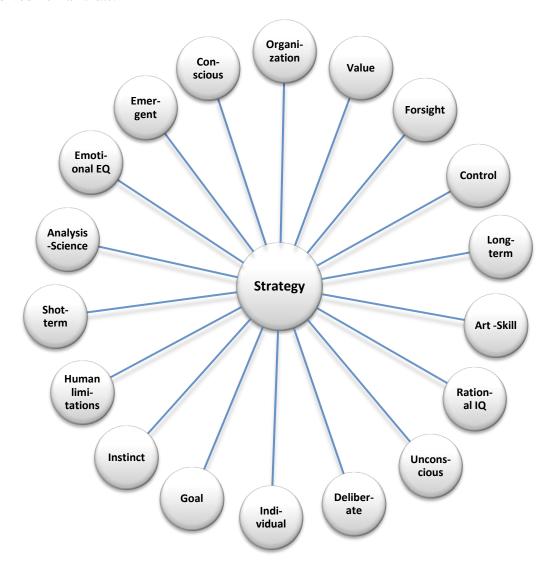


Figure 12. Some of the complex dimensions of the phenomenon called strategy.

Strategy is more *unique*, *important* and *focused* than *everyday* (i.e. no strong relations to purpose) decision-making and action (or no to take action) or the *everyday plans*, *ploys*, *patterns*, *position*, *perspectives*, *processes*. That is the more *common* activities or means to an end decision-making and action. These boundaries are though *difficult* to define.

Its main *constructs* that makes decisions and actions *strategic* in its *nature* is often *a strong sense* of *purpose*, of *importance*, of *choice* (content) and of *foresight* followed by *action*.

The findings suggest that the *origins* of this *strategic instinct* or *trait* (doing strategy) are the result of millions of years of man's *evolution*.

5.5 The creation of important purposes and the management of purposeful behavior

After exploring the literature, the phenomenon called strategy (including strategies) may be described in the following way:

Strategy - The creation of important purposes and the management of purposeful behavior

- > Strategy (strategies) signifies a thought process (processes) creating a purpose (purposes) which is considered important, followed by behavior that is guided by this purpose (purposes).
- ➤ Thus, **strategy** (strategies) is in fact the creation of an important purpose (purposes) and the management of behavior that is guided by the purpose (purposes).

Thus, a strategy (for an individual or organization) is:

The creation of important purposes and the management of purposeful behavior

Management - meaning to handle or direct with a degree of skill and thus to work upon or try to alter for a purpose.

Purpose - meaning something set up as an object or end to be attained.

Behavior - it means: (a) anything that a human (organism) does involving action: (b) response to stimulation; and (c) a response of an individual, group, or species to its environment. Or the way or manner in which one conducts oneself, for example, like acquiring and using resources. (d) Behavior limitations (like bounded rationality, biases or dysrationalia). Every strategy is affected by limitations in human behavior.

5.6 Explaining the nature of the phenomenon called strategy

The nature of strategy may be explained as follows:

- **The nature** of strategic thinking and acting (for both an individual and individuals in an organizations), is first that these phenomena must be based on some *important purpose*, whichever that purpose may be, and it *triggers* the act of thinking, formulating or crafting strategy that is followed by *action*, or a decision *not to act*. This form of decision-making and action is *future oriented*.

- **The second nature** is that the phenomena's called purpose, strategic decisions, strategic formulation, and strategic action may be *fully conscious* or *unconscious* or a *combination* of both *states of mind*. An individual or the individuals in an organization *all* have personal limitations (that is, bounded rationality, biases and so on) and their own belief system (the view of how the world works); thus, strategy is *affected* by human limitations and beliefs.
- The third nature is that these phenomena *cannot* be labeled or called strategic unless an *action* has followed in *sufficient strength* to result in effort with the aim to carry them out in some manner to "*satisfice*" the purpose. However, a decision *not to take action* at a given time and place, can be called *strategic* if it is in harmony with the purpose, and is future oriented. Other decisions and actions or decisions *not to take action* that may be labeled as *common responses* to conditions of the environment, are *not* strategic in their nature by them self's.
- **The fourth nature** of strategic thinking or formulation is that *available factors* to choose from and control in decision-making (choice) are *limited*, in whether in form, place or time (either limitations or opportunities). When chosen they will establish *a set of conditions* that *meet*, *alter* or *eliminate* the purpose. Decision-makers may get none, some or much *feedback* about the decision or decisions taken, both while and after the implementation of the chosen decision or decisions.
- **The fifth nature** is that the formulation or crafting of a strategy can be *deliberate* and/or *emergent*, or a *combination* of various factors.
- **The sixth nature** is that a series or *patterns* of decisions, based on some purpose which *determines behavior* over some stretch of time, may be called a strategy.
- **The seventh nature** is that a *change* in purpose, strategic formulation and strategic action may happen at *any time* the decision-maker or makers choose to do so. Nothing prevents an individual or organization, having chosen one strategy today from selecting a different one tomorrow. But the today's decision, in so far

as it has been *acted out* before reconsideration, may already have *narrowed down* the strategies available tomorrow.

- **The eight nature** is that the: (a) creation of purpose; and (b) formulating or crafting of strategy (c) strategic action, may all be *unique*, *innovative* and/or *creative* in its nature or not.
- **The ninth nature** is that an ever-changing *internal* and *external* environment may generate ever new or adjusted purpose or eliminate the existing purpose, and in turn require new or altered strategy based on some different purpose. The *new* strategy in turn influences the *new* existing purpose and may generate an *ever-new* or *adjusted* purpose or *eliminate it*.
- **And at lastly,** any decision-making manner that fulfills the conditions above may be considered strategic in nature. Even though if it is *not realized* or *not fully realized* by the concerning individual or organization.

Research and the phenomenon called strategy

Research is ongoing on many fronts on the phenomenon called strategy as referred to in the thesis. Different approaches are important and input from other fields of study is preferable.

Many scholars have argued that a multidisciplinary approach is *essential* if to gather relevant knowledge on the dynamic phenomenon called strategy. It is perhaps obvious that a multidisciplinary approach is in *my opinion* the right approach. Using a *multidisciplinary* and *holistic* approach is preferable for a further research on the phenomenon called strategy as suggested by David B. Jemison (1981 or Joseph T. Mahoney and Anita M. McGahan (2006).

Further research should focus on the phenomenon called strategy in the context of exploring man *as he really and is* and his role in various types of *organizations* or in *society*. It will have to take look at *all human dimensions*. The *internal* and the *external* environment of *organizations* or the *society* are as well of importance, especially in the *unusual* circumstances that humans live in today and the *uncertain* conditions that the human race may face in the near future.

Appendix

The Strategy as approach, examples from the literature

- Strategy as Practice
- Strategy as Crafting
- Strategy as Journey
- Strategy as Transforming force
- Strategy as Leader's Statement
- Strategy as Community's Statement
- Strategy as Guiding Track
- Strategy as the Building of Competitive Advantage
- Strategy as Relationship to the Environment
- Strategy as Plan, Ploy, Pattern, Position or Perspective
- Strategy as Plan
- Strategy as Ploy
- Strategy as Pattern
- Strategy as Position
- Strategy as Perspective
- Strategy as Philosophy
- Strategy as Ethos
- Strategy as Organizing
- Strategy as Intention and Anticipation
- Strategy as Orchestrating Knowledge
- Strategy as Data Plus Sense-Making
- Strategy as Creativity
- Strategy as Systems Thinking
- Strategy as Process, Power and Change
- Strategy as Marketing
- Strategy as Numbers
- Strategy as Decision Making
- Strategy as Orientation and Animation
- Strategy as Intent
- Strategy as Imitation
- Strategy as Theories of Action
- Strategy as Programmed
- Strategy as Rituals
- Strategy as Craft
- Strategy as Continious, Adaptive Process
- Strategy as Emergent Decision Making
- Strategy as Deliberate Decision Making
- Strategy as Social Embeddedness
- Strategy as Social Construct

- Strategy as Mix of Emergent and Deliberate Decision Making
- Strategy as Adaptive Persitence and Strategic Accommodation
- Strategy as Learning and Doing
- Strategy as Invention of a Discipline of Business Strategy, to Justify Power
- Strategy as ROI on ...
- Strategy as NPV on
- Strategy as Stretch
- Strategy as PR, Contol and Group Therapy
- Strategy as Formal, Quantified Planning
- Strategy as Detailed "Road Map"
- Strategy as Continuous, Remorseless "Gurilla Warfare"
- Strategy as Innovation
- Strategy as Innovations and "Winner-Takes-All"
- Strategy as Constant Search for Monopolistic Profits
- Strategy as Particular Way To Jump Over a Fence
- Strategy as Competitive "Grand Strategy"
- Strategy as PIMS, "Profit Impact Market Strategy"
- Strategy as Decisions Interdependance, and Behavior Expectations of Adversaries'
- Strategy as Cost leadership, Differentiation or Focus
- Strategy as Art
- Strategy as Science
- Strategy as Combination of Science and Art
- Strategy as is the Realm of Ideas and Attitudes, which leaves the Zone of Strategic Behaviour Amenable to Assay for Strategic-Cultural Influence.
 Some cultures favour holistic strategic analysis, others are wont to be more Cartesian, dissecting strategic problems for discrete, sequential treatment. "Culture Rules"
- Strategy as Cultural Dependant Orientations of Behaviour
- Strategy as Context
- Strategy as Left Brain Thinking
- Strategy as Right Brain Thinking
- Strategy as Combination of Left and Right Brain Thinking
- Strategy as Culture Rules
- Strategy as Dreams in Search of Reality
- Strategy as A Comprehensive, Holistic, Gestalt, Logical Vision of some Future Alignment
- Strategy as Giving Rise to Plans
- Strategy as Basic Principles, Commitments, and Norms to Form A Policy Core
- Strategy as Plans, Programs, and Decisions to make a Protective Belt
- Strategy as Integrated Sets of Ideas and Constructs that Create a Causes that Mold Streams of Decisions into Patterns
- Strategy as Vision Directed phenomenon that Crates a Framework which Guides those Choices that Determine the Nature and Direction of an Organization

- Strategy as Emerging events, Step by Step, and when Recognized as Lucrative Position, then Turned into a Deliberate Strategy
- Strategy as a Pattern Evoked Plan
- Strategy as The Management of the Internal Community's Integrity, Of its Willingness to Contribute and to Pursue All Avenues Leading to the Organization's Survival and Prosperity
- Strategy as Heuristics and Creative Methodologies that helps Understanding and Transforming Reality
- Strategy as Theory about How to Gain Competitive Advantages
- Strategy as a Political Process
- Strategy as Deception
- Strategy as Improvisation
- Strategy as Achieving Customer Bonding
- Strategy as Idea
- Strategy as The Conceptual Link between Action and Effect and between Instrument and Objective
- Strategy as a Plan of Action Designed in Order to Achieve some End, i.e. A Purpose together with a System of Measures for its Accomplishment
- Strategy as a Purpose together with a System of Measures for its Accomplishment
- Strategy as 'Wayfinding' (or Navigation)
- Strategy as a Journey
- Strategy as a Process of Discovery
- Strategy as Truth

References

- Afil, N. A. (2008). Continual fire-making by Hominins at Gesher Benot Ya'aqov, Israel, *Quaternary Science Reviews*, 27, 1733–1739.
- Andrews, K. R. (1980). *The Concept of Corporate Strategy* (revised edition). New York: Irwin.
- Augier, M & Teece, D. J. (2008). Strategy as Evolution with Design: The Foundations of Dynamic Capabilities and the Role of Managers in the Economic System. *Organization Studies*, 29, 1187-1207.
- Babbitt, C. C., Warner, L. R., Fedrigo, O., Wall, C. E. & Wray, G, A. (2010). Genomic signatures of diet-related shifts during human origins, *The Royal Society*, 1–9.
- Backwell, L. d'Errico, F. & Wadley L. (2008). Middle Stone Age bone tools from the Howiesons Poort layers, Sibudu Cave, South Africa. *Journal of Archaeological Science*, 35, 1566-1580.
- Bar-Yosef Mayer, D. E. B. Y., Vandermeersch B. & Bar-Yosef, O. (2009). Shells and ochre in Middle Paleolithic Qafzeh Cave, Israel: indications for modern behavior. *Journal of Human Evolution*, Volume 56, Issue 3, March, 307-314.
- Bardone, E. (2011). Seeking Chances: From Biased Rationality to Distributed Cognition. Berlin Heidelberg: Springer-Verlag.
- Barnard, C. I. (1938). *The Function of the Executive* (13^{td} ed. 1968). Cambridge: Harvard University Press.
- Barnard, C. I. (1940). COMMENTS ON THE JOB OF THE EXECUTIVE. *Harvard Business Review*, March, 295-308.
- Barney, J.B. (2001), Is the Resource-Based Theory a Useful Perspective for Strategic Management Research? Yes. *Academy of Management Review*; 26, (1), 41–56.
- Barney, J.B., Wright, M. & Ketchen Jr., D.J. (2001), The resource-based view of the firm: Ten years after 1991. *Journal of Management*; 27 (6), 625–641.
- Barney, J. B. & Hesterly, W. (2008). *Strategic Management and Competitive Advantage*. New Jersey: Pearson Prentice Hall.
- Becerra, M. (2009). *Theory of the Firm for Strategic Management: Economic value analysis*. Cambridge: Cambridge University Press
- Beinhocker, E. D. (2006). *The Origin of Wealth: evolution, complexity, and the radical remaking of economics*. Boston: Harvard Business School Publishing.

- Bose, P. (2004). Alexander the Great's Art of Strategy. London: Profile Books.
- Bower, B. (2011), 'Modern' humans get an ancient, nonhuman twist, *Sciencenews*, Web edition: Saturday, January 16, 2010, Retrieved 5. Jan. 2011, from: http://www.sciencenews.org/view/generic/id/54973/title/Deleted_Scenes__Moder n_humans_get_an_ancient,_nonhuman_twist
- Bower, J. L. (2008). The Teaching of Strategy: From General Manager to Analyst and Back Again? *Journal of Management Inquiry*, 17, 269-275.
- British Museum, London, The Standard of Ur, Image retrieved August 30 2010 from wikipedia.org (In public domain), http://en.wikipedia.org/wiki/File:Standard_of_Ur_-_War.jpg
- Buchanan, L. & O'Connell, A. (2006). A Brief History of Decision Making. *Harvard Business Review*, January, 32-41.
- Bunge, S. A. & Wallis, J. D. (Ed.) (2008). *Neuroscience of Rule-Guided Behavior*. New York: Oxford University Press.
- Bunn, H. T. & Pickering, T. R. (2010). Bovid mortality profiles in paleoecological context falsify hypotheses of endurance running–hunting and passive scavenging by early Pleistocene hominins, *Quaternary Research*, 74, 395-404.
- Carbonell, E. & Mosquera, M. (2006). The emergence of a symbolic behaviour: the sepulchral pit of Sima de los Huesos, Sierra de Atapuerca, Burgos, Spain. *Académie des sciences*, C. R. Palevol 5, 155–160.
- Chandler, A. D. (1962). *Strategy and structure: chapters in the history of the industrial enterprise* (20^{td} ed. 1998). Cambridge: MIT Press.
- Chapais, B. (2011). The Deep Social Structure of Humankind, *Science*, vol. 331, 1276-1277.
- Chen, M. (2007). Asian management systems (2nd ed.). London: Thomson Learning.
- Christensen, C. R., Andrews, K. R., Bower, J. L., Hamermesh, R. G. & Porter, M. E. (1982). *Business Policy: Text and cases* (5th ed.). Homewood: Richard D. Irwin.
- Choi, C. Q. (2009). Humans Still Evolving as Our Brains Shrink, *LiveScience*, Retrieved Dec. 28 2009, http://www.livescience.com/history/091113-origins-evolving.html
- Clausewitz, C. v., (1832). *On War.* (Graham, J. J. trans. 2004). United States of America: Barnes & Noble Publishing.

- Coase, R.H., (1952 [1937]), The Nature of the Firm. In G.J. Stigler & K.E. Boulding (Eds.), *Readings in price theory*, (pp. 331–351). Chicago: Irwin. (Reprinted from Econometrica, (1937, 4, pp. 386–405).
- Coase, R. H. 1984. The new institutional economics. *Journal of Institutional and Theoretical Economics*, 140, March, 229-231.
- Colin, W (2004). Strategic management. Hampshire: Palgrave Macmillan.
- Coolidge, F. L. & Wynn, T. (2009). *The Rise of Homo sapiens: The Evolution of Modern Thinking*. United Kingdom: John Wiley & Sons.
- Corballis, M. C. (2009) Language as gesture. *Human Movement Science*, 28, 556–565.
- Cordes, C., Richerson, P. J., McElreath, R., & Strimling, P. (2008). A naturalistic approach The role of cooperation and cultural evolution. *Journal of Economic Behavior & Organization*, 68, 125-139.
- Cummings, S. & Wilson, D. (Ed.) (2003). *Images of Strategy*. Malden: Blackwell Publishing.
- Cyert, R. M. and March, J. (1963). *A Behavioral Theory of the Firm*. Englewood Cliffs: Prentice-Hall.
- Daft, R. L. (2001). *Organization Theory and Design*. (7edition). Ohio: South-Western College Publishing.
- Dameron, S. & Torset, C. (2009). Strategists in an uncertain world: Practices and tools to face tensions. *Strategic Management Society Annual Conference*, Washington DC, October, Draft version, (halshs-00469431, version 1 1 Apr 2010), 1-30.
- Darwin, C. (1871). *The Descent of Man, and Selection in Relation to Sex* (Vol. 1. 1th ed.). London: John Murray.
- De Wit, B & Meyer, R. (2005). *Strategy Synthesis: Resolving Strategy Paradoxes to Create Competitive Advantage* (2nd ed.). London: South-Western Cengage Learning.
- Duggan, W. (2010). How Aha! Really Happens. *strategy+business*, Issue 61, winter, p. 24-29.
- Eisenhardt, K. M. (1989). Making Fast Strategic Decisions in High-Velocity Environments. *The Academy of Management Journal*, Vol. 32, No. 3 Sept., 543-576.
- Enfield, N.J. (2009). *The Anatomy of Meaning: Speech, Gesture, and Composite Utterances*. Cambridge New York: Cambridge University Press.

- Feist, G. J., (2006). *The psychology of science and the origins of the scientific mind*. New Haven: Yale University Press.
- Gavetti, G. & Rivkin, J. W. (2007). On the Origin of Strategy: Action and Cognition over Time, *Organization Science*, Vol. 18, No. 3, May–June, 420–439.
- Geary, D. C., (2009). The evolution of general fluid Intelligence. In *Foundations in Evolutionary Cognitive Neuroscience*. Platek, S. M. & Shackelford, T. K. (Ed.). Cambridge: Cambridge University Press.
- Ghemawat, P. (2002). Competition and Business Strategy in Historical Perspective. *Business History Review*, 76, Spring, 37–74.
- Gilkey, R., Caceda, R & Kilts, C. (2010). When Emotional Reasoning Trumps IQ. *Harvard Business Review*, September, 27.
- Golsorkhi, D., Rouleau, L., Seidl, D. and Vaara, E. (2010). What is Strategy as Practice? In *Cambridge Handbook of Strategy as Practice*. Golsorkhi, D., Rouleau, L., Seidl, D. and Vaara, E. (Eds.). Cambridge UK: Cambridge University Press.
- Grant, R. M. (2008). *Contemporary Strategy Analysis*. (6^{td} ed.). Malden: Blackwell Publishing.
- Griffith, S. B. (1963). Sun Tzu The Art of War. Oxford: Oxford University Press.
- Hafsi, T & Thomas, H. (2005). The Field of Strategy: In Search of a Walking Stick. *European Management Journal*, Vol. 23, No. 5, 507–519.
- Hamblin, W. J. (2006). Warfare in the ancient Near East to c. 1600 BC: Holy Warriors at the Dawn of History. Abingdon, Oxon: Routledge.
- Hamel, G, & Prahalad, C. K. (1989). Strategic Intent, *Harvard Business Review*, May-June, 63-76.
- Hamel, G, & Prahalad, C. K. (1990). The Core Competence of the Corporation, *Harvard Business Review*, May-June, 79-91.
- Hamel, G, & Prahalad, C. K. (1994). *Competing for the Future*. Boston: Harvard Business School Press.
- Hamel, G. (1998). Strategy innovation and the quest for value. *Sloan Management Review*, Vol. 39 No. 2, 7-14.
- Hammond, M. (2009). *THUCYDIDES The Peloponnesian War*. New York: Oxford University Press.

- Hanzhang, T. (2007). Sun Tzu's Art of War: the Modern Chinese Interpretation. (Shibing Y. transl.). New York: Sterling Publishing Company.
- Haugstad, B. (1999). Strategy Theory a Short Review of the Literature, *KUNNE Nedtegnelse N* 02/99, SINTEF Industrial Management. Strategic Institute Program ISSN 1502-4555.
- Hauser, M. (2009). The Mind, Scientific American, September, 30-37.
- Helms, M. M. (Ed.) (2006). *Encyclopedia of management* (5th ed.). Farmington Hills: Thomson Gale.
- Henry, Anthony (2008). *Understanding Strategic Management*. Oxford: Oxford University Press.
- Hetherington, R., & Reid, R. G. B. (2010). *THE CLIMATE CONNECTION: Climate Change and Modern Human Evolution*. Cambridge UK: Cambridge University Press.
- Hill, K. R., Walker, R. S., Božičević, M., Eder, J., Headland, T., Hewlett, B., Hurtado, A. M., Marlowe, F., Wiessner, P. & Wood, B. (2011). Co-Residence Patterns in Hunter-Gatherer Societies Show Unique Human Social Structure, *Science*, vol. 331, 1286-1289.
- Hutzschenreuter, T. & Kleindienst, I. (2006). Strategy-Process Research: What Have We Learned and What Is Still to Be Explored, Journal *of Management*, 32, 673-720.
- Inkpen, A. & Choudhury, N. (1995). The seeking of strategy where there is not: Towards a theory of strategy absence, *Strategic Management Journal*, vol. 16, 313-332.
- Jacobs, Z. & Roberts, R. G. (2009). Human History Written in Stone and Blood, *American Scientist*, Vol. 97, July-August, 131- 272.
- Jashapara, Ashok (2004). *Knowledge Management. An Integrated Approach*. Essex: Pearson Education Limited.
- Jeffares, B. (2009). The Evolution of Technical Competence: Strategic and Economic Thinking. In W. Christensen, E. Schier, and J. Sutton (Eds.), ASCS09: Proceedings of the 9th Conference of the Australasian Society for Cognitive Science, 162-169.
- Jeffares, B. (2010). The co-evolution of tools and minds: cognition and material culture in the hominin lineage. *Phenomenology and the Cognitive Sciences*, October 9. (Springer Science+Business Media B.V.), 503–520.
- Jemison, D. B. (1981). The Importance of an Integrative Approach To Strategic Management Research. *Academy of Management Review*, Vol. 6, No. 4, 601-608.

- Johnson, G., Langley, A., Melin, L. and Whittington, R. (2007). *Strategy as Practice Research Directions and Resources*. Cambridge UK: Cambridge University Press.
- Kay, N. (2008). Reappraising the Nature of the Firm: The Role and Influence of Lexical and Structural Ambiguity, *Organization Studies*, 29, 1209-1226.
- Kothari, V. B. (2010). Executive Greed: Examining Business Failures that Contributed to the Economic Crisis. New York: Palgrave Macmillan.
- Kotler, P., Berger, R. & Bickhoff, N. (2010). *The Quintessence of Strategic Management: What You Really Need to Know to Survive in Business*. Translated by Jokubauskas, C. Heidelberg: Springer-Verlag.
- Kuiper, K., (Ed.) (2011). *Mesopotamia: The world's earliest civilization*. New York: Britannica Educational Publishing.
- Lawrence, P. R. (2010). *Driven to lead: good, bad, and misguided leadership*. San Francisco: Jossey-Bass.
- Lau, D. C. & Ames, R. T. (2003). *Sun Bin: The Art of Warfare*. Albany: State University of New York Press.
- Levine, J. M. & Hogg, M. A. (Ed.) (2010). *Encyclopedia of group processes and intergroup relations*. Thousand Oaks: SAGE Publications.
- Lewin, R. (2005). *Human evolution: An illustrated introduction* (5th ed.). Malden, MA: Blackwell Publishing.
- Linsted, S., Fulop, L., & Lilley, S. (2009). *Management & Organization: A Critical Text* (2nd ed.). New York: Palgrave Macmillan.
- Lombard, M. (2007). The gripping nature of ochre: The association of ochre with Howiesons Poort adhesives and Later Stone Age mastics from South Africa. *Journal of Human Evolution*, 53, 406-419.
- Lorblanchet, M. (2007). The Origin of Art. *Diogenes*, 54, 98-109.
- Lynch, R. (2006). *Corporate strategy* (4th ed.). England: Pearson Education.
- Mahoney, J. T. (2005). *Economic Foundations of Strategy*. Thousand Oaks: *SAGE Publications*.
- Mahoney, J. T. & McGahan, A. M. (2007). The Field of Strategic Management within the Evolving Science of Strategic Organization. *Strategic Organization*, 5, 79-99.

- Markides, C. (2001). Strategy as Balance: From "Either-Or" to "And". *Business Strategy Review*, Volume 12 Issue 3, 1-10.
- May, T. (2007). The Mongol Art of War. England: Pen & Sword Military.
- McDonald, J. (1950). *Strategy in Poker, Business and War*. New York: WW Norton & Company.
- McBrearty, S. & Brooks, A. S. (2000). The Revolution That Wasn't: A New Interpretation of the Origin of Modern Human Behavior, *Journal of Human Evolution*, 39, 453–563.
- McBrearty, S. & Johnson, C. (2010). 500,000 year old blades from the Kapthurin Formation, Kenya, *Journal of Human Evolution*, 58, 193–200.
- Mckenna, C. D. (2006). Writing the ghost-writer back in: Alfred Sloan, Alfred Chandler, John McDonald and the intellectual origins of corporate strategy. *Management & Organizational History*; Vol. 1(2): 107–126.
- McLean, G. N. (2006). *Organization Development: Principles, Processes, Performance*. San Francisco: Berrett-Koehler Publishers.
- Merriam-Webster Dictionary & Thesaurus, (2010) from http://www.britannica.com
- Meyer, R. (2007). *Mapping the Mind of the Strategist: A quantitative methodology for measuring the strategic beliefs of executives*. Erasmus Research Institute of Management. Rotterdam: Erasmus University.
- Mgeladze, A., Lordkipanidze, D., Moncel, M. H., Despriee, J., Chagelishvili, R. Nioradze, M. & Nioradze, G. (2011). Hominin occupations at the Dmanisi site, Georgia, Southern Caucasus: Raw materials and technical behaviours of Europe's first hominins, *Journal of Human Evolution*, 1-26.
- Michael Balter, M. (2011). Was North Africa The Launch Pad For Modern Human Migrations? *SCIENCE*, VOL 331, 7 Jan., 20-23.
- Miller, J. D., Scott, E. C. & Okamoto, S. (2006). Public Acceptance of Evolution, *SCIENCE*, Vol. 313 11. August, 765-766.
- Mintzberg, H. (1973). *The Nature of Managerial Work* (1980 edition). New York: Prentice-Hall.
- Mintzberg, H. (1987). Crafting strategy. *Harvard Business Review*, July-August, 66-75.
- Mintzberg, H. (1987). The Strategy Concept I: Five Ps For Strategy. *CALIFORNIA MANAGEMENT REVIEW*, fall, 11-24.

- Mintzberg, H. (1987). The Strategy Concept II: Another Look at Why Organizations Need Strategies. *CALIFORNIA MANAGEMENT REVIEW*, fall, 25-32.
- Mintzberg, H. (2007). *Tracking Strategies: Toward a general theory*. New York: Oxford University Press.
- Mintzberg, H. (2009). *Managing*. San Francisco: Berrett-Koehler Publishers.
- Mintzberg, H., Ahlstrand, B. & Lampel, J. (1998). *Strategy safari: a guided tour through the wilds of strategic management.* New York: The Free Press.
- Mintzberg, H & Lampel, J. (1999). Reflecting on the Strategy Process. Sloan Management Review, spring, 21-30.
- Morgan, G. (1997). Images of Organization (2nd, edition). Thousand Oaks, CA: Sage.
- Morgan, M., Levitt, R. E. & Malek, W. (2007). *Executing your strategy: How to Break It Down and Get It Done*. Boston: Harvard Business School Press.
- Murray, W, Knox, M. M. & Grimsley, M., (Ed.) (1994). *The Making of Strategy: Rulers, States, and War.* Cambridge: Cambridge University Press.
- Mourre, V., Villa, P. & Henshilwood, C. S. (2010). Early Use of Pressure Flaking on Lithic Artifacts at Blombos Cave, South Africa, *SCIENCE*, Vol. 330, October 29, 659-662.
- Nag, R., Hambrick, D. C. & Chen, M. J. (2007). What is strategic management, really? Inductive derivation of a consensus definition of the field. *Strategic Management Journal*, 28, 935 955.
- Nutt, P. C. & Wilson, D. C. (2010). Crucial Trends and Issues in Strategic Decision Making. In *Handbook of Decision Making*. Nutt, P. C. & Wilson, D. C. (Eds.). United Kingdom: John Wiley & Sons.
- Ofer H. Azar, O. H. & Brock, D. M. (2008). A Citation-Based Ranking of Strategic Management Journals. *Journal of Economics & Management Strategy*, Volume 17, Number 3, fall, 781–802.
- Osvath, M. & Gärdenfors, P. (2005). OLDOWAN CULTURE AND THE EVOLUTION OF ANTICIPATORY COGNITION, *Lund University Cognitive Science*, 122, 1-16.
- Pascale, R. T. & Athos, A. G. (1986). *The Art of Japanese Management* (First published in 1981). England: Penguin Books.
- Pelegrin, J. (2009). Cognition and the emergence of language: A contribution from lithic technology. In *Cognitive Archaeology and Human Evolution*. de Beaune, S. A., Coolidge, F. L. & Wynn, T. (Eds.). New York: Cambridge University Press.

- Penrose, E.T. (1959). The Theory of the Growth of the Firm. New York: Wiley.
- Pitman, G. R. (2010). The Evolution of Human Warfare, *Philosophy of the Social Sciences*, *SAGE*, June 10, 1-28.
- Porter, Michael E. (1980). Competitive Strategy: Techniques for Analyzing Industries Competitors. New York: The Free Press.
- Porter, M. E. (1996). What is strategy? *Harvard Business Review*, 74(6), 61–78.
- Porter, M. E. (1998 ed.). *Competitive Strategy: Techniques for Analyzing Industries Competitors* (First Free Press Edition 1980). New York: The Free Press.
- Porter, M. E. (1998). *Competitive Advantage: creating and sustaining superior performance* (First Free Press Edition 1985), New York: The Free Press.
- Porter, M. E. (1998). Towards a Dynamic Theory of Strategy. In *Strategic development: methods and models*. Robert G. Dyson, R. G. & O'Brien, F. A. (Eds.). England: John Wiley & Sons.
- Porter, Michael E. (2008). *On Competition* (updated and expanded edition). Boston: Harvard Business Review Publishing.
- Prahalad, C. K. & Hamel, G. (1989). Strategic Intent. *Harvard Business Review*, May-June, 63-76.
- Prahalad, C.K. & Hamel, G. (1990). The Core Competence of the Corporation. *Harvard Business Review*, May–June, 79-91.
- Rabinovich, R., Windheuser, S. G. & Inbar, N. G. (2008). Systematic butchering of fallow deer (Dama) at the early middle Pleistocene Acheulian site of Gesher Benot Ya'aqov (Israel), *Journal of Human Evolution*, 54, 134-149.
- Rapp, D. (2009). *Ice Ages and Interglacials: Measurements Interpretation and Models*. New York: Springer.
- Rapoport, A. & Bearden, J. N. (2005). Strategic behavior in monkeys. *TRENDS in Cognitive Sciences*, Vol. 9, No.5, May, 213-215.
- Relethford, J. H. (2008). The Human Species (7td ed.). New York: McGraw-Hill.
- Renfrew, C., Frith, C. & Malafouris, L. (Ed.) (2009). *The sapient mind: archaeology meets neuroscience*. New York: Oxford University Press.
- Ries, A. & Trout, J. (2006). Marketing Warfare. New York: McGraw-Hill.

- Ronfeldt, D. (2006). IN SEARCH OF HOW SOCIETIES WORK: Tribes—The First and Forever Form, *RAND Pardee Center*, WR-433-RPC, Pardee Center working paper series, 1-97.
- Rowe, J. (2008). Studying Strategy. Jim Rowe & Ventus Publishing ApS BookBooN.
- Rumelt, R. P. (1979). Evaluation of Strategy: Theory and Models. In Schendel, D. E. & Hofer, C. W. (Ed.). *Strategic Management: A New View of Business Policy and Planning*. Boston, MA: Little Brown.
- Rumelt, R. P. (1979). Evaluation of Strategy Theory and Models. In Schendel, D. E. & Hofer C. W. (Eds.) *Strategic Management*. Boston: Little, Brown.
- Rumelt, R. P. (1984). Towards a strategic theory of the firm. In R. B. Lamb (Ed.), *Competitive Strategic Management*. Englewood Cliffs: Prentice-Hall, 556-570.
- Sanchez, R. & Heene, A. (1997). Reinventing Strategic Management New Theory & Practice for Competence- based Competition, *European Management Journal*, Vol. 15, No 3, 303-317.
- Scarre, C. (Ed.). (2009). The Human Past (2nd ed.). London: Tames & Hudson.
- Scholz, C.A., Johnson, T. C., Cohen, A. S., King, J. W., Peck, J. A., Overpeck, J. T., Talbot, M. R., Brown, E. T., Kalindekafe, L., Amoako, P. Y. O., Lyons, R. P., Shanahan, T. M., Castaneda, I. S., Heil, C. W., Forman, S. L., McHargue, L. R., Beuning, K. R., Gomez, J. & Pierson, J. (2007). East African megadroughts between 135 and 75 thousand years ago and bearing on early-modern human origins. *PNAS*, October 16, vol. 104, no. 42, 16416–16421.
- Shan, C. (Ed.) (1997). The Strategic Advantage: Sun Zi & Western Approaches to War. Beijing: The New World Press.
- Shreeve, J. 2010. "The evolutionary road". *National Geographic*, Vol. 218, No. 1, 35-67.
- Shijun, L., Xianju, Y. & Jiarui, Q (1997). "Sun Wu's Art of War" and the Art of Business Management (3th ed.). Translated by Xudian, M. (First published in 1984). Hong Kong: Hai Feng Publishing.
- Silverman, D. & Marvasti, A. (2008). *Doing qualitative research: a comprehensive guide*. Thousand Oaks: Sage Publications.
- Simon, H. A. (1945). *Administrative behavior: a study of decision-making processes in administrative organizations* (2nd ed. 1957). New York. The Free Press.
- Simon, H. A. (1955). A behavioral model of rational choice. *Quarterly Journal of Economics*, 69, 99—118.

- Simon, H. A. (1957). *Models of Man: Social and Rational* (Fifth printing 1967). New York: John Wiley & Sons.
- Slack, N., Chambers, S. & Johnston, R. (2007). *Operations Management* (5th ed.). England: Pearson Education.
- Sminia, H. (2009). Process research in strategy formation: Theory, methodology and relevance. *International Journal of Management Reviews*, 97–125.
- Speth, J. D. (2010). The Paleoanthropology and Archaeology of Big-Game Hunting: Protein, Fat, or Politics? New York: Springer.
- Stanovich, K. E. (2009), Rational and Irrational Thought: The Thinking that IQ Tests Miss *SCIENTIFIC AMERICAN*, November/December, 34-39.
- Sun, H., Chen, C., & Zhang, S. (2008). Strategic leadership: Sunzi Art of War. In Chen, C & Lee, Y. (Ed), *Leadership and Management in China, Philosophies, Theories and Practices*. Cambridge: Cambridge University Press.
- Teece, D. J. (2009). *Dynamic Capabilities and Strategic Management*. New York: Oxford University Press.
- Thieme H. (1997). Lower Palaeolithic hunting spears from Germany, *NATURE*, Vol. 385, 27 February, 807.
- Thomas, H. (1984). Mapping Strategic Management Research. *Journal of General Management*, 13-28.
- Thompson, J. & Martin, F. (2005). *Strategic Management: Awareness and Change* (5th ed.). London: Thomson Learning.
- Tung, R. (1994). Strategic management thought in East Asia, *Organizational Dynamics*, Spring, 55–65.
- Tversky, A. & Kahneman, D. (1963). Extensional versus intuitive reasoning: The conjunction fallacy in probabilistic reasoning, *Psychological Review*, 90, 293-315.
- Tversky, A. & Kahneman, D. (1974) Judgment under uncertainty: Heuristics and biases, *Science*, 185, 1124-1131.
- Wadley, L. (2007). Announcing a Still Bay industry at Sibudu Cave, South Africa, *Journal of Human Evolution*, 52, 681-689.
- Wadley, L. (2010). Compound-Adhesive Manufacture as a Behavioral Proxy for Complex Cognition in the Middle Stone Age. *Current Anthropology*, Volume, 51, June, 111-119.

- Wadley, L, Hodgskiss, T. & Grant, M (2009) Implications for complex cognition from the hafting of tools with compound adhesives in the Middle Stone Age, South Africa. *PNAS Early Edition*, ANTHROPOLOGY, pnas.0900957106, 1-5.
- Weick, K. E., Sutcliffe, K. M. & Obstfeld, D. (2005), Organizing and the Process of Sensemaking, *Organization Science*, Vol. 16, No. 4, July–August, 409–421.
- Wells, S. (2010). *Pandora's seed: the unforeseen cost of civilization*. New York: Random House.
- Wernerfelt, B. (1984). The Resource-Based View of the Firm. *Strategic Management Journal*, 5, (2), 171–180.
- White, L. A. (1975). *The Concept of Cultural Systems: A Key to Understanding Tribes and Nations*. New York: Columbia University Press.
- Whittington, R. (2001). What is Strategy and Does It Matter? (2nd ed.). London: Thomson Learning.
- Wilkins, J. (2010). Style Symboling & Interaction in Middle Stone Age Societies. *Explorations in Anthropology*, Vol. 10, No. 1, 102–125.
- Williamson, O. E. (1985). *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting.* New York: The Free Press.
- Williamson, O. E. (1991). Strategizing, Economizing, and Economic Organization. *Strategic Management Journal*, Vol. 12, 75-94.
- Williamson, O. E., (Ed.) (1995). *Organization theory: from Chester Barnard to the present and beyond* (Expanded edition). New York: Oxford University Press.
- Wong, K. (2006). Human Becoming Human: Evolution and the Rise of Intelligence. *SCIENTIFIC AMERICAN SPECIAL EDITION*, September, 19, 1-92.
- Zimmer, C (2010), The Way You Make Me Feel. *ORIGINS DISCOVER Magazine*, summer, 22-25.