

“The Human Factor Engineering Process: Preparing People for the Tasks and Challenges of Management”

AUTHORS

Senyo B-S. K. Adjibolosoo

ARTICLE INFO

Senyo B-S. K. Adjibolosoo (2004). The Human Factor Engineering Process: Preparing People for the Tasks and Challenges of Management. *Problems and Perspectives in Management*, 2(2)

RELEASED ON

Thursday, 02 September 2004

JOURNAL

"Problems and Perspectives in Management"

FOUNDER

LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

0



NUMBER OF FIGURES

0



NUMBER OF TABLES

0

© The author(s) 2025. This publication is an open access article.

The Human Factor Engineering Process: Preparing People for the Tasks and Challenges of Management

Senyo B-S. K. Adjibolosoo¹

Abstract

In the business world, leadership and managerial functions are critical for the ongoing success of the corporation in terms of sustained global competitiveness, profitability, and long-term survival. Unfortunately, however, in the cases where leaders and managers do not possess the positive human factor, the corporation will run into tremendous problems that will lead to its final demise – bankruptcy. In the light of these observations, it is argued in this paper that until the positive human factor is developed, it is impossible for any corporation to enjoy its leadership in global competitiveness, profitability, and longevity. Thus, any business leaders and managers that desire to enhance their own performance effectiveness and those of their subordinates must of necessity engage in excellent human factor engineering programs. Without the positive human factor, leaders, managers, and other employees will fail to achieve effective and efficient levels of every day business problem solving.

1. Introduction

It is well-known that managers play an invaluable role in the performance effectiveness of the business organization (Drucker, 1985, pp. 9-14; Drucker, 1989, pp. 221-231).² Managers have the task of making sure that all available resources are channeled into their best alternative uses. The management process, therefore, uses people to perform intended tasks aimed at the accomplishment of company mission. In general, the management process can be viewed as a set of activities aimed at the best use of all inputs and facilities to accomplish the primary objectives of the business organization. For example, it is the task of the manager to ensure that human, physical, financial, and informational resources are employed to the best advantage of the corporation.³

It is clear, therefore, that the duty of the manager is to facilitate the creation of the requisite environment within which all employees can contribute their optimal performance toward the fulfillment of the company's productivity and profit goals. However, the primary question is: "How can managers successfully overcome the challenges they face in a hostile post modern global work environment?"

To answer this question, the remainder of this paper is organized in the following manner. While section 2 focuses primarily on the strategic management process, section 3 takes a brief look at the problems with existing managerial practices of today. In section 4, the emphasis is placed on the significance of the human factor (HF) and the quality of people required for effective management. In this section, the human factor engineering process and its underlying principles are presented and discussed in detail. Also, the management development curriculum is also outlined in this section. The role of the media for communication, education, training, and socialization is presented and discussed in section 5. Section 6 contains the conclusion and summary of the obtained results.

¹ Department of Accountancy, Business, and Economics Point Loma Nazarene University San Diego, CA, U.S.A.

² Thereafter, the term "business organization" is used interchangeably with such terms as organization and corporation.

³ On the definition of the term "management" see details in Holden, Pederson, and Germane (1968); Campbell, Dunnette, Lawler, and Weick (1970); Wortman and Sperling (1975); Mintzberg (1989, pp. 48-62); Smith (1984); Stewart (1987, pp. 385-391); Kanter (1982, pp. 95-102); Steiner (1969); Luthans (1988, pp. 127-132); Van Fleet (1991, pp. 8-31); Miner, Singleton, and Luchsinger (1985, p. 2-23).

2. The Strategic Management Process

The strategic management process is about the long-term managerial game plan. It is the blue print of the managerial decision making process. Like a lamp set on a hill, this process is expected to beam a brighter light on the path trod by management. It guides managers as they dance to the rhythms of the drumbeats and music of the managerial decision-making process. It focuses on the formulation, implementation, and evaluation of the long-term objectives of the corporation. The foundational set of managerial activities is divided into four categories, namely, *planning*, *organizing*, *coordinating*, and *controlling*. Such activities as leading, staffing, influencing, communicating, training, and many others are viewed as integral elements of these four characteristics of the management decision-making process.

Planning: Outlines the organization's vision, mission, goals, and the appropriate strategies by which these must be accomplished (i.e., being proactive rather than reactive).

Organizing: Determining, establishing, and using the organizational structure that is most conducive to the accomplishment of objectives (i.e., tasks and who to perform them—staffing).

Coordinating: Fitting all together to function as a successful unit. It involves inspiration, motivation, communication, conflict resolution, etc.

Controlling: An act of evaluating performance and monitoring results (i.e., the extent to which they reflect intended goals and objectives). Both individual and company performances are monitored—with corrective measures in place.

All these activities together delineate the key elements of the manager's decision set. They form the primary cornerstone activities of the management decision-making process. In their pursuit of the strategic management process, managers:

- Develop the company's mission (i.e., purpose, philosophy, and goals).
- Determine internal conditions and capabilities and evaluate the organization's external environment.
- Assess the company's options and resources available for meeting the challenges of the external environment.
- Highlight the best options and confirm the appropriateness of available resources for the accomplishment of company mission.
- Select objectives and determine the relevant strategies for achieving them (i.e., specify both short-term and long-term strategies that are compatible with objectives).
- Implement key strategies through efficient resource allocation.
- Evaluate performance effectiveness and take the appropriate action.

To accomplish the primary objectives of the corporation effectively and efficiently, the manager depends on a number of other individuals who participate in the visioning, mission development, and organizational development process. Viewed from these perspectives, therefore, the total management function is more of a process rather than a one-time event.

In general, the traditional approach to management revolves around:

- Company philosophy (ideology, beliefs, values, aspirations, etc.).
- Sequential strategy formulation and implementation.
- Supervision, monitoring, and evaluation (externally induced).
- Intimidation (i.e., accusations, anxiety, fear, and other like these).
- Eye on the bottom line (i.e., preoccupation with profits).
- Quick fixes (i.e., corner-cutting measures, problem accommodation techniques, etc.).
- Human resource development and management (i.e., human capital acquisition).
- Process development and management (i.e., procedures, systems, techniques, etc.).
- Letting go and finding replacements (i.e., hiring, firing, layoffs, etc.).

3. The Problem with Management Today

Unfortunately, however, orthodox managerial practices do not always promote employee performance effectiveness and efficiency. In most cases, programs such as quality circles, total

quality management, management by objectives, organizational re-engineering, and many others aimed at enhancing input productivity have either been ineffective or failed. These programs are usually based on wrong assumptions and presuppositions. They, therefore, fail to recognize that at the heart of a company's successes or failures are the personality characteristics of all people involved in the management decision-making process and employee duties. This oversight usually leads to many pertinent problems that work against the ongoing smooth management and performance effectiveness of the business organization.

Today, managers are saddled with complex problems that relate to greed, shirking, absenteeism, pilfering, anger, bitterness, and relationships. In addition to these, some of them suffer from gross ineffectiveness and inefficiency.¹ These problems pose tremendous challenges or hindrances to the company's global competitiveness, profitability, and longevity in the long term. If, however, managers do not learn how to successfully solve these problems, many business organizations will continuously experience tremendous problems in the 21st century and beyond – that is if they can even survive for that long.

In general, therefore, managers face entrepreneurial, engineering, and administrative problems (see Van Fleet, 1991, pp. 163-164). A more careful study on this classification of managerial problems reveals that the existing quality of the HF contributes immeasurably to the nature and severity of the problem the manager faces.

There also exist high levels integrity crises in all aspects and stages of the management decision-making process today. The length, breadth, height, and depth of this integrity crisis exceed imaginable proportions.² If not arrested and dealt with in good time, it will surely destroy many corporations in the long term. As of today, we have seen great companies like Enron, WorldCom, Global Crossing, and many others forced into disgraceful bankruptcies as a result of unethical and immoral managerial decisions based on individual greed and craving for financial prosperity. Currently, there are many other companies that are on the verge of bankruptcy in the United States, Japan, Germany, Britain, and elsewhere in the global village for the same reason.

A more careful and thorough review of the problems being faced by managers today brings to mind the following questions: (1) What kinds of people are required to effectively and efficiently perform the managerial tasks in the 21st century and beyond? (2) What principles must inform and guide the development and performance effectiveness of these people as they enter managerial positions? (3) What role does the quality of the manager's HF play in managerial successes or failures? (4) What can be done to improve the quality of the HF for the purposes of enhancing managerial performance effectiveness? The remainder of this paper focuses on discussions aimed at answering these important questions.

4. The Human Factor and the Managerial Decision Process

Today, if managers are sincerely concerned about preventing poor employee performance, it is important that they pay attention to the development of the appropriate personality traits in themselves and the labor force. Managers who crave for authority and power while at the same time lack the positive HF will fail in the long term. Thus, in the presence of severe HF decay, few managers will survive.

Before presenting the key ideas of this chapter, it is imperative to have clear understanding of the HF concept. This is the case because in order to increase input productivity, the manager must of necessity find ways and means to assist and equip employees to perform at their best. To perform their roles as effectively as possible, managers must possess conceptual, diagnostic, interpersonal, technical, and thinking skills. Above all, the possession of personality characteristics such as integrity, responsibility, accountability, commitment, trustworthiness, respect, trust, love, caring, and loyalty, for example, is necessary for the manager to use the acquired skills appropriately. These are aspects of the positive HF. Adjibolosoo (1995, p. 33) defines the HF as the:

¹ See the problems of the managers of the Oracle Corps in 1991 in Hitt, Ireland, Hoskisson (1995, p. 318).

² These problems cannot be solved through such techniques as managing by extrapolation, crisis, subjective, and hope (see David, 1995, p. 197).

Spectrum of personality characteristics and other dimensions of human performance that enable social, economic and political institutions to function and remain functional over time. Such dimensions sustain the workings and application of the rule of law, political harmony, a disciplined labor force, just legal systems, respect for human dignity and the sanctity of life, social welfare, etc. As is often the case, no social, economic or political institutions can function effectively without being upheld by a network of committed persons who stand firmly by them. Such persons must strongly believe in and continually affirm the ideals of society (Adjibolosoo, 1993, p. 142).

As is obvious from this definition, it is an undeniable fact that any managers of the Twenty-First Century and beyond that fail to use the HF approach to managerial decision-making will see their own performance effectiveness and efficiency, global competitiveness, profitability, and long-term survival dwindle over time. However, to be in a better vantage position to implement the HF approach to management, a caliber of people who possess the positive HF is required. Therefore, I present a brief discussion on the quality of the types of people required for effective and efficient management.

4.1. People Required for Effective Management

In terms of the quality of people required for the national development program, Adjibolosoo (1995a, pp. 84-85) observes that to be able to carry out its objectives of development, every nation needs people who:

1. Have the ambition and the imagination to search for clues; have the intent always to perform and are of one mind; have the willingness to search for, and insist on discovering solutions to existing national problems.
2. Are determined to search for and acquire understanding about current problems, existing levels of available skills and the additional abilities required for the enhancement of productivity, and have knowledge about what must be done and how and the wisdom to use acquired knowledge to solve problems. These people will facilitate the rate at which solutions are carved for overcoming hindrances to the economic development process.
3. Have the zeal and the willingness to do liberally their best to contribute to the national economic development program. The industry brought to the reconstruction process by each person must grow out of individual free will and commitment to self-interest insofar as it is consonant with national economic development goals.
4. Provide the required leadership that is apt to facilitate the process of providing the opportunities for every citizen to contribute freely to the success of the national program for economic progress.
5. Have the assurance that courage, resourcefulness and hard work will not only increase the wealth of their society but will also lead to the continuing enjoyment of their munificence fruits.
6. Possess a sense of purpose, insight, vision and direction; are skilful in wisdom and scientific knowledge; are steadfast in commitment to risk taking; and are dedicated to personal integrity. These are the people who possess relevant human qualities and know what is good and required for human progress (i.e., effective and efficient maintenance of law and order, respect for the rule of law and property rights, the promotion of hard work and social welfare and an unrelenting respect for the sanctity of human life and the dignity of labor).

When the labor force possesses the positive HF, it will be placed in the right position to make effective management happen in the business organization in the long-term because it will be fully equipped to fashion workable plans, policies, programs, and projects; and the relevant techniques that are necessary for achieving the aims and objectives of the corporation (Adjibolosoo, 1995a, pp. 83-85).

It is the continuing failure of both people in leadership and management and their subordinates to undergo proper preparations that make them fail in effectively and efficiently perform-

ing their tasks. Because they are unable to discern the exact requisites of the management decision-making process, they most frequently put forward the wrong foot. In the long-term, the haste to make higher profits and personal financial gains through the design and implementation of quick-fix business plans and programs leads to total failure and bankruptcy. To avoid failure, the HF model of management must be pursued in place of currently existing traditional models of management.¹ To work for the successful application of the human factor-based management model, both people in management and their subordinates must learn respect, caring, commitment, responsibility, integrity, accountability, loyalty, trustworthiness, and trust. In what follows, I present in detail discussions on the implementation of the HF engineering model.²

4.2. The Human Factor Approach to Management

The HF approach is therefore *sine qua non* to managerial performance effectiveness and its success in improving input productivity and company competitiveness, profitability, and long-term survival. The principles of HF engineering expounded in this paper will provide every manager with the requisite insights he or she needs to carry out company's objectives successfully. It is argued, therefore, that the HF approach to management must be hailed and practiced by every manager interested in improving employee performance effectiveness and long-term company success. This approach maintains that since it is people who make things happen or not happen, it is incumbent on the manager to first facilitate HF engineering if he or she expects to obtain optimal performance from each employee and other critical input. The HF approach to management focuses primarily on:

- the organization's vision and mission;
- universal principles;
- human factor development (i.e., the acquisition of positive personality characteristics);
- supervision, monitoring, and evaluation (internally induced);
- confidence, courage, and hope (internally induced);
- responsible outcome (i.e., social responsibility);
- identifying and dealing with the root causes of pertinent problems;
- mentoring and nurturing (i.e., personal transformation from within).

In applying the HF approach to management, the common primary activities include:

1. Thorough search for the caliber of an individual who either has what it takes or is ready and willing to be educated and trained for the tasks on hand.
2. Face-to-face interaction with perspective employees (requires an exhaustive human factor-based interview and selection process).
3. Selection, acceptance, and installation (i.e., a meticulous human factor-centered initiation ceremonies on the first day of work).
4. Pursuing teamwork toward the accomplishment of intended company mission (i.e., interactions between managers and subordinates that are non-human factor-based will always destroy the organization's long-term global competitiveness, profitability, and survival).

The necessary requirements for the successful implementation of the HF model are as follows:

1. Existence of organizational vision, mission, and plan.
2. Availability of the appropriate resources (i.e., inputs).
3. Proven procedures, systems, and methodologies successfully applied in the past.
4. Higher levels of mutual respect, trust, integrity, and appreciation.

¹ In management and leadership today, such problems as sexual harassment, conflict of interest, nepotism, lying, etc. are common in both developed and developing countries alike.

² A more detailed discussion is presented in Adjibolosoo (1998, pp. 201-217).

The sufficient requirement for the optimal performance of the HF model is the positive HF.

The main similarities and differences between the traditional and HF approaches to management are obvious. For example, it is important to know that the advantage of the HF model over the traditional approach to management is that it is both timeless and culture neutral. In the presence of the positive HF, the HF model is universally applicable.

While the HF approach focuses on the development of the positive HF, the traditional model is solely concerned with the development, enhancement, and management of systems, institutions, processes, and technologies. In cases where the traditional model deals with people, it mainly focuses on human resource development and management. By so doing, the primary concern of the traditional management model is about knowledge and skill acquisition (i.e., human capital acquisition) and their applications. As is obvious from the HF concept, human capital is only a minute element of the whole HF. Thus, the human factor is more concerned with the significance of the quality of people's HF to the management decision-making process.

It is, therefore, necessary for leaders and managers of corporations to focus on the development of the positive HF if they are truly interested in promoting the profitability, global competitiveness, and longevity of the corporation. In light of this conclusion, we now turn to the HF engineering process.

4.3. The Human Factor Engineering Process

To achieve the intended objectives of the corporation, I argue that the quality of the HF continuously exerts tremendous impact on the managerial decision-making process – be it positive or negative. In light of this conclusion, any programs aimed at improving the quality of the physical work environment and managerial performance effectiveness must begin first with intensive HF engineering programs aimed at the development of the positive HF.

Until HF engineering programs are successfully initiated and propelled to accomplish the goal of assisting employees, it will be difficult, if not impossible, to permanently improve the physical environment, organizational governance practices, human performance effectiveness, labor productivity, and continuing organizational growth. As noted earlier, since effective and efficient managerial performance effectiveness requires the development of the positive HF, it is imperative for everyone interested in the managerial decision-making process to understand that without the positive HF, no organizational reform attempts will work as effectively as intended. We will return to this issue later in the paper and discuss it in detail.

From the HF perspective, education is one of the most important aspects of the human enterprise. This is so because through various education and training programs, we prepare children, youth, and adults for a life of purpose, meaning, and service – not only to themselves, but also to others. Education, whether productive or destructive, begins right from birth and goes through the whole lifespan of the individual – formally and informally. Speaking to this issue, Dewey (1897, p. 77) writes:

I believe that all education proceeds by the participation of the individual in the social consciousness of the race. This process begins unconsciously almost at birth, and is continually shaping the individual's powers, saturating his consciousness, forming his habits, training his ideas, and arousing his feelings and emotions. Through this unconscious education the individual gradually comes to share in the intellectual and moral resources which humanity has succeeded in getting together. He becomes an inheritor of the funded capital of civilization. The most formal education and technical education in the world cannot safely depart from this general process. It can only organize it or differentiate it in some particular direction (Also reprinted in Dworkin (1959, pp. 19-20)).

Truly, education is a lifelong process. It works towards the preparation of the individual for life. From John Dewey's perspective, therefore, it is clearer that whether or not there is a formalized education program, the individual always receives education through various means and procedures.

Some of the various techniques humans have used for the purpose of education and training for generations include but not limited to socialization, mentoring, role modeling, role playing, apprenticeship, and theatrical performances (e.g., story telling, music recitals, drama, poetry reading, oration of mythical legends, art exhibitions, solving riddles and puzzles, etc.). However, none of these techniques are easy to master and use. In light of these, those who plan to make the best use of any of these vehicles in order to achieve optimality in managerial decision-making must do their best to identify precisely their primary objectives, tasks, and challenges. Some of these tasks and challenges that face people in managerial decision-making positions include but not limited to:

1. Realizing the true value of the human personality and its significance to every individual in particular and the whole corporation (and human race) in general.
2. Providing children with the positive school environment and climate – with lots of opportunities and resources through which they can learn to apply their acquired positive HF (and prepared for managerial positions in the future).
3. Assisting every student to form a peace-loving and caring personality – love, trust, kindness, non-violence, integrity, respect, and others.
4. Leading, encouraging, and motivating students to engage in positive attitudes and behaviors that serve as the true foundation stone for performance effectiveness and efficiency in every human action – especially the managerial decision-making process.

As is expected, only teachers, administrators, and staff members that possess some measures of the positive HF will be ready and willing to lead every student on the glorious path toward the development of the positive HF. These teachers, administrators, and members of support staff must not only be encouraged to assist students in this area, but also be provided with relevant resources and opportunities through which they can be successful in this venture.

Until members of such a team of educators begin to achieve positive results in terms of HF development, educational reforms in any country will not produce the critical mass of the high quality of people required for effective global leadership in the long-term. In general, educators – administrators, teachers, parents, businessmen and women, CEOs, doctors, lawyers, Presidents, civil servants, graduates, and many others – must be fully involved in the HF engineering process. Until these educators focus on engineering the positive HF, any other attempts (e.g., the alteration of systems, techniques, procedures, legal injunctions and their proliferation, etc.) made to improve the school environment and hence student performance will always fail miserably in the long term.

If these individuals are to successfully improve the school environment, every other interested person involved in education must also work assiduously to gain the appropriate knowledge regarding how we all must proceed to achieve our intended educational reform objectives – improving the school environment and climate. Such an activity calls for efforts directed at attaining deeper insights and strong understanding of the various theories and principles that underscore existing curricula in schools. This is critical because without this level of comprehension, it will be difficult to effectively and efficiently enhance the quality of the school environment. Whatever surgery we carry out regarding our desire to improve the school environment, we must ensure that students are the primary focus and benefactors. For when students are placed at the receiving end, our efforts will definitely lead to positive results in the long-term period. However, until the curriculum is aimed at developing the positive HF, every attempt we make at educational reform will always fail – in the long term.

In light of this conclusion, every community-based reform plan must first and foremost be concentrated on dealing with the various environmental and climatic conditions that affect student performance at all levels – both within and outside the four walls of the school. Educational reform programs aimed at producing quality leaders and managers must be concentrated on the development of the whole person (i.e., spiritual, intellectual, physical, moral, social, economic, and others). This requires that educators devise procedures for stimulating students and motivating them to work towards the attainment of the positive HF and higher academic standards in their educational programs. The attainment of personal excellence in every aspect of life must be lauded and promoted. Successes attained in this regard will lead students towards the achievement of great

intellectual heights. Failures experienced must be used as opportunities for teachable moments to enhance the learning process in the long term.

The aspects of the positive HF necessary to improve the school environment and climate include but not limited to commitment, responsibility, integrity, love, respect, loyalty, trust, and self-control. In the long-term, the general emphasis of educators places on these things by channeling tremendous human energy and scarce economic resources within them will lead to nothing else substantial but disappointing failures. Truly, from the HF perspective, managerial, leadership, and employee efficiency and effectiveness do not come from things – institutions, techniques, procedures, processes, and machines. Rather, efficiency and performance effectiveness are natural outflows of the applications people make of their positive HF.

The desire to improve the quality of the school environment and its associated climate must begin with attempts made to assist teachers to better their own internal locus of control – the inner person, which is most frequently reflected in the quality of the HF and expressed in attitudes, behaviors, and actions. The attainment of excellence has a great deal to do with the positive quality of the HF. For example, as Adjibolosoo (1999b) observes:

Creating new educational institutions to focus on information technology, technical education, [vocational training], knowledge acquisition, and computer literacy will never solve the social, economic, and political problems we face in society today. If we, at the present moment, focus on these programs and channel huge financial resources into them, we will realize later, to our dismay, that these programs do not have what it takes to produce disciplined citizens and/or labor force. As such, within ten to fifteen years down the road, we will all perceive again that our dreams fail to be realized. The glorious ideas and ideals we had fifteen or twenty years ago to begin these programs with will fizzle away very quickly. These programs will crumble on us. They will not be relevant any more because they failed to develop the positive HF quality of people. We will then, unfortunately, have to begin from where we started a long time ago in the past.

The HF engineering process begins with intensive focus on programs aimed at the discovery of the principles on which the HF approach to management must focus. The application of the principles of HF engineering to the national education, training, mentoring, and socialization program of activities will foster the development of effective and efficient managers and labor force. In the following subsection, our focus is on the key principles that must form the pillars of the HF model – aimed at the effective and efficient managerial development and decision-making.

4.4. The Identification of Principles

It is crucial to identify principles that must serve as the foundation pillars on which management programs are established. In terms of principles, the leaders and managers of the corporation have to think about the role of genuine love in human behavior and effective management. The leaders and managers of the corporation must also think about stewardship, (i.e., people serving or helping others in life and all human endeavor) and social responsibility. It is also important that the leaders and managers of the corporation honor and respect the sacredness and sanctity of human life. This is important because when people are convinced that life is both sacred and sanctified, those in management will do everything possible to preserve it. It is also useful to realize that any managers who fail to promote personal and group freedom, liberty, equity, and fairness will find it too difficult to deal successfully with the day-to-day operations of the corporation. It is also important to hold in high esteem programs aimed at the ongoing development of the spiritual and moral dimensions of every human being.

Pulling all these ideas together, some human factor-based key principles emerge. They are as follows:

1. The most important input in the management development and decision-making process is the positive H. All other resources are co-operant factors.
2. Managers who lack the spirit and clothing of the moral virtues (i.e., integrity, trust, accountability, self-control, responsibility, courage, faithfulness, fidelity, love, kindness, patience, respect, etc.) will be barren and unfruitful in performing their day-to-

day functions. That is, people who are spiritual dwarfs and moral derelicts have no place in the business of management and leadership.

3. The loving, merciful, trustworthy, and caring individual makes the most effective, efficient, and productive employee in the business organization – be he or she either a leader, manager, or common laborer.
4. Conceptual, diagnostic, technical, communications, interpersonal, thinking, and creative skills are necessary but not sufficient for leadership and managerial performance effectiveness. To achieve optimal returns from the use of these skills, it is imperative for people who hope to face the challenges and tasks of leadership and management in today's complex global environment to possess the positive HF.
5. There is productive counsel, safety, and security in a team of co-equals working together to accomplish the vision, mission, and plan of the corporation.
6. People who pursue truth, commit to searching diligently for the best way, and honor human rights, human dignity, and the sanctity of life make authentic and productive leaders and managers.

Today, unfortunately however, the act of nurturing spiritual dynamism and promoting moral development is being neglected. However, to either minimize or overcome managerial problems, the HF approach to management requires a strong interest in both spirituality and personal morality by all people involved in the corporation's labor force. Otherwise, the task of solving every day business problems will be too difficult to accomplish. Covey (1991, pp. 285 and 302) observes correctly that:

Attempting to change an organization or a management style without first changing one's own habit patterns is analogous to attempting to improve one's tennis game before developing the muscles that make better strokes. Some things necessarily precede other things. We cannot run before we can walk or walk before we can crawl. Neither can we change our management styles without first changing personal habits. . . . Psychologist William James suggested that in order to change personal habits, we first make a deep internal commitment to pay whatever price is necessary to change the habit; second, we grasp the very first opportunity to use the new practice or skill; and third, we allow no exceptions until the new habit is firmly imbedded into our nature. . . . When trust is low, communication processes deteriorate. We see a great deal of adversarial communication, interpersonal conflicts, and interdepartmental rivalries. People develop a siege mentality. Often they turn to a legalistic approach to legislate their wishes. They lobby pressure groups and push for what they want.

At the starting point of the HF agenda implementation, it is important for managers of the corporation to highlight, discuss, select, and promote these principles on which to establish the program of activities.¹ Once these principles are discovered, established, and adhered to as the standards against which managerial and employee performance effectiveness must be measured, the workforce must be nurtured and guided to live and work according to these principles.

If we establish the fact that one of the major objectives of the business enterprises is the pursuit of profits and social responsibility, it follows that all relevant activities must be directed towards the fulfillment of this goal. It is, however, true that the attainment of optimal managerial and employee performance effectiveness requires the whole HF development.² Every effort made by all people involved in the managerial decision-making process must focus primarily on HF development. The development of each component of the HF is a challenge to the leaders and managers of the corporation.³ To be successful, therefore, every business program requires strong underlying HF development education, training, and mentoring programs. This implies that leaders

¹Such ideological models of management include those of the classical school (i.e., scientific and administrative management); behavioral school (i.e., the Hawthorn studies, human relations, and contemporary behavioral science); the quantitative school (i.e., management science, operations management, and management information systems); and contemporary management theory (i.e., systems theory, contingency theory, etc.). See detail in Van Fleet (1991, pp. 33-61).

²David (1995, p. 197) observed that: "an unknown educator once said, "If you think education is expensive, try ignorance!"

³ The two relevant universal principles of life are discussed in detail in Adjibolosoo (1998, pp. 193-200).

and managers must develop and institutionalize relevant programs to cultivate every dimension of the HF in each employee. It is important, therefore, that managerial effectiveness and efficiency do not just happen by themselves. To achieve long lasting success, managers need to be properly trained and educated (Gordon and Howell, 1959; Pierson, 1959; Mahoney, Jerdee, and Carroll, 1963; Luthans, 1988, pp. 127-132).¹ This preparation process must create conducive environment within which leaders and managers can acquire the appropriate skills (i.e., technical, interpersonal, diagnostic, conceptual, etc.) and the relevant personality characteristics (i.e., respect, integrity, accountability, responsibility, commitment, trust, loyalty, and others).

HF engineering will create continuing progress, provided people have the will and commitment to pursue it relentlessly. As is often the case, human beings have for centuries avoided this route to progress because its fruitful gestation period is usually long – a generation or more. What most people want and delight in instead are quick-fix solutions and problem accommodating techniques. This is why some leaders and managers devote their energies to the pursuit of cosmetic changes. This class of leaders and managers delight themselves in being perceived as making attempts to deal with existing problems.² Whether these programs will be successful in achieving their intended goals in the long term or not is not a necessary issue of concern to them.

To avoid managerial failure, HF development programs must, therefore, be aimed at educating people and preparing employees to participate effectively in the productivity and quality enhancement revolution. The HF engineering process must include a carefully articulated vision aimed at reforming those who have already fallen prey to low productivity syndrome, absenteeism, and shirking. Whenever possible, the process must also prevent other employees from falling into these traps. It is the task of the HF engineer to focus on the discovery of the truth about employee performance effectiveness and how to stand for it since the possession of true knowledge about this is necessary for progress and peak performance. Those who are trained and educated in this manner may live by and defend the timeless principles of life and work.

When the custodians of business schools, professional institutes, universities, colleges, and business companies fail to educate and train prospective employees to become morally and ethically responsible agents who are committed to their family and work life, company goals, and principles of life and work, the desire to achieve higher levels of productivity, make high quality goods, offer unqualified services, and increase company productivity may not be attainable goals. On the basis of these arguments, it becomes clear that HF engineering must be made as the primary foundation of every management program aimed at progress. A community of people will fail to attain intended goals if the people are not educated to acquire the positive HF required for the achievement of intended objectives.

In terms of the productivity and quality enhancement revolution, companies that put sufficient resources into HF engineering programs will make a more permanent gain. HF engineering is, therefore, the primary core of the productivity and quality enhancement process. Just as a solidly established foundation is to the life of a building, so also is HF engineering to the leadership and managerial decision-making process. There can, therefore, be no successes in the pursuit of progress without intensive and effective HF engineering plans, policies, and programs.

Those who go through existing educational institutions must acquire knowledge, skills, and human qualities that are necessary for effective and efficient human performance. Graduates from educational institutions must satisfy both societal and business needs. If business people and the rest of society are unhappy about the products being turned out by national elementary schools, universities and colleges, it implies that educators have failed to achieve their primary mandate of HF development. Truly, if a community of people desires to experience positive changes in all spheres of human life, that community needs to alter its existing curricula (i.e., of all educational institutions from grade 1 level right up to the university level). The new curriculum must focus on

¹ Recognizing this truth, Motorola focuses on intensive training and development program for its employees. In 1992, for example, Motorola spent \$120 m on human resource development. Each employee of the company spends approximately 36 hours per year on formal education and training activities. See details in Hitt, Ireland, and Hoskisson (1995, p. 18).

² The six components of the human factor are spiritual capital, moral capital, aesthetic capital, human capital, human abilities, and the human potential. They are discussed in detail in Adjibolosoo (1995a, pp. 33-40).

HF engineering rather than mere human capital acquisition. Any society whose educational institutions neglect HF development will face serious social, economic, and political problems in the long term.

The mere pursuit of higher degrees and/or advanced knowledge in ideologies through further disciplinary study of principles and theories will not produce expected results. The hope is that by the time students graduate, they will not only have been furnished with a huge tool box of information, knowledge, and skills into which they can dig their hands to pick up relevant tools to be used to solve day-to-day problems, but also they must acquire the positive HF. Otherwise, though they would have graduated with higher degrees, they would be social misfits. This will be the case because sooner or later, most graduates will learn that the actual tools they need to cope with every social, economic, business, political, and educational problem transcend the mere acquisition of academic tools made up of knowledge and skills.

I am convinced that the custodians of a society's educational institutions must never cripple their own common future by running students through hodgepodge educational systems and training programs that have little to do with the preparation of people for life. I must also add that I am not talking about education as it relates to mere knowledge acquisition and skill development. Instead, I am talking about education, training, mentoring, and socialization programs as they relate to continuing total HF development in primary, secondary, college, and university students. It is critical that educational programs and their accompanying activities transcend mere schooling and focus on people development. There is no better way through which to successfully achieve HF development than by revisiting the existing education system and training programs and altering them in the manner that meets the current needs of society.

The HF perspective maintains that since institutions, systems, technology, and such like are inanimate, they cannot achieve their optimal performance without having people who have acquired the positive HF to manage and operate them (Adjibolosoo, 1995b). As such, if business leaders and managers desire to experience continuing success in the operations of their social, economic, political, and educational institutions, they must of necessity develop and implement a curriculum that provides opportunities for vigorous programs through which the positive HF can be developed among students. As all humanity enters deeply into the Twenty-First Century and beyond, any educational administrators that fail to implement a curriculum that is aimed at HF development will make these institutions irrelevant to the future of their own society. Such institutions deserve to be either closed down or given diminished funding.

Every professional and/or academic program developed and run in elementary schools, high schools, colleges, and universities must have continuing HF engineering as their primary objective. All subject areas – from archaeology to zoology – must be treated as such. Failure to do so will finally put in jeopardy the collective future of all humanity. That is, by allowing the existing HF to decay and also refusing to develop it in the youth, human beings will be nursing a future of excessive disappointment, pain, and suffering.

Providing the Relevant Training and Education

At the implementation stage of the HF approach to the development of leaders and managers, it is essential to educate people to evaluate, understand, and then accept the fact that (a) a life of service to others; (b) loving, respecting, and forgiving others; (c) being loved and forgiven; and (d) honest living are not only priceless, but also that their intrinsic value cannot be measured accurately. The magnitude of the long-term benefits to be derived from the acceptance and adherence to these practices far exceeds any temporal gratification to be derived from human attitudes, behaviors, and actions that ignore them.

Indeed, all human attitudes, behaviors, and actions based on selfishness, greed, unnecessary boasting in one's material possessions will abort the success of the management development program in the long term. True human pride must of necessity be based on the beauty of the inner person as brought about by spiritual maturity, moral sensitivity, and sound ethical judgment – adherence to principles of life. These issues are so crucial that if a people's education, training, mentoring, and socialization systems ignore them, people who are educated and trained in these institu-

tions will not acquire the necessary HF traits to make their societies work as effectively and efficiently as they may desire. As such, any people that desire to experience the “good life” must be prepared to base their education and training systems on the identified principles. These education systems and training programs must be carefully crafted and articulated so they can inculcate these ideals and principles in their people. As is often said, prevention is better than cure. Children who are lost to the streets and left on their own may not be transformed that easily for the better. Indeed, an apple tree that had always borne apples cannot, all of a sudden, produce grapes in its old age (see Mararike, 1995, pp. 91-99).

4.6. The Management Education Curriculum

Develop the new HF curriculum, discuss, and debate its contents across the nation. For instance, look at the contents of the existing curriculum and make sure that its elements stress intellectual, moral, spiritual, and physical development; the promotion of the principles that relate to integrity, trust, commitment, courage, responsibility, accountability, etc.; the respect for human rights and human distinctiveness; the inculcation of the skills and qualities that facilitate the peaceful resolution of conflicts and/or all forms of disagreements; the understanding of how to make choices through personal evaluation of the associated opportunity costs to oneself and to the rest of society, etc. These issues are also vital and must, therefore, not be by-passed. It will be suicidal to delete this step in the HF development process.

When the curriculum is approved by parliament or the highest decision making body in the country, the HF development agenda must begin with intensive teacher training, and adult education programs. Since teachers, educators, and parents will be given the mantle for educating, training, and mentoring, they themselves should be educated and trained rather than schooled. For the HF education and training agenda to work, there must be a large number of trained and educated teachers in addition to other personnel who will be ready to make the system work as effectively as possible.

When all these have been completed, the curriculum must be phased in gradually. In this case, it is important to develop and empower the:¹

- Family leaders (i.e., parents – as understood by and constituted in each society).
- People who work in the education system, training programs, and mentoring arrangements.
- Government employees, politicians, and business people operating in the system.
- Defense lawyers, soldiers, policemen and women, and all other people who are involved in the defense sector of the nation to promote HF development in society.

Leaders of religious institutions must also be brought into the picture and held accountable for their programs and actions. Government officials are not necessarily expected to regulate what people involved in religious organizations should do or not do; but there must be a meaningful dialogue in regard to what is expected of them, what they must be doing as their religions allow – must be commensurate with the identified principles of human life and action, making sure that they contribute to the development of the positive and desirable personality characteristics. Any people of religious groups that work contrary to key principles and the corresponding HF development agenda can either be challenged by other citizens or be made to lose any financial assistance they receive from taxpayers to run their programs.

Heath (1994, p. 128) notes that interpersonal strengths are the core of human adaptability. Indeed, it can be argued therefore that:²

¹ It must be noted that there is historical evidence to show that leaders who stayed for a long period of time as Kings, Queens, Prime Ministers, and Presidents and achieved little results failed to focus their attention on HF development. Examples include Suharto of Indonesia, Mobutu Sese Seko of the Democratic Republic of the Congo, and Ferdinand Marcos of the Philippines. However, any leader that commits himself or herself to continuing HF development programs will, in the long term, leave a significant legacy of citizens who have either acquired the appropriate HF characteristics or are pursuing it vigorously. It is also quite possible to note that such leaders might have reproduced themselves.

² See details in Adjibolosoo (1998, p. 209).

- Education for citizenship, community leadership, and development must focus on helping people to acquire the necessary human qualities (Adjibolosoo, 1995a and 1996a).
- Intellectual curiosity, self-direction, and self-reflection are necessary strengths required to be a successful manager (Heath, 1994, p. 130; See also the original work on this issue by Evangelauf, 1990).
- Academic and athletic excellence must also be given as top priority in the educational and training institutions (Heath, 1994, p. 131).

A good personal character is a *sine qua non* to human well-being and performance effectiveness.

The works of Maria Montessori (1912, 1949) reveal that the educational environment must assist children to develop their mind and personality characteristics. It is important to explore the critical principles through the curriculum (see also Erikson, 1950; Heath, 1994, p. 292). Once the appropriate interest and motivation are produced in the children, they will be encouraged to learn and work for the benefit of all.

In adopting the HF approach to management education, the custodians of the existing social institutions must, therefore,¹

1. Teach and encourage people to seek truth and/or principles that bring about personal fulfillment in life in terms of love, peace, forgiveness, trust, respect, and tranquility.
2. Pursue knowledge acquisition, clear understanding, and wisdom.
3. Help people to learn the value of self-control (i.e., continence) and also strive to attain it relentlessly.
4. Encourage people to learn and practice accountability, loyalty, integrity, respect, responsibility, commitment, and personal endurance.

The educational program must create and promote the environment within which people can cherish and practice love and forgiveness.² Adjibolosoo (1998, p. 214) observes that:

The love that transcends all conditions and barriers (i.e., unconditional love) is the true love brought about in the presence of positive HF. Real love is a crown. It is a permanent foundation to human behavior and action. True love guides and determines personal interaction with people and reaction to circumstances and/or events. The absence of true and sincere love among men and women in society can lead to ugly situations.

A community of people who make sure that their educational, training, mentoring, and socialization programs promote the development of this kind of love will produce managers that are responsible, accountable, trustworthy, committed, loyal, respectful, and above all, practice personal integrity. The HF development program must utilize existing agencies of education, training, mentoring, and socialization activities to promote the acquisition of:³

- Self-confidence.
- Sense of right and wrong.
- Respect for the rule of law, the sanctity of human life, and human dignity.
- Conflict resolving and negotiating skills.
- Personal adaptability and communications skills.
- Ability to identify, articulate, and solve problems.
- Knowledge, understanding, and wisdom.

¹ Refer to Adjibolosoo (1998, p. 211).

² The significance of love is discussed extensively in the psychological literature (See, for example, Singer, 1984; Byrne, 1969 and 1971; Kerschhoff and David, 1962; Levinger, Senn, and Jorgenson, 1970; Walster, 1970; Walster, Aronson, Abrahams, and Rottman, 1961; Zajonc, 1968).

³ Details are presented in Adjibolosoo (1998, pp. 213).

5. Media for Communication, Education, and Training

For any effective transformational education and managerial training program to succeed, it is critical to have in place the appropriate media infrastructure through which educators and trainers can communicate and transfer principles, knowledge, personality characteristics, and skills to everyone involved in the program. Using this media educators and trainers, must be able to combine the various component strands to create a powerfully effective environment and learning experience for students. It is appropriate, therefore, to keep in mind that the transfer of information and knowledge alone to those being trained is necessary but not sufficient for education for life. It is one thing acquiring knowledge and skills. It quite another task to make sense of the information and then successfully apply it to solving everyday problems. Each technique or procedure must provide the opportunity for participants to discuss, debate, and analyze the contents of the program and how they are being delivered.

The various techniques that are part of the media infrastructure aimed at transformational HF-based leadership and managerial education must exhibit certain critical characteristics. For example, they must:¹

1. Provide opportunity for participants to interact with their trainers and educators. That is, the environment created must encourage questions, dialogues, discussions, critical analyses, and debates.
2. Lend themselves to simultaneous applications. It must be possible to appeal to a combination of these elements of the media infrastructure to assist people to not only comprehend, but also perceive their values.
3. Motivate people involved in the education and training program of activities to uncover their own personal deficiencies in the positive HF and how to go about acquiring and developing them.
4. Realize that people are both knowledgeable and intelligent. As such, the media infrastructure must allow for both individual and group participation and/or involvement in the learning and transformational process.
5. Assist every individual to not only discover areas of personal gifting, talents, and skills, but also what program of activities to pursue in order to realize one's maximum potential in the long term.
6. Uncover underlying beliefs, assumptions, presuppositions, perceptions, ignorance, attitudes, and behavior that are inimical to effective human transformation processes and programs.
7. Provide people with the appropriate information to facilitate managerial decision-making processes that are based on excellent observations and carefully thought out conclusions.
8. Promote activities that focus on the development of inter-personal and conflict resolution skills and techniques.
9. Be fun and enjoyable for everyone involved.

Used in conjunction with the positive HF, most techniques currently being applied today are still relevant. People using these techniques must make sure that the appropriate information being communicated and principles being taught are neither lost nor distorted. To assure that everything goes on as successfully as expected, there must be frequent evaluation programs—aimed at continuing assessment, revision, improvement, and re-implementation.

From the HF perspective, therefore, some of the elements of the transformational educational communication media must include any or combinations of the following techniques listed below:²

- **Music:** Songs and dances.
- **Literature:** Poetry, drama, and the novel.
- **Oral Tradition:** Narratives, stories, legends, and slogans.

¹ See the complete listing in Adjibolosoo (1998, pp. 208-209).

² These media communication techniques are discussed in detail in Adjibolosoo (1999b).

- **The Verbal and Visual:** Theatre, cartoons, photographs, radio, and television.
- **Print Media:** Newsletters and magazines.
- **The Internet:** Principle-centered information exchanged through this medium.
- **Principle-Focused Group (town) Discussion Meetings:** For brainstorming sessions.

The appropriate and effective use of these media will facilitate the development of people who are destined to become efficient and effective leaders and managers in the future.

6. Conclusion

There exists a way out through the difficult and complex tunnels of management problems in the corporation. The actual hindrance to pursuing managerial goals and objectives is severe human factor decay – lack of integrity, dishonesty, fear, greed, and self-indulgence, disrespect for others, etc. All these are results of severe HF decay and/or underdevelopment. Yet, few leaders and managers are willing to put their lives on the line to secure a stable future for the corporation. Many leaders and managers in the corporation today prefer to put on deceptive masks – pretending to not see the pertinent problems that surround them. All they desire to be called managers on whom the corporation confers rights and significant financial privileges to be enjoyed all year round. They do not only lose touch with reality, but also engage themselves in activities and/or lifestyles that insulate them against the plights of those who placed them in office. They become leaders and managers without “heads.” As such, they are engrossed fully with the enjoyment of their rights and financial privileges since they suffer from the disease of managerial amnesia regarding why their agents hired them to be their representatives in the corporation.

Regardless of these observations, however, we must not necessarily place the whole blame on them because educators are the people who actually failed to help the people they schooled to acquire the positive HF in the course of their schooling. To deal successfully with this lopsided behavior, the social, economic, business, political, and educational machinery must assist every citizen to acquire the positive HF. When a community of people is able to accomplish these tasks, the ongoing global competitiveness, profitability, and long-term survival of the corporation will be ensured for generations to come. It will be controlled and directed by leaders and managers that so desire the best for all stakeholders.

References

1. Adjibolosoo, S. 1999a. *Rethinking Development Theory: A Human Factor Critique*. Westport, CT.: Praeger.
2. Adjibolosoo, S. *The Political Economy of Social Engineering*. (Unpublished Manuscript, Trinity Western University, Langley, B. C., Canada).
3. Adjibolosoo, S. 1998. *Global Development the Human Factor Way*. Westport, CT.: Praeger.
4. Adjibolosoo, S. 1996. *Human Factor Engineering and the Political Economy of African Development*. Westport, CT.: Praeger.
5. Adjibolosoo, S. 1995a. *The Human Factor in Developing Africa*. Westport, CT.: Praeger.
6. Adjibolosoo, 1995b. “Achieving Optimal Quality and Productivity: The Passions.” In D. J. Sumanth, J. A. Edosomwan, R. Poupart, and C. G. Thor, eds. *Productivity and Quality Management Frontiers—V. Norcross, Georgia: Industrial Engineering Management Press* (pp. 412-425).
7. Adjibolosoo, 1995c. “Achieving and Maintaining Global Competitiveness: The Quality of the Workforce.” In D. J. Sumanth, J. A. Edosomwan, R. Poupart, and C. G. Thor, eds. *Productivity and Quality Management Frontiers—V. Norcross, Georgia: Industrial Engineering Management Press* (pp. 652-662).
8. Byrne, D. 1971. *The Attraction Paradigm*. New York: Academic Press.
9. Byrne, D. 1969. “Attitudes and Attraction.” In L. Berkowitz, ed. *Advances in Experimental Social Psychology*. Vol. 4. New York: Academic Press.

10. Campbell, J. P., Dunnette, M. D., Lawler, E. W., and Weick, K. E. 1970. *Managerial Behavior, Performance, and Effectiveness*. New York: McGraw-Hill.
11. Covey, S. R. 1991. *Principle-Centered Leadership*. New York: Simon and Schuster.
12. David, F. R. 1995. *Concepts of Strategic Management*. Englewood Cliffs, NJ.: Prentice Hall.
13. Drucker, P. F. 1989. *The New Realities*. New York: Harper and Row, Publishers.
14. Drucker, P. F. 1985. *The Changing World of the Executive*. New York: Times Book.
15. Dumaine, B. 1989. "What the Leaders of Tomorrow See." *Fortune*, July 3: 48-62.
16. Erikson, E. 1950. *Childhood and Society*. New York: W. W. Norton.
17. Evangelauf, J. 1990. "Business Schools are Urged to Rethink the Curriculum of MBA Programs." *Chronicle of Higher Education*, 23 May: A30.
18. Gordon, R. A. and Howell, J. E. 1959. *Higher Education for Business*. New York: Columbia University Press.
19. Heath, D. H. 1994. *Schools of Hope: Developing Mind and Character in Today's Youth*. San Francisco: Jossey-Bass.
20. Hitt, M. A., Ireland, R. D., and Hoskisson, R. E. 1995. *Strategic Management: Competitiveness and Globalization—Concepts*. New York: West Publishing Company.
21. Holden, P. E., Pederson, C. A. and Germane, G. E. 1968. *Top Management*. New York: McGraw-Hill.
22. Kanter, R. M. 1982. "The Middle Manager as Innovator." *Harvard Business Review*, July-August: 95-105.
23. Kerschoff, A. C. and David, K. E. 1962. "Value Consensus and Need Complementarity in Mate Selection." *American Sociological Review*, 27: 295-303.
24. Levinger, G. K., Senn, D. J., and Jorgenson, B. 1970. "Progress Toward Permanence in Courtship: A Test of the Kerckhoff-David Hypothesis." *Sociometry*, 33: 427-443.
25. Luthams, F. 1988. "Successful Versus Effective Real Managers." *Academy of Management Executive*, May: 127-132.
26. Mahoney, T. A., Jerdee, T. H., and Carroll, S. J. 1963. *Development of Managerial Performance: A Research Approach*. Cincinnati: Southwestern.
27. Mararike, C. G. 1995. "Indigenous Leadership Styles: Can Grapes be Picked from an Orange Tree?" In S. Adjibolosoo, ed. *The Significance of the Human Factor in African Economic Development*. Westport, CT.: Praeger.
28. Miner, J. B., Singleton, T. M., and Luchsinger, V. P. 1985. *The Practice of Management*. Toronto: Charles E. Merrill Publishing Company.
29. Piersin, F. C. 1959. *The Education of American Businessmen*. New York: McGraw-Hill.
30. Singer, J. L. 1984. *The Human Personality*. New York: Harcourt Brace Jovanovich.
31. Smith, P. 1984. *The Rise of Industrial America*. New York: McGraw-Hill.
32. Steiner, G. 1969. *Top Management Planning*. New York: Macmillan.
33. Stewart, R. 1987. "Middle Managers: Their Jobs and Behaviors." In J. W. Lorsch, ed. *Handbook of Organizational Behavior*. Englewood Cliffs, NJ.: Prentice-Hall.
34. Van Fleet, D. D. 1991. *Contemporary Management*. Princeton, NJ.: Houghton Mifflin Company.
35. Walster, E. 1970. "The Effect of Self-Esteem on Liking for Dates of Yannis Social Desirabilities." *Journal of Experimental Social Psychology*, 6: 240-252.
36. Walster, E., Aronson, V., Abrahams, D., and Rottman, L. 1961. "Importance of Physical Attractiveness in Dating behavior." *Journal of Personality and Social Psychology*, 4: 508-516.
37. Wortman, M. S. And Sperling, J. 1975. *Defining the Manager's Job*. New York: Amacom.
38. Zajonc, R. B. 1968. "Cognitive Theories in Social Psychology." In G. Lindzey and E. Aronson, eds. *The Handbook of Social Psychology*. Reading, Mass.: Addison-Wesley.