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A COMPARATIVE STUDY OF EXECUTIVE
DECISION MAKING IN THE UNITED STATES AND GHANA

A Dissertation Presented

by

MATTSON K. ATSUNYO

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

May, 1992

School of Management

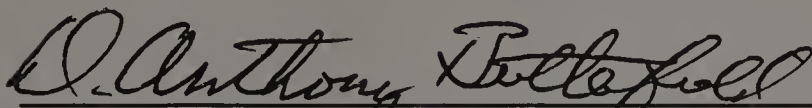
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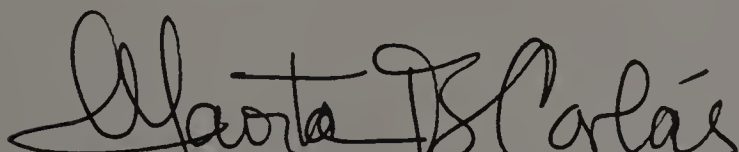
Approved as to style and content by:



D. Anthony Butterfield, Chairperson




Ronald Karren, Member



Marta B. Calas, Member



Ralph Faulkingham, Member



Ronald Karren
Director, Doctoral Program

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To the memory of my beloved mother

DOMINICA YAWA AYATEY

For her sacrifices and long suffering,
That, in her words, "I might learn the whiteman's knowledge".
This work is dedicated to you, NANA.

ACKNOWLEDGEMENTS

This endeavor was completed with the assistance and encouragement of several people. To each and everyone who contributed in one way or another, I salute you all.

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ABSTRACT

A COMPARATIVE STUDY OF EXECUTIVE DECISION MAKING IN THE UNITED STATES AND GHANA

MAY, 1992

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The research presented here examines core decision making orientations of top executives of small and medium-sized corporations in two national cultures -- the United States and Ghana (Africa). The purpose is to understand how these executives arrive at the actions they initiate on behalf of their organizations; whether the approaches differ significantly, and, if they do, in what ways. The study adopts a behavioral approach and is undergirded by the proposition that executives, when faced with a decision problem, have preferences for particular types of decision procedures. The study deals directly with individual and group differences among executive decision makers. Two human information processing (HIP) metaphors -- rational and intuition -- are used to develop a number of hypotheses. Data were gathered through a questionnaire survey instrument adapted from the Taggart & Valenzi (1990) HIP survey, and from the works of Heller

& Wilpert (1981) and Hofstede (1980). Questionnaires were mailed to three hundred and twenty U.S. executives. Thirty-one percent of the executives completed and returned the survey instrument. One hundred and eighty Ghanaian executives were personally contacted in eight cities with the survey instrument. The response rate among these executives was forty two percent.

Survey questionnaires were analyzed using analysis of variance procedures on the rational and intuitive index scores. T - tests were conducted on the "decision centralization scores". The results suggest that there were differences in the decision making orientation of United States and Ghanaian executives with regard to the rational metaphor. The differences were, however, not in the direction predicted. Executive respondents in Ghana, more than executives in the United States, appeared to have greater orientation to decision information processing using logic, planning and ritual. No significant differences were found in relation to executives' orientation to the intuitive metaphor in the two countries. As was suggested in the literature, executives in Ghana preferred more centralized decision making than executives in the U.S. There was evidence of association between "decision centralization" and the intuitive mode.

The implications of the results of the study are that the biocomputer functions of the executive brain are already in action in practice, and research and theory building must provide clarifications equally for the two modes of executive thinking. Secondly, decision information processing (using the rational and

intuition metaphors) appears to be influenced less by culture-specific decision approaches than by culture-general organization perspectives. Third, the study should also be interpreted as a learning process in "the transferability of western-based concepts and methodologies" to other cultures, such as Ghana (Adler, et al., (1989:67).

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CHAPTER I

INTRODUCTION

1.1 Overview

Traditional economic and administrative models of decision making have generated a great deal of understanding of this very important organization phenomenon. These models, however, seldom deal with personal and cultural differences among decision makers (Agor, 1989; Taggart, et al. 1985, 1990). Organization theorists and researchers generally assume that behavioral decision variables such as: (a) elements of the situation, (b) the nature of the task, (c) power and influence of individual actors, and (d) the extent of subordinate participation in the firm, among other similar reasons, are most important in affecting the decisions made. A few other researchers emphasize the fact that most behavioral decision research has yet to acknowledge the impact of culture and ideology on the decision maker's mind (see Adler & Graham, 1989; Taylor, 1984; Agor, 1989; Hofstede, 1980, 1988; Decisions in Organizations, 1979). For example, Taylor (1984:81) considers that "decision making performance depends upon both the behavioral characteristics of the decision maker and the features of the decision environment". The underlying patterns of thinking expressed by the individual decision maker's own orientation may explain a substantial amount of variation in executive decision making (Nutt, 1989; Haire, et al. 1966; Taggart, et al. 1985). Haire, et al. (1966:24) suggest that executive decision making may be

similar within the same culture, but dissimilar across different cultures. The present study attempts to test the minority argument that executive decision making is substantially grounded in the cultural and personal orientation of individual decision actors.

According to social anthropologist Berreman (1966), decision making, albeit a universal phenomenon, has multiple manifestations that "reflect different styles of thought" nurtured in different cultures. Thus, for example, while European navigators plan and plot their routes based on general principles, Trukese navigators simply determine their major objective and rely on intuitive insights to respond "to conditions as they arise in an ad hoc fashion" (p.347).

The field of social anthropological research is well-known for its indepth analysis of culture. Berreman's (1966) thesis developed this train of thought a step further by the introduction of two human information processing (HIP) metaphors -- rational and intuition -- in relation to different national culture dyads. Organization theorists, however, have mastered behavioral decision making research but have often shied away from cultural and personal preferences. By reciprocal interdependence of these two areas of knowledge, the evidence emanating from observation and research is that there are spiritual kins-persons of European and Trukese navigators in modern organizations; hence it is possible that further research to test the impact of culture and personal preferences on

executive decision making will enhance our understanding of this organizational phenomenon.

The metaphoric extrapolation of the "rational" and "intuitive" distinction is found in many fields of study and cultures. Neurophysiological research has explained the left and right hemispheric specialization of the human brain with some cautious references to the left as "rational" and the right as "intuitive" (cf. Sperry, 1964; Bogen, 1986; Ornstein, 1986; Churchland, 1986). Western philosophy highlights the HIP metaphors using the Greek philosophers' distinction between Apollonian (rational) and Dionysian (intuitive) approaches to reality. The Greek god Apollo represents the light of the sun and the god Dionysus represents darkness that descends upon human thought under the influence of wine to cause our thoughts to flow uninhibited by the rational mind (Taggart & Valenzi, 1990). The "esoteric" philosophies of the East have long recognized the two HIP metaphors. The Chinese Yin - Yang symbol captures the metaphoric duality of human consciousness -- Yang (the rational) and Yin (the intuitive) (see Wilhelm-Baynes, 1950). In Vedanta (or Hindu thought), Budhi represents the rational (intellect) and Manas represents the intuitive (mind). The Afrocentric philosophy captures the HIP metaphors in the masculine (rational) and feminine (intuitive), occupying the centre of the rhythm of nature.

The terminology used to describe the "rational" and "intuitive" metaphors varies from one author to another. References to logical/analytic or other similar

words are significations of the rational term, and synthetic/ holistic means intuitive. A representative list of terms is found on pages 34 & 35. The essence of the terms appears to be universal.

Different cultural segments of the world have been associated with one and/or both HIP metaphors. Hofstede & Bond (1988) describe two chunks of the world's cultures thus:

We could say that Western thinking is analytical, while Eastern thinking is synthetic (p.20).

Kiggundu (1988:235) notes that field research in Africa indicates that indigenous knowledge systems "are important because they are holistic" and are complementary to the alien and often misunderstood rational and scientific analytical systems. Allison (1971:v) describes the basic orienting frame of most people in the U.S. as in the direction of the rational actor model. Descriptions of such culture-dependent executive thinking abound. In addition, there persists the view that "culture's grip on us is complete" and even "affects the theories we are able to develop to explain our practices" (Hofstede & Bond, 1988:19); therefore, researchers' decisions on what to stress or not to stress may be a function of cultural influences. Hofstede (1980) attested to such influences on the theories of founding fathers of organizational studies such as Machiavelli (1468-1527), Fayol (1841-1925), Taylor (1856-1915), and Weber (1864-1920).

In this study, the attempt is to outline executives' orientation toward particular underlying modes of thinking in decision situations. The aim is two-fold: first, to apply the rational-intuitive terminology to the theoretical position of the authors who posit that decision making orientations are substantially affected by cultural differences, and second, to see if these differences are manifested in the personal and cognitive makeup of executive decision makers.

1.2 The Problem

Both the rational-economic and administrative models of decision making characterize the executive as a rational, deliberately analytical and calculating individual presiding over and providing logical congruence to a rational organization governed by rules and theories (Isenberg, 1984). Rational information processing is rooted in the narrow economic definition of rationality, based on the assumption of extensive and complete information regarding all features of a decision problem. "Ideally, a complete set of possible courses of action will be known, all possible outcomes that may result from taking any of these actions will be specified, and courses of action will be judged in the light of appropriate criteria to determine the extent to which they attain the decision maker's objective" (Taylor, 1984). Led by Herbert Simon (1955, 1978), (see also Cyert, et al. 1956; Pettigrew, 1973, Mintzberg, 1976; Stein, 1981(a); Nutt, 1984), the administrative decision theorists broadened the economic definition of rationality to embody

intelligence and reasonableness (Taylor, 1984), bounded by sharp cognitive limits to such human intellectual capacities. The cognitive strain on human information processing implied by these authors is such that a decision alternative could not yield an optimal course of action but only a satisfactory solution at a particular time.

A growing body of research evidence indicates that the rational and administrative theories embellished with many techniques for expanding the bounds of rational decision making still do not adequately explain decision making in many situations. Isenberg (1984) writes that contrary to the conventional wisdom that executives make decisions in a manner similar to the rational and administrative models, "this is only partly true". Several authors also suggest that in conjunction with rational analysis, executives rely heavily on intuition (see e.g., Barnard, 1938; Mintzberg, 1976; Quinn, 1980; Pondy, 1983; Isenberg, 1984; Agor, 1989; Nutt, 1989; Taggart, et al. 1990).

In this study, the attempt is to outline a conceptual model that uses culture as a base upon which to examine the rational and intuitive modes of decision making. Special emphasis is placed on the cultural and personal connections related to the two HIP metaphors. The main problem is to test the Berreman (1966) thesis that decision making reflects different styles of thought -- rational and/or intuitive -- nurtured in particular culture dyads.

In order to achieve the above objective, two representative national cultures have been selected -- United States and Ghana. The reasons for the selection are that the behavioral decision making literature implies that the cultural assumptions underlying U.S. management are generally based on objective analysis using rational and factual support (Linstone, 1984). There is an "exhaustive use of logic and reason" often with disregard for subjective experience, writes Clark (1973:158). In contrast, most conceptual discussions about Ghana assume that Ghanaian executives rely on intuition and experience in decision making (Kiggundu, 1988). The Ghanaian executive "has no alternative but to bring his (sic) indigenous [holistic] thought-system to the workplace" (Ahiazu, 1986:47).

1.3 Definitions of Intuition

The experiential phenomena of intuition is usually defined in many ways to cover a broad spectrum of experiences ranging from "mystical apprehension of absolute truth, insight into the nature of reality, extrasensory perception,..... knowing or perceiving through the body rather than the rational mind, hunches and premonitions" (Clark, 1973:156). Clark's exposition "Exploring Intuition: Prospects and Possibilities" attempts to formulate an all-inclusive conceptual framework with which to study intuition as a psychological function. According to Clark (1973:157):

Psychological conceptions of intuition have dealt primarily with intuition as inference, using the term to describe the process of reaching an accurate conclusion on the basis of less information than would usually be required to reach that conclusion. The assumption is that information is gained through the usual sensory channels, and acted upon by the usual cognitive processes, but both the process and the clues remain essentially unconscious, or below the threshold of consciousness.

In contrast, parapsychological studies generally define intuition based on assumptions other than inference. Such extrasensory perception (ESP) definitions usually culminate in a claim of direct apprehension of truth. In this tradition, Beveridge, in his The Art of Scientific Investigation, describes intuition as a "sudden enlightenment or comprehension of a situation, a clarifying idea which springs into consciousness, often, though not necessarily, when one is not consciously thinking of the subject" (1957:91). Webster's Third New International Dictionary also defines intuition in the ESP tradition as:

Revelation by insight or innate knowledge, a form of knowing that is akin to instinct or a divining empathy and gives direct insight. Quick and ready insight. The act or process of coming to direct knowledge or certainty without reasoning or inferring.

Clark's (1973) intuition framework includes "the philosophical tradition of intuitionism" which "assumes that truth can be known intuitively, and that objects of perception can be apprehended intuitively"(p.158). Through intuition, the individual is able to apprehend the essence of life, transcending the application of reason or intellect.

Jung's (1923) conception of intuition, although not necessarily reducible to inference, is in the cognitive domain of Clark's (1973) model. Jung's intuition/ thinking and sensation/ feeling categories represent "a psychological function present in all men, (sic) albeit in varying degrees, and manifested according to personality types.... The intuitive knows, but does not know how he knows" (Clark, 1973:159).

The elusive nature of intuitive cues makes it imperative for executives seeking to use intuition to "be willing to learn by trial and error" (Clark, 1973: 162). Ray & Myers (1989) define intuition in this mode as "paying clear attention, without mind chatter and emotions, to the most appropriate alternative that comes from the creative Essence" (p.250).

Herbert Simon (1987) posits a rational definition of intuition. According to Simon, ".. intuition is not a process that operates independently of analysis .."; the "ability is best explained by postulating a recognition and retrieval process that employs a large number of chunks or patterns stored in long term memory" (p.61).

Clearly, intuition is not management by ignorance; it sizes up all elements of a decision situation and comes up with a solution when rational information is not available or too complex for any meaningful conclusions to be drawn (Harper, 1988:116).

Clark's (1973) model focuses on the individual. With reference to groups, intuition is considered by some authors as a cultural construction (cf. Berreman, 1966; Gladwin, 1964). Much like the spiritual kins-persons of European and Trukese navigators mentioned in the overview, the cultural and personal orientation of modern executives is thought to be significant in promoting either rational, intuitive, or integrative (combining both rational and intuition) modes of decision making. In other words, some national cultures seem to reward predominantly rational or predominantly holistic thinking; other cultures reward both.

1.4 Purpose of the Study

The purpose of this research is to compare executives' core decision making orientations in two national cultures. Specifically, the objective is to devise ways of systematic comparison of preferred modes of decision making. The study introduces two key variables. The first variable is culture, (usually missing in many behavioral decision making studies), represented by U.S. and Ghana. These two national cultures were selected because they meet the theoretical considerations of the study and were convenient on account of the researcher's resources. The second variable is managerial thinking, represented by two human information processing metaphors of rationality and intuition. In a comparative

analysis, the study attempts to assess the impact of national cultural differences on executive decision making orientations.

The future of managing of organizations is said to involve greater environmental turbulence "where the economic and political climate will be characterized by rapid change, crisis and major structural dislocations" (Agor, 1989:4; cf. Naisbitt, 1981). The understanding and articulation of the two decision information processing metaphors would make a contribution to managerial success under turbulent conditions. Barnard (1938) says of the two mental processes:

I have found it convenient and significant for practical purposes to consider that these mental processes consist of two groups which I shall call 'non-logical' and 'logical' (p.302) emphasis added.

In order to articulate the existence and differences in orientation to the two HIP modes, a cross-cultural analysis will be conducted to achieve the purpose of the study.

1.5 Basic Assumptions

In the conceptualization and design of this study, the following assumptions were made:

1. A universalistic approach to decision making. Decision making is thought to be a universal precursor of organization action but with distinguishable orientations of decision makers in various culture dyads.
2. A personalistic decision analysis. Inputs and outputs are attributed to a specific decision making executive. The analysis proceeds from the recognition that although decision making is heavily influenced by decision aids and contingencies, the primary authority is vested in the top executive whose definition of "reality" allows the organization to continue to exist and act in its environment.
3. Executives in different national cultures perceive and organize decision problems using their most preferred mode of thinking. Individual executives have deep-seated preferences with regard to how decisions should be made. These preferences affect not only what they attend to in decision situations (eg. information type), but how they draw conclusions about what they perceive (eg. processing options) (see Briggs & Myers, 1987:2).
4. Preference for a particular decision making orientation may be associated with the cultural and cognitive makeup of the decision maker (Wright, 1984).

1.6 Contributions of the Study

The study brings into focus two very important issues relevant to the field of organizational studies -- culture and managerial thinking. The relevance of culture to managerial activities has been forcefully brought to the limelight by "culturists" such as social anthropologist Hall (1959) and organizational anthropologist Hofstede (1980, 1988). "The concept of culture", observed Hall (1959), "touches upon such intimate matters that they are often brushed aside at the very point where people begin to comprehend their implications" (p.165). An understanding of the operations of the executive's mind in different national cultures has great relevance for today's integrated world economy, increased overseas assignments, and for management education in general. The general feeling is that most organization researchers are strongly biased toward rational thinking and all but ignore intuitive thinking (Taggart & Valenzi, 1990). The first specific contribution of the study is that it will help researchers and practitioners to understand directly personal and cultural differences (and/or similarities) among decision makers using both rational and intuitive metaphors. The comparative nature of the study proceeds beyond the single country or regional analysis of most decision making studies.

A second contribution of the research concerns the rational versus intuitive approach adopted. The literature reports that "balanced brain" (whole brain) offers the optimum tool for decision makers. The intuitive dimension, misunder-

stood and/or ignored, is emphasized to help bridge the gap between management scientists and management practitioners.

Another contribution of the study is the provision of some empirical answers to the numerous conjectural discussions of corporate executive decision making behavior in the literature. Awareness of executives' orientations can guide decision support systems to be set up to complement individual executive preferences.

Perhaps the most important aspect of the study lies in the expectation that the results will uncover subtle similarities and differences in U.S. and Ghanaian executive decision approaches. Researchers and practitioners will achieve a better understanding of the two modes of consciousness and their utilization for directing executive action in different cultures.

1.7 Overview of Subsequent Chapters

The following pages present the conceptual framework upon which the study is based and the design and methodology used for the empirical research. The managerial foundations embedded in the relevant decision making literature are discussed extensively in Chapter II. The discussions include the physiological and cultural explanations of the subject matter under study. Chapter III develops

the thesis, hypotheses and the methodology used for the study. Chapter IV presents the results of the research and a discussion of the results. A summary of the study is provided in Chapter V together with the researcher's concluding thoughts. The appendices and bibliography follow the main chapters to provide opportunities for reference, and future study.

CHAPTER II

LITERATURE REVIEW

This chapter elaborates on the decision information processing orientations of executives using the rational and intuitive metaphors (Taggart & Torrance, 1984; Agor, 1989). A further categorization of the two modes into six modes, descriptive of the Taggart & Valenzi (1990) Human Information Processing (hereafter HIP) metaphors, comprising logic, planning and ritual in the rational orientation, and insight, vision and feeling in the intuitive orientation, is explored. The relevant decision making studies of the West, and Eastern and African "esoteric" philosophies, form the bases of the metaphors. Three areas of the literature are examined. The first explores the multiple perspectives analysis. The second reviews cognitive decisional research and the managerial foundations of this approach. This is followed by a review of cross-cultural decision making research in which the concept of culture (societal and organizational), comparative management and the explanations of the HIP metaphors across cultures are discussed.

The chapter ends with limitations of the literature on decision making as it relates to the HIP metaphors and a summary that brings the different sections together.

2.1 Research on Decision Making

Organizations are action oriented, and decisions initiate actions. "A decision expresses the expectation that certain actions will take place" (Brunsson, 1982:32). Researchers on decision making have adopted a variety of approaches to the study of the subject. This study focusses on "descriptive research". Three main categories of descriptive research undergird the present study (see Table 2.1, p. 18). These are:

1. Multiple Perspectives Analysis
2. Cognitive Decisional Research
3. Cross-cultural Decision making Research

The organization literature related to these has identified differences in decision making orientations as a result of the influence of "unrecognized assumptions upon [executive] thinking about events ..." (Allison, 1971:v). In the reviews which follow in the next several pages, this researcher argues, in the tradition of social and organizational anthropologists (eg. Hofstede, 1986; Hall, 1977; Berreman, 1966; Gladwin, 1964; Mudimbe, 1988) and organizational theorists such as Allison 1971; Grayson, 1973; Taggart & Robey, 1981; Isenberg, 1984; Agor, 1989; Ahiazu, 1986; Nzelibe, 1986; and Isaack, 1981), that these "unrecognized assumptions" which channel executive thinking about events may be substantially culture-dependent.

Table 2.1		
<u>Descriptive Research on Decision Making</u>		
Research Perspectives	Representative Research	Method of Analysis
1. Multiple Perspectives Analysis	Cyert, et al. 1956	Cases
	Allison, 1969, 1971	"
	Pettigrew, 1973	"
	Steinbruner, 1974	"
	Andersen, 1977	"
	Linstone, 1984	"
2. Cognitive Decisional Research	McKenny & Keen, 1974	Questionnaire
	Quinn, 1980	Interviews
	Shrivastava & Mitroff, 1983, 1984	Interviews
	Isenberg, 1984	Interviews
	Hambrick & Mason, 1984	Questionnaire
	Nutt, 1984, 1989	Interviews
3. Cross-Cultural Decision Making Research	Haire, et al. 1966	Questionnaire
	March & Olsen, 1976	"
	Dundos, 1979	"
	Hofstede, 1980	"
	Heller & Wilpert, 1981	"
	Hickson, et al. 1986	"
	Carter, 1987	"

2.2 Multiple Perspectives Analysis

The central theme of the multiple perspectives analysis is that executives wear "conceptual lenses" with which they see and define the "reality" of their organizations, that is to say, what threats and opportunities exist, and what to highlight or neglect. The analysis suggests that the basic orienting frame of most people in the United States is the rational actor model (Allison, 1971:v).

Graham Allison (1969, 1971) applied three conceptual models (i.e. the rational actor model, the organizational process model, and the bureaucratic politics model) to explain the Cuban Missile Crisis. Model I assumes that organizations behave as rational individuals who have complete information about alternatives and the consequences of the alternatives. Allison (1971) postulates that most predictions of behavior of individuals and organizations proceed in terms of this one basic rational conceptual scheme which "must be supplemented, if not supplanted" by other schemes (p.4 & 5). Model II considers decisions as outputs of organization processes, and Model III assumes that decisions are outcomes of political games and "the resultant of bargaining among individuals" (1971:162-180). Steinbruner (1974) applied the multiple perspectives analysis to NATO's proposed multilateral force and recategorized Allison's (1971) dimensions into rational-analytic, cybernetic, and cognitive frames. The analytic frame assumes "analytic evaluation of alternative outcomes"; the cybernetic paradigm sees "uncertainty reduction by routinalization" as critical; and the cognitive frame

rests on the assumption that "much of information processing is done without conscious direction (Steinbruner, 1974), but "on a certain belief structure of the human mind" (Linstone, 1984:31). Andersen (1977) combined the Allison (1971) and Steinbruner (1974) models into "rational", "organizational", and "cognitive" perspectives. A recent study by Linstone (1984) proposes three similar perspectives: the "technical", "organizational" and the "personal". According to Linstone, the technical world "is seen in quantitative terms" with tools which "include probability and game theory, decision and cost-benefit analysis, systems dynamics, and econometrics" (1984:46). The organizational perspective sees the world through organizational processes affected by rules and standard operating procedures (SOP's), and by myths and culture (1984:48). The personal perspective sees the world through the individual's eyes, and brains and intuition, charisma, leadership and self-interest play vital roles (1984:53).

The Multiple Perspectives Analysis offers a good description of the HIP metaphors adopted for this study. The essential feature of the rational-analytic model is to view decisions as the product of intendedly rational conscious choice (Schwenk, 1988:7). The personal (intuitive) frame assumes that "each individual has a unique set of patterns that inform [his/her] intuition" which augments the conscious logical processes (Linstone, 1984:55). Personal circumstances may lead to decision behaviors, choices or points of view that reflect the particular situation; the unique individual may have perceptual, cognitive and emotional patterns that gravitate toward particular approaches (Maruyama, 1984). The

organizational (integrative) perspective depends on rules and procedures in which vibrant human elements of the rational and personal persuasions structure and strategize the processes. Cultural and personal beliefs of the decision participants in the organization help to mold bargaining positions and compromises.

The use of Multiple Perspectives in decision analysis would suggest that executives have a whole range of decision making approaches or models available to them. Observations of behavior of executives, however, indicate that they have deep-seated preferences or orienting functions with regard to how they approach decision making; they often fail to use the repertoire of decision approaches when pertinent (Nutt, 1989:107). Instead, there is partial or complete unawareness of the complementary strengths of other perspectives. The existence of such barriers to the use of multiple perspectives in decision making brings to the forefront the proposition by some authors that "the influence of a decision maker's 'style' must be considered" a crucial aspect of any decision tactic (Nutt, 1989:107; see also Myers-Briggs, 1985; Otite, 1978).

In summary, the multiple perspectives analysis generates three alternative frameworks with which to explore executive decision making. It also acknowledges that behind these frames are unrecognized, often unconscious, assumptions upon which executives base their thinking, and therefore they may be oriented toward a single rather than multiple perspectives in their decision analysis. If decision 'style' is as important as it is portrayed by some authors, and that

executives exhibit different decision making styles, we are in a position to hypothesize that:

There are differences in the decision making orientation of executives.

2.3 Cognitive Decisional Research

The second major category of descriptive research related to the present study is Cognitive Decisional Research. The basic tenet of this theory is that "differences in the cognitive makeup of managers color their preferences" (Nutt, 1989:108). The theory addresses questions such as: "Why do some managers seem to gravitate toward particular approaches and use them repeatedly?" "... what makes this behavior habitual?" (Nutt, 1989). Cognitive Decisional Research and Comparative Management Decision Making Research literatures provide some answers to these questions.

Carl Jung's (1923) theory of psychological types offers a widely accepted view of cognitive makeup of decision makers. As interpreted by Myers-Briggs (1985), the theory suggests 'styles' (or orienting functions) that can be defined by the executive's preferred manner of gathering and analyzing information for decision making. "Sensing" and "Intuition" [S or N] refers to "perceptive" activities

which may be used to gather information. "Sensing Types" tend to focus on what works 'now' in work situations and "reality" for them is what can be observed, collected, and verified directly by the senses. They usually apply what they have learned in a step-by-step sequence to reach decisions and generally distrust intuitive inspirations and are careful at remembering and working with a great number of facts in each decision situation. "Intuitive Types" tend to focus on information gathering that shows meanings, relationships and possibilities beyond the information for the senses. They follow their inspirations and hunches and leap to decisions quickly. They are not interested in facts but in possibilities (Myers-Briggs, 1985).

"Thinking" and "Feeling" [T or F] refers to "judgement" activities which may be used to process information in the bid to arrive at a decision. "Thinking Types" prefer to process information in logical order with a step-by-step process of reasoning from cause to effect, seeking an objective standard of truth. They have a talent for analyzing a problem and like to anticipate or predict logical outcomes of decision choices. "Feeling Types" prefer to process information based on personal values, not requiring logical analysis. They tend to be sympathetic and responsive to the effect of their choices on other people (Myers-Briggs, 1985).

Combining the two information-gathering modes -- sensing and intuition -- with the two information-processing modes -- thinking and feeling -- provides the four Jungian psychological types: Sensing/Thinking types (STs); Sensing/Feeling

types (SFs); Intuition/Thinking types (NTs); and Intuition/ Feeling types (NFs). The Sensing/Thinking executive relies on an information gathering approach that is shaped by facts and details, breakable into discrete elements; and information processing that relies on logic and step-by-step processes. The Intuition/Feeling executive is the opposite of the ST type who adopts a perceptive and comprehensive approach to information gathering, and personalizes the decision at the processing stage (Nutt, 1989: 101-111). The Sensing/Feeling executive is also interested in observable reality but the information processing judgements they trust lead them to be sensitive with other people's feelings and reactions. The Intuition/Thinking executive is the extreme opposite of the SF type who is interested in a wide range of possibilities but prefers to handle these possibilities by applying objective and logical criteria (Myers-Briggs 1985).

In a nutshell, the Jungian (1923) theory of psychological types portends "that much seemingly chance variation in human behavior is not due to chance, it is in fact the result of a few basic, observable preferences" (Myers-Briggs, 1985) emphasis added. The psychological types illustrate dominant choice styles or preference for particular frames of reasoning about problems, especially in the manner in which executives assemble and process information in order to reach a decision. Mitroff & Kilmann (1975) studied loan officers of a bank who were asked to describe how they believed bank loans should be dispensed. They found that the loan officers had distinct styles in various case descriptions. Nutt's

(1979b) study of "Planners" who described their ideal planning process in writing found similar preference types.

In the manner of the multiple perspectives discussion, it is feasible to adopt the proposition that executive decision making differences depend on executive cognitive differences -- the processes which may be described as rational and/or intuition.

2.3.1 The Rational, Intuitive and Integrative Dichotomies.

Several authors simply classify the observable preferences or choice styles in decision making along a single rational-intuitive dimension (see eg. Ornstein, 1986; Leavitt, 1978; Mintzberg, 1976; Suojanen, 1976; Zeleny, 1975; Taggart, et al. 1985). This is often interposed with rational-intuitive unity that requires an integrative shifting of the continuum of thought (see Agor, 1989; Ladd, 1987; Pondy, 1983; Leavitt, 1978). In their recent study, Taggart & Valenzi extended the two-mode rational-intuitive dimension into six modes which consist of varying degrees of rationality and intuitiveness arranged on a continuum from the most rational to the most intuitive. The derived modes, they posit, are rooted "in innovative management thought, the physiology of the human nervous system, and Eastern and Western philosophy" (p.153). The authors developed a semantic analysis of term pairs by subdividing the "rational" term into logic, planning, and ritual; and

the "intuitive" term into insight, vision, and feeling (p.159). The opposite term pairs are "logic-insight" (which indicates how executives approach tasks either as SPECIALISTS using logic or as GENERALISTS using insight); "planning-vision" (which represents how executives prepare for the future either by PLANNING AND DEVELOPING FORECASTS or by GENERATING SCENARIOS); and "ritual-feeling" (which signifies how executives work with people either by being TASK CENTRED or PEOPLE CENTRED) (p.160). According to Taggart & Valenzi (1990), the HIP metaphors do not yield a simple 2 x 3 structure because the term pairs have varying "distances" between them -- the most pronounced being the logic-insight pair and the least pronounced found in the ritual-feeling pair. Figure 2.1 illustrates the rational-intuitive continuum superimposed on the multiple perspectives, cognitive and the Taggart & Valenzi (1990) HIP formulation.

Figure 2.1 closely resembles the Multiple Perspectives model (ie. the rational-analytic; the personal and the integrative-organizational perspectives), with the superimposition shown in the figure. The rational end of the continuum pursues organizational precursors of action (ie. decision making) in an explicit, logical, well-ordered manner. Similar to the multiple perspectives model I, the predominant style of thinking "includes a preference for the language of numbers, a propensity to divide problems into components, to search also for convergence -- that is, for an answer" (Leavitt, 1978). The intuitive end of the continuum of thought "relies on holistic impressions, visual and spacial images, impulsive

The rational and intuition HIP metaphors lie on a continuum. The integrative perspectives of the cognitive and multiple perspectives analyses suggest a "balanced brain" approach to the HIP modes. The line of research being pursued in this work concentrates on the single dimension of rational and intuition HIP modes. Measures of integration form part of the overall analysis only to explore the possibility of the complementary use of the two HIP modes by executives. The Taggart & Valenzi (1990) HIP self-description inventory (see Appendix B) demonstrates the single continuum analysis upon which to examine the proposition that executives have preferred decision making styles and these styles are based on the cognitive processes of rationality and intuition.

2.3.2 Managerial Foundations

The managerial foundations of the rational and intuitive decision processing in the cognitive mode have been discussed by organization theorists since the first substantive academic theory of executive functions in the United States by Chester Barnard in the 1930's (see Perrow, 1986:62). Although "one of the strongest biases in management research is the bias toward rationality" (Taggart & Valenzi, 1990:153), some of the theorists who laid the foundations of organization theory clearly recognized the importance and the dual nature of human information processing. In his The Functions of the Executive (1938), Barnard writes:

In the common-sense everyday, practical knowledge necessary to the practice of the arts, there is much that is not susceptible to verbal statement -- it is a matter of know-how. It may be called behavioral knowledge. It is necessary to do things in concrete situations. It is nowhere more indispensable than in the executive arts. It is acquired by persistent habitual experience and it is often called intuitive (1968:291).

..... I have found it convenient and significant for practical purposes to consider that these mental processes consist of two groups which I shall call 'non-logical' and 'logical' (1968:302).

Barnard goes on to predict that:

... the power of the arts and the arts themselves are capable of expansion when there is available scientific knowledge - explanations, concepts. Thus in the hands of those who apply themselves to the control of future events a developed science, even though it will be later superseded, in conjunction with local, temporary, specific, and behavioral knowledge and intuitional talents, is an additional means of great importance when properly used (1968:291) emphasis added.

Some early attempts were made to validate and provide scientific anchors for Barnard's observations of the 'everyday affairs' of the executive. In The Science of "Muddling Through", Lindblom (1959) provides a model of the intuitive decision process. According to Lindblom, decision making is a process of "successive approximations to some desired objective" (1959:86). Decision choices are not definitive, that is to say, decision problems and desired objectives are continually changing. The executive, therefore, must proceed by a method Lindblom (1959) describes as "successive limited comparisons" which greatly reduces or eliminates reliance on [rational processes]". Mintzberg (1976:52) confirmed in his research

that "key managerial processes are enormously complex and mysterious ... drawing from the vaguest of information and using the least articulated of mental processes". These processes, he announced, "seem to be more relational and holistic than ordered and sequential, more intuitive than intellectual". Mintzberg (1976) even hinted at the idea that business schools may be mistakenly "looking for the key to management in the lightness of logical analysis", while perhaps it may have "been lost in the darkness of intuition".

Many other organizational theorists and management practitioners have tended to agree with the intuitive notion since the Barnardian antithetical declaration amidst the "scientific management" revolution of the 1930's. Harold Leavitt (1975a; 1975b) argues that analytic thinking alone in United States management has run into trouble and that anti-analytic components that integrate "wisdom and feeling with analysis" are needed to redefine and solve real problems. Harold Geneen, the legendary Chief Executive Officer of International Telephone and Telegraph Corporation (ITT) in the 1970's writes: "The highest art of professional management requires the ability to 'smell' a real fact from all the others" (O'Toole, 1984). By 'smell', Geneen referred to the application of intuitive skills to understand too little, adequate, or too much information from which to derive a decision. "A recent advertisement for Columbia University's Executive Program that shows a picture of an executive alone looking out a window, with a caption, 'You've surrounded yourself with people who are paid to give you good advice. And they doThen the ball is in your court'", captures the executive's "uncanny

ability to sense what should be done and the courage of their convictions to act decisively" when the data and all the good advice provide no clear answers (Harper, 1988:122). The terminologies used to describe the rational and intuitive metaphors, however, differ widely even amongst organizational writers. Table 2.2 provides additional representation of terminologies commonly used.

A number of researchers also argue that elements of both rational and intuitive judgement are present in most decision information processing phenomena and insist that both dimensions of thought be given complementary recognition (see Quinn, 1980; Pondy, 1983; Isenberg, 1984; Agor, 1989). Peter Drucker (1973: 516) writes:

Insight, understanding, ranking of priorities and the "feel" for the complexity of an area are as important as precise, beautifully elegant mathematical models -- and in fact usually infinitely more useful and indeed even more "scientific". They reflect the reality of the manager's universe and of his tasks.

"Both modes of thinking are optimal, both are equally important", argues Milan Zeleny (1975). He notes:

As managerial concerns advance from simple well-structured, static and deterministic problems toward more complex, fuzzy, dynamic, and stochastic problems, the optimal working framework of the human mind changes from logical, rational, sequential and quantitative, to perceptive, intuitive, simultaneous and qualitative. To approach the problems of reality and their full complexity ... requires a conscious enhancement of both ends of this ... continuum of thought (1975:42).

TABLE 2.2

Rational Versus Intuitive Dichotomy: List of Terminology

<u>Source</u>	<u>Rational Terminology</u>	<u>Intuitive Terminology</u>
Jung, (1923)	Conscious Sensing/Thinking	Unconscious Intuition/Feeling
Barnard, (1938)	Logical reasoning	Non-logical reasoning
Wilhelm-Bynes, (1950)	"Yang" "Ch'ien, the Creative Heaven Male-paternal Day	"Yin" "Kun", the Receptive Earth Female-maternal Night
Lindblom, (1959)	Root Method	Branch Method
Levi-Strauss, (1966)	Science of the Abstract Positive Advanced	Science of the Concrete Myth Primitive
McKenny & Keen, (1974)	Perceptive Systematic	Receptive Intuitive
Leavitt, (1975)	Analytic Thinkers	Imaginative-Intuitive
Grayson, (1973)	Explicit	Implicit
Mintzberg, (1976)	Logical/Linear Left hemisphere	Holistic/Relational Right hemisphere
Samples, (1976)	Rational	Intuitive
Vedanta (Hindu Thought)	"Buddhi"	"Manas"
Suojanen, (1976)	Left Brain	Right Brain

Continued on next page.

Table 2.2 contd.

<u>Source</u>	<u>Rational Terminology</u>	<u>Intuitive Terminology</u>
African Sources	Masculine Left side of the body	Feminine Right side of the body
Sow, (1980)	Microcosmos Day	Mesocosmos Night
Appiah-Kubi,(1981)	Science	Magic
Wright, (1984)	Probabilistic	Non-probabilistic
Pondy, (1983)	Rational/Analytic Sequential/Convergent Detailed/Logical	Intuitive/Synthetic Simultaneous/Divergent Holistic/Artistic
Isenberg, (1984)	"Head" Systematic	"Gut" Intuitive
Linstone, (1984)	Technical Perspective	Personal Perspective
Ramaprasad & Mitroff, (1984)	Objective Impersonal Thinking/Logical	Subjective Personal Feeling/Value-laden
Bogen, (1986)	Propositional	Appositional
Rowan, (1986)	Logic/Analysis	"Hunches"
Harper, (1988)	Quantitative Analysis Left hemisphere Conscious Linear thinking	Intuition Right hemisphere Subconscious Lateral thinking
Agor, (1989)	Left Brain Analytical Deductive	Right Brain Intuitive Inductive
Nutt, (1989)	Systematic	Heuristic
Taggart, et al. (1990)	Rational	Intuition

Quinn's (1982) "logical incrementalism" model attempts to embody the features of rationality and intuition in a conscious, proactive process so that despite "the practical psychological and informational problems of getting a constantly changing group of people with diverse talents and interests to move together effectively in a continually dynamic environment", some logical inquiry can be made (1982:99).

Isenberg's (1984) research of executive information processing and decision making concluded five different ways in which executives use intuition (and rationality) in arriving at organizational decisions. First, executives intuitively "sense" when a problem exists. The benefits of experience and emotional involvement of senior managers show in their intuitive skills that sense problems which novices may not see exist at all.

Levels of intuitive awareness are said to function on four non-verbal modes: physical, emotional, mental and spiritual (Vaughan, 1979). Physical awareness is in the nature of body sensations; the manager "feels" strong body responses to individual employees, groups of employees, the corporate climate, external competition or situations when there is no surface logical, analytical, or verbal indicators for such responses. Emotionally, feelings carry intuitive signals. In the performance of their "roles" (Mintzberg, 1973), executives externally sensor colleagues, workers, clients and suppliers whom they may instantaneously trust, respect, like or dislike for no apparent surface reasons (Agor, 1989; Leavitt,

1978:105). Mental level intuitive awareness comes in the form of visual images or pictures, synthesizing fragmented and unrelated information, for example, facts, hearsay, and gossip, into a directional whole. It involves simultaneous visual perception of a whole system without rational intermediary steps. Mental intuitive cues enable executives to picture what colleagues and competitors are up to before analytical projections become available. At the spiritual level, "emphasis is on the transpersonal and the underlying oneness of life" symbolized in the biblical saying, "As ye sow shall ye reap" (Agor, 1989).

Second, Isenberg (1984) relates that executives rely on intuition to perform well-learned (routine) behaviors rapidly. Experienced executives become "fluent" with their roles so that performance reverts to a natural instinctive effort, without conscious thought. Isenberg writes:

Intuition [in this context] refers to the smooth automatic performance of learned behavior sequences. This intuition is not arbitrary or irrational, but is based on years of painstaking practice and hands-on experience (1984:85).

He reports on one manager among the group he studied as saying:

It [is] very instinctive, almost like you have been drilled in close combat for years and now the big battle is on, and you really don't have the time to think. It's as if your arms, your feet, and your body just move instinctively. You have a preoccupation with working capital, a preoccupation with capital expenditure, a preoccupation with people, and one with productivity, and all this goes so fast that you don't even know whether it's completely rational, or it's part rational, part intuitive (1984:85) emphasis added.

Indeed, the constraints of time on decision making, the simultaneous existence of many interrelated problems and their competition for the manager's time, contradicted by inaccessibility of analytical data at speedily appropriate times, make the age-old intuitive (automatic) decisions seem imperative (Grayson, 1973; Harper, 1988).

Third, executives use intuition to synthesize bits and pieces of analytical data and experience into an integral whole. Such syntheses and conscious discovery often probe deep into the future and remain analytically unproven for several years. Tintner (1974) observed about classical economists that "the classics have frequently anticipated with incredibly sharp intuition results in pure economic theory that have been proven only very recently with the help of mathematical methods unknown even to the mathematicians at the time of the classics".

Fourth, some executives use intuition as a validity check on their logical mind. In Isenberg's terminology, this is "a belt-and-suspenders approach" to find "a match between their 'gut' and their 'head'".

Finally, some executives use intuition to by-pass indepth analytical data to plausible immediate solutions. They recognize familiar patterns in much the same way that people sometimes immediately recognize faces that were familiar years

ago. From a repertoire of familiar problematic situations, executives intuit immediate responses (Isenberg, 1984).

2.3.3 Criticism of the HIP modes

The separation of the rational and intuitive modes of human information processing and the preponderance of evidence of the use of intuition by executives is criticized by a number of authors (see Campbell, 1982; Simon, 1987; Tversky & Kahneman, 1974). Based on Evolutionary Epistemology, Campbell (1982) argues that "the machinery of knowing is biasedly focused upon the small segment of the world which is knowable, as natural selection makes inevitable (p.58) and that the "intelligent", "creative", and "foresightful" product of thought must be subsumed under the blind-variation-and-selection-retention model (p.62). According to this model, "vision represents an opportunistic exploitation of a coincidence" (p.48). Tversky & Kahneman (1974) point to a number of decisional biases based on heuristic judgements. The availability heuristic, they posit, leads decision makers to judge future courses of action as most likely on the basis of ease of recall of past occurrences of similar events stored in their memory. Herbert Simon (1987) compares intuition to the behavior of an "expert" and insists that:

It is a fallacy to contrast "analytic" and "intuitive" styles of management. Intuition and judgement ... are simply analyses frozen into habit and into the capacity for rapid response through recognition The effective manager does not have the luxury of choosing between "analytic" and "intuitive" approaches to problems. Behaving like a manager means having command of the whole range of management skills and applying them as they become appropriate (p.63)

This study concurs with Simon's (1987) observation to the extent that rational and intuitive orientations are a spectrum of skills on a continuum (Taggart & Valenzi, 1990). The metaphors are dichotomous only in the sense that individuals and executives have preferences or orienting functions with which they perceive problems and attempt to solve them in a manner that is relatively consistent and habitual. A major portion of the two-mode HIP literature indicates that intuition extends beyond "analyses frozen into habit". Education and experience are important but the willingness to trust one's "capacity for rapid response through recognition" and the courage to act decisively are skills that must be developed (Vaughan, 1979; Harper, 1988; Agor, 1989). Ray & Myers (1989) clarify this observation in their definition of intuition: ..."paying clear attention to the most appropriate alternative that comes from the creative Essence" (p.250) emphasis underlined.

Cognitive Decisional Research and the managerial foundations of such studies provide a strong background for the HIP metaphors and their use in this research. The proposition is that executive decision making styles are based on human cognition which could be described as rational and intuition. Managers

are thought to gravitate toward specific cognitive approaches and habitually utilize those approaches to define their organization's "reality" and to decide what actions ought to be pursued. Are the gravitations general across the managerial world or are they specific to certain cultures? The third area of literature review provides some leads to the question.

2.4 Cross-Cultural Decision Making Research.

Together with the multiple perspectives and cognitive decisional research reviews just concluded, the third major area of research related to the present study is cross-cultural decision making studies. In this section, we explore the concept of societal culture briefly, followed by conceptual definitions of United States and Ghanaian (West African) cultural orientations. The relevant comparative decision making studies across cultures and the explanations associated with the concept of intuition are explored in detail. The Organizational Culture Perspective is used as a frame of reference to examine relevant rational and intuitive decision making variables such as subordinate participation or non-participation in decision making, executives' experience on the job, and their age and education.

2.4.1 Definition of Culture

We may define culture as the symbolic-expressive aspects of human behavior in a society (Wuthnow, et al. 1984). Kroeber & Kluckhohn (1954) catalogued 164 definitions of culture and concluded that culture is "an abstraction from behavior" consisting of explicit and implicit patterns of and for "behavior acquired and transmitted by symbols". The classic rendition of the nineteenth century English anthropologist E. B. Tylor defined culture as "...that complex whole which includes knowledge, belief, art, law, morals, customs and other capabilities and habits acquired by man as a member of society" (1877:1). In essence, culture can be described as the way a group (say, a nation, ethnic group, organization etc.) learns, understands, and makes sense of their lives by shared influences among themselves in a social process; "a human environment brought into existence by the ability to symbolize" (Ezeh, 1988). The evolution of culture advances from instinctive behavior of the organism to learned and freely variable behavior, a "configuration of all of the more or less stereotyped patterns of learned behavior, which is handed down from one generation to the next through the means of language and imitation" (Barnouw, 1963:4). Culture's inescapable phenomenon of universalism (ie. all people have cultures) defines the common humanity of groups (Ezeh, 1988).

The foregoing definitions capture the essence of culture but remain imprecise for rational-design cross-cultural research purposes. Hofstede (1980)

suggested "nationality" as the operational cultural boundary and defined culture as a collective mental programming of people in an environment which is difficult to change, and if it changes at all, very slowly. "...it is that part of our conditioning that we share with other members of our nation, region, or group but not with members of other nations, regions, or groups" (Hofstede, 1986:310). The notion of nationality as a surrogate definition for culture has been criticized as misleading since "populations within a national boundary [may] be considered as culturally homogeneous or as multicultural" (see Adler, 1982a; Adler, 1982b). Ronen & Punnet (1982) argue that business organizations do, in fact, use the nation state as the unit of analysis. In this study, the researcher uses the nation state as the unit of analysis by careful delineation and description of those features of the two societies that underlie and unify the variety of specific ethnic patterns and have had relative permanence or persistence over time (see Sudar-kasa, 1988: 183). With a boundary and a description of culture as patterns of behavior of human groups which are susceptible to direct observation and studies (Cole, 1988:73), it becomes possible to attribute causes of things and events to particular groups.

The cultural orientations of the two nation states selected for study -- United States and Ghana -- like many other societies, are based on the complex interaction of values, attitudes, and behaviors, which are themselves underlined by a certain paradigm -- a way of thinking about the world; a certain ontological world-view of People and Nature and particular ways of reducing chaos (which

knowledge everywhere attempts to achieve). To the extent that we can define culture in terms of a total communication framework, (eg. words, gestures, actions, emotions, the meaning of time, work, space etc.), Ghanaian societies are observed to take a high-context approach to life. "A high-context communication ... is one in which most of the information is either in the physical context or internalized in the person, while very little is in the coded, explicit, transmitted part of the message" and "high-context actions are by definition rooted in the past, slow to change and highly stable" (Hall, 1977:91-93).

American societies, on the other hand, are noted to have low-context patterns. The information system is built on explicit codes; actions (decisions) are rooted in the present and changes are constantly taking place. There is a constant attempt to make everything explicit and an insistence on "logical" sequences. A linear, step-by-step compartmentalized pattern of thinking is highly developed (Hall, 1977). Grimaldi, basing his analysis on the theories of Mircea Eliade's The Myth of the Eternal Return, sums up the United States viewpoint of the world thus:

.....we of literate, scientific, industrial societies have long lived comfortably with a linear sense of reality. The world and our lives in it moves in a straight line. We go forward, eternally, just because knowledge, the skills, the intellectual 'capital' of our society can only grow (1986:71).

Corporate executives in Ghana generally base their practices on United States and European managerial concepts. Perceived disparities in the underlying paradigms of the two societies have led some theorists to suggest that Ghanaian executives may experience "cognitive dissonance" in their human information processing (Festinger, 1957); their internalized indigeneous management thought appears to be in conflict with the learned Euro-American management thought (Nzelibe, 1986). Societal culture in Ghana is indigeneous to the Ghanaian executive who must simultaneously contend with an organization and managerial system that is founded on Euro-American principles and theories. The view adopted for this study sides with cross-cultural developmental psychologists who insist that patterns of cultural behavior start early in life and that original patterns of culture will persist in the way executives make decisions (Hofstede & Bond, 1988).

2.4.2 Comparative Management

"At the heart of comparative management research has always been the question of whether countries or 'cultures' have a significant differentiating impact on behavior in and of organizations" (Heller & Wilpert, 1981:62). "Comparative studies are designed to identify the similarities and differences across two or more cultures", that is, "to distinguish between those aspects of organizational theory which are truly universal and those which are culturally specific" (Adler, 1982b). This research assumes equality of the two national cultures under study in coping

with reality and reducing chaos; no dominant culture is intended. The general approach of the study "accepts the possibility of there being both culture-specific and culture-general [universal] aspects" to the phenomenon of executive decision making (Adler, 1982b:18). Since the 1960's, a deluge of cross-cultural research has been undertaken from an economic development orientation of managers to their espoused managerial values (see eg. Harbison & Myers, 1959; Kerr, Dunlop, Harbison & Myers, 1960; Likert, 1963; Farmer & Richman, 1965). Haire, Ghiselli & Porter's (1966) influential study of attitudes, beliefs and values of 3,641 managers in 14 countries drew attention to the possibility of explaining organizational commonalities and differences through socio-cultural factors. Between 25 and 30 percent of all variations observed in their study were associated with national cultural groupings. Hofstede & Bond's (1988) "Chinese Value Survey" has reasserted the pervasiveness of culture in organizational activities (cf. Hofstede, 1980).

Specific studies which compare decision making orientations or preferences between nations are very limited particularly those which address the application of the rational and intuitive metaphors. Among these, March & Olsen (1976) compared 13 cases from Scandinavia and the U.S.A.; Dundos (1979) studied decision making techniques in some U.S. manufacturing corporations and their subsidiaries in Canada and found some differences in the parent company; Heller & Wilpert (1981) compared decision making in 129 business organizations from 5 countries and introduced the Influence-Power continuum; and Carter (1987)

compared formal and informal decision making among U.S. and Canadian CEO's and concluded that CEO's from both countries favored formal decision making through planning.

Other studies tangential to decision making have been undertaken by researchers using Haire, et al.'s (1966) survey instrument on managerial thinking in South Africa (Blunt, 1973); Liberia (Howell, et al. 1975); Kenya (Blunt, 1976); and Malawi (Jones, 1988). These studies uncovered a variety of similarities and differences in attitudes, beliefs and values between African managers and their Euro-American counterparts. In Haire, et al.'s (1966) study, the predictions about Germany's strong authoritarian tradition and the less likelihood of German managers' advocacy of participation were confirmed. France's egalitarian traditions also confirmed a higher likelihood to adopt participation. Considerable similarities among managers in the 14 countries studied were also found. Haire, et al. (1966) speculate that such similarities may be the result of universal lip service to participative and democratic approaches to leadership which has become the sine quo non of all executive development and training programs over the years (p.24). A second speculative reason is that although the managers studied do "not really feel that positive benefits will be gained by the use of such democratic-type practices,.... nevertheless, feel that it is somehow old-fashioned or unorthodox these days not to endorse them" (Haire, et al. 1966:24). Jones' (1988) conclusions about Malawian managers are similar to Haire, et al.'s (1966) study

except for the former's additional emphasis on the Malawian political environment.

In general, a plethora of unanswered questions and/or assertions based on conceptual or circumstantial evidence about decision making orientations in Africa in comparison with other parts of the world remain. It has been suggested, for example, that executives in Ghana (Africa) usually base their decisions on past experiences, act with speed and intuition, invest limited amounts of time in review of detailed data in a rational process, and feel comfortable with highly personalized and centralized authority systems in which top executives decree authoritative decisions (Kiggundu, 1988). Few empirical studies are offered to support these contentions.

2.4.3. Meaning of the HIP Metaphors Across Cultures

Explanations of the HIP metaphors across different national cultures use different terminologies (see pages 32 & 33 but they generally cover the spectrum of definitions associated with rationality and intuition. This section explores the comparative management literature as it relates to the West, East, and African worlds of reality creation with regard to the two metaphors.

Western philosophy represents the rational dimension of the HIP metaphors with the Greek god Apollo (light of the sun), and the intuitive dimension by the god Dionysus (darkness). The earliest Western scientific writings on intuition considered it as forms of reason. Descartes (1596-1650) believed in rational intuition. "Cartesian intuition is, then, a rational operation whereby certain truths are presented in a total and immediate way" (Bunge, 1962:3). For Spinoza (1632-1677), intuition is rational knowledge of a third kind "and this kind of knowledge proceeds from the adequate idea of a formal essence of certain attributes of God (Nature) to the adequate knowledge of the essence of things" (Spinoza, 1909). Kant's (1724-1804) pure intuition transcends reason and is more attuned to preconscious processes. Kant defined intuition as "the awareness of the object mediated by the senses" (Bastick, 1982).

Prominent psychologists have long proposed the notion of two modes of consciousness and human information processing. I. P. Pavlov and Sigmund Freud disagreed on many psychological thoughts but are in agreement with the two modes of thought, even if on different grounds. Pavlov explained it in terms of human neuroses as two signalling systems which divide human beings into thinking, artistic, and intermediate (integrative) types. Freudian psychology referred to it as "secondary process thinking" (of the conscious mind) wrapped in the growth of language; and "primary process thinking" (of the unconscious mind) associated with concrete images (eg., dreams, gestures, body and facial expressions) (see Bogen, 1986).

In the modern Western scientific world, the HIP metaphors are understood by neurophysiologists in terms of the dual specialization of the human mind (see eg., Sperry, 1964; Gazzaniga, 1967; Bogen, 1986; Ornstein, 1986). Cognitive research has intimated over twenty-five years that two "half brains" or modes of consciousness coexist within every individual, each hemisphere usually referred to as left half brain (LHB) and right half brain (RHB). Experiments conducted on commissurotomy patients served to confirm the following findings: The LHB engages in predominantly rational and logical thinking and its mode of operation is primarily linear with sequential information processing, expressive in verbal and mathematical skills. In contrast, the RHB specializes in simultaneous, holistic and relational information processing, with Gestalt formation, oriented toward imagination, intuition, artistic endeavors, comprehension of visual images and "excels in 'non-language' or 'non-verbal' functions (Bogen, 1986:106). Austin (1978:139) describes the RHB this way: "The right hemisphere ... basically is non-verbal.... Hidden away, almost out of reach of language,[it] can be the source of intuitive insights that are fundamental to problem solving". Samples (1976) sums up the two mode metaphor thus:

Recent findings have verified a long-known notion that humans have two modes of knowing in their minds. Some of the data are powerfully aligned with the notion that these two modes of knowing, relational-linear and metaphoric-intuitive, are located in opposite cerebral hemispheres The metaphoric-intuitive, more holistic mind functions, are conversely linked to the right cerebral hemisphere. (p.8)

The philosophies of the East have for thousands of years recognized the duality of consciousness and represented the HIP metaphors in the "Yin" (intuitive) or 'night', and the "Yang" (rational) or 'light' symbol. Figure 2-2 shows the Chinese Yin-Yang symbol.

The left side of the symbol (facing out) is K'un (the "night" or dark side), and the right side is Ch'ien (the "day" or light). In Wilhelm-Baynes (1950) translation of the I Ching, Ch'ien is The Creative.

...Its image is heaven. Its [light-giving, active, strong] energy is represented as unrestricted by any fixed conditions in space and is therefore conceived of as motion. (p.18) emphasis added.



Figure 2.2: The Chinese Yin - Yang Symbol.

K'un is the Receptive.

...its image is earth. It is the perfect complement of The Creative - the complement, not the opposite, for the Receptive does not combat the Creative but completes it. It represents nature in contrast to spirit, earth in contrast to heaven, space as against time, the female-maternal as against the male-paternal. (p. 18) emphasis added.

Other Oriental psychologies also recognize the bilateral symmetry of the human brain. Benedict (1953) writes about the Bagobo people of Malaysia thus:

Inhabiting every individual two souls called Gimokud are recognized - shadowy, ethereal personalities that dominate the body more or less completely. The right-hand soul, known in Bagobo terminology as the Gimokud Takawanan, is the so-called "good soul" that manifests itself as the shadow on the right hand of one's path. The left-hand soul called Gimokud Tebang is said to be a "bad soul" and shows itself as the shadow on the left hand on the path (Bogen, 1986:124).

In Vedanta (or Hindu thought), the HIP duality is between the rational "Buddhi" and intuitive "Manas" (the seventh class of consciousness following the five senses and intelligence) (Bastick, 1982:16). One old rendition of Buddhi and Manas was "rational thought" and "integral thought" respectively (Bogen, 1986:125). In Suzuki's introduction to Herrigel's (1953) Zen and the Art of Archery, he proposes Zen as the alternative route to peace of mind, or to "understanding" that treats traditional rationality as interference or noise that blocks learning (Leavitt, 1975). The intent of Zen is not to withdraw from the temporal linearly organized dimension of the "real" world but to heighten concentration and attention to the

"comprehensive, complete perception of events as intertwined entities, each reciprocally influencing the other" (Ornstein, 1986:129; also Leavitt, 1975). In other words, in Zen Buddhism, in a person's isness, the intellectual approach to experience is devalued or banished and every effort is made to exclude all outer and inner stimuli and to become free from all conditioning, and at the same time focus attention on the meditative object (eg., to hear the sound of one hand clapping) (Deikman, 1986:202). Suzuki writes in Zen and the Art of Archery:

Zen is the 'everyday mind'. This 'everyday mind' is not more than 'sleeping when tired, eating when hungry. As soon as we reflect, deliberate, and conceptualize, the original consciousness is lost and a thought interferes. We no longer eat while eating, we no longer sleep while sleeping Man is a thinking reed but his great works are done when he is not calculating and thinking. 'Childlikeness' has to be restored with long years of training in the art of self-forgetfulness. When this is attained, man thinks yet he does not think. (Herrigel, 1953:11).

Western scientists have found neurological correlates to Zen using electroencephalographic patterns of alpha waves. It has been suggested that Zen and other forms of meditation in Eastern cultures serve to train the RHB, which education and training is ruled out by much of Western scientific inquiry (Ornstein, 1986:199; Agor, 1989; Leavitt, 1975; Mintzberg, 1976).

In Afrocentric philosophy, the HIP duality is captured in the masculine (rational) and feminine (intuition). The Afrocentric concept of reality considers Humans as part of the vitality of Nature, possessing dual characteristics (mascu-

line and feminine) and occupying the centre of the rhythm of Nature. The African perceives cyclism in nature and within the cyclical patterns, intellect and intuition are cast in myths and symbolism. Symbolic terminologies often used include masculine, right side of the body, positive, day, and microcosmos for the rational term, and feminine, left side of the body, negative, night, and mesocosmos for the intuitive term respectively.

These and other term pairs noted in the Western, Eastern, and African cultures (see extended list on pages 32 & 33) form one of the bases for the use of the HIP survey in this study. The proposition is that rationality and intuition are expressed differently in different cultural groups.

2.4.4 Organizational Culture and Decision Behaviors Across Cultures.

In addition to the earlier discussion of broad societal culture, intra-organizational symbolic-expressive social processes by which executives reach important decisions are relevant to this study. This is because organization culturists have identified similarities and variations in the social energy that motivates executives to act in certain ways - "a hidden, yet unifying theme that provides meaning, direction, and mobilization" toward decision alternatives (Kilman, et al. 1985:ix). The cultural norms, values, beliefs, and assumptions (some imbibed from the societal culture in which the firm is located and others generated from

within the firm itself with regard to the theories and principles learned, the technology available, the firm's competitors and market rivalries, and even the personalities of prominent past and present leaders of the firm) provide the basis for certain executive decision behaviors to emerge. This is "the way we do things here" pervasiveness in organizations (Ott, 1989:3). The explanations given to decision making behaviors with regard to the organizational culture perspective usually preclude executives' personal preferences for the rational and/or intuitive mode.

Hofstede's (1980, 1986) cultural dimensions are perhaps the best known explanations for cultural similarities and differences in organizational theory. His identification of executives' perception of risk and uncertainty, and the power distance among executives and subordinates as important cultural dimensions are used frequently. The "uncertainty avoidance" dimension signifies the extent to which members of a national culture tend to consider themselves threatened by uncertain and ambiguous situations and the manner in which they tend to avoid such situations. In the social process of organizational decision making, strong uncertainty avoidance societies tend to seek formal organizational rules, are intolerant of deviant behavior and ideas, and generally avoid taking risks. Weak uncertainty avoidance societies prefer to accept more dissent and deviation from the norm, are less rules minded, and generally take more risks. Ghana ranks relatively stronger on the uncertainty avoidance dimension (ie., prefer less risk) than the U.S.

Hofstede's second dimension of culture, termed "power distance," reflects the degree of acceptance of unequal distribution of power among social actors in an organization, especially by the less powerful actors in a particular national culture. It indicates the extent to which centralization of authority and autocratic decision making are acceptable to members of the organization. Nations such as the United States play down inequality in organizations as much as possible and are said to have low power distance. Other nations such as Ghana accept and support large imbalances of executive status and power and therefore have high power distance.

With the concept of power distance, it has become easy to explain organizational decision making processes of participation or non-participation without resorting to universalistic "one best way" principles. High/Low power distances provide the basis of organizational social contracts or culture by which subordinates expect and can predict the executive's core decision making orientation. Low power distance cultures (eg., U.S.) generally accept participation in decisions and high power distance cultures (eg., Ghana) accept non-participation.

With the rational and intuitive term pairs, it is possible to include a new explanation dimension with regard to the organizational social processes of participation and non-participation in decision making. Intuition is said to excel in non-verbal or non-language functions and decisions based on intuitive orientation (as the executive's core decision making preference) are likely to

be "own decisions" with a mantle of non-participation, and decisions based on rational orientation are likely to be joint, consultative or delegation with a mantle of participation. The proposition here is that participative and/or non-participative decision making styles may be different in different cultural groups.

2.4.5 The Executive and Decision Information Processing.

The "executive" metaphor is used throughout this research to remind the researcher and readers that the study is not simply about freshly minted MBA's or their likes from Business Schools. It is about that special high level manager who is at the centre of the organization's culture and who possesses the capacity to reshape the firm's shared values, beliefs, assumptions, perceptions, and norms (Iacocca, 1984). Such executive replacements are usually difficult and lengthy and their compensations and benefits are large (Harper, 1988:111). Mintzberg's (1973:92) study of what top executives "actually do" lists the executives' job to include three interdependent roles:

Interpersonal roles: figurehead, leader, and liaison;

Informational roles: monitor, disseminator, and spokesperson; and

Decisional roles: entrepreneur, disturbance handler, and negotiator.

Indeed, the higher top executives reach in the organizational hierarchy, the more their roles involve "conceptual rather than technical matters, a long-term rather than a short-term time horizon, and issues of what type of business the firm should do rather than issues of how the firm should do business" (Harper, 1988: 112). Hence, top executives "tend to think about two kinds of problems: how to create effective organizational processes and how to deal with one or two overriding concerns, or very general goals" (Isenberg, 1984:82). In other words, their preoccupation is with a limited number of quite general issues (p.84). John P. Kotter (1982) defined the two issues of concern as: developing and maintaining an extensive interpersonal network, and formulating an agenda. Shapira & Dunbar (1980:90) recategorized Mintzberg's (1973) ten managerial roles into two overriding issues of "information generation and processing" and "decision making".

The executive's ability to see the risks and uncertainties encompassing the firm's divisions or parts in an integrated manner (i.e., to see the forest instead of the trees) enables him/her to sift through the large quantities of information from a variety of sources to confront the complex organization problems. In such decision information processing activity, a large number of decision variables moderate executives' rational thinking and/or intuitive judgement. The important decision variables identified for the purpose of this study include age, level of education and years of experience on the job. Organization members' perception, meaning and reaction toward these decision variables constitute a part of their organization's culture. Isenberg (1984) indicates that, in particular, "years of

painstaking practice and hands-on experience" paves the way for "smooth automatic performance" by executives (p.85). "Experience" coincides with the psychological definition of intuition as "inference" (see chapter 1, p. 8 of this document). Experience is also closely associated with Simon's (1987) rational definition of intuition as previous training and experience stored as patterns and information in long-term memory with the capacity for instant recall (p.63). Simon posits that both rationality and intuition operate on the same "expert" system - a kind of awareness of a good move, with no awareness of how the judgement was evoked (p.59).

2.5 Intra-Cultural and Cross-Cultural Decision Making Orientation of Executives.

In chapter IV, national culture will be used as an independent variable and the rational and intuition term pairs as dependent variables to determine intra-cultural and inter-cultural decision making orientations of executives in the United States and Ghana.

The juxtaposition of U.S. and Ghanaian executives is indicative of the main inter-cultural comparison which this research was designed to achieve. In order to objectify the inter-cultural results, executives in each culture were categorized into manufacturing and service sectors. This sectoral classification of top executives in this work is referred to as "intra-cultural". Executive respondents in each sector

are at the highest levels of their corporations and are presumed to be responsible for creating the kind of environment in their organizations where employees would feel comfortable to put forth their best productive capabilities.

The questions asked of executives in the two intra-cultural categories are general, using the rational and intuition metaphors, and not intended to seek sector-specific answers. A comparison of manufacturing and service sectors is simply a check on the possibility that decision making orientations might differ within culture (by sector) as well as between cultures. The results could therefore be relevant in determining whether intra-cultural influences significantly affect inter-cultural decision orientation of executives.

2.6 Summary

The multiple perspectives, cognitive decisional, and cross-cultural decision literatures provide the psychological, physiological, philosophical and managerial foundations of the present research. The two basic human information processing metaphors are explained with regard to Allison's (1971) innovative multiple decision scheme, Jungian (1923) cognitive psychology, Sperry's (1964) physiology of the human brain, and the culturally distinct philosophies of the West, East and Africa, and the managerial foundations of Barnard (1968). The studies reviewed generally agree with the rational and intuitive notions but few of the theorists

discuss or describe the components in detail or attempt to assess their impact on executives intra-culturally and across cultures. The reviews suggest that executives' orientation to the HIP metaphors can substantially influence the processes of centralization or decentralization of decision making which usually characterize different societies (Hofstede, 1980). The propositions are that:

- (a) Executives exhibit different decision making styles,
- (b) The decision making styles depend on their cognitions -- the processes which may be described as rational and/or intuition,
- (c) Rationality and intuition are expressed differently in different cultural groups, and
- (d) Participation and non-participation decision making styles may be different in different cultural groups.

Confirmed or rejected, the culture and managerial thinking hypotheses presented in the study will be important not only for cross-cultural research but also for different forms of managerial thinking as they relate to culture. The results will provide one more support for culture-specific versus culture-universal aspects of organizational studies with regard to the question: "Which aspects of organizational behavior vary across cultures and which are constant regardless of culture?" (Adler, 1982b).

CHAPTER III

DESIGN AND METHODOLOGY OF THE STUDY

This chapter outlines the overall design, methodology, instrumentation and data collection techniques used in the study. A brief re-statement of the hypotheses will also be included.

The overall design is circumscribed by the technicalities associated with good quality comparative research (see Adler, 1982b). The study contrasts two national cultures on executive orientations to the HIP metaphors. In addition to the dilemma of imprecision in defining culture as a result of substituting surrogate nation-states for it, whether to designate culture as an independent variable, a dependent variable or a residual variable is of strategic relevance to the study. In the past:

Research has usually been done without a priori hypotheses about the kind of cultural effects expected -- culture being treated as a 'variable X' that should account for the variance left unexplained by other factors (Hofstede, 1981:33).

"Culture affects organizations in a variety of ways", and decision information processing by those who hold statutory authority in organizations is in direct line of culture's effects because their actions "lead to the attribution of scarce

resources among competing applications" (Hofstede, 1981:28). In these respects, the designated independent variables in the present study are represented by the United States and Ghana. The dependent variables consist of the HIP continuum of rational and intuition. The relationships between these independent and dependent variables, the researcher hastens to add, do not presume any simple causal explanations.

One design objective was to match samples of theoretically equivalent corporate executives. The approach was to search for both similarities and differences between the two culture's corporate executives. The principle of equivalence was preeminent at each stage of the study. Specific steps were adopted to ensure that instrumentation and administration were equivalent (although not identical) in both cultures. For example, the choice of U.S. and Ghanaian executives was based on theoretical considerations of existing organizational and anthropological literatures. The samples were not representative of each culture but were intended to be matched across cultures. English language, the official business and administrative communication in both the U.S. and Ghana, was used to pose the survey questions and instruct the study participants. The wording of the survey instrument was short and easy to understand and included some redundancy. Administration of questionnaires was by personal contact in one culture and by mailed responses in the other.

The theories relevant to this study are embedded in the literature review section just concluded. The works of Taggart & Valenzi (1990); Agor (1989); Nutt (1989); Ornstein (1986); Mintzberg (1976); Berreman (1966) and Barnard (1938) among others, generate a number of general hypotheses. Two general propositions which summarize those outlined in the literature review section form the foundations of the specific hypotheses.

General Propositions:

- A. Human cognition relies on two modes of consciousness, both of which are important in human information processing.

- B. There are differences in the decision making orientation of executives in the United States and executives in other cultures.

From the foregoing general propositions, it is plausible to investigate the following hypotheses:

H1: Top executives of U.S. companies are significantly more likely to use rational decision making, whereas top executives of Ghanaian companies are more likely to use insight in decision making. More specifically,

- H1a: Top executives of U.S. companies are significantly more likely to have greater orientation to tasks as "specialists" (using logic) than are top executives of Ghanaian companies.
- H1b: Top executives of Ghanaian companies are significantly more likely to have greater orientation to tasks as "generalists" (using insight) than are top executives of U.S. companies.
- H2: Top executives of U.S. companies are significantly more likely to use planning in decision making, whereas top executives of Ghanaian companies are more likely to use vision in their decision making. More specifically,
- H2a: Top executives of U.S. companies are significantly more likely to have greater orientation to prepare for the future by planning and developing forecasts than are top executives of Ghanaian companies.
- H2b: Top executives of Ghanaian companies are significantly more likely to generate scenarios (using vision) as they prepare for the future than are top executives of U.S. companies.
- H3: Top executives of U.S. companies are significantly more likely to use ritual in decision making, whereas top executives of Ghanaian companies are more likely to use feeling in decision making. More specifically,

H3a: Top executives of U.S. companies are significantly more likely to have greater orientation to be "task centred" (using ritual) than are top executives of Ghanaian companies.

H3b: Top executives of Ghanaian companies are significantly more likely to be "person centred" (using feeling) than are U.S. executives.

These hypotheses are reasonable in view of the Berreman (1966) thesis that decision making reflects different styles of thought -- rational and/or intuitive -- nurtured in particular cultures. Agor (1989) attributed differences in intuitive index scores more to "cultural conditioning and upbringing than any single factor" (p.131).

In addition, the Taggart & Valenzi (1990) six information processing modes (summarized in Table 3.1) provide the metaphors used in the hypotheses. Specialists approach tasks in a rational-analytic fashion "using organized, controlled" routines; generalists explore and synthesize. Rational planning is a way to prepare for the future by developing forecasts and designs while the intuitive-vision approach depends on generating scenarios with which executives imagine or foresee the future similar to the Trukese navigators referred to in the introduction of this study. Task centred executives engage in rational-ritual routines that conform to traditions and have a "possessive attitude that

Table 3.1

Summary of the Mode Definitions.

Rational		Intuitive	
(Specialist)	How do you approach tasks?		(Generalists)
<u>Logic</u>	Analyze Organize Control	<u>Insight</u>	Explore Pattern Synthesize
How do you prepare for the future?			
(Develop Forecasts)			(Generate Scenarios)
<u>Planning</u>	Propose Predict Design	<u>Vision</u>	Imagine Foresee Invent
How do you work with people?			
(Task Centred)			(Person Centred)
<u>Ritual</u>	Conform Possess Prohibit	<u>Feeling</u>	Associate Co-operate Share

Source: Taggart & Valenzi (1990:160)

prohibits movement'. Person centred executives adopt an intuitive-feeling approach that encourages association, cooperation and community sharing.

H 4: Top executives of Ghanaian companies are significantly more likely to have greater orientation toward centralized (non-participative) decision making than are top executives of U.S. companies.

Participative and non-participative decision making have been explained mostly in terms of high or low power distance or expectations of democratic and autocratic behaviors by managers which may preclude the impact of an individual's rational and/or intuitive orientations. Verbal and language functions are crucial to the understanding of the two human information processing modes and their use by executives in decision making. The rational mode is easily expressed in verbal and mathematical skills and symbols. In contrast, the intuitive orientation is inherently personalistic, "excels in 'non-language' or 'non-verbal' functions" (Bogen, 1986:106). Very high intuitive orientation may, therefore, take on the appearance of non-participative decision making. Harper (1988) observed that: "Many people who possess intuitive skills have difficulty communicating their thoughts to others in the firm [because] intuition by its very nature is relatively intangible".

Hypotheses 3 (a&b) and 4 would seem to be diametrically related and somewhat logically contradictory. This is not necessarily the case when examined

more closely. Explanations of the participatory and non-participatory taxonomies of executive-subordinate decision procedures in hypothesis 4 and the HIP metaphors of the feeling and ritual scales in hypotheses 3 (a&b) respectively are not the same or interchangeable.

Participation and non-participation are used in this study to depict "varying degrees of consultation" between executives and subordinates in decision information processing. The theory behind hypothesis 4 is closely associated with the Vroom-Yetton, (1973) normative model. This hypothesis was to demonstrate that high non-consultation between executives and subordinates may be associated with high levels of intuitive information processing by top executives. The scale of measurement is the Decision Centralization Score (DCS). On the other hand, an examination of hypotheses 3 (a&b) embodied in the HIP questionnaire for the feeling and ritual scales (see Appendix C of this document) will show that the items are generic executive work attitudes (eg., decisions to carry out tasks through established rules and procedures; level of satisfaction gained from individual, personal or group, community sharing, and concern for oneself or for other people), which are by themselves not a spectrum of definitively varying degrees of executive consultation with subordinates. Executives who prefer rituals are said to demand conformity and would normally prohibit subordinate acts that are not directed toward the accomplishment of designated organizational tasks. Executives who are person centred (feeling oriented) prefer to process information based on personal values. They are responsive to the feelings of

people who will be impacted by their decisions and tend to be sympathetic toward their feelings and reactions. Moreover, the HIP scales used to measure these work attitudes differ from the DCS where decision styles are weighted to vary continuously from "own decision without participation" to "full participation".

3.1 Description of the Sample

The sample from which the cross-cultural decision making data were obtained was derived from a population of small and medium-sized firms in the United States and Ghana. A major objective of the sample definition was to obtain matched samples. This meant that respondents from both the U.S. and Ghana should be as similar as possible except for their nationality. A number of steps were taken to achieve these comparable characteristics. First, the State of Massachusetts (U.S.A.) was matched with the nation of Ghana. The theoretical dimensions of rationality and intuition outlined in the literature review applied very well to this New England State of approximately six million people and to the fifteen million people in Ghana respectively. The imbalances of Ghana's larger land mass and population in relation to Massachusetts are generally counterbalanced by the relatively intense economic activity and education in the later. In other words, the economic dualism that exists in Ghana (in which a third to one half of the economy is highly developed and the rest relatively undeveloped) balanced with the developed economy of Massachusetts.

Second, the sample was limited to small and medium-sized corporations in both national cultures. Definitions of small and medium-sized business organizations vary. Most authors favor the use of number of employees as a measure of size (see Chandler, 1962; Lawrence & Lorsch, 1967). The United States Small Business Administration suggests 500 or fewer employees for a small business size. Medium-sized firms usually have between 500 - 2000 employees (Carter, 1987: 109). For purposes of our matched samples objective, the cut-off point for small and medium-sized firms is set at 2000 employees.

Third, the subjects of the study consisted of top level corporate executives in Massachusetts and Ghana. Their positions ranged from CEO's to Vice Presidents, or Managing Directors to Deputy Managing Directors (the equivalent Ghanaian designations). In lieu of such official titles, individual executives were to be designated as senior managers or higher in their organizations.

3.2 The Sample Frame

Subjects were top executives selected from manufacturing and service organizations listed in public directories. The Ghanaian sampling frame was the Manufacturing and Services Year Books. The directories contain a register of corporations and their directors and other officials. Eight cities/towns (Accra, Tema, Ashiaman, Obuasi, Kumasi, Ho, Hohoe and Cape Coast) were selected to

serve as the target population. Four of these cities are the largest industrial and business centres in Ghana. The total number of usable firms in the target population approximated 4,800. A simple random selection of one corporation every two, three, four or five pages (varying with each city's directory listings), to meet the projected corporate sector criteria was achieved (ie., Manufacturing = 100; Services = 100). Although not critically important, this sectoral projection was designed to maintain a balance between the two groups of executives.

The U.S. sampling frame was the Massachusetts Service and Manufacturing Directories. The selection was done to "match" similar firms selected in Ghana. The matching characteristics included: two thousand employees or less in any one firm; equal selection between manufacturing and service firms; and top level executives as subjects of study.

3.3 The Research Instrument

Current research suggests several popular instruments for assessing executive decision orientations using the rational-intuition metaphor. The Myers-Briggs Type Indicator (MBTI) (cf. Briggs & Myers, 1983) has been widely used to highlight executive decision styles ranging from sensing-thinking (rational, ST) to intuition-feeling (intuitive, NF). The Herrmann's Brain Dominance Instrument (HBDI) (1988) developed a four quadrant profile: cerebral left (rational), limbic

left (rational), cerebral right (intuitive), and limbic right (intuitive). Similarly, the Brain Technologies Corporation's Brain Map (1985) assessed rational and intuitive profiles using: I-control (rational), I-pursue (intuitive), I-explore (intuitive), and I-preserve (rational). In 1984, Torrance & Taggart introduced a two-mode human information processing (HIP) survey which consisted of measures of left-hemisphere dominance and right-hemisphere dominance, and a third measure: integration. Agor (1986) developed the AIM survey instrument to test the underlying potential intuitive ability of decision makers and the extent of the use of this ability in management decisions.

A recent study by Taggart & Valenzi (1990) extended the two-mode HIP survey into a six-mode version which they believed was more representative of management behavior (p.155). The six-point Likert-type scale of the HIP survey was made up of frequency statements that described a person's action 'frequency' responses. The Taggart & Valenzi (1990) questionnaire instrument was adopted for this study (cf. appendix C for the survey items, and appendix A for permission from the author to use the survey instrument).

Questions 1 - 30 are the Taggart & Valenzi (1990) HIP self-description inventory "rooted in innovative management thought, the physiology of the human nervous system, and Eastern and Western philosophy" (p.53). Questions 31 - 33 are a portion of Geert Hofstede's (1980) cross-cultural differences in executive thinking and leadership questionnaire, which study has been acclaimed by

numerous cross-cultural researchers (see eg., Moran & Harris, 1982). Question 34 was adapted from the Heller & Wilpert (1981) "general decision questionnaire" used successfully to explore the "power-influence continuum" of 129 organizations in five continental countries (Germany, France, the Netherlands, Spain, Sweden) and Israel (p.17). Questions 35 - 44 of the survey instrument asked for demographic information from the subjects. Such demographic variables as executive age, education, number of years on the job, and corporate sector operations (manufacturing or service) were used to determine their impact on the HIP assessments of the executives.

Table 3.2 describes the HIP survey in terms of the paired modes of the logic, planning, and ritual models of the rational style; and the insight, vision, and feeling models of the intuitive style (Taggart & Valenzi, 1990:169). Each of these specific vocabulary terms relate to the hypotheses previously introduced.

Hypothesis 1 contrasts a logic approach to tasks (using analyses, organization and control), with an insightful approach (using exploration, pattern and synthesis).

Hypothesis 2 which deals with executives' preparation for the future, compares planning propositions, predictions and design with scenario generation involving imagination, foreseeing, and inventing. Hypothesis 3 relates to working with people either in a task oriented manner (using conformity, possession and prohibition) or in a person centred manner (using association, cooperation and sharing).

Table 3.2

The HIP Survey (Paired Numbered Items).

RATIONAL		INTUITIVE	
How do you approach a task?			
<u>Logic</u>		<u>Insight</u>	
(= Specialist)		(= Generalist)	
(1)	I feel that a prescribed, step-by-step method is best for solving problems.	(7)	I look at a problem as a whole, approaching it from all sides.
(9)	I prefer specific instructions that are explicit about the details, rather than general instructions.	(8)	I try to discover things through free exploration.
(3)	It is important for me to have a place for everything and everything in its place.	(11)	I prefer general instructions that leave the details up to me, rather than specific instructions.
(10)	When solving problems, I prefer to use analytical approaches rather than intuition and insight.	(4)	When solving problems, I rely on intuition and insight rather than analytical approaches.
(6)	I prefer specific details more than general ideas.	(2)	I prefer general ideas more than specific ideas
How do you prepare for the future?			
<u>Planning</u>		<u>Vision</u>	
(= Develop Forecasts)		(= Generate Scenarios)	
(5)	When I have an important activity due in a week, I carefully outline what is required to get the job done.	(14)	I prefer people who are imaginative to those who are not.

Continued on next page.

Table 3.2 contd.

- | | |
|--|---|
| (15) When I have a special job to do, I like to organize it carefully from the start. | (12) I like to find new and better ways of doing things. |
| (18) I prefer to arrange events well in advance rather than respond to them as they arise. | (16) I come up with new ideas. |
| (19) I make a priority list of what needs to be done, and I stick to it. | (20) I prefer spending a great deal of time on issues of ideas. |
| (13) When I go somewhere, I plan what I will do and when. | (17) I feel that I use imaginative ways of doing things. |

How do you work with people?

Ritual

(= Task Centred)

- (22) I believe my success is determined by how well I carry out my procedures.
- (28) I rely on rules and procedures in making my decisions.
- (24) I find individual, personal work to be satisfying.
- (29) I prefer working on tasks by myself rather than with a group.
- (25) I will achieve something important for myself even if it makes someone else look bad.

Feeling

(= Person Centred)

- (21) I find group work to be satisfying.
- (23) I prefer working on tasks with a group rather than alone.
- (27) I prefer those activities that involve co-operation to those that do not.
- (30) In group work, I like to make sure that the concerns of others are considered.
- (26) I believe my success is determined by how well I get along with people.

Source: Taggart & Valenzi (1990:170-171).

3.4 Validity and Reliability of the HIP survey.

"The universe of content from which the scale's items were derived was based on the HIP metaphor" which is rooted in philosophical and managerial foundations (Taggart & Valenzi, 1990:166). Four expert judges (each with published research in HIP or other closely related areas) reviewed the items twice and one independent judge reviewed the item phrasing. The final scale items were derived by factor analytic procedures (Taggart & Valenzi, 1990:161).

The validity and reliability of the statistical measures adopted for this study are based on the internal consistency of the HIP self-description inventory. The test items were found to be homogeneous by Taggart & Valenzi (1990).

Cronbach's coefficient alpha was used to assess the internal consistency of the six HIP scales. Taggart & Valenzi (1990) reported the following coefficient alphas for the six HIP scales: Logic (.75), Planning (.83), Ritual (.53), and Insight (.69), Vision (.65), Feeling (.63).

Construct validity of the HIP survey was inferred from the universe of content used to construct the scales by the authors. The factor analytic methods used provide evidence for convergence and discriminant validity. The survey items included some redundancy which helped to verify the intended constructs. Using the multitrait-multimethod analysis, the HIP scales demonstrated predicted

patterns of correlation with the Myers-Briggs Type Indicator (MBTI), Kolb Learning Style Inventory, and Torrance & Taggart (1981) two-mode HIP survey. The MBTI, for example, is a widely-used measure of rational and intuitive ability well-known for over thirty years (Agor, 1989:9).

3.5 Data Gathering and Treatment.

At the two data collection points -- the United States and Ghana -- the main objective was to locate the defined small and medium-sized firms and their top corporate executives with "strictly comparable characteristics". "Matching in cross-cultural research is always difficult and consequently imperfect...." (Heller & Wilpert, 1981:20). To achieve a satisfactory comparison, two different but equivalent phases were enacted to gather the needed data.

Under phase I applied to the Ghanaian sample, dependence on mailed questionnaires from the United States or Ghana was judged not to be a viable choice. The researcher travelled to Ghana. Survey questionnaires were personally deposited with selected corporate executives by the researcher and four assistants. Eight cities and towns were visited. The following schedule was observed.

- Dec.17, 1990. Arrived in Ghana with 200 printed copies of the survey instrument and a letter of introduction from the Director of Doctoral Program (see appendix B for copy of letter).
- Dec. 20/21, 1990. Simple random selection of five corporations per page listed in the Ghana Manufacturing and Services Association Year Books for eight cities and towns.
- Dec. 27/29, 1990. Informal induction training for assistants who helped to introduce and retrieve questionnaires from executives in other cities and towns.
- Dec.31/Jan.20 1991 Distributed survey instrument to selected executives. Each assistant had a list of firms to contact (see tabulated data in Table 3.3).

The researcher instructed his assistants to politely leave the instruments with managers or read and fill out the questionnaires with managers who insisted on such a method, without any imprints of their (assistant's) interpretation of the instrument to the managers. The study subjects were assured of complete confidentiality of their names and those of the firms they managed. A few of the executives did insist on the researcher or assistant reading the survey instrument

Table 3.3

Distribution of Selected Firms in Ghana.

CITY/TOWN	# OF FIRMS SELECTED	# OF FIRMS REACHED	CONTACTED BY
Accra	65	61	Researcher
Tema	45	42	"
Asiamanh	5	5	"
Obussi	10	10	Assistant
Kumasi	30	18	"
Ho	20	20	"
Hohoe	5	5	"
Cape Coast	20	19	"
TOTAL	200	180	
%		90%	

to them (on the reasonable excuse of time constraints) and had their wishes recorded without researcher or assistant interpretation. The selected executives were generally very cooperative. (Only in one instance was the researcher literally thrown out of the business premises of a manufacturing firm. Further inquiry into the circumstances revealed that the firm was in receivership and production had ceased a few weeks before my arrival). Follow-up visits were

announced to the managers on the day of the deposit. On a number of these return visits (in some cases as many as four or five visits), completed questionnaires were picked up by the researcher and his assistants. The first phase was completed between December 17, 1990 to January 25, 1991.

Under phase II applied to the United States sample, survey questionnaire distribution was achieved by mailing. One hundred surveys each (a total of 200 surveys) were mailed to service and manufacturing category executives in ten cities and towns in Massachusetts. Each survey instrument package contained a brief letter of introduction and purpose of the research on official letterhead and a laser printed questionnaire with a good introduction assuring strict confidentiality. The objective was to encourage honest responses and also prompt a high U.S. response rate. Nineteen surveys were returned undelivered. Five executives sent back letters (or notes) declining to fill out their questionnaires (cf. appendix E for a rejection letter sample). Non-respondents and non-deliveries were replaced by a further comparably matched selection of 120 firms from the sampling frame to meet the approximate 100 executive responses desired. Overall, three hundred and twenty survey instruments were mailed to U.S. managers. One hundred and one surveys were completed and returned -- a response rate of 31.6%. The response rate of similar surveys range from Milan's (1986) 15% to Agor's (1986) 35%. It is well-known that high level executives are usually very difficult to reach with survey instruments. The mailed U.S questionnaires, distributed between February 15 to March 31, 1991, had the following specific

procedures recommended by some researchers to increase executive response rate (cf. e.g. Dillman, 1978).

1. A questionnaire instrument short enough to be completed in less than thirty minutes.
2. Open-ended type of questions are avoided.
3. Confidentiality and anonymity of executive respondents was guaranteed.
4. Pre-addressed self-stamped envelope for the return postage.
5. Laser-printed questionnaires, mailed first class.

No follow-up questionnaire mailings were attempted.

3.6 Data Analysis and Hypothesis Testing

Questionnaire responses from executives in the U.S. and Ghana provided the following raw data on each of the one hundred and seventy six study subjects: (a) logic/insight scores; (b) planning/vision scores; (c) ritual/feeling scores; (d) decision centralization scores; and (e) scores on ten demographic items pertaining to issues of individual firm affiliation, job title, length of time with the firm, length of time in current position, highest level of education, number of full-time

employees, nationality, age and sex of respondents. From the data obtained, statistical procedures were performed to support or reject the hypotheses.

The core (dependent) variable is decision making behavior as measured by the rational-intuitive continuum. The U.S. and Ghana are the predictor (independent) variables. The analyses are sensitive to distributional assumptions of normality and homogeneity of variance. With comparable characteristics of the two categories of the independent variable, the expected associations are that the country means for the U.S sample will be higher for logic, planning, and ritual scales (the rational mode) and lower for insight, vision, and feeling scales (the intuition mode), and vice versa for the Ghanaian sample.

Hypotheses 1a & 1b (logic-insight pair) dealt with executive's approach to tasks. Hypotheses 2a & 2b (planning-vision pair) examined executive's preparation for the future. Hypotheses 3a & 3b (ritual-feeling pair) compared how executives worked with people. These hypotheses were directly compared across culture by national grouping. Based on the paired mode difference scores, F - ratios were computed using analyses of variance procedure.

For H 4, the ordinal scale was transformed into a "decision centralization score" (DCS). Respondents' percentages for each decision style were weighted and divided by 100 so that the DCS values for each executive could vary continuously from 1 - 5. According to Heller & Wilpert (1981), the DCS values

are reliably smooth. Mean DCS values for each country (U.S. and Ghana) were computed whereby low DCS values indicated decentralized (participative) decision making, and high DCS values showed a centralized (non-participative) way of decision making. A t-test distribution was used to make inferences about the means of the two samples.

CHAPTER IV

DATA ANALYSIS AND RESULTS

This chapter presents the treatment of the data obtained and results of the study. The chapter is divided into several sections. First, a demographic analysis of the respondents from the U.S. and Ghana will be presented. Second, each hypothesis will be stated and analyzed separately, followed by a brief interpretation of the findings.

Chapter V will discuss the various implications inherent in the results obtained with regard to organizational studies, cross-cultural management research and the practice of management.

4.0 Demographic Analysis.

The demographic information section of the research questionnaire asked ten questions pertaining to respondents' firm, job title, sex, age, education, nationality, and number of employees. These data are tabulated in Tables 4.1 - 4.6.

A total of 500 executives were contacted either in person or by mail with the research questionnaire. One hundred and seventy six responded -- 101 in the United States and 75 in Ghana. All of the research surveys returned were found to be usable. The overall response rate for the two countries was 35.2%. Thirteen (7.4%) were female executives; seven were from Ghana and six were U.S. respondents. The rest (92.6%) were male executives. Respondents were categorized into manufacturing and service sectors as shown in Table 4.1. This sectoral classification referred to in chapter two will form the bases of any intra-cultural comparisons. Of the completed U.S. sample, 56.4% were in the manufacturing sector and 43.6% in the service sector. For the Ghanaian sample, 57.3% were in manufacturing and 42.7% were in the service sector. The combined sample thus was represented more by manufacturing executives (56.9%) than by service executives (43.2%), but the representation of manufacturing and service sectors was essentially the same in both country's samples.

4.1 Corporate Demographic Characteristics.

The number of employees in U.S. firms surveyed ranged from 7 to 2000 (average 264). Ghanaian employees in the firms surveyed ranged from 4 to 2000 (average 334). These numbers reflect classifications of full-time employees. All the firms surveyed in each country are domestic corporations.

Table 4.1

Administration of Survey Instrument

Sector	Delivered		Completed & Returned		Percentage Returned	
	U.S.	Ghana	U.S.	Ghana	U.S.	Ghana
Manufacturing	160	94	57	43	35.6	45.7
Service	160	86	44	32	27.5	37.2
Sub Total	320	180	101	75	31.6	41.7
Grand Total	500		176		35.2%	

4.2 Executive Demographic Characteristics.

Executive respondents were asked to indicate their titles and years of service in their current position with the corporation. The majority of U.S. respondents (73.3%) listed "President" or "CEO"; and the majority of Ghanaian respondents (65.3%) listed "Managing Director" or "General Manager" as their current titles. Other executive designations included Vice President, Plant Manager, Owner, Publisher and Comptroller in the U.S.; and Deputy Manager, Plant Manager, Head of Division and Administrative Manager in Ghana. The average age of U.S. respondents was 50 years (range, 31 - 75 years) and 43 years for Ghanaian respondents (range, 26 - 60 years). U.S. respondents had worked in

their current positions an average of 10.1 years (range, 1 year - 46 years) and Ghanaian executives averaged 5.7 years in their current job (range, 1 year - 22 years). Seventy nine percent of U.S. executive respondents had college degrees: 53 BA/BS/BBA, 26 MA/MS/MBA, and 1 Ph.D. Fifty eight percent of Ghanaian respondents possessed college degrees: 39 BA/BS/B.Com. and 5 MA/MS/MBA. A statistical breakdown of executive respondents' characteristics is provided in Tables 4.2, 4.3, 4.4, & 4.5. The analyses showed that there are differences in the educational levels between U.S. and Ghanaian executives; and that the U.S sample is older, and has spent more time in their current positions, than the sample of Ghanaian executives.

Table 4.2

Respondents' Job Titles *

United States			Ghana		
Title	Number	Percentage	Title	Number	Percentage
Pres/CEO	74	73.27	Mg. Dir.	43	57.33
Vice Pres.	14	13.86	Gen. Mgr.	6	8.00
Plant Mgr.	3	2.97	Plant Mgr.	5	6.67
Other	10	9.90	Other	21	28.00
Total	101	100.00%		75	100.00%

* Since all the job titles were in the domain of top executive positions, no attempt was made to indicate differences between them.

Table 4.3

Respondents' Level of Education

United States			Ghana		
Title	Number	Percentage	Title	Number	Percentage
High School	13	12.9	'O'/'A' Level	6	8.0
BA/BS/BBA	53	52.5	BA/BSc./B.Com.	39	52.0
MA/MS/MBA	26	25.7	MA/MSc.MBA	5	6.7
Ph.D.	1	1.0	Ph.D.	--	0.00
Other	8	7.9	Other	25	33.3
Total	101	100.00%		75	100.00%

Crosstabulation of Education by Country: Chi-Square = 25.30, DF.
= 3, Significance $p < .001$

Table 4.4

Respondents' Age.

Country	n	Mean	Maximum	Minimum	Range	Std. Dev
U.S.A	99	50.42	75	31	44	9.27
Ghana	65	43.57	60	26	34	7.55

t - Value = 5.39, DF. = 172.50, 2-Tail Prob. = $< .001$

Table 4.5

Respondents' Years in Current Corporate Position.

Country	n	Mean	Maximum	Minimum	Range	Std. Dev
U.S.A	101	10.03	46	1.0	45.0	10.24
Ghana	75	5.65	22	1.0	21.0	4.06

t - Value = 3.50, DF. = 174, 2-Tail Prob. = < .001

The demographic variables of age, number of years on the job, and educational level shown in Tables 4.2 through 4.5 indicated significant differences between U.S. and Ghanaian executives. The impact of these variables on inter-cultural comparative analyses, however, depends on their association with the dependent rational and intuition term pairs. Table 4.6 indicates that very low correlations (only 2 of 18 being significant at $p < .05$) were found between the demographic variables and the rational and intuition term pairs. Thus, the demographic variables are unlikely to contribute meaningful variance to any cultural differences which might subsequently be found on the rational and intuition term pairs.

Table 4.6
Sample Characteristics
Pearson Correlation Coefficients

	EDUCATION	AGE	YEARS OF EXPERIENCE
LOGIC	.105	-.017	.073
INSIGHT	.084	.116	.049
PLANNING	.097	-.088	-.037
VISION	.070	.118	.009
RITUAL	.101	.057	.152 *
FEELING	.033	-.129	-.169 *

* $p < .05$; all others NS.

Together with the executive demographic characteristics tabulated in Tables 4.2 - 4.5, respondents were asked to state their nationality. Seventy-three respondents in Ghana recorded "Ghanaian" as their country and two listed "Indian". Twenty-six percent of U.S. respondents to the question identified themselves first with a second and/or third country "born American". A tabulation of the nationality composite is presented in Table 4.7.

Table 4.7

U.S. Respondents' Nationality Composition

Country	Number	Percentage
United States	73	72.28
German-American	4	3.96
Lithuanian-American	1	.99
English-American	4	3.96
Greek-American	2	1.98
Polish-American	1	.99
Italian-American	7	6.93
Swedish-French-American	1	.99
Portuguese-Dutch-American	1	.99
German-Swedish-American	1	.99
Canadian-American	2	1.98
Jewish-American	2	1.98
English-Polish-American	1	.99
French-Italian-Irish-American	1	.99
Total	102	100%

4.3 Descriptive Statistics: Scale Reliabilities & Correlations.

Individual scale items for the term pairs were used to determine the overall reliability of each measure using the Cronbach Coefficient Alpha. These reliability estimates were to reassess the previously tested scales designed and used by Taggart & Valenzi (1990). Table 4.8 displays the scale descriptions and reliabilities, the items included in each scale and the correlations among the

variables of both U.S. and Ghana. Separate reliability estimates were also computed for the U.S. and Ghanaian scales (see Table 4.9). The significance of these computations was to assure that each individual country's item pairs displayed adequate internal consistency.

In interpreting the "acceptance levels" of internal consistency of the scales and correlations, Taggart & Valenzi (1990) suggested a caveat of "forgiving" owing to the inherently elusive nature of intuition and the difficulty of its precise operational definition, explanation and measurement. The authors acknowledged the enormous complexity of measuring non-logical processes in a logical manner that would be amenable to objective understanding (p.164). As they suggested, Table 4.8 demonstrates that rational relationships were easier to validate than intuitive relationships. This researcher joins in the caveat of "forgiving" acceptance levels of these scale reliabilities.

The overall reliabilities of four of the six scales exhibit good internal consistency ($\alpha > .64$). The two remaining scales provide weak but adequate reliability of studies of this nature at $\alpha > .51$.

The separate reliabilities for U.S. and Ghana shown in Table 4.9 indicated no consistent differences between the two countries. In addition, the scale reliabilities were consistent with those reported by Taggart & Valenzi, 1990:167.

Table 4.8

Overall Scale Reliabilities & Correlations

		Intercorrelation among variables Pearson Correlatin Coefficients (All Groups Pooled)					
Variable	Description & Measure	LOG	INS	PL	VIS	RIT	FEEL
Logic	Self-rating of approach to Task. LOG1 LOG9 LOG3 LOG10 LOG6 Alpha = .713						
Insight	Self-rating of approach to Task. INS7 INS8 INS11 INS4 INS2 Alpha = .514	-.372*					
Planning	Self-rating of approach to Future. PL5 PL15 PL18 PL19 PL13 Alpha = .851	.616*	-.089				
Vision	Self-rating of approach to Future. VIS14 VIS12 VIS16 VIS20 VIS17 Alpha = .645	.094	.421*	.228			
Ritual	Self-rating of work with people. RIT22 RIT28 RIT24 RIT29 RIT2 Alpha = .559	.478*	.007	.531*	.144		
Feeling	Self-rating of work with people. FEEL21 FEEL23 FEEL27 FEEL30 FEEL26 Alpha = .717	.238	.121	.219	.317*	.109	

* p < .01

Table 4.9

Alpha Scale Reliabilities for Ghana and the U.S.

	GHANA	UNITED STATES	T. & V.* (1990)
<hr/>			
(1) <u>RATIONAL VARIABLES:</u>			
(A) "Logic" Scale	.637	.741	(.75)
(B) "Planning" Scale	.837	.828	(.83)
(C) "Ritual" Scale	.533	.606	(.53)
(2) <u>INTUITION VARIABLES:</u>			
(A) "Insight" Scale	.552	.502	(.69)
(B) "Vision" Scale	.665	.502	(.65)
(C) "Feeling" Scale	.686	.728	(.63)
<hr/>			

* Scale Reliabilities Reported by Taggart & Valenzi, 1990:167.

Furthermore, the logic, planning, and ritual scales (the rational dimension) exhibited significant positive correlations with each other. Conversely, the insight, vision, and feeling scales (the intuition dimension) were also positively correlated although at much lower levels. The rational and intuition metaphors also require

"the scales in one group to be negatively associated with those in the other group" (Taggart & Valenzi, 1990:166). As it was with the original research, this prediction was only partially supported. Logic and insight, the most distinguishable "opposites" in the rational-intuition continuum model, showed a significant negative correlation.

4.4 Analysis of the Data.

This section presents the treatment and findings with regard to the hypotheses introduced in the previous chapters. Intra-culture comparisons, (manufacturing verses service sectors), mentioned as a possible issue in Chapter Two, were not necessary since sector representation was balanced in the two national cultures. Statistical analyses (data not shown) confirmed no differences in executive decision making orientation by sector. The relevant hypotheses deal with comparative issues of logic and insight (ie., specialists vs. generalists); planning and vision (ie., develop forecasts vs. generate scenarios); ritual and feeling (ie., task centred vs. person centred); and decision centralization and decentralization. Each hypothesis will be stated and analyzed separately and later as part of the overall general hypothesis dealing with rational and intuitive approaches to decision making. A summary interpretation is provided at the end of each analysis.

4.4.1 Results of Hypotheses Tests.

H1: Top executives of U.S. companies are significantly more likely to use rational decision making, whereas top executives of Ghanaian companies are more likely to use insight in decision making. More specifically:

H1a: Top executives of U.S. companies are significantly more likely to have greater orientation to tasks as "specialists" than are top executives of Ghanaian companies.

H1b: Top executives of Ghanaian companies are significantly more likely to have greater orientation to tasks as "generalists" than are top executives of U.S. companies.

Hypotheses 1a & 1b are the strongest in the Taggart & Valenzi (1990) rational-intuition continuum arrangement (p.160). "...The exhaustive use of logic and reason" often with disregard for subjective experiences is a strongly suggested underlying assumption of U.S. management (Clark,1973:158). The preponderance of evidence in the organization literature suggests that U.S. executives prefer to approach tasks systematically and analyze information using quantitative measures. Specialists imbued with emphasis on hard data and logical analysis fill the intentional structure of roles created by the organizing function. Control or the correction of deviations from planned targets is pursued with cost-benefit

analysis and evaluation research (Nutt, 1989). Taggart & Valenzi (1990) associated this mode of approach to tasks with the metaphor "Specialist". The reverse metaphor "Generalist" is associated with executives who prefer to use judgement, subjectivity and insight in their approach to tasks by exploring various possibilities and synthesizing conflicting claims. Judgement and subjectivity are most closely associated with Ghanaian management. These strongly held descriptions led to the reasoning behind H1a & H1b.

To test hypotheses 1a & 1b, respondents were given five paired statements. Each statement described the frequency with which it represented the respondent's true self. The six-point scale ranged from "Never" = 1 to "Always" = 6. Table 4.10 reports the computation of the mean scores obtained for each of the statements for the U.S. and Ghana.

With respect to H1a, Table 4.10 shows mean scores of 3.73 and 4.20 for U.S. and Ghanaian executives respectively on the logic scale. This suggests that Ghanaian executives were higher on logic than U.S. executives. Analysis of variance was used to test for statistical significance between the United States and Ghanaian mean scores. Table 4.11 presents the results. The "logic" scale across nations shows that there was a significant difference between U.S. and Ghanaian executives, $F = 13.61, p < .01$. The analysis suggests that Ghanaian executives were more likely to approach tasks as "specialists" than are U.S. executives. These

Table 4.10

Executives' Approach to Tasks: Country Mean Scores.

ITEM	Mean (Std. Deviation)	
	U.S.	GHANA
1. I feel that a prescribed, step-by-step method is best for solving problems.	4.00(1.01)	4.08(1.10)
2. I prefer specific instructions that are explicit about the details, rather than general instructions.	3.52(1.37)	4.27(1.29)
3. It is important for me to have a place for everything and everything in its place.	3.93(1.40)	4.42(1.33)
4. When solving problems, I prefer to use analytical approaches rather than intuition and insight.	3.59(1.18)	4.48(1.25)
5. I prefer specific details more than general ideas.	3.62(1.08)	3.76(1.30)
Mean Score (Specialist)	3.73(1.23)	4.20(1.25)
INSIGHT		
1. I look at a problem as a whole, approaching it from all sides.	4.66(0.89)	4.68(1.02)
2. I try to discover things through free exploration.	3.91(1.09)	4.08(1.29)
3. I prefer general instructions that leave the details up to me, rather than specific instructions.	3.77(1.34)	3.60(1.22)
4. When solving problems, I rely on intuition and insight rather than analytical approaches.	3.17(1.06)	2.91(1.07)
5. I prefer general ideas more than specific details.	3.11(0.94)	3.55(1.23)
Mean Score (GENERALIST)	3.72(1.06)	3.76(1.16)

results are opposite to the prediction that U.S. executives are more likely to be specialists.

Hypothesis 1b dealt with the "insight" scale. Table 4.10 shows mean scores of 3.72 and 3.76 for U.S and Ghanaian respondents respectively. Analysis of variance across nations indicated that there was no significant difference between the two cultures on this issue, $F = .135$, NS (see Table 11). These results indicate that the two cultures' executives were very similar as "generalists".

The results of the "logic" and "insight" scales did not support hypotheses 1a & 1b, that U.S. executives will have greater preference for being specialists than Ghanaian executives, and Ghanaian executives will have greater preference for being generalists than U.S. executives.

H2: Top executives of U.S. companies are significantly more likely to use planning in decision making, whereas top executives of Ghanaian companies are more likely to use vision in their decision making. More specifically:

H2a: Top executives of U.S. companies are significantly more likely to have greater orientation to prepare for the future by planning and developing forecasts than are top executives of Ghanaian companies.

Table 4.11

ANOVA for Logic & Insight, by Country.*

Variable	SS	DF	F-Value	Sig. of F
Logic	9.400	1	13.609	.000
Insight	.062	1	.135	.714

* See Table 4.10 for means(standard deviations).

H2b: Top executives of Ghanaian companies are significantly more likely to generate scenarios as they prepare for the future than are top executives of U.S. companies.

Hypotheses 2a & 2b are considered to be of medium strength in the HIP classification. Planning supports the rational mode and vision complements the intuitive mode. Table 4.12 presents the mean scores and standard deviations of the planning and vision scales.

With respect to Hypothesis 2a, U.S. executives recorded a mean score of 3.89 on the planning scale as opposed to 4.66 for Ghanaian executives. The mean scores suggest that Ghanaian executives were much higher on the (rational)

Table 4.12

Executives' Preparation for the Future: Country Mean Scores.

ITEM	MEAN (STD. DEVIATION)	
	U.S.	GHANA
PLANNING		
1. When I have an important activity due in a week, I carefully outline what is required to get the job done.	3.98(1.34)	4.75(1.22)
2. When I have a special job to do, I like to organize it carefully from the start.	4.31(1.13)	5.19(1.07)
3. I prefer to arrange events well in advance rather than respond to them as they arise.	3.68(1.17)	4.28(1.23)
4. I make a priority list of what needs to be done, and I stick to it.	3.50(1.16)	4.20(1.41)
5. When I go somewhere, I plan what I will do and when.	4.00(1.18)	4.88(1.18)
Mean Score (Developing Forecasts)	3.89(1.19)	4.66(1.22)
VISION		
1. I prefer people who are imaginative to those who are not.	4.73(0.86)	5.01(1.16)
2. I like to find new and better ways of doing things.	4.67(0.95)	4.97(0.89)
3. I come up with new ideas.	4.34(0.83)	4.01(1.01)
4. I prefer spending a great deal of time on issues of ideas.	2.99(1.13)	3.68(1.37)
5. I feel that I use imaginative ways of doing things.	4.20(1.40)	3.85(1.04)
Mean Score (Generating Scenarios)	4.19(1.03)	4.30(1.09)

planning scale than U.S. executives. Hypothesis 2a was tested using the analysis of variance procedure outlined for H1a & H1b. Cross-national ANOVA results are presented in Table 4.13. The planning scale demonstrates a significant country (culture) effect between U.S. and Ghanaian executives, $F = 28.861$, $p < .01$. The analysis shows that Ghanaian executives indicated greater orientation to planning than their U.S. counterparts, contrary to what was predicted.

Hypothesis 2b dealt with the "vision" scale. Table 4.12 shows mean scores of 4.19 for the U.S. and 4.30 for Ghana. Using the analysis of variance procedure, no statistically significant difference was found between executives in the U.S. and Ghana with regard to the vision scale, $F = .625$, NS (see Table 4.13). The analysis indicates that executives in the U.S. and Ghana were similarly oriented toward the use of vision (or generating scenarios) in decision information processing.

H3: Top executives of U.S. companies are significantly more likely to use ritual in decision making, whereas top executives of Ghanaian companies are more likely to use feeling in decision making. More specifically:

H3a: Top executives of U.S. companies are significantly more likely to have greater orientation to be "task centred" than are top executives of Ghanaian companies.

H3b: Top executives of Ghanaian companies are significantly more likely to be "person centred" than are U.S. executives.

Table 4.13

ANOVA for Planning & Vision, by Country*

Variable	SS	DF	F-Value	Sig. of F.
Planning	25.097	1	28.861	.000
Vision	.625	1	1.440	.232

* See Table 4.12 for means (standard deviations).

Hypothesis 3a & 3b are the least robust in the Taggart & Valenzi (1990) rational-intuition continuum classification. With respect to hypothesis 3a, task centred executives prefer rituals that "conform, possess and prohibit" subordinate acts not directed toward task accomplishment. Table 4.14 reports the mean scores of the "ritual" scale. U.S. and Ghanaian executives score 3.14 and 3.62 respectively on this scale. The mean scores suggest that executives in Ghana were higher on the (rational) ritual scale than U.S. executives. To test for significance in H3a, the researcher used the same analysis of variance procedure reported for the previous hypotheses. ANOVA results for the ritual scale are reported in Table 4.15. The results indicate that there was a significant difference between executives in the U.S. and Ghana, $F = 19.056$, $p < .01$. We must conclude that executive respondents in Ghana showed a more task oriented approach to working with subordinate employees than U.S. executive respondents. This finding was again contrary to our prediction.

Table 4.14

Executives' Work Attitudes Toward Subordinates (U.S. & Ghana).

ITEM		Mean (Std. Deviation).	
		U.S.	GHANA
RITUAL			
1.	I believe my success is determined by how well I carry out procedures.	3.11(1.40)	4.11(1.24)
2.	I rely on rules and procedures in making my decisions.	3.30(1.19)	4.01(1.19)
3.	I find individual, personal work to be satisfying.	4.09(1.04)	3.40(1.15)
4.	I prefer working on tasks by myself rather than with a group.	3.19(1.06)	3.20(1.03)
5.	I will achieve something important for myself even if it makes someone look bad.	2.01(0.99)	3.08(1.43)
	Mean Score (Task Centred)	3.14(1.14)	3.62(1.20)
FEELING			
1.	I find group work to be satisfying.	3.43(1.22)	3.77(1.17)
2.	I prefer working on tasks with a group rather than alone.	3.10(1.10)	3.61(1.12)
3.	I prefer those activities that involve co-operation to those that do not.	4.17(1.15)	4.28(1.06)
4.	In group work, I like to make sure that the concerns of others are considered.	4.41(0.94)	4.52(1.11)
5.	I believe my success is determined by how well I get along with people.	4.53(1.28)	4.32(1.37)
	Mean Score (Person Centred)	3.93(1.14)	4.10(1.17)

Table 4.15

ANOVA for Ritual & Feeling, by Country*

Variable	SS	DF	F-Value	Sig. of F.
Ritual	9.784	1	19.056	.000
Feeling	4.524	1	3.501	.063

* See Table 4.14 for means (standard deviations).

Hypothesis 3b concerned the "feeling" scale. Person centred executives prefer to "associate, co-operate and share" their feelings with subordinate employees. The "feeling" scale indicated no significant differences between the two national cultures, $F = 3.501$, not significant. These results show that U.S. and Ghanaian executives are not significantly different from each other in being person centred with others at work.

H4: Top executives of Ghanaian companies are significantly more likely to have greater orientation toward centralized (non-participative) decision making than are top executives of U.S. companies.

The analysis used to test this hypothesis was developed from the ordinal scale in question 34 of the survey instrument. The scale was transformed into a "Decision Centralization Score" (DCS). Respondents' percentages of decision styles were

weighted and divided by 100. DCS values for each respondent varied continuously from 1 to 5, (where 5 denotes high centralization). This scoring method was established by Heller & Wilpert, 1981.

A t-test was conducted on the DCS values for the U.S. and Ghana. The results are posted in Table 4.16. The t - statistic demonstrated a significant difference in the means of the two cultural groups. Hypothesis 4 could therefore be supported at alpha = .05. There was evidence that in all important decisions made in the course of one year, Ghanaian executives were closer to preferring "own decisions" with or without detailed explanation to colleagues and subordinates, than U.S. executives, who preferred "prior consultation, joint decision making, and delegation" to or with their colleagues and subordinates.

Table 4.16

Decision Centralization Scores (t - Tests).

	n	Mean	Std. Dev.	Std. Error	t - Value	Degrees of Freedom	2-Tail Prob.
U. S.	101	2.90	.567	.056	-2.50	.174	.013
Ghana	75	3.10	.468	.056			

To assess and substantiate the conclusions drawn about hypothesis 4, supplementary questions 31, 32, & 33 were examined in the survey instrument. The questions did not have direct bearing on specific executive decision behaviors. They were somewhat general, asking respondents to indicate the extent to which they agreed or disagreed that: (a) subordinates lose respect for an executive if he/she asked for their advice before making a decision; (b) individual decisions are usually of higher quality than decisions made by groups; and (c) subordinates should participate in the decisions made by top management. These questions, however, commanded a strong bearing on centralization and decentralization of executive decision making. Their function was to determine whether respondents' DCS behavior, evidenced with a t - statistic previously, matched the DCS opinions in these questions. With this view in mind, hypothesis 4 was re-tested using respondents' beliefs and values rather than their behavior and actions.

T - tests were computed for the three questions separately. The results are reported in Table 4.17. Respondents' answers to questions 31 and 32 were significantly different for the two countries at $p < .01$ level of significance. Question 33 was not statistically significant.

The five-point scale for questions 31, 32, & 33 commenced with Strongly Agree = 1, Agree = 2, Undecided = 3, Disagree = 4, to Strongly Disagree = 5. The t - test for question 31 suggests that U.S. executives tended to strongly disagree that "employees lose respect for a manager who asks them for their

advice before he/she makes a final decision". Ghanaian executives disagreed less strongly on the issue. The question served to confirm the decentralized decision information processing of U.S. executives reported earlier for hypothesis 4.

The findings for question 32 were less conclusive; both U.S. and Ghanaian executives tend to disagree that individual decisions are better than group decisions. The Ghanaian executives disagreed more strongly than the U.S. executives. With regard to question 33, no significant differences were detected in the manner in which executives in the two cultures responded to the question. Both U.S. and Ghanaian executives agreed that "subordinates should participate in the decisions made by top management". It appears that U.S. executives have again substantiated their position on decision decentralization. Ghanaian executives, on the other hand, did not support their decision centralization position; rather they tended to agree with U.S. executives on the issue of decision decentralization.

Finally, for purposes of future research, correlation analyses were conducted on the Decision Centralization Scores and the cognitive functioning of the executive. Decision Centralization was positively correlated with insight (.23), vision (.25), and feeling (.18); and negatively correlated with logic (-.19), planning (-.13) and ritual (-.22). These associations are very weak but the fact that the DCS showed such association at all calls for further investigation. (Were the associations relatively stronger, the interpretation would be that "own decision" executives are more likely to be intuitively oriented and joint and consultative

decision executives are more likely to be oriented toward rational decision information processing).

Tabel 4.17

T - Tests for Questions 31, 32 & 33.

Q.31. Employees lose respect for a manager who asks them for advice.

Country	n	Mean	Std. Dev.	Std. Error	t - Value	Degrees of Freedom	2-Tail Problem
U.S.	101	4.5347	.672	.067	5.15	174	.000
Ghana	75	3.9200	.912	.105	.		

Q.32. Decisions made by individuals are usually of higher quality than decisions made by groups.

U.S.	101	3.5644	1.024	.102	-2.61	174	.007
Ghana	75	3.9333	.777	.090			

Q.33. Subordinates should participate in the decisions made by management.

U.S.	101	2.0495	.853	.085	-1.58	174	.130
Ghana	75	2.2800	1.085	.125			

4.5 Summary

This chapter presented the major findings of the study and the procedures used for the analysis of data. Descriptive statistics were used to provide a summary of the major components of the survey questionnaire. These included item percentages, mean, standard deviation and range of scale items, and scale reliabilities and correlation among variables. Analysis of variance was used to determine cross-cultural differences. T - tests were conducted on the Decision Centralization Scores. Correlation analysis examined associations between decision centralization and the cognitive modes of decision information processing.

In the next chapter a summary of the major research findings will be provided, followed by observations of the researcher and suggestions for further research in this area of organizational and cross-cultural studies.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS.

This chapter is divided into three sections. The first section presents a summary of the major findings of the study. This is preceded by a brief recapitulation of the objectives of the research. The second section follows with a discussion of the implications of the findings for organizational studies, cross-cultural research, and the practice of management. Limitations of the study will be featured in this section. The third section concludes with recommendations for the application of the findings and opportunities for future research.

5.1 Summary of the Objectives of Study.

Three groups of theorists have dealt with the rational and intuition metaphors in organizational research. The first group, spearheaded by Herbert Simon (1955, 1987), has paid a great deal of attention to deductive analytical processes of problem resolution almost to the exclusion of intuitive processes. For this group, judgement and intuition are easily subsumed under rational processes to provide a store of learning and information ready for recognition and retrieval instantly when necessary. "...There is nothing 'irrational' about intuitive

or judgemental reasoning", writes Simon, (1987). Chester Barnard (1968) challenged this so-called bias toward rationality. Since then a host of other researchers have attempted to integrate intuitive behavior into the mainstream of organizational research. Neurophysiological studies for which Roger Sperry (1964) won a Nobel prize boosted research in the field in the 1970's and 1980's.

Organizational anthropologists' postulate linking the two metaphors to different national cultures pushed the argument a step further. The indication was clear that one could associate executive thinking in different national cultures with different styles of decision information processing.

In this research, I have compared top corporate decision makers in two national cultures. The literatures reviewed clearly juxtaposed the rational and intuitive metaphors of decision information processing styles, and the national cultures selected have generally been associated with a primary decision making style. The results of the study were intended to indicate whether there were indeed differences (or similarities) between executives of the two national cultures and whether the metaphors used in the study were culture specific (ie., whether executive decision styles show cultural uniqueness), or culture general (ie., whether executive decision behaviors demonstrate universality and are not associated with these particular cultures).

5.2 Major Research Findings.

The following sections recapitulate the major findings of the study. The technical explanations were laid out in Chapter IV.

5.2.1 Rational and Intuition: Cultural Differences.

Predicted orientation toward a rational or intuitive mode of decision making as a function of culture was not supported by the study findings. There were, however, some significant cultural differences between Ghanaian and U.S. executives. The sample of Ghanaian executives indicated that they approached tasks more as "specialists" (ie., favoring logic) than their U.S. counterparts. Furthermore, in their preparation for the future, Ghanaian executives indicated greater preference for "planning" than U.S. executives. Differences were also found between the two cultural groups with regard to how they work with their subordinate employees. Ghanaian executives showed greater "task centredness" (ie., ritual) than U.S. executives. Counterwise, no significant differences were found between the two cultural groups with regard to their use of insight, vision, and feeling in decision information processing. Hence, in the totality of decision information processing activities, Ghanaian executives indicated greater orientation toward the use of the enveloping metaphor of "rational decision style" than

U.S. executives. High level corporate executives in Ghana appear to use logic, planning, and ritual to a greater extent in decision making than U.S. executives.

The results obtained from this study indicate that the literature-based hypotheses with respect to executive orientation toward a rational and/or intuitive mode of decision information processing as a function of national culture could not be substantiated. Bearing in mind the dissimilarities of the samples on the basis of national culture (eg., race, stage of economic development, and other symbolic expressive aspects of behavior of people in the two national groups). Non-confirmation of the hypothesized propositions of differences between decision making orientation of U.S. and Ghanaian executives was surprisingly inconsistent with the Berreman (1966) general proposition that decision making reflects different styles of thought nurtured in different cultures. Interpreting cross-cultural data requires a high degree of cultural understanding, often beyond the apparent differences between two cultures (see Cundiff & Hilger, 1988). On one hand, the failure to support H1 - H3 suggests that neither an organizational perspective, nor a culture-specific perspective, prevailed. On the other hand, the fact that the rational scale results were actually opposite to those predicted suggests more of a culture-specific orientation. However, since both cultures' executives used rationality (and intuition) to higher rather than lower degrees, (most scale means were above mid-points), the culture-general perspective would seem slightly more supported by the study. Jones (1988) referred to this type of

finding as "the universality of the forces of industrialization and business organization" (p.503).

5.2.2 Decision Centralization: Country Differences.

A second major result of this study was that in all important decisions made by executive respondents in both national cultures in the course of one year, Ghanaian executives used slightly (but significantly) more centralized procedures for decision making than did United States executives. Confirmation of the hypothesis associated with this result did not come as a surprise. The high and low power distances usually associated with Ghanaian and U.S. organization actors respectively have led many theorizers to suggest centralized organization systems for Ghana and decentralized systems for the U.S. Additional questions were asked concerning executive beliefs and opinions about centralization and decentralization. U.S. respondents confirmed their actual decision activities with their beliefs and opinions; Ghanaian executives were more undecided on the issues or did not corroborate their actual decision activities with their beliefs and opinions.

Some weak associations between decision centralization and the two-mode metaphor were detected. Decision centralization showed a weak positive

association with the intuitive decision style and an even weaker negative association with the rational decision style.

5.3 Implications of the Research

The comparative nature of the study is an attempt to determine similarities and differences between the two culture's executives. Hence, although the hypotheses probed for differences, the study accepts the possibility that there may be both culture-specific and culture-general (organizational) aspects to the phenomenon of executive decision making.

The study reports the first known research in organization theory and cross-cultural management studies to explicitly apply rational and intuitive decision information processing metaphors on two continents in order to determine culture's consequences on them. All the other studies known to this researcher have either not mentioned the words "rational and intuition" (preferring to use surrogate terms such as formal and informal), or have not been across nations, or are simply conceptual in nature.

Although the attempt is significant, the results of the study should also be interpreted as a learning process in "the transferability of western-based concepts and methodologies to" other cultures, such as Ghana (Adler, et al. 1989:67). This

is because, first, the study is based on a methodological perspective that may be described as a rational design perspective where: (a) the individual is the basic unit of analysis; groups merely provide the context and structure in which individuals can be located and described, (b) the organization is fundamentally monocentrically designed, that is, the most powerful individuals or coalitions institute intentional rational-design and planning so that functions such as coordination, delegation and division of labor serve to achieve predetermined goals, and (c) the scientific paradigm supporting the rational-design perspective is fundamentally out of the positivistic tradition. The methods of inquiry are therefore primarily analytical, reductionist, exact, and quantitative, the basis upon which causal relationships are sought (Dachler, 1984:103-4). The questions posed using the analytical, reductionist HIP survey may be culturally and linguistically articulate for U.S. executives than for their Ghanaian counterparts. The low-context cultural experience of U.S. executives and the use of English as a first language in which the meanings of things are symbolized may themselves constitute differences in understanding the meaning of the survey items. The Whorfian (1967) hypothesis posits that people of different cultural and linguistic backgrounds have different perceptions of the world and unless their backgrounds and perceptions are the same, similar or can be calibrated, they are likely to perceive and/or symbolize meanings differently. The underlying argument in all of this is that the questionnaire instrument used may have failed to pick up culture-specific dimensions of the rational and intuitive decision information processing activities.

Second, Whorf's (1967) proposition shows that differences in perception and cognition may influence the manner in which individual HIP scale items are understood and interpreted. A question asked by Adler, Campbell & Laurent, (1989:71) is very relevant to the methodological portrait of the study, that is: in using a Western analytic perspective to look in on Ghanaian executives' decision information processing approaches, "Are we asking the right questions to understand them, or are we merely asking how similar [they] are to westerners on dimensions" of, say, rationality and intuition," that have been found to be meaningful in explaining western managerial behavior?". In other words, was the HIP survey asking culture-general questions (a reflection of Westerners) rather than soliciting culture-specific responses?. Adler, et al. (1989:71) suggest that "we may need to develop more indigenous models, questions, and methods -- perhaps more fundamentally based on anthropological methods -- if we are to begin to understand" the other. For a high-context culture such as in Ghana where information processing behaviors are internalized and very little is explicitly coded, it is plausible to assume that rationality and intuition may be easier to understand from the expressive aspects of managerial behavior rather than in the cognition and perception of these executives.

The researcher, being a Ghanaian, offers in this section additional speculative reasons for the failure to support the hypotheses in the study. First, executives in each participant nation were treated as culturally homogeneous. All were fairly to highly literate with EuroAmerican management systems. If we

consider, for example, the dual characterization of Ghana's economic development stage (in which one-half is fairly industrialized and the other half dependent on subsistence agriculture), and also the fact that about half of Ghana's population is illiterate and the symbolic expressive behaviors of illiterate individuals managing organizations may be different from the literate executives within the same country, some measure of multiculturalism (separation of dyads in the same culture) may be appropriate. That is to say, literate executives may not necessarily be representative of Ghana's culture. The alternative argument could also be made that culture is a constant struggle to redefine the reality of a people from one generation to another; therefore any redefined expressive behaviors displayed by the current literate generation of executives is indeed a part of the national culture. This dilemma is the reason why some theorists (eg., Nzelibe, 1986) have linked the behavior of modern executives in Ghana with Leon Festinger's (1957) "cognitive dissonance model". The generation which raised these executives and the external EuroAmerican educational systems they had to undergo have conspired to create inconsistencies in their thinking. They have become "children of two cultures". Indeed, the study results indicated a higher orientation to rational decision information processing for Ghanaian executives (a position usually associated with U.S. executives). It may be that executive respondents in Ghana would like to "look good" in the eyes of Westerners. They may perceive a Western "literary symbol" (eg., a questionnaire) as a thing to be dealt with from a Western perspective. The executives were clearly aware that the questionnaire instrument originated from the United States and might have

proceeded to answer them in ways that would be appreciated by a Westerner. Management teachers in Africa usually pointed to the attractiveness of Western "classical" and "modern" principles of management, and "tidy description and universalistic prescriptions" (see Jones, 1988:503).

Secondly, there is some remnant of what could be described as a "boss/subordinate" relationship between business executives in Ghana on one hand, and Western business leaders on the other hand. This kind of reasoning is entirely compatible with traditional Ghanaian culture which values respect for persons or groups who possess authority (in this case, political and economic authority), and experience (that is to say, managerial and business experience). These political, economic, and managerial systems have become the subject of study all over the world (see Jones, 1988:501). The perception on the part of Ghanaian executives may, again, be that the "subordinate" ought to look good in the eyes of the "boss". To look good was to show how "rational" they are in the study of their approach to decision making. If they did the "bosses" bidding correctly, their responses would not reinforce the view that Ghanaian executives are somewhat less sophisticated or less developed than their United States counterparts. Similar problems of perception and instrumentation have been described by Ronen (1986) as a "courtesy or hospitality bias" in which respondents give answers that they might consider pleasing to the researcher (p.49).

Thirdly, there might have been a "response set bias", in which Ghanaian executives always tended to respond to the questionnaire items on the extreme ends of the scales. Twenty four of the thirty questions on the HIP scale recorded higher average readings for Ghanaian executives than for U.S. executives.

In conclusion to the speculative reasons for the non-support for H1 - H3, we may surmise that: (a) the Western research paradigm, (b) the survey instruments' inability to pick up culture-specific dimensions of the two-mode metaphor, and (c) the elusive nature of the intuition metaphor, were contributory factors. In this regard, Bond & Hofstede (1988) have attempted to create a non-Western based research paradigm using a Chinese instrument.

Decision Centralization is the other significant aspect of this research. The study supports distinct preferences for centralized and decentralized decision making in Ghana and the U.S. respectively. This assessment of decision making behavior in the two cultures has been on the books for a long time but without specific research support. Furthermore, while executive decision activity in the U.S. matched executive beliefs and opinions, Ghanaian executives' decision activity and beliefs were not consistent. Ghanaian executives demonstrated more (compared to the U.S.) centralized decision making over the course of one year. At the same time, as an example of the "cognitive dissonance syndrome", Ghanaian executives appear to hold the belief that employee participation in decision making (decentralization) was the better system. The implication of this

assessment of Ghanaian executives' beliefs is similar to what Jones (1988) found in his research of managerial thinking in Malawi that "managers everywhere tend to share similar views about the effectiveness of participative styles of management" (p.501). This statement concurs with an earlier one made by Haire, et al. (1966) that "There is a very strong and consistent tendency for managers [everywhere] to express similar beliefs about management" (p.5). One reason Haire and his coauthors suggested for this managerial tendency was that "it is somehow old-fashioned or unorthodox these days not to endorse" democratic practices (p.24). The results of the present study support the suggestion that, in Ghana, practice appears to differ from belief, similar to Haire's, et al. (1966) prediction that although "managers subscribe to such beliefs they seldom put them into practice when dealing with subordinates in actual job situations" (p.24). Organization theorists must be keenly aware of these executive anomalies: what they profess to believe in and what they actually do in decision making situations.

The benefits of the assessments made in this study to the field of organizational studies and cross-cultural management are not earth-shattering by any means but do provide the following:

- (1) the opportunity to explore executive thinking and decision information processing in different national cultures and to learn "more about the transferability of western-based concepts and methodologies " to other countries (eg., Ghana), and to enable

future research to build upon the preliminary assessments (cf. Adler, et al. 1989:67)

- (2) an examination of the field of organizational behavior to delineate the areas that vary with culture and areas that remain constant (ie., organization perspectives) regardless of seemingly obvious cultural influences (Adler, 1982).
- (3) the opportunity to integrate the two modes of human cognition into mainstream organization research for which the authors cited and this study have attempted to set the stage.
- (4) a firmer understanding and notice of the complexity of executive decision information processing in different national cultures. Many natural resources remain untapped on the continent of Africa. The potential for expatriate executive competitive edge in the next century will be grounded in a better understanding of host country executive thinking even if only in "successive approximation to [the] desired objective" (Lindblom, 1959:86).
- (5) use of the two modes of consciousness as a basis for training and development schemes of future executives in Business Schools to

better understand the creative component of decision making activities.

The study also has important implications and benefits for executive practitioners. Executives already seem to practice what theorists such as Quinn ("logical incrementalism", 1980) have been trying to model. The literature has so much to say about rationality and so little to say about intuition. This study has shown that one-sided cultural preferences may not be appropriate. The insights gained may help in the training and development of home and foreign nationals in the task of deciding the activities of their firms.

5.4 Limitations of the Research

The subject of managerial thinking in decision situations across national cultures is evidently a crucial issue in organizational studies. Decisions are action initiators and corporate performance over the course of time is arguably the culmination of all the strategic and operational decisions made during that stretch of time. The researcher believes that this study makes a significant contribution toward the understanding of culture and managerial thinking and hints about the adoption of appropriate methodology for such cross-cultural endeavors. The study is also mindful of its limitations and the generalizability of the results.

5.4.1 Limitations of the Methodology

In addition to the general limitations of the Western-based research paradigm, three limitations of the methodology are briefly discussed below. These are: (a) the use of matched samples, (b) the self-assessment questionnaire instrument, and (c) the sample size.

First, a great deal of energy was directed toward "equivalence" in the selection of the samples. The objective was to select top executives who were similar in their corporate positions, familiar with the English language and questionnaire research instruments, and perhaps similar in levels of psychological response to the test questions. While some of these objectives may have been achieved, the samples could not be described as representative of each national culture. The matched samples obtained were at best "only equivalent on key theoretical dimensions across cultures" (Adler, 1982). In view of these limitations, the results reported may be generalizable only to similar executives and not to the entire U.S. and Ghanaian populations.

Second, the self-assessment test instrument imposes certain constraints on the data collected and the results posted. Subjects who chose to respond to the survey could be a self-selected group, representative of minority decision making views in their specific cultural segment. Moreover, because of the "respondents'

complete anonymity" caveat, there was no assurance that the responses were actually those of the targeted top executives rather than some designated assistant or secretary. An appropriate methodological supplement would be to conduct culture-specific field interviews with some of the top executives. This phase would help to differentiate executives' beliefs and opinions from actual decision making behavior. Time and cost constraints made incorporating interviews very difficult for the researcher at this time.

Third, only two national cultures were selected for the study. Time and budgetary restrictions limited the sample to two groups. In the strict definition of cross-cultural studies, this study could be described only as pilot or exploratory. The results posted may be treated in such a context. An expanded version of the study (perhaps with a more indigenous and/or appropriate transferable methodology) would have to include several different cultural groups. In addition, literatures on the two-mode metaphor reserve special mention for the female sex as being adept at intuitive decision information processing. In individual, corporate and nationwide studies, men scored lower than women on preference for intuition (Agor, 1986). The present study included mostly male respondents (92.6%). Generalization of the results would therefore be most appropriate for similar, predominantly male, samples.

5.4.2 Limitations of the Metaphors Used

One fundamental limitation of the study is directly associated with the nature of the metaphors used in the research. The non-logical aspects of decision making are said to be inherently elusive. "They are difficult to define, explain and measure" (Taggart & Valenzi, 1990:164). The dilemma is further complicated by the fact that descriptive language has only a linear dimensionality to it. The result is that the attempt to understand non-logical decision information processing through logical models is inherently problematical. The use of non-Western or non-positivistic perspectives may be one of the ways to try alternative research techniques.

5.5 Opportunities for Future Research

Studies of culture and executive thinking in organization theory are a messy area in the field. They are messy because the metaphors of "culture", "rationality" and "intuition" all lack the "crisp" definitions and model building which the canons of rational-design analytical research approve. The movement of research across national (cultural) boundaries enters a whole complex world of uncontrollable elements of symbolism, values, beliefs and psychological states. In such a context, the present study must be viewed as a learning process intended to invigorate further research in the area of executive decision information processing using the

two-mode metaphor in multiple cultures. The science of management also includes the art of management which R. H. Sui (1978) labelled the "subjective, the ineffable, the holistic synthetic, and the infinite concatenations of cascading sensed-unknowables". This research demonstrates the need to devote more time and resources to the study of the two modes of executive decision information processing to better understand this phase of the complex and demanding job of the executive.

The specificity of further research in this area, however, must deal first with "appropriate indigenous models, questions and methods" if the decision behavior of executives in other cultures is to be understood (cf. Adler, et al. 1989:71). With a clearly stated and appropriate indigenous method, several areas of further research may be pursued. An expansion of the present study to include several national cultures on the African, American, European, and Asian subcontinents may constitute one avenue. Further research could involve different hierarchical executive levels, juxtaposition of lower, middle and top level executives, and men and women executives.

The present study sampled only corporate business executives. Further studies may include public sector executives; for example, politicians, military officers and commanders, civil servants and school administrators. These sectors may be compared within country and across country. Some within country studies have already been undertaken (see Agor, 1986) which indicate parities and

disparities with various private and public sectors with regard to their potential preference for rational and/or intuitive decision processing activities.

Another line of research could be undertaken to delineate and model decision situations and settings in which logical and non-logical decision information processing might be most beneficial to organizations. In addition, more subtle studies involving transpersonal psychology and executive ESP (extra sensory perception) could be pursued to learn more about how executives "know" that an intuitive decision is "right".

5.6 Concluding Thoughts.

In this endeavor, I have attempted to utilize the idea of the executive mind and have tried to extend its bounds using metaphors not regularly encountered in existing organization literature. The thought of research being somehow useful to the management practitioner always fascinated me. In pursuing this work, I was also simultaneously doing academic research that personally appealed to me. The results achieved and their interpretations were, for the most part, different from the literature-based hypotheses. Similar to the findings presented by Adler, Campbell & Laurent, (1989:67), the process of finding executive decision approaches across culture also became a learning process in the transfer of Western theories, concepts, metaphors, and methodologies across culture. Thus,

while the specifics of each culture's executive decision making behavior remain somewhat elusive, this study provides a general exploratory understanding of this important area of managerial behavior and cross-cultural research. Organization Studies, in "leading" business, ought to look back from time to time to see whether the practitioners are "following". Some theorists (eg., Perrow, 1982) have even disputed the contention that organization studies "leads" business.

This research has shown that it is possible to engage in serious academic discourse even around what Evolutionary Epistemologists term "unknowables" (Campbell, 1982). It is my fervent hope that this work will provoke others and encourage them to pursue research (using more culture-specific methodologies) in this important area of organization studies.

APPENDIX A

PERMISSION TO USE HIP SURVEY



Florida International University

October 29, 1990

Mr. Mattson Atsunyo
121-A1 Brittany Manor
Amherst, Massachusetts 01002

Dear Mr. Atsunyo:

Thank you for your interest in my recent article in the *Journal of Management Studies*. The original HIP Survey is available from Scholastic Testing Service in both a professional workshop edition and a less expensive research version. If you are interested in that material, I've included a brochure from STS.

The new HIP survey which has the working title of *Management Styles Inventory* is not yet available for distribution. We are still working on the norms data and the completion of a Facilitator's Manual to go with the new MSI Survey. When that is complete, it can be purchased from a distributor. At this time I don't know what organization that will be.

In the meantime if you are interested in the new version for your own research, I will grant you permission to use the items in the Appendix of the *JMS* article. In return for the use of this material, I ask that you give appropriate credit for the source of the items and that you share with me the results of your research using the material.

Thanks again for your interest. Let me know if you would like to do more. I can be reached at 305-348-3303 (school) or 305-551-8919 (home) almost any day of the week. Since I do most of my work in the home office, that is the best telephone number to use.

Sincerely,

A handwritten signature in cursive script that reads 'W. M. Taggart'.

W. M. Taggart
Professor of Management

Enclosure

Department of Management & International Business • College of Business Administration
University Park Campus, Miami, Florida 33199 • 305-348-2791 • FAX: 305-348-3278

Equal Opportunity/Equal Access Employer and Institution

APPENDIX B

LETTER OF INTRODUCTION TO EXECUTIVES



UNIVERSITY OF MASSACHUSETTS
AT AMHERST

Ph.D. Program

School of Management
Amherst, MA 01003
(413) 545-5608

December 14, 1990

To Whom it May Concern:

Mattson Atsunyo is a Ph.D. Candidate in good standing at School of Management at the University of Massachusetts. He has written and defended his dissertation proposal before his committee. He has also completed all other degree requirements. He is currently researching "Executive Decision Making in the U.S. and Overseas" for his dissertation.

We recommend that you give him all the necessary cooperation he needs to collect the research data.

Thank you for your assistance.

Sincerely,

A handwritten signature in cursive script, appearing to read "Ben Branch".

Ben Branch
Ph.D. Program Director

The University of Massachusetts is an Affirmative Action/Equal Opportunity Institution

APPENDIX C

SURVEY QUESTIONNAIRE (COVER LETTER)

SENIOR EXECUTIVE DECISION MAKING

IN THE U.S. AND ABROAD.

1. The purpose of this survey is to improve our understanding of how senior executives in business organizations in the U.S. and overseas are oriented toward the choices they make with regard to their most important decisions. Your responses to the questions will be strictly anonymous.
2. Please, try to answer all the questions. Write explanations or comments (if any) in the margins and on the back of the questionnaire.

We thank you very much for your time and cooperation.

APPENDIX D

SURVEY QUESTIONNAIRE

Please, read each of the following statements carefully and then choose the phrase that best describes how FREQUENTLY the statement represents your TRUE SELF.

	Never	Once in a While	Some- times	Quite Often	Frequent- ly if not Always	Always
	1	2	3	4	5	6
1. I feel that a prescribed, step-by-step method is best for solving problems.						
2. I prefer general ideas more than specific ideas						
3. It is important for me to have a place for everything and everything in its place.						
4. When solving problems, I rely on intuition and insight rather than analytical approaches.						
5. When I have an important activity due in a week, I carefully outline what is required to get the job done.						
6. I prefer specific details more than general ideas.						
7. I look at a problem as a whole, approaching it from all sides.						
8. I try to discover things through free exploration.						

	Never	Once in a While	Some- times	Quite Often	Frequent- ly if not Always	Always
	1	2	3	4	5	6
9. I prefer specific instructions that are explicit about the details, rather than general instructions.						
10. When solving problems, I prefer to use analytical approaches rather than intuition and insight.						
11. I prefer general instructions that leave the details up to me, rather than specific instructions.						
12. I like to find new and better ways of doing things.						
13. When I go somewhere, I plan what I will do and when.						
14. I prefer people who are imaginative to those who are not.						
15. When I have a special job to do, I like to organize it carefully from the start.						
16. I come up with new ideas.						
17. I feel that I use imaginative ways of doing things.						
18. I prefer to arrange events well in advance rather than respond to them as they arise.						
19. I make a priority list of what needs to be done, and I stick to it.						
20. I prefer spending a great deal of time on issues of ideas.						

	Never	Once in a While	Some- times	Quite Often	Frequent- ly if not Always	Always
	1	2	3	4	5	6
21. I find group work to be satisfying.						
22. I believe my success is determined by how well I carry out my procedures.						
23. I prefer working on tasks with a group rather than alone.						
24. I find individual, personal work to be satisfying.						
25. I will achieve something important for myself even if it makes someone else look bad.						
26. I believe my success is determined by how well I get along with people.						
27. I prefer those activities that involve co-operation to those that do not.						
28. I rely on rules and procedures in making my decisions.						
29. I prefer working on tasks by myself rather than with a group.						
30. In group work, I like to make sure that the concerns of others are considered.						

Indicate the extent to which you personally agree or disagree with each of these statements.

	Never	Once in a While	Some- times	Quite Often	Frequent- ly if not Always	Always
	1	2	3	4	5	6
31. Employees lose respect for a manager who asks them for their advice before he/she makes a final decision.						
32. Decisions made by individuals are usually of higher quality than decisions made by groups.						
33. Subordinates should participate in the decisions made by top management.						

The descriptions below apply to 5 different types of decision procedures. Please, consider ALL IMPORTANT DECISIONS that you normally make in the course of a year. Indicate the method you use in practice (for instance, by marking it 100%). If, in general, you do not use a particular procedure, simply put 0% next to it. If you use several methods, split up the percentage accordingly.

34. a. _____ % OWN DECISION without detailed explanation to colleagues/subordinates.
- b. _____ % OWN DECISION with detailed explanation to colleagues/subordinates.
- c. _____ % PRIOR CONSULTATION with colleagues/subordinates.
- d. _____ % JOINT DECISION-MAKING with colleagues/subordinates.
- e. _____ % DELEGATION of decision to colleagues/subordinates.

Total 100% of Important Decisions.

Personal Information

35. In what industry or business is your firm? _____
36. What is your current job title? _____
37. How long have you worked for the company? _____
38. How long have you worked in your current position? _____
39. What is your highest level of education? _____
40. What is your major area of education and training? _____
41. How many full time employees does your firm employ? _____
42. What is your nationality? _____
43. Your age, please. _____
44. Is your sex _____ Male? _____ Female?

APPENDIX E

SAMPLE REJECTION LETTER



COLDWATER SEAFOOD CORPORATION

MAGNUS GUSTAFSSON
President

April 1, 1991

Mr. Mattson K. Atsunyo
School of Management R208
Univ. of Massachusetts
Amherst, MA 01003

Dear Mr. Atsunyo:

Regretfully, Mr. Magnus Gustafsson of Coldwater Seafood Corporation will be unable to participate in your investigation.

He is travelling extensively and will be unable to complete the enclosed questionnaire.

He wishes you good luck in your study.

Sincerely,

COLDWATER SEAFOOD CORPORATION

Dona Morin
Assistant to Magnus Gustafsson
President

MG:dim

133 ROWAYTON AVENUE
ROWAYTON, CONNECTICUT 06853

TELEPHONE: 203-852-1600 TELEX: 643618 TWX: 710-468-0001 TELEFAX: 203-866-4871 EASYLINK: 62017791

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