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WORK MOTIVATION IN ZAMBIA: AN EXPLORATORY STUDY

By

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ABSTRACT

WORK MOTIVATION IN ZAMBIA:
AN EXPLORATORY STUDY

By

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Behavioral science research conducted mostly in industrially advanced countries has helped develop several theories to explain work motivation. Little of this research was done in developing countries. However, now that developing countries are trying to industrialize and develop their economies, they face major problems, one of which is the motivation of their work forces. Today, problems of motivation continue to be major and are evident from the astonishingly low productivity of many developing nations.

Although cross-cultural researchers have studied motivation across many countries, their research has had severe limitations: cross-cultural research has stressed comparisons across cultures rather than practical applications which developing nations need most. Further, cross-cultural research attempts to validate theories developed on one culture in other cultures. While such theories may do well enough in one culture, they may only be partially, if at all, explanatory in other cultures. Finally, most cross-cultural motivation research has included relatively few developing countries.

This study investigated work motivation in the developing country of Zambia to try to: (1) determine the degree to which work motivation in Zambia fit into current motivation theory; (2) develop a theory of motivation if the data so compelled;

(3) determine factors that could be manipulated to enhance motivation and productivity in Zambia; and (4) conduct a validity check on the concepts that would emerge from the data.

Critical incidents were collected from 341 Zambian employees representing five occupational groups from 11 organizations. Content analysis of the data produced motivational themes which were used to construct a validation questionnaire that was administered to an independent sample of 80 employees.

With respect to the validity check, questionnaire responses confirmed the content-analyzed results. Factoring of motivational themes, performed independently by three judges, produced six motivational factors that showed some support for components of some process and content theories, but also included elements that appear unique to Zambia. Five of the six factors showed potential to increase and impair motivation, but each factor could increase motivation more than it could impair motivation or vice versa. A differential positive-negative impact model of work motivation is proposed. Practical and research implications of the findings are discussed.

TO MY FATHER

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INTRODUCTION*

The importance of work motivation for employees, organizations and society as a whole cannot be overstated. Productivity of organizations and entire nations depend in part on the motivation of those nations' work force. In developing countries where productivity is comparatively lower than that in developed countries, the issue of motivation assumes added significance. Certainly motivation alone without accompanying technology and employee abilities and aptitudes is not sufficient to boost productivity. But that motivation is so essential an ingredient of productivity is best illustrated in Richman's (1967) study of managers from China, India, Russia and the United States; Richman wrote that "Thus far, Red China has achieved substantial industrial progress more because of managerial motivation and attitudes than because of managerial technical know-how," (p. 70).

The importance of work motivation has been long appreciated in the behavioral sciences. Research especially in the field of psychology has led to the development, testing, and refining of theories and constructs of work motivation over the last few decades (Steers and Porter, 1975; Chung, 1977; Campbell and

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Pritchard, 1976; Lawler, 1973). These theories have been widely applied in work organizations. But the bulk of this research has been conducted in, or on samples from, developed countries. Only little, if any, of the research was done in developing countries. For example, two extensive literature searches conducted independently by myself and Baklien (1980) found only one reported study pertaining to work motivation in the central-east African region. The result has been that work motivation theory and related constructs developed so far, and even the methods of data collection are more suited to the characteristics (social structures, values and habits, technology and educational levels) of the industrialized countries.

But today underdeveloped nations are attempting to industrialize and develop their economies. These countries can learn and borrow technology from developed countries and can enhance the aptitudes, skills and abilities of their workforce through training. But the vital ingredient of motivation in the development process cannot be easily increased without understanding what will motivate the people being put to work. Unfortunately - as pointed out by Heller (1969) and supported by my own observations - developing nations tend to stress development of infrastructures like roads, railroads, electrical power, etc. as a precondition for rapid economic development without due concerns for factors like motivation, values and habits that guide behavior of people in organizations. The implicit assumption of stressing non human factors only appears to be that people in these countries will respond to organizational work situations in the same manner as

their counterparts in industrialized nations. This assumption, true only to some extent, ignores the fact that..."the motivation of members to belong, work and advance in the organization may be different from one society to another" (Tannenbaum, 1980, p. 283). And this is clearly evident in the problems of work motivation facing many developing nations today. For example in the young African nation of Zambia, problems of work motivation cannot be more adequately illustrated. Political leaders have on many occasions, complained about the lack of will to work among workers. Leaders have continued to call for "increased productivity," disciplining of lazy and/or "inefficient" employees. Recently, the President of the country himself highlighted problems of work motivation in the workforce:

> If by next year all the five million Zambians choose to be lazy as they are now, President Kenneth D. Kaunda fumed last year, I would willingly step down because I don't want to lead people with lazy bones (Wall Street Journal, February 15, 1979, p. 9).

It must be pointed out, however, that cross-cultural researchers in organizational psychology and related disciplines have, for some time now, attempted to learn about work motivation in many countries including some developing nations. (See Barrett and Bass, 1976; Tannenbaum, 1980; for a review.) But the work of these researchers have severe limitations. First, cross-cultural research tends to emphasize comparisons across cultures rather than the work motivation factors that apply in a specific culture or country. As a result findings from these studies may not readily lend themselves to practical applications within any specific nation--and developing nations need knowledge on applications. Second, cross-cultural

research on work motivation may only provide fragmentary information at best or useless information at worst because most of this research is aimed at validating one or two theories (developed on one culture) in a number of cultures. Such theory or theories may do well enough in the one culture but may tap only a small part of the underlying motivational mechanisms or patterns in other cultures or may not be valid at all. Finally, most cross-cultural studies of applicability to work motivation problems have been comparisons among developed nations and the more advanced of the developing nations such as Bulgaria, Israel, India, Mexico (see Barrett and Bass, 1976; Tannenbaum, 1980, for a review), rather than among the less developed nations. Failures and weaknesses in cross-cultural research in the field of organizational psychology led Roberts (1970) to conclude an evaluative review of organizational related research with the statement that "...increment of knowledge seems minimal and possibly not worth the effort thus far placed in cross-cultural work," (p. 345).

Although Roberts' assessment may be too harsh, there is need for investigators wanting to fully understand psychological phenomena like work motivation in different cultures to shift their approach. What is needed is an empirical approach that does not limit itself to some given a priori theoretical framework(s). Such an approach must begin by observing and examining productive and non-productive work behavior in work organizations in regions or cultures thus far not well studied, then proceed to develop theoretical concepts around the observations. Such an approach has major advantages: from a theoretical standpoint, analysis of data collected using this

approach can allow us to determine the degree to which work motivation in those cultures fits existing theory, and provide material to build new theory for those regions or modify current theory if the data so suggests. Secondly, and more important for the development needs of those regions, this approach would provide information that can be used to increase work motivation in the areas studied. Thus, this approach aims at theory building, practical applications and allows indirect cross-cultural comparisons.

Aims of this Study:

This research investigated work motivation in Zambia by examining conditions, events and processes surrounding highly productive and highly unproductive work behavior. That is, a critical incident technique (Flanagan, 1954) was used. Content analysis (see Holsti, 1968; Crano and Brewer, 1973) was the method of data analysis. As a check on the construct validity of the findings, motives or factors that were identified in the content analysis were used to develop a questionnaire. This questionnaire was administered to a sample of employees. The employees were asked to indicate--on the basis of their personal work experience--which of the factors (derived from content analysis) tended to be associated with situations or incidents when they worked very hard and those with situations when they put very little effort into their work.

Although the proposed investigation was not based on any particular theory of work motivation, it is important nevertheless to take a close look at the state of current motivation theory. This is necessary because the aim of this study, among other things, is to determine the degree to which data from a developing nation

(Zambia) fits into some existing theory or theories of work motivation, or how such data may be used to adapt such theory to the culture and unique conditions of an underdeveloped nation. Thus, we need to examine contemporary theories of work motivation. In the next section, seven such theories are briefly reviewed. Discussion then returns to cross-cultural research where it is noted that despite the weaknesses pointed out earlier, cross-cultural investigations have produced some important findings. This is followed by a presentation of background information on Zambia. Discussion of methodological problems then follows and this leads into the method, results and discussion sections of the paper.

I. THEORIES OF MOTIVATION

Motivation, the process by which behavior is energized, directed, sustained and regulated has been studied for many years. As early as 1789, the philosopher Bentham coined the phrase "hedonic calculus" to describe the process by which individuals weigh advantages and disadvantages of their behavior. Later, psychologists like James and McDougall (instinct theory), Freud (unconscious theory) and Thorndike (drive theory) proposed more comprehensive theories of motivation at the turn of the century and early this century, (see Cofer and Appley, 1964; Atkinson, 1964 for reviews of early motivation models). It is to these early works that today's motivation theories owe their roots. In the summary that follows, discussion concentrates on those formulations which have been used to explain work behavior. Before presenting the theories, a basis for classifying them is first outlined.

Contemporary models of motivation can be differentiated on the basis of whether they postulate conscious mental processes (cognitive) or whether they contend that behavior is regulated by past habits or reinforcement history (acognitive). This distinction has some significance for this study. For it can be expected that greater differences across cultures are more likely with theories positing that behavior is determined by conscious decisions of the individual than with theories maintaining that behavior is a function of reinforcement history. Another basis for distinction is whether the models focus on identifying specific factors within the individual or environment which determine behavior (content) or if they focus on processes by which behavior is controlled (process). In the

summaries below, content theories are discussed first, cognitive process theories next, then the single acognitive process theory is presented.

Content Theories

Need Hierarchy Theory:

Maslow (1943, 1954) explained human motivation in terms of a dynamic hierarchy of needs. He postulated a set of five needs - basic physiological, safety, social, esteem and self-actualization - arranged in increasing order or prepotency. According to Maslow, individuals will be motivated to satisfy physiological needs before safety, social and other higher order needs can be fulfilled. Gratification of physiological needs triggers the emergence of safety needs which when satisfied give way to the more psychologically oriented social needs. This process continues until the high order needs of esteem and later self-actualization are gratified. Thus, relative gratification of a given need submerges it and activates the next higher order need which continues to organize and dominate the individual's personality and capacities until it (need) is satisfied. Maslow also proposed a frustration hypothesis; that non satisfaction of a given need for a long time will cause a fixation for that need.

Although Maslow's need hierarchy concept is one of the oldest of today's theories of work motivation and has been used to explain and prescribe management practices (McGregor, 1960, 1967; Schein, 1965) and job enrichment (Hackman and Lawler, 1971; Hackman, 1977), it has not received much empirical support. While some studies like those of Aronoff (1967) in the British West Indies and Aronoff

and Messé (1969) working with American college students found support for Maslow's formulation, the bulk of research findings have been non supportive of propositions from the theory. Disconfirmatory evidence for propositions of the Maslow model has led some researchers to suggest some modifications. Alderfer (1969, 1972) proposed a three-level (existence, relatedness and growth) need hierarchy theory and this received some empirical support from Wanous and Zwany (1977). Based on his earlier empirical research (Lawler and Suttle, 1972), Lawler (1973) suggested..."A two-step hierarchy with existence and security needs at the lowest level and all the higher-order needs at the next level," (p. 34). Later, Lawler and Suttle (1975) added a modification that..."prepotency of higher level needs for an individual would be determined by such things as his childhood experience, his age..." (p. 45). Some researchers on the other hand found little if any support at all for the need hierarchy model. Rauschenburger, Schmitt and Hunter (1981) found not support whatsoever for the need hierarchy concept.

Cross-cultural findings: Cross-cultural research on the need concept has met with equally inconsistent findings. If Maslow's formulation was correct, then we could have expected people from underdeveloped economies to be more concerned with satisfying lower order needs than higher order needs. Tannenbaum (1980), succinctly stated this point: ..."'psychological' (quotation marks his) support would be irrelevant in economically disadvantaged societies where lower level needs are not fulfilled; support in such places would have meaning only in terms of actions that contribute directly to physical well being of organizational members," (p. 301). While some studies supported this view, some did not.

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After studying IBM personnel in poor and rich nations, Greenwood (1971) concluded that job security was more prepotent in economically poor nations while needs for autonomy and challenging work were relatively more important in wealthy nations. The study of Singh and Wherry (1963) in India had also come to the same conclusion. But Orpen and Ndlovu (1977) found that black clerical workers in South Africa had stronger higher order needs than whites despite the fact that..."Blacks in South Africa form a disadvantaged caste...(for whom) lower order needs for shelter and for security are only occasionally met," (p. 32). In the same vein, a study by Haire et al. (1966) involving 3600 managers from fourteen countries did not give strong support to the Maslow position.

Despite these weaknesses and perhaps because of its simplicity, the need hierarchy concept has been and continues to be widely used in organizations and has recently been incorporated into modern job design theory (Hackman and Lawler, 1971; Hackman, 1977). For purposes of this study, it would be interesting to see, and would provide strong empirical support, if a motivational pattern similar to the need hierarchy formulation emerges from data to be collected.

Two-Factor Theory:

Another approach to work motivation is that advanced by Herzberg et al. (1966) following a content analysis of critical incident data collected from 200 American accountants and engineers. This approach, called the two-factor theory states that job satisfaction is qualitatively different from job dissatisfaction and that these two are caused by two independent sets of factors. The factors that affect satisfaction, the motivators, tend to be more intrinsic and include

interesting and challenging work, recognition and advancement, responsibility and achievement. Factors affecting dissatisfaction, the dissatisfiers, are extrinsic and include pay, supervision, interpersonal relations, working conditions and company policies. According to Herzberg, the presence of satisfiers in sufficient amounts will result in employees being satisfied and motivated to work but will not affect dissatisfaction. Similarly presence or absence of dissatisfiers will only affect dissatisfaction and not satisfaction.

Support for the two-factor theory has not been strong. Only those studies that used the same methodology as Herzberg have given support to the theory, (Wexley and Yukl, 1977). On the other hand Herzberg and his associates have been accused of equating satisfaction to motivation by asking respondents to talk about good or bad feelings about their jobs and inferring motivation from resulting data (Vroom, 1966). Another criticism is that since coding during the content analysis was not entirely determined by the coding system but required interpretation by coders, bias could have been introduced into the data during the analysis (Wigdor and House, 1967). Further, Herzberg's claim that satisfaction is affected only by satisfiers and dissatisfaction only by dissatisfiers has been challenged and many researchers now accept that both factors affect satisfaction and dissatisfaction (see Lawler, 1973). Probably the harshest criticism of the two-factor theory is that from Dunnette, Campbell and Hakel (1967) who stated that "It seems that evidence is now sufficient to lay the two factor theory to rest, and we hope that it may be buried peaceably," (p. 173).

Despite these criticisms, Herzberg's theory appears to have some validity. The two-factor theory together with Maslow's (1954) need hierarchy concept are cornerstones of modern job design/redesign theory (Hackman and Lawler, 1971; Hackman, 1977) which has received substantial empirical support in field settings. Because the present study will use a methodology similar to the one used by Herzberg, this study may partly be seen as an attempt to replicate Herzberg under a different cultural, social, economic and political environment. Nevertheless this study is different not only in methodological improvements over Herzberg's (see section on methodological problems) but also in the main assumption that motivation patterns in third world countries might be greatly different from those in the West and consequently might be different from what Herzberg found.

Need for Achievement:

Building on Murray's (1938) list of human needs, McClelland (1961), McClelland et al. (1953), and his associates have developed a theory of human motivation centered around the need for achievement. The achievement motive, as the need for achievement is often referred to, is perhaps the most thoroughly researched individual human motive. According to McClelland, need for achievement is a relatively stable disposition to strive for success. A person with high need for achievement is more intrinsically motivated to perform highly on tasks of medium difficulty and where feedback is available than on extremely difficult or easy tasks with no feedback. Such a person derives more pleasure from accomplishment and more frustration from failure than people with low need for achievement.

Unlike the two-factor theory just discussed, the need for achievement construct has received widespread empirical support. Research findings in both laboratory and field have demonstrated a positive relationship between need for achievement and level of performance in a variety of settings including job success of executives, (Atkinson, 1958; Atkinson and Feather, 1966; McClelland, 1951; McClelland, et al., 1953; Cumming, 1967; Hundal, 1971; Steers, 1973; Weiner and Rubin, 1969; Weiner and Kukla, 1970). Even though need for achievement is a relatively stable personality variable, McClelland (1965) proposed that a person's need for achievement could be increased through training. He was able to demonstrate this in India though this effort met with limited success (McClelland and Winter, 1969).

Cross-cultural findings: The need for achievement concept has probably been subjected to more cross-cultural investigation than any other formulation of human motivation. In research extending over two decades and covering many developed and underdeveloped countries, McClelland (1961) and his associates investigated the relationship between need for achievement within a nation and the nation's level of economic growth. McClelland concluded from this research that need for achievement--measured by projective techniques--was positively related to the level of economic growth measured by amount of electrical output in a given country.

Despite the impressive support, the need for achievement framework has not been without its critics. Cofer and Appley (1964) cautioned that..."The theory McClelland and his co-workers have developed is neither compelled nor directly derived from their data,

but is presumably consistent with the data," (p. 374). McClelland's cross-cultural results linking the achievement motive to economic growth of nations has been questioned by some; Barrett and Franke (1971) raised concern about use of electrical output as an indicator of national economic growth and the assumption implicit in McClelland's research that countries of all sizes, at different levels of economic growth and technology were all affected by need for achievement in the same way. A reanalysis by Barrett and Franke (1971), showed that findings were dependent on time period and measure of economic growth chosen. A finer breakdown of findings revealed that need for achievement related to economic growth only in small already developed countries. Besides these criticisms, McClelland's attempt to link one micro variable (need for achievement) to a macro variable (national growth) is not sufficient to explain the total picture of what motivates productive or non-productive work behavior especially in cultures where work motivation has received no systematic investigation. Nevertheless, because of the widespread support the need for achievement construct has received in many developed and developing nation cultures (McClelland, 1961), it is highly probable that achievement need may emerge as a factor of work motivation in this study.

Cognitive Process Theories

Goal-Setting Theory:

A relatively new formulation of work motivation has been advanced by Locke (1968) based on Lewin's (1935) level of aspiration concept. According to Locke, goals and intentions regulate a person's behavior. Definite goals such as specific deadlines or

levels of performance lead to higher performance than general goals such as "do your best" or "work as fast as possible." Further, difficult goals result in better performance than easy goals as long as the individual accepts and commits himself to attaining the goals. Locke further added that though such variables as task characteristics, incentives, supervision and feedback may have some effect on performance, these variables have little or no effect at all when differences in goals and intentions are controlled for.

Locke (1968) and his associates have supported the theory with a large number of findings from laboratory studies. More recently, some field studies have also supported goal setting theory propositions (see Latham and Yukl, 1975). But goal setting theory is not without weaknesses: Firstly, Locke's model contradicts need achievement theory which predicts that achievement-oriented persons (who are also likely to be the high performers) tend to choose and perform well on tasks of medium difficulty. The theory is also in direct disagreement with another cognitive process theory (expectancy theory) which would predict greatest motivation on easy tasks where success and therefore rewards are certain—of course, assuming rewards to be contingent on performance. Secondly, Locke's goal-setting theory says little on how goals, expectations or intentions are established in the first place (Howell, 1976); evidence presented by Miner and Dachler (1973) suggest that people prefer goals they expect to be able to reach. Related to this point is perhaps the strongest criticism of goal-setting theory. That is that, when goals are extremely difficult to attain, there may be little commitment on the part of the individual to attain such goals. In

such a situation, goals and intentions may have no effect on performance. Unfortunately, none of the studies presented by Locke and his associates varied goal difficulty to near impossible levels to answer this issue (see Dobmeyer, 1970).

Equity Theory:

A theory formulated with a focus on social interactions in work situations is equity theory (Adams, 1963, 1965). Adams stated that an individual brings into the work situation inputs (such as effort expended, education, training, age, sex, seniority, status, ethnic background) in return for outcomes (such as pay, fringe benefits, job status and rewards intrinsic to the job). The individual compares his ratio of outcomes to inputs to that of a "comparison other." If the two ratios match, equity is perceived and the individual is not likely to change his inputs or outcomes. If, however, the ratios are perceived to be unequal, the individual experiences tension and will be motivated to rid himself of the tension and thereby eliminate or reduce the inequity.

Adams suggested various modes individuals may use to reduce inequity. These include cognitive distortion of inputs or outcomes, actual alteration of inputs or outcomes or withdrawal from the situation. Thus according to equity theory an employee perceiving himself as underrewarded may reduce work quality or quantity (whichever of the two removes the inequity), demand more pay, be absent or tardy for work or in extreme situations quit the job. On the other hand, overrewarded employees can be expected to increase work quality or quantity to restore equity.

A considerable amount of research has been conducted on equity theory in laboratory, simulated and actual work situations. Recently Walster et al. (1976) have extended the theory and used it as a general theory of social behavior. They used the equity framework to explain social interactions in dating preferences, helping and exploitative relationships. Although not all studies testing equity theory predictions produced supportive results, the findings from most studies have generally been supportive (see Goodman and Friedman, 1971; Carrell and Dittrich, 1978; Machungwa, 1978; Walster, et al. 1976 for comprehensive reviews). Some of the most frequently observed effects are that persons underpaid under a piece-rate system increase work quantity at the expense of quality to achieve equity. On the other hand, individuals perceiving overpayment inequity under piece-rate increase quality without increasing quantity. Other findings are that overpaid hourly-employees increase quality and/or quantity of their work while those underpaid reduce these aspects of performance to regain equity (see Goodman and Friedman, 1971 for detailed review).

The concept of equity is an interesting one to examine in cross-cultural contexts. Because of the political ideology of some countries the equity norm may not be as salient as it might be in other countries. In the proposed study the concept of equity is not directly addressed; however, the approach of this study - starting with no a priori theoretical framework - may very well bring in the equity norm if the idea of equity is salient in the culture to be studied.

Expectancy Theory:

Drawing heavily on the works of Lewin (1938), Tolman (1959) and Peak (1955), Vroom (1964) proposed a cognitive theory of motivation

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to explain work behavior. Like many other versions of expectancy theory (e.g., Campbell, Dunnette, Lawler and Weick, 1970; Graen, 1969; Porter and Lawler, 1968), Vroom's theory posits that a person's behavior results from conscious choices based on a comparative evaluation of possible alternatives. The central concepts in the theory are expectancy (the perceived probability that effort leads to desired performance), valence (the desirability of a given event or outcome), outcome (any potential need-related consequence of behavior) and instrumentality (the likelihood that a given level of performance leads to desired outcomes). According to the theory the motivation for an individual to perform a given task is a function of the expectancy that effort leads to required performance, the likelihood that performance leads to outcomes and desirability of the outcomes in question. Mathematically, the theory can be stated as follows:

$$MF = E\Sigma VI$$

where MF = motivation or force to act, E = expectance that effort leads to performance, V = valence of outcomes and I = the instrumentality.

Expectancy theory is considered by many to be a leading theory of work motivation. Numerous research studies have been conducted to test propositions of the theory. But partly because of the theory's complexity and problems of operationalizing the key concepts within the model (see Mitchell, 1974) many of the studies had methodological problems and did not provide an adequate test of the theory, or yielded only equivocal findings. Although expectancy theory still seems a promising model for explaining work behavior,

a number of methodological issues, logical and conceptual problems within the theory itself (Mitchell, 1974, Wahba and House, 1974) need to be resolved before the theory's rather promising explanatory potential can be successfully realized. Another problem is that people may not think like the theory suggests and may use a more simplified approach, (Simon, 1965).

Acognitive Process Theory

Drive-Reinforcement Theory:

Whereas the last three theories discussed treat behavior as having roots in conscious mental processes, drive reinforcement theory holds that behavior exhibited is a result of past reinforcement history and stimulus-response relationships. The basis of the theory is Thorndike's law of effect which states that responses closely followed by pleasureable events (rewards) are more likely to recur in similar situations while events closely followed by unpleasurable events (punishment) are unlikely to occur in similar situations. Drive-reinforcement theory went through a number of elaborations with the work of Hull (1943 and later Skinner (1963, 1969) who is probably the most well-known and strongest proponent of the theory.

According to drive-reinforcement theory, behavior will be strengthened if it is followed closely in time by positive reinforcement of rewards. Conversely behavior can be weakened or extinguished by withdrawal of rewards and/or presentation of punishment. Rewarding of individuals only part of the time (partial reinforcement) rather than all the time leads to acquisition of behavior more resistant to extinction. However, acquisition of

behavior is faster when individuals are rewarded each time they emit the required behavioral response.

Hundreds of laboratory studies with animal subjects have been conducted. These studies have generally provided impressive support for drive reinforcement theory. Results from studies in work settings have yielded support though this support has not bee as strong as that from the laboratory (see review by Schneier, 1974). Use of pay incentives (a type of positive reinforcement) has been observed to result in higher productivity (Lawler, 1971). Use of drive-reinforcement principles has also proved effective in reducing absenteeism (Lawler and Hackman, 1969) and tardiness (Hermann et al. 1973). Other studies such as the one at the Emery airfreight company showed that feedback and praise reinforcement could be used to shape appropriate job behaviors (Anacom, 1973).

Drive-reinforcement theory has met with a lot of criticism and resistance. Whyte (1972) has argued that while drive-reinforcement theory has proved explanatory in the laboratory, the theory's predictions are unlikely to hold in the complexities of real life. According to Whyte, drive-reinforcement theory ignores the social comparison process (issues of equity). That even though rewards may be contingent on performance, performance cannot increase and might even decrease if much inequity is perceived. Other researchers have criticized drive-reinforcement theory on the grounds that it advocates an approach to motivation solely based on externally mediated rewards - with total disregard for self-administered rewards (Likert, 1967; Vroom and Deci, 1970; Deci, 1971, 1972). According to Deci (1972),

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the drive-reinforcement model of work motivation aims at satisfying lower order needs (Maslow, 1954) and ignores higher order needs.

In spite of these criticisms and the opposition this theory has faced from advocates of cognitive models, drive-reinforcement theory can, perhaps, be expected to hold better cross-culturally than cognitive and even content theories. Since the reinforcement approach ignores mental processes which are influenced by such things as values, attitudes and beliefs, the effect of culture on this approach is somewhat limited. Thus it can be expected that each individual's behavior (irrespective of culture) will be determined by his unique past reinforcement history. While the design of the proposed study does not permit a direct test of drive-reinforcement theory propositions, it is probable that critical incidents from this study will show themes that support the non cognitive theory.

Summary:

The fact that all theories just reviewed have explained work behavior under certain conditions despite weakness and contradictions illustrates the complexity of human motivation. Behavior is nearly always multi-determined, at times by seemingly conflicting motives. The very nature of this complexity tends to render inadequate an approach relying on a single theory to explain behavior. But with the empirical approach this study proposes, the hope is that the data will yield a framework which itself is a product of the complex interactions of motives that determine work behavior. Thus it can, perhaps, be expected that a combination of interaction of variables from the theories reviewed (if these are salient in the country to be studied) plus other work-related and cultural variables may emerge

from the data. In the next few pages, cultural and work-related variables that influence motivation are discussed.

II. CROSS-CULTURAL RESEARCH

Employee motivation to work cannot be fully understood without considering other work-related variables that have an impact on employee reactions in work situations. Many of these variables show their influence on work behavior through their effect on work motivation. In this section, cross-cultural research that investigated variables known to influence motivation in work settings are reviewed. Earlier in this paper, some weaknesses of cross-cultural research in organizational psychology (work motivation in particular) were outlined. But despite these weaknesses and failures, cross-cultural research has produced findings that must be noted by any investigator whose work has some cross-cultural aspect, as is the case with the planned study. Studies reviewed here are chosen on the basis that they investigated variables previously shown to have influence on work motivation. Another criterion used is the relevance of variables and questions addressed in the study to the culture and country where the present research will be conducted. This latter criterion is based on the author's own knowledge and familiarity with Zambia. The reader seeking a comprehensive review of work-related cross-cultural research should consult Tannenbaum (1980), and Barrett and Bass (1976).

Leadership:

Leadership styles and their effectiveness have been extensively investigated in developed countries and a number of theories have

been advanced. Behavioral theory of leadership has propounded two leadership dimensions which can be stated as an interpersonal orientation, and a task orientation (Bales and Slater, 1955; Fleishman and Harris, 1962; Katz et al., 1950). Interpersonally oriented leaders are considerate, have respect for, and build mutual trust for their group while task oriented leaders tend to structure, define, assign tasks, set deadlines and emphasize performance. Research results concerning the effectiveness of each style or combination of both styles have been as inconsistent across countries as within countries. Thiagarajan and Deep (1970) found a positive relationship between participative supervision and employee satisfaction among workers in Belgium, Italy, United Kingdom and the United States. On the other hand, Meade (1967) observed in India that children led by a democratic leader were absent more often, turned out poorer quality work and liked their leaders less than children in authoritarian-led groups. Similarly, Peruvian workers were found to like their leaders to the extent that they exercised close rather than general supervision (Whyte and Williams, 1963).

Another issue pertaining to leadership is the disposition of managers towards participative decision making. Results generally indicate that managers from less developed countries tend to be less participative (Haire et al., 1963; Tannenbaum, et al., 1974; Negandhi, 1973; Bass, 1968; Barrett and Bass, 1970; Thiagarajan and Deep, 1970). Barrett and Ranke (1969) further reported that the preference by managers to use two-way rather than one-way communication correlated .75 with level of economic development of a country.

These differences in participative/autocratic styles of leadership between developing and industrialized countries have been explained in terms of differences in orientation towards authoritarianism. Despite some inconsistencies, the general view is that people in developing nations tend to have more authoritarian attitudes than their counterparts in developed nations. Hagen (1962) concluded an extensive literature review with the assertion that the harsh and unpredictable conditions in many traditional societies lead people to reliance on the judgment or will of some superior individual or person in authority.

If the preference for nonparticipative leadership in developing countries is a universal phenomenon, then it can be expected in this study that good critical incidents will be more associated with nonparticipative leadership and close supervision. However, since nonparticipative leadership is not likely to lead to good interpersonal relations (which are stressed in developing nations, as will be seen in the next section), this leadership must be a type of paternalism that blends some consideration with autocracy. Paternalism is a phenomenon which is not strange to many developing countries that have been colonized. In many cases, colonial rulers, when not outright autocratic, acted paternalistic to the colonial peoples. In the developing nations of Africa, paternalistic leadership had long been practiced by African chiefs and monarchs.

Interpersonal Relations in Organizations:

Being closely tied to cultural factors, interpersonal relations in work settings can be expected to differ widely across nations. But bureaucracy, which characterizes most work organizations in

nearly all countries, does not consider cultural differences. Emphasis is placed on impersonality of contacts among job occupants (Weber, 1947). Cross-cultural investigators have sought to understand the differences in people's interpersonal contacts and reactions to others in organizations across nations. Findings suggest that individuals from developed countries tend to be more impersonal in their dealings than persons from less developed countries. For example, Triandis (1967) found that Americans working in Athens were perceived by Greeks to be "inhumanly legalistic, rigid, cold and overconcerned with efficiency (p. 51)," and gave little weight to interpersonal relations. Similarly, Zurcher (1968) found that Mexican bank employees weighted obligations of friendship in work settings more than American bank workers. In the same vein, Triandis and Vassilou (1972) observed that Greeks attached more importance to recommendations by friends when hiring a new employee than did Americans. These findings are in line with my own observations in Zambia - a developing country. My observations and work experience suggest that people attach greater importance to harmonious social relations with coworkers and superiors than would be the case in a country like the United States, for example. It is plausible, therefore, to expect that in societies like Zambia, interpersonal relations will have a strong impact on work motivation.

Exposure to Work Organizations and Worker Attitudes:

Populations of most developing nations have not been exposed to industrial organizations for as long as populations in industrialized countries. Some research work done mainly in underdeveloped nations

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has attempted to relate employee work attitudes to degree of exposure to industrial work organizations. It has been found that exposure to, and experience with work organizations appears related to compatibility with demands of the industrial settings and good psychological adjustment (Inkeles and Smith, 1974). In a longitudinal study, conducted in Argentina, Chile, East Pakistan, India, Israel and Nigeria, Inkeles and Smith found that, compared to peasants, persons who moved from the farm to a factory had better psychological adjustment as measured by feelings of personal efficacy, aspirations, openness to new experiences, belief in calculability of the world and trust in others to meet their obligations. Even more important was the finding that psychological adjustment improved with length of work in industrial settings. Research by Elden and Leviatan (1974) with Israeli agricultural and factory workers in the Kibutzim suggested that Inkeles and Smith findings were not due to mere difference of working on land as opposed to working in the factory. If workers on the lands use modern technology and are exposed to a larger social environment similar to that which factory workers are exposed to, then there would be no difference in psychological adjustment between land workers and those in the factory.

It is difficult to speculate how exposure to and experience with work organizations would relate to work motivation, but one can hazard a guess that there would be a difference in motivation patterns between groups with more and those with less exposure. This study will check for such differences if any exist at all.

Rank, Education and Age:

Consistent empirical support has been found in the USA for the position that rank is positively related to favorable job attitudes (Herzberg, Mausner, Peterson and Capwell, 1957; Machungwa, 1978). Cross-cultural studies have now confirmed that this finding holds across nations (Tannenbaum et al., 1974; Tannenbaum, et al., in press).

A variable closely related to rank is amount of education; that is, people with more education generally hold higher ranks. But unlike rank, education per se, is not positively correlated with favorable job attitudes. On the contrary, analyses of research data in Austria, Italy, USA, Yugoslavia and Israel (Tannenbaum et al., 1974), indicated that education is negatively related to job satisfaction and attitudes towards the company. Quoting findings of other investigators, Tannenbaum (1980) states that similar results have been obtained in Brazil, Germany and Hungary. On the other hand, age is positively related to favorable attitudes towards both the job and company.

On the basis of these results, it is plausible to expect that rank, education, and age differentials might be reflected in motivation levels and patterns. In fact a study by Machungwa (1978) with a U.S. sample found rank to be positively related to level of motivation as measured by amount of perceived equity on the job. The present study will among other things explore any bearing that rank, education and age may have on productive and nonproductive behavior in a developing country.

Pay:

Due to the central role pay plays in the interactions in work situations and its relationship to work motivation and other work variables (e.g. job and need satisfaction, performance, etc. Lawler, 1971), even as selective a review as the present one would be incomplete if pay was not discussed. The study of Herzberg et al. (1966) with a sample of 200 American engineers and accountants concluded that pay had a relationship to job attitude, i.e., inadequate pay increased dissatisfaction but had little effect on work motivation. On the contrary, there appears some consensus cross-culturally (at least in the few developed countries studied) that pay in itself is not related to job attitudes. Zdravomyslov and Jadov (1964) found with 2550 young Soviet workers that pay level per se had little influence on job satisfaction. Instead factors like job type influenced the pay satisfaction relationship. The two researchers observed that unskilled workers doing monotonous jobs were more dissatisfied with their jobs than skilled workers even though earnings of the unskilled employees were more than those of the skilled workers. These results have received support from Tannenbaum et al. (1974) and their associates with data from the USA, Austria, Yugoslavia, Germany, Hungary and in Ireland to a limited extent.

As earlier noted in our critique of cross-cultural studies, few of the poor, less developed countries were included in the studies referred to above. Because of the relative poverty of many developing countries, pay might be expected to assume greater significance. In those countries, it can be expected that pay will have

a strong link to attitudes towards the job and company. Further, we can speculate that pay will have strong influence on work motivation.

Job Characteristics:

The final work related phenomena of interest in the cross-cultural literature is that of job characteristics. Hackman and Lawler (1971) using an American sample of 200 telephone company employees found that jobs which provided more variety, autonomy, task identity and feedback led to higher employee motivation and job satisfaction both affectively and behaviorally. The effect was stronger for employees with higher order needs. These results have received support from cross-cultural investigations with hardly any conflicting results. It has generally been observed that people doing routinized, monotonous, fractionalized, physically tiring or even dangerous jobs that allow little learning and skill development tend to have more negative attitudes towards their organizations and jobs than employees in jobs providing autonomy, variety, feedback and task identity. These findings hold for the USSR (Zadravomyslov and Jadov, 1964), Israeli Kibbutzin, Italy, USA, Yugoslavia (Tannenbaum, et al., 1974) and Brazil (deSouza and deSouza, in press). According to the Tannenbaum et al. study, negative effects of jobs with poor characteristics persist even when effects of rank, education and age have been controlled for.

The apparent universality of the relationship between job characteristics and job attitudes would suggest that such a relationship might exist in developing countries. This study will see if job characteristics are related to work motivation among Zambian workers.

Miscellaneous

There are many more variables that have influenced and continue to influence motivation in developing countries. Because of the relatively little research conducted in these countries, many of these variables have yet to be identified. Those which have been identified have not been subjected to much empirical research. Consequently the nature of the relationship between such variables and task motivation is hardly understood. Most variables that will be examined here fall into this latter category. Although the assumption is that these variables are related to motivation, little attempt is made in this section to speculate on the direction and nature of this link. The hope here is that these variables will show up in the content analysis - if they are important determinants of work behavior in the country to be studied.

Colonial Heritage:

As indicated earlier, many developing countries were colonized. And even though they have attained independence, the colonial legacy or heritage (represented by such things as underdevelopment, little education and work skills, rigid organizational structures, authoritarian leadership) still lingers on. Thus organization of the work place and interactions therein continue to be influenced by the colonial history. Whereas the effects on motivation of some aspects of the colonial legacy, e.g., leadership, have been discussed in an earlier section of this paper, effects of some aspects of the colonial experience are not well known.

Social Change:

Political independence has brought rapid social and technological change to many former colonial nations. Chances for higher education and training and resultant status and economic mobility are much greater. Among the more educated, there is a shift towards new values which, more often than not, tend to be those from industrialized countries. These values in many cases clash with traditional values. Such conflicts in values can be expected to have an effect on people's reactions to work situations. Not all the effects of social change on motivation are unknown. For example the effects of training, education and exposure to industrial work organizations have been studied cross-culturally and have been discussed earlier (see pages 25-27). However, the influence of conflicting social values on motivation during this kind of social change is not readily predictable.

Corruption:

Associated with social change are issues of corruption in developing nations. While corruption is not a monopoly of developing nations or any group of countries, there have been many charges of corruption in developing nations following independence. In work settings, corruption takes the form of bribery, favoritism, nepotism, tribalism or ethnicity in hiring, promotions, firings, work assignment and other personnel decisions. Such actions have a strong impact on the work motivation of the persons involved particularly those perceiving themselves victimized.

Attitude Towards Time:

An issue that might have possible significance in work settings and which is only occasionally mentioned, is the attitude exhibited towards time by people from developing nations, especially those from Africa. Durand (1960) wrote from French Africa (on the basis of personal observations) that African employees did not consider the time element important in executing their duties as long as they completed the assigned tasks. Hardly any research in Africa has directly addressed this question to support or refute Durand's statement. Researchers who inquired into perception of time in Africa focused on such issues as, memory, choice between an immediate reward and a later reward of greater value (see Wober, 1975 for a summary). Since the time element is an important component of work performance in most organizational work situations, attitude toward time is certainly an important issue. While the design of the proposed study does not allow for a direct investigation of Durand's position, it is probable that critical incident data from this study may show the salience of worker attitude toward time if Durand's viewpoint holds in today's modern Africa.

Choice of Country

Since (as earlier stated) little research on work motivation has been conducted in many developing countries, the study being proposed here would be of theoretical and practical significance in many developing countries. But as it is impossible to conduct a study of this nature in all countries where motivation is relatively uninvestigated, one has to choose among these countries. A consideration of importance in making a choice is the researcher's familiarity and

contact with people and culture to be studied. The importance of this familiarity and contact with the culture a researcher is to work with in cross-cultural psychological research has been aptly stated by Irvine (1968) as follows: "To collect valid data, a psychologist needs adequate and sympathetic training in understanding a culture that is alien, complex and conceptually different," (p. 3). Suggesting that participant observer research would gain greater importance because of the need for contact and familiarity, Irvine added that there is really no substitute for first-hand contact with cultures other than the one the researcher grew up in. This view is also echoed by Wober (1975, p. 215) in his concluding remarks following a descriptive review of psychology research in Africa.

Since the intending researcher in this study is Zambian, was born, grew up and lived nearly all his life in Zambia, choice of Zambia as the research site is most appropriate. Another reason for choosing Zambia for this study is that problems of work motivation have been so clearly evident (see pp. 34-35) that a systematic investigation of motivation is an imperative if this young nation is to make full use of its most valuable resources - human resources.

III. ZAMBIA

Geography, History, and Economy:

Zambia, located in the Southern central region of Africa, has an area just under 300,000 square miles (approximately five times the size of the State of Michigan). The land-locked country, a former British colony, has a population of five million people. The country became a republic in 1964 and is now ruled by a one-party elected government.

The mainstay of Zambia's economy is the giant copper mining industry[1] which accounts for about 90% of the country's foreign exchange earnings. Realizing the susceptibility of copper prices to sharp fluctuations on world markets, the Zambian government embarked on an ambitious policy to diversify the economy. Manufacturing, processing, chemical, service, agricultural, etc. industries were set up. Such industries were partially (50% or more shares), or in a few cases totally owned by the government. Private interest or multi-nationals held the minority shares. Small private enterprises were also encouraged. Most, if not all, work organizations in Zambia are run bureaucratically.

The new industries that had been set up soon ran into trouble. Despite initial success and massive injection of capital, the overall performance of many of these organizations proved disappointing. Productivity was low and many of these companies continued to rely on government subsidies to meet operating costs. There were many reasons advanced for the mediocre performance of these companies. One among the chief reasons appeared to be problems associated with motivation. It had been noted that productivity in many organizations in the country including government ministries and departments was low. Many political leaders including the president began to complain that many Zambians lacked the will to work; that it appeared managers and workers were for some reason unwilling to exert themselves. The leaders called for increased productivity and urged stronger disciplinary measures against "inefficient" and

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[1]Zambia is the world's third largest exporter of copper.

"lazy" employees. Meanwhile the president threatened to quit if the people did not stop being lazy - a threat which he has repeated more recently (see quotation on page 3). In spite of this clear evidence that the work motivation concepts developed in industrialized countries appear to have failed in Zambian work organizations, no systematic inquiry to understand, build and apply newer work motivation concepts (if necessary) has been conducted in Zambia to date.

In the last few years, copper prices plummeted to an all time low on world markets and forced closure of some copper mines in some countries including the United States. Consequently Zambia was earning little and in some cases incurring considerable loss on copper sales. The loss of copper revenue plus the military and economic demands of being a frontline state[2] in the Southern African war of liberation made the situation worse. And with the continuous rise in oil prices and the resultant increase this has on prices of goods that Zambia imports from abroad, the fiscal situation in the country lately has been bordering on chaos. The country now appears to be experiencing a severe recession if not a depression and has had to borrow heavily from the international community. Inflation and unemployment especially among the less educated, unskilled people is fairly high.

Under these conditions, it is plausible to expect that many employees in Zambia would be concerned with job security and the pay

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[2]Since its independence in 1964, Zambia has actively supported the liberation struggles of the people of Angola, Mozambique, Zimbabwe (until they gained independence), and Namibia. Consequently, Zambia has had to face and fight off attacks from Portuguese, Rhodesian (before Angola, Mozambique, and Zimbabwe were liberated) and South African troops.

they earn. The concern for job security would perhaps be greater for the less educated unskilled workers as these people can be easily replaced. If these suppositions are true, then it can be expected that these concerns about job security and pay might be reflected in the motivation of many Zambian workers. One can also expect, if these assumptions are correct, that concern for job security will be more pronounced in the motivation of the less educated and relatively unskilled workers.

People:

Although Zambia is a multi-racial society, over 90% of the population consists of indigeneous African peoples. There are about 72 distinct dialects but these can be grouped into four main linguistic groups. The extended family system is widely practiced throughout the country. However, urbanization and the money economy has considerably weakened the larger family unit so that the extended family tends to be strong only in the rural parts of the country. The people are generally friendly and, like most African peoples in the central African region, stress good interpersonal relations with friends, neighbors, workmates and other associates. This stems, I believe, from the way most traditional African societies were organized and this same phenomenon has been noted by anthropologists (Gulliver, 1965; Sangree, 1965; p. 175). In those societies, it would be unheard of, for example, that a man did not know and had not interacted with his neighbors. Hence in today's Zambian society, good interpersonal relations with supervisors, subordinates and co-workers are considered by many to be an essential condition for an effective work atmosphere. Another factor, therefore, that can be

expected to affect work motivation - and this is in line with empirical evidence from cross-cultural studies reviewed earlier (see page 24) is interpersonal relationships.

Before ending this outline on Zambia, an important point to note for purposes of the research being proposed is the level of education in the workforce. Zambia like most developing nations has a fair degree of illiteracy or semi-illiteracy on its workforce. A very high percentage of workers in low level, manual, unskilled or even some semi-unskilled jobs can be considered functionally non-literate, at least in English even though English is the country's official language. Therefore, a study of work motivation in Zambia that will include these employees cannot use methodologies that require reading or some other school-attained skills.

Hypotheses

An exploratory study (like the one proposed here) with no a priori theoretical framework(s) and using content analysis is not appropriate for testing hypotheses. This is particularly true when means of validating inferences from the content analyzed data are undetermined or unavailable (Crano and Brewer, 1973, chap. 9). Because of this limitation this study is not intended to pursue rigorous psychometric testing of inferences from the data to be collected. Such testing will be the subject of another follow-up study. Nevertheless, the research studies reviewed earlier and the information presented about Zambia and its people allows speculation on some possible factors expected to influence (increase or reduce) work motivation in Zambia. The list of factors presented below is not meant to be exhaustive; it is believed that the a

posteriori approach to be used in content analysis (see section on data analysis, p. 48) will enable the data themself to generate the factors determining work motivation.

List of Possible Factors:

1. Interpersonal relations with supervisors, co-workers, subordinates
2. Pay (raises, bonuses, etc)
3. Job security or steadiness of employment
4. Type of leadership
5. Amount of education
6. Age
7. Length of employment in work organizations, length of urban residence
8. Occupational level
9. Equity issues
10. Corruption-related issues (nepotism, tribalism, favoritism)

IV. METHODOLOGICAL PROBLEMS

Researchers of work motivation in the industrialized countries have developed various techniques for assessing task motivation. But as many of these techniques and the mediums they rely on are more suited to conditions in the industrialized countries, they often are unsuitable for use in developing countries for a number of reasons. In this section, I argue that the critical incident technique and content analysis are the most appropriate tools to explore work motivation in Zambia.

Possible Techniques

Questionnaires:

Perhaps the most commonly used method to measure motivation has been the written questionnaire. This relatively inexpensive device has a number of problems. Questionnaires being perceptual measures may not tap the construct being investigated. Besides, these instruments are subject to faking, and various response sets. When these instruments are to be used in cultures other than those in which they were developed, their validity is highly suspect. Further, questionnaires, especially those using abstract scales, may prove cognitively too demanding on subjects. Finally questionnaires assume a literacy level not possessed by considerable segments of populations in developing nations. For these reasons written questionnaires were considered unsuitable for the proposed study.

Behavioral Measures:

In some laboratory and field studies, motivation has been operationalized as the amount of performance, effort and/or time invested into a given activity. Such behavioral measures while preferable are plagued with difficulties in determining what component of the exhibited behavior is due to motivation, ability or some personality trait. And in any case such techniques of assessing motivation are more useful when we work with some theory to predict or explain the behavior. In a study like the one being proposed where the investigation is not within the framework of a given motivation theory, the behavioral observation technique is inappropriate.

Projective Techniques:

Another method used in motivational research is the projective technique. For example, the McClelland (1961) study, referred to earlier, examined contents of stories or responses to ambiguous photographs to determine the achievement motive within a culture. A serious problem with projective methods are their doubtful psychometric qualities (Anastasi, 1976). Even if this problem were ignored, McClelland's approach is unsuitable because it is theory specific. Besides, using the technique across cultures, as McClelland did, assumes people from various cultures project in similar a manner and to about the same degree - a risky assumption.

More Useful Techniques

Interview:

The interview is another technique that has been used to assess motivation. Unlike the written questionnaires, this method is usable even with people with low or no reading skills at all. In the hands of a skilled person, the interview (structured or unstructured) can yield information that questionnaires or mere observation would never be able to get. Problems with interviews include their high cost and the possibility that bad rapport developed in the interview and poor probing would affect the quality and hinder the collecting of information. In addition, unreliability (disagreement among interviewers) is a problem with the interview.

Critical Incidents:

The critical incident technique developed by Flanagan (1954) has, among other things, been used to assess work motivation. The

method consists of collecting anecdotes of job behaviors which describe especially good or especially bad job performance. The anecdotes (obtained through observation of job performance, or interview with employees) describe events leading to the incidents, exactly what the individual did that was so effective or ineffective, the perceived consequences of the behavior, and extent to which consequences were within the employee's control. The critical incidents approach has major advantages: since respondents are asked about objective events, data collected from this method tends to be more accurate than that from techniques relying on subjective or purely evaluative descriptions. This technique can be used with people with no formal education at all, and, like the interview, it is not culture specific as would a questionnaire developed in a given culture.

In the present study, the critical incident technique is most ideal. It is a less obtrusive way to collect information on what determines productive and non-productive behavior than direct questions like "what motivates you to work very hard?" And because some of the workers to be sampled lack the education and sophistication to deal with the abstract scales of written questionnaires that characterize most research on task motivation, the critical incident technique (using the interview form) is the compelling alternative for this study.

The Critical Incident Technique and Work Motivation: The Herzberg Study:

A successful use of the critical incident technique was made by Herzberg, Mausner, and Smyderman (1966) to study work motivation. In what has become one of the most cited and controversial studies

on work motivation and job satisfaction, Herzberg et al., interviewed 200 accountants and engineers and asked them to: "Think of a time when you felt exceptionally good or exceptionally bad about your job...and tell me what happened," (p. 141). This request to subjects was followed with fourteen questions that sought to establish why and how the situation occurred, its consequences and significance to the subject. The process was repeated for both good and bad critical incidents. Using the semi-structured interview procedure, the whats, whys, hows and wherefores of the critical events were collected. Herzberg et al. then performed a content analysis of their data. The results yielded two groups of factors that constitute the Herzberg two-factor theory (see review of motivation theories, p. 10).

Herzberg's methodology and resultant two-factor theory has received severe criticism as was pointed out earlier. Critics of his methodology accused him of equating a satisfying event to a motivating event by asking respondents to talk about good or bad feelings about their job and inferring performance motivation from resulting data (Vroom, 1966). Another criticism is that since coding was not entirely determined by the coding system but required interpretation by raters, bias was introduced into the data during content analysis. Criticisms against the theory include a challenge of the claim that factors causing motivation and those responsible for dissatisfaction are independent. Further, the theory has tended to receive little support from studies using different methodologies - thus it is method bound, (see House and Wigdor, 1967).

But as earlier indicated, Herzberg's theory appears to have some validity. The two-factor theory together with need hierarchy are

the cornerstone of modern job design/redesign theory (Hackman and Lawler, 1971; Hackman, 1977) which has received reasonable support in field settings. If the weaknesses noted in the methodology used in the Herzberg study can be remedied, then the Herzberg methodology is most appropriate for the study proposed here. This is because Herzberg's is an empirical approach which is perfect for an exploratory study and suits conditions in the population to be investigated - no reading skills among some members of the sample.

Thus, the critical incident technique (with a semi-structured interview was used to learn about events, conditions and processes surrounding productive and non-productive behavior at work. The methodological modifications to deal with weaknesses in Herzberg's approach will be discussed in the method section, which is presented next.

V. METHOD

Materials:

A semi-structured interview with questionnaire items based on those used by Flanagan (1954, p. 342) and Herzberg et al. (1966, p. 141-142) was used in this study. Recall that Herzberg et al. were criticized for equating feelings of satisfaction to motivation in that they asked interviewees to recall "a time when you felt exceptionally good...about your job" and inferred motivation from the data so collected. To deal with this problem, interviewers in the present research asked subjects to "think of a time when you worked exceptionally hard" (in the good incident) or "...a time when you put in exceptionally little effort into your job" (in the bad incident). Such a statement deals with motivation since exceptionally

hard work and little effort can be assumed to be associated with high and low motivation respectively. Some items used by Herzberg et al., for example the one asking subjects to rate their feelings on an abstract 21 point scale, were dropped from the scale and new ones considered suitable were added.

Further, all questions in the instrument, all of them open-ended type, were subjected to extensive pretesting on a sample of 40 Zambian employees before they were adopted in the final questionnaire used in the study. Questions that appeared incomprehensible, vague, or could not induce meaningful responses according to pilot study results were changed, reworded or simply dropped from the final set of questions included in the questionnaire.[3] And because a considerable portion of the Zambian workforce (mainly employees in low level jobs) cannot read, write or speak English, the questionnaire was translated into two Zambian languages (Bemba and Nyanja) using the back-translation technique. Bemba and Nyanja were chosen because they are spoken in the major industrialized and urbanized regions of the country where the data were collected. The Bemba and Nyanja (questionnaire) versions were also pretested before the main study began.

Subjects:

The sample consisted of 341 Zambian employees who included 65 managers/senior administrators, 53 technical personnel, 72 secretaries, stenographers and typists, 67 clerks and 84 semi-skilled and

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[3] A copy of the questions finally adopted for the study (after pretesting) are presented in Appendix 1. A short statment used by the researchers to introduce himself to the interviewee is also included.

general workers including laborers. The five occupational groups were chosen because they represent categories of employees that occur in many organizations. The employees were drawn from the three main types of organizations existing in Zambia, viz: government, partially government and partially private, and private. Of the 341 employees, 55 were drawn from government departments, 241 from partially government and partially private-owned companies and 45 were from private firms. Ninety-four of the employees were female and the remaining 247 were male. The sample's age ranged from 19 to 67 with a mean of 31.5 and both mode and median of 30 years. Amount of education among the subjects ranged from 0 to 20 years with a mean of 11.3 years. The mode and median were 13 and 12 years, respectively. Years of urban residence in the sample varied from 2 to 50 years with a mean of 21.2. The mode was 23 and the median was 22 years.

Inclusion of an employee in the sample was determined by organizational officials (the employee's manager or supervisor). Typically the organizational official designated by the chief executive or senior management was asked to provide the researchers with a specified number of employees in each of the five occupational groups included in the sample. The researchers emphasized to this person (manager or supervisor) who actually picked the employees to be as representative as possible. That is, the manager or supervisor was not to pick only the best or worst employees in his or her work unit. Rather, it was to be ensured that employees picked reflected the variations in work behavior existing in the unit or department.

Organizations:

A number of private, government and quasi-government organizations in the Lusaka and Copperbelt (the most industrialized areas) regions of the country were contacted. The purpose of the study--to investigate motivation and identify factors that could be manipulated to enhance motivation and productivity--was explained to the chief executive, senior administrator or person of similar standing in the organization. Participation of the organization in the project was requested; inclusion in the sample depended on whether the organization agreed to participate or not.

Of thirteen organizations approached, two--a private company and a government department--declined to participate. The eleven that agreed to participate included two government departments, a city government, three private companies, a university, and four partially government and partially private-owned firms. The eleven organizations represented varying industries or business activities that included brewing, mining, oil refining, heavy engineering, occupational and educational assessment, furniture manufacturing, legal practice, health administration, housing administration, heavy equipment importing and distributing, among others.

Data Collection:

Before the data collection and even pretesting of the questionnaires started, a research assistant was trained. The assistant, a senior year public administration student at the University of Zambia, was given background concerning the aim of the study and information on how to conduct a semi-structured interview. He was instructed on establishing rapport, asking questions and ensuring

they were understood, active listening, use of the probe to clarify some responses and to keep the conversation on track, and how to encourage subjects through neutral comments like "I see," "Uh-hh," "O.K.," etc. (see the Survey Research Center's Interviewer's Manual for 1976). Procedures for fast note-taking were also discussed and practiced. Role-playing was used to ensure that techniques were correctly and properly learned.

After training was completed and questionnaires readied through pretesting and contacts with organizations had been made, data collection began. Each interviewer sat in a separate office. When a subject entered, the interviewer introduced himself and went on to establish rapport and explain the purpose of the study. The interviewer, who did not ask for the employee's name, emphasized the confidential nature of the interview and assured the subject that nothing said in the interview would be told to, or discussed with, anyone other than the researchers. The subject was also told that participation in the interview was voluntary and could be withdrawn any time. (The introductory statement used in the interviews is shown together with the interview questions in Appendix 1). If subjects expressed unwillingness to participate, they were not interviewed . Only three persons showed reluctance to participate and were subsequently excluded from the study.

Other Information:

After subjects described and answered questions on critical incidents, the researchers asked them to state conditions, circumstances, or events that they thought would make them (subjects) work as hard and as little as in the critical incidents narrated. This

information was recorded. Following this, subjects were requested to supply some personal information: Their sex, age, job position, education, number of years with company or department, number of years in paid employment and number of years of urban residence. In addition, names of the companies and departments and their location were recorded.

Data Analysis

Content Analysis:

There are two main approaches to content analysis (Lasswell, 1949): One approach is an a priori approach in which classification of content is based on a previously thought out schematic system. The factors proposed earlier (see page 38) would, for example, allow building of a priori classification system or list of factors expected to emerge from the data. The other approach is a posteriori in that its schematic system is based on the data themselves. This approach requires preliminary examination of the data and developing categories into which all the data are then classified.

In this study, the a posteriori classification was used; that is the category system was based on the data themselves. This is important in light of my earlier criticism of cross-cultural research in motivation which studies cultures with a priori conceptual schema developed on different cultures. The researcher studied all the interview schedules and developed a classification system based on themes or thought units expressed in the interviews. (A theme or thought unit is a "single assertion about some subject," Holsti, 1968, p. 647). The researcher and his assistant then independently examined the 341 interviews and extracted (coded) themes from each interview.

Intercoder agreement was found to be 87% over 3025 codings made by each coder. Examination of disagreements between the coders showed that 95% of these disagreements were a result of omission of a theme by one or the other of the coders. The coders then jointly reexamined the interviews where disagreement had occurred. If it was found that one coder had made a mistake of omission in coding a given them, such theme was included in the final list of themes. If, on the other hand, one coder included a theme which on joint examination could not be attributed to the interview being examined, such theme was omitted from the final list of themes. This inclusion or omission of themes on joint examination of interview data did not affect the value of intercoder reliability which had been computed prior to this reexamination.

Each theme was typed on a card. The cards were then sorted independently by four judges (all of whom were Zambian) including the researcher and three other people not connected with the study. The four judges sorted the cards into a classification system earlier developed by the researcher following preliminary examination of all interview schedules. On the basis of the four judges' sorting, 23 factors or motives were identified from the good critical incidents and 27 from the bad incidents (see Table 1, p. 55).

Since interviewers also collected information on subjects' own subjective impressions of what would make "me work as hard or more than" or "as little or less than" during the incident (good and bad critical incidents respectively), each judge made four sortings: two for factors associated with hard work and two factors inhibiting hard work.

Frequency counts were performed for each of the factors extracted from the content analysis. The frequency for each factor represents the number of people within the 341 sample who cited that factor as having encouraged them to work very hard (in the case of motivating factors) or to work very little (in the case of demotivating factors). These frequencies, therefore, serve as a measure of the strength of each factor to encourage or discourage hard work among employees.

Validity Check Questionnaire:

To check the validity of the factors identified in the content analysis, the motivating and demotivating factors were themselves used as items to construct a questionnaire. To be included in the questionnaire each motivation factor had to have a minimum frequency of 9 (i.e., be mentioned by at least 9 people or approximately 2.6% of the 341 sample). This was done to ensure a reasonably short questionnaire in the hope of avoiding deterioration in response quality often encountered when respondents fatigue and lose interest because of very long questionnaires. Twelve factors encouraging effort at work and 17 discouraging hard work met this criterion and were mixed randomly to form a 29-item three-point scale instrument. The scale simply asked respondents to indicate "basing on your own work experience (what has happened to you in the past),...which of the listed factors would encourage you to work very hard, which would make you do very little work, and which you are not sure would encourage or discourage you to work hard" (see Appendix 2). This questionnaire was administered to a sample of 80 employees not included in the original study. These employees were drawn from eight different organizations representing private, government and

quasi-government firms. As in the original sample, the 80 consisted of managers/senior administrators, technical, secretarial, and clerical personnel, and general workers.

Scoring:

An item which a respondent indicated encouraged hard work was scored three points, one said to discourage work was scored one point, and a "not sure" item received two points. With this scoring, an item that received a mean greater than two after summing and averaging across all respondents is considered motivating. The closer the mean to a value of three, the greater the unanimity among respondents that the item (factor) encourages hard work. Consequently, the size of the mean can be considered a measure of the motivating strength of the items. Another indication of unanimity of subjects' responses to a given time, is the size of the standard deviation of the item. A smaller standard deviation would signify greater unanimity of responses than a larger one. Thus, the standard deviation can also be looked at as an indicator of motivating strength of items.

Similarly, items (factors) having a mean score less than two after summing up and averaging across respondents are considered to discourage hard work. The closer the mean value to one, and the smaller the size of the standard deviation, the greater the agreement among respondents that the item discourages working hard and therefore, the greater the magnitude of such factors or items as a demotivator. Items with a mean value of two on summing and averaging across the sample are those where respondents were unsure as to whether such factors encouraged or discouraged them to expend extra work effort; such items may be considered neutral.

Convergence of the factors from the content analysis and questionnaire study is considered established if items or factors from good critical incidents show mean values greater than two and closer to three, while items or factors from bad critical incidents show mean values lower than two and closer to one. In addition, the strength of the factors as motivators or demotivators as shown by the frequency counts in the content analysis could be confirmed by correlating these frequency counts with the means of the same items following analysis of questionnaire responses. Consequently, the means of questionnaire items were correlated with the frequency counts.

Formation of Clusters:

The researcher and two other persons (two American advanced doctoral students of psychology) with a sound background and understanding of motivation theories and constructs independently clustered the 23 motivators first and then the 27 demotivators. The three judges separately examined the 23 motivators and then sorted them into categories or clusters. Items were grouped together if (in the judge's opinion) they expressed themes that were related on a content, conceptual and theoretical basis. The judges also defined each cluster of items so formed by giving it a name they thought most descriptive of the factor. This process was repeated for the 27 demotivating items. Mean K coefficient reliabilities [proportion of agreement after chance agreement is removed, Cohen (1960)] across the three judges was found to be .85 for motivators and .82 for demotivators.

Correlational Analysis:

For every subject, each motivational variable received a score of one (if that subject mentioned the factor in question) or zero (if the subject did not mention that factor). This was done for both the 23 items derived from content analysis of good critical incidents and the 27 from bad incidents (Table 1). Biographic and other work-related variables (e.g., length of employment, length of urban residence, etc.) collected on each subject were correlated with each other and with the dichotomously scored motivational variables. In addition, the frequencies of motivational variables derived from critical incidents were correlated with the frequencies of the same variables derived from subjects' responses when directly asked to state what they thought would motivate or demotivate them. This was separately done for motivating and demotivating items.

In order to confirm the content and conceptually-based factoring of motivational variables by the three judges, it would be desirable to statistically factor (Nunnally, 1967; Kim, 1975) the motivating and demotivating items. However, factor analysis is inappropriate for these data for two reasons. First, factor analysis assumes interval data (Stevens, 1946; Kim and Moeller, 1978) which we do not have in this study since the dichotomized variables, scored on the basis of whether a subject mentioned a given variable or not, are nominal. Second, the phi coefficients that would be computed among the variables (and on which the analysis would be performed) become smaller and smaller as p values depart from 0.5 (Nunnally, 1978; Kim and Moeller, 1978). Since, as can be seen from Table 1, the mention

frequencies of items vary from 69% to 0.6%, intercorrelations among items would likely be very low and this would affect the factor analysis.

VI. RESULTS

The motivational variables identified from content analysis of good and bad critical incidents are presented in Table 1 (p. 55). Frequencies for bad critical incidents are somewhat lower than those for good critical incidents. A possible explanation for this might be the one suggested by Vroom and Maier (1961) that incumbents are objective in describing their effective but not their ineffective behavior. Both groups of factors are listed in order of magnitude (measured by how frequently a given item was mentioned as coded from critical incidents). That is, a given motivational variable had a higher frequency than those following it. Since frequency of mention may be seen as an indication of the magnitude of a variable's impact on work motivation, then the effect of the variables on motivation increases with proximity to the top of the list.

From Table 1, five of the a priori motivational factors are confirmed by these data. The five are interpersonal relations, pay, job security, equity, and corruption-related issues. (Results relating to the other a priori factors are presented on pages 68-72). It can be seen from Table 1 that Herzberg's assertion that motivators and hygienes are independent has been contradicted since some variables (or rather, absence of them) appear as demotivators. For example, work that is interesting, challenging, important and has variety is motivating while work that is boring and unimportant impairs motivation.

Table 1

Motivational variables identified through content analysis of interview data. Variables are presented in order of decreasing frequency and percentage of mention (N = 341).

Bad critical incident (demotivating) items	Frequency	%
1. Tribalism, favoritism, racial discrimination, nepotism, corruption in promotions, pay raises, work assignments, grievances, etc.	97	28.0
2. Bad interpersonal relations with superiors, co-workers, subordinates	88	26.0
3. Pay (low, lack of increment, bonuses, merit raises, incentives, reached pay ceiling or reduction in pay)	82	24.0
4. Company, superiors, co-workers do not care for or listen to problems or welfare of employees	58	17.0
5. Death/sickness in family	54	15.8
6. Promotion (lack of)	50	14.7
7. Lack of recognition (no praise, nor compliments)	46	13.5
8. Lazy and/or incompetent superiors, co-workers	44	12.9
9. Feeling or mood (just don't feel like working)	41	12.0
10. Supervision (close or laissez faire)	40	11.7
11. Fringe benefits (lack of housing, transport, loans, etc.)	34	10.0
12. Demotion and/or disciplinary action	24	7.0
13. Poorly defined work duties	23	6.7
14. Domestic quarrels or other problems	22	6.5
15. Lack of chance to learn more about job and/or further training	20	5.9
16. Failure to keep promises by company	19	5.6
17. Job security threatened	18	5.3
18. Bad company policies and procedures	13	3.8
19. Work itself (boring, unimportant, uninteresting)	12	3.5
20. Too much work or too little work	10	2.9
21. Unjust blame or suspicion	7	2.1
22. Drinking (hangover)	6	1.7
23. Hunger	5	1.5
24. Shortages of essential commodities in shops	3	0.9
25. Physical work conditions (dangerous, unfavorable)	3	0.9
26. Interference (political or by superior) in work	2	0.6
27. Lack of rotation of work	2	0.6

Good critical incident (motivating) items	Frequency	%
1. A lot of work or difficult work (not too much or too difficult)	234	68.6
2. Work itself (interesting, challenging, important, has variety)	150	44.0
3. Work that is urgent and/or has completion deadline	136	40.0
4. Recognition (to show capability, praise from others, to meet others' expectations)	68	20.0
5. Promotion or chance for promotion	56	16.0
6. Chance to learn more about job and/or further training	51	15.0
7. Pay (increment, bonus, incentive, merit raise) or possibility of pay increment	50	14.7
8. Job security (to ensure being employed)	33	10.0
9. Achievement (work that allows achievement and proving oneself)	28	8.0
10. Responsibility	24	7.0
11. Good interpersonal relations with co-workers, superiors and subordinates	10	3.0
12. Trust and confidence shown by superiors, co-workers	8	2.3
13. Autonomy	7	2.1
14. Supervision (consultative, participative, not laissez faire)	6	1.7
15. Supportive-encouraging family, friends	5	1.5
16. Physical conditions (work layout, equipment)	5	1.5
17. Hardworking superiors, co-workers	4	1.2
18. Feedback (corrective)	4	1.2
19. Fringe benefits (accommodation, cafeteria, transport, loans, pay advances)	3	0.9
20. Fairness in promotion, work assignment, pay raises, handling complaints, etc.	3	0.9
21. Proper placement - doing work I was trained for	3	0.9
22. Understanding company, superiors, co-workers who listen to my personal problems	2	0.6
23. Company keeping promises	2	0.6

Table 2 shows means and standard deviations of items extracted from good and bad critical incidents which were included in the validity check questionnaire.

As can be seen from Table 2, all factors extracted from good critical incidents have means greater than two and close to three. In contrast, items from bad critical incidents have means that are less than two and close to one, except for item 17, which had a mean higher than two. The fact that item 17 is double-barrelled perhaps explains this unexpected result. These questionnaire results lend strong support to the factors identified from the content analysis in that all good incident-related factors have been associated with hard work and those from bad incidents have been identified by an independent sample of employees as tending to discourage hard work.

Examination of the standard deviations shows the values generally become smaller as item means get closer and closer to three for motivating items while the same is true as means get closer and closer to one for demotivating items. This shows response unanimity among the 80 employees who completed the questionnaire, that a particular item is motivating or demotivating and provides an index of motivational strength of the items.

Another confirmation of the content analyzed - results, particularly the ranking of the motivational variables by frequency of mention to indicate strength of their impact on motivation, is shown by the data in Tables 3a and 3b (p. 58).

Correlations between frequency counts for the motivational factors (items) identified from the content analysis and the means of the same items computed from the validity check questionnaire are positive

Table 2

Table showing mean and standard deviation scores of motivational factors (items) included in the validity check questionnaire. Items tending to increase work motivation (from good critical incidents) are on the right and those tending to reduce motivation (from bad incidents) are on the left.

(N = 80)

	ITEMS	MEANS(S.D.)
1.	Superiors or bosses practice tribalism, racial discrimination, favouratism, nepotism or corruption.	1.438(.570)
2.	There are bad relations or misunderstandings between yourself, your superiors or bosses and your workmates.	1.275(.573)
3.	Pay is low and increments, bonuses, merit increments and other financial incentives are unlikely.	1.250(.516)
4.	Company or employer does not care or listen to personal problems.	1.375(.624)
5.	There is sickness or death in the family or you have other personal or domestic problems.	1.387(.584)
6.	Promotions or chances for promotions are very unlikely.	1.425(.652)
7.	There is no praise, appreciation, compliment or recognition for hard work.	1.337(.615)
8.	Your superiors or bosses are lazy and incompetent.	1.862(.823)
9.	You just do not feel like working.	1.563(.633)
10.	Your boss/supervisor supervises closely (breathes on your neck) or hardly looks at your work at all.	1.512(.711)
11.	There are little or no fringe benefits (housing, loans, etc.).	1.425(.671)
12.	You are demoted, suspended or subjected to disciplinary actions.	1.612(.755)
13.	Work is not properly explained or that you have no specific job. You are continuously moved from job to job.	1.412(.610)
14.	There is little chance to learn more on your job or little chance for further training.	1.462(.728)
15.	The company or superiors do not keep their promises which were made to you.	1.438(.653)
16.	Job security is threatened (you are likely to be sacked)	1.622(.795)
17.	You have been assigned either too much or too little work.	2.387(.665)

	ITEMS	MEANS (S.D.)
1.	There is a lot of work to be done.	2.938(.244)
2.	The work is interesting, important, challenging or has variety	2.975(.157)
3.	The work is urgent and/or must be completed within a deadline	2.837(.489)
4.	There is chance to be complimented, appreciated praised or recognized for working hard.	2.797(.49)
5.	You are promoted or that there are chances for promotion.	2.875(.369)
6.	There is chance to learn more about the job or there is chance for further training.	2.962(.249)
7.	Pay is reasonable and there is possibility for increment, bonus, merit increment or financial incentive.	2.862(.381)
8.	Job is secure (you are not likely to be sacked).	2.625(.603)
9.	There is possibility for achievement on your job.	2.887(.177)
10.	The job allows you responsibility and chance to make decisions.	2.837(.489)
11.	There are good relations, understanding between yourself, bosses and your workmates.	2.737(.611)
12.	The job offers fringe benefits (company housing, loans transport to work, salary advances).	2.762(.579)

Tables 3 a & b

Pearson product moment correlations between frequency of mention of motivational variables from the content analysis and means of the same variables included in the validity questionnaire.

Table 3a

Correlations for Motivating Items (from good critical incidents)
N=12

	Questionnaire Item Means	Item Mention Frequency	Item Mention Frequency (Subjective)+
Questionnaire Item Means	1.00		
Item Mention Frequency	.534*	1.00	
Item Mention Frequency (Subjective)	.329	.394	1.00

*p< .025

Table 3b

Correlations for Demotivating Items (from bad critical incidents)
N=17

	Questionnaire Item Means	Item Mention Frequency	Item Mention Frequency (Subjective)
Questionnaire Item Means	1.00		
++Item Mention Frequency	- .504*	1.00	
++Item Mention Frequency (Subjective)	- .267	.841**	1.00

*p< .019
**p< .001

\+ Item Mention Frequency (Subjective) is the number of times an item was mentioned in the case where subjects were asked to state conditions, circumstances or events they thought would make them work as hard or as little as they did in the critical incidents.

++ The two negative correlations are positive because questionnaire items were scored such that mean values decreased as demotivating magnitudes increased whereas item mention frequencies increased with demotivating magnitude.

and highly significant: A positive relationship ($r = .534$, $p < .025$) has been found between frequency of mention for the 12 motivating items (from good incidents) and means of the same items included in the questionnaire. The correlation between frequencies for the twelve items - in instances where subjects were directly asked what would make them work as hard as they had in the critical incidents - and the mean scores from the questionnaire is positive but nonsignificant ($r = .329$, $p > .149$). It is interesting to note here (Table 3a) that the relationship between what motivated employees as coded from good critical incidents (item mention frequency) and what people said would motivate them (item mention frequency - subjective) when asked directly, is positive but nonsignificant) $r = .394$, $p > .103$).

Support for ordering of demotivating items (from bad incidents) by frequency of mention is also strong - Table 3b - as shown by the significant positive relationship between questionnaire item means and item mention frequency ($r = .504$, $p < .019$). And, as was the case with the motivating items, a positive but nonsignificant correlation ($r = .267$, $p > .15$) is obtained between validity check questionnaire item means and frequency of mention of items in cases where subjects were directly asked to report conditions or events that would discourage them from working hard. In contrast to the finding with motivating factors, however, a high positive correlation ($r = .841$, $p < .001$) was found between frequency of mention of an item or factor in the bad critical incidents and the same item's frequency of mention in the more subjective situations where subjects responded to direct questions about what they thought would discourage hard work on their part. These results seem to suggest that employees'

ideas and perceptions of what would demotivate them is much more in agreement with what actually discourages them from working hard as arrived at from critical incidents. But their perceptions and thoughts about what encourages them to work hard and what makes them do so as derived from critical incidents is less in agreement.

These data show strong convergences between results (factors) from content analysis and those from the questionnaire study. The strong positive correlations between frequencies of items from the content analysis and questionnaire item means (subjects' agreement and unanimity that a given item encouraged or discouraged them to work hard) suggest that ranking items by frequency to roughly indicate the items' effect on motivation is justifiable.

Structure of the Clusters Identified

Factoring of the motivators and demotivators by the three judges yielded five motivating and six demotivating factors. The judges believed, however (looking at the names they used to describe the factors and from discussion with them after they each had completed factoring), that five of the six demotivating factors were inverses of the five motivating clusters. Each judge had arrived at this decision because five of the six demotivating clusters represented the absence or inadequacy of conditions defined by the motivating factors. Hence, instead of five motivating and six demotivating clusters, only five factors with potential to both enhance and impair motivation were defined. The sixth of the demotivating factors (Personal Problems) is the only cluster identified which appears to have only a negative impact on motivation. These results, presented in more detail below, are summarized in Figure 1.

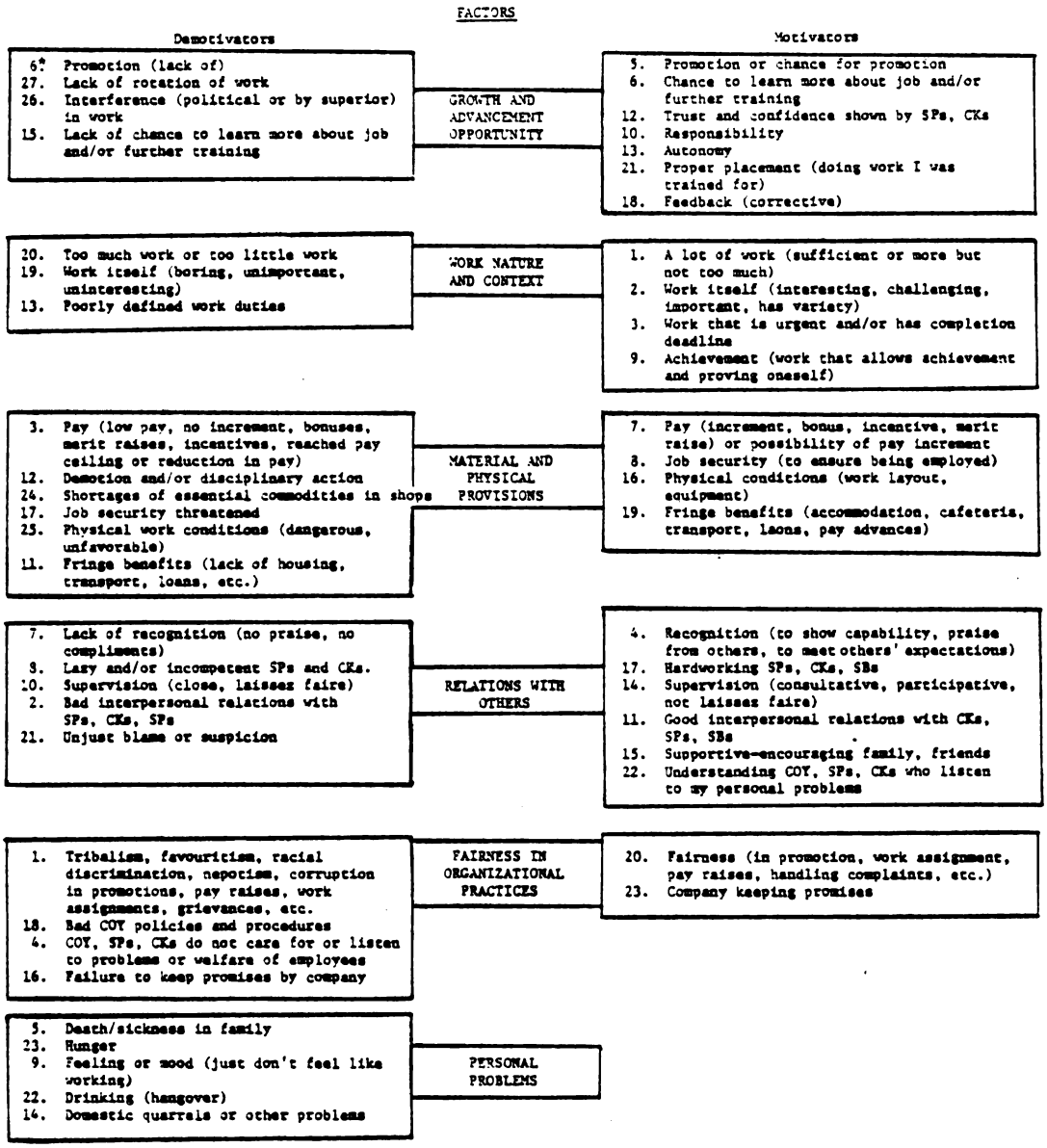

Figure 1. Diagrammatic representation of the six factors identified showing the motivating and demotivating items clustered under each factor.

*Item numbers denote the ranking of item by frequency of mention (Table 1).

NOTE: Abbreviations used in table stand for: SPs - Supervisors, SBs - Subordinates, COY - Company or Organization and CKs - Coworkers or colleagues.

Motivating Factors (from Good Critical Incidents):

The first factor identified from the data has been defined as Growth and Advancement Opportunity. Existence of growth and advancement opportunity - a very frequently mentioned motivating condition - is ensured when possibilities for promotion are present; chance to learn more about the job and/or further training is available, trust and confidence is shown by one's superiors and co-workers, and when job conditions allow responsibility and autonomy. Other items grouped under the factor are proper placement in a job with regard to one's skills and previous training, and corrective feedback received on the job.

The second cluster relates to the nature, amount and difficulty of the work and how work is assigned. This factor has been defined as Work Nature and Context. Items that were clustered to form this factor are amount or difficulty level of work assigned (a lot of work - sufficient or more but not too much), urgently required work or one with a completion deadline, work that is interesting, challenging, is perceived important and has variety, and work that allows a sense of achievement and opportunity to prove oneself. Work or assignments that provide these dimensions are highly motivating since these dimensions were very frequently cited by subjects as leading to hard work in the critical incidents.

The third factor defined from the data relates to the amount of Material and Physical Provisions present in the job situation. This factor, like the first two, has potential to increase and reduce work motivation. Items making up this material and physical provisions factor to pay (reasonable pay, increments, bonuses, incentives, merit

raises), job security, fringe benefits, and favorable work conditions. Presence of the dimensions named tends to encourage hard work.

Factor four is Relations With Others. Items that judges grouped together to form this factor - those mentioned as tending to encourage hard work - are recognition or praise one gets from superiors, co-workers or subordinates, good supervision, degree to which superiors and coworkers are hard working and competent, good interpersonal relations, supportive family and friends, and degree of understanding and attention to employee problems shown by the company.

The fifth factor is Fairness in Organizational Practices. Only two items are grouped under this factor. These are fairness in promotions, awarding of pay raises, work assignment, and other personnel practices, and company keeping promises to employees. These two items that comprise Fairness in Organizational Practices were mentioned as motivators by very few persons in the sample (Table 1). On the other hand, these same items were mentioned by many more people as sources of demotivation. Results from analysis of demotivating factors are presented next.

Demotivating Factors (from Bad Critical Incidents):

Clustering of demotivating items by the judges identified six factors. Of the six factors, five were found to represent an inverse of the five identified from analysis of good critical incidents.

The first cluster obtained from this analysis groups together six items. These are unfavorable pay (low pay, lack of increments, bonuses, incentives or merit raises), threatened job security, lack of, or inadequate fringe benefits, and unfavorable or dangerous physical work conditions. In addition, demotion or disciplinary action against

an employee and shortages of essential food commodities in shops were grouped under this factor. Since this grouping represents an absence or inadequacy of the conditions, provisions or materials defined under the factor Material and Physical Provisions (identified from analysis of good critical incidents), it is an inverse of that factor. Consequently, this cluster of demotivating items represents the demotivating component of material and physical provisions. Thus, the factor Material and Physical Provisions is capable of both increasing and impairing motivation.

Two of the items under material and physical provisions (demotion and disciplinary action, and shortages of food commodities in shops) do not appear to have any positive effect on motivation - i.e., none of the subjects indicated that absence of demotions and presence of commodities in shops increase work motivation.

The factor Material and Physical Provisions appears to be more associated with deflating than increasing motivation to work since items tending to reduce motivation rank higher (were cited as demotivators more often than they were as motivators) than those encouraging hard work (Table 1).

The second demotivating cluster identified deals with the nature and difficulty level of the work. Items clustered to form this factor are too much or too little (too difficult or too easy) work assignments, poorly defined work, and work that is boring and perceived to be unimportant. As was the case with material and physical provisions, this grouping of items constitutes the inverse of a factor derived from analysis of good critical incident items - namely Work Nature and Context. Hence Work Nature and Context has potential to enhance

and also impair motivation. Unlike Material and Physical Provision, however, Work Nature and Context appears to have greater positive than negative association with work behavior since items constituting the positive component of the factor rank much higher than demotivating items.

Of the items clustering on Work Nature and Context, two (work that is urgent or has completion deadlines, and work that allows a sense of achievement and chance to prove oneself) were not associated with the demotivating component of the factor. These two items, work that is not urgent or work that does not provide a sense of achievement and opportunity to prove oneself, were not mentioned by subjects as discouraging hard work.

Factor three pertains to the degree of fairness or unfairness in organizational practices. Items grouped under this factor are tribalism, racial discrmination, favoritism, nepotism, or corruption in the job situation, failure to keep company promises to employees, bad company policies and practices, and unwillingness by the company to listen to employee problems. When these conditions are present, work motivation is very negatively affected. Like the other factors discussed so far, this cluster appears to be the negative component of the factor Fairness in Organizational Practices defined from analysis of motivating items.

The degree of Fairness in Organizational Practices appears to have only a minor positive effect on motivation. This is because the two items (fairness in promotions, awarding pay raises, work assignments and other personnel activities, and company keeping promises to employees) that constitute the motivating component of the factor

were very infrequently mentioned as sources of motivation in the critical incidents. Lack of fairness in organizational practices, however, was quoted much more frequently as a demotivator as is evident from the ranking of the demotivating items composing this factor (Table 1). In fact, one of the items clustered on this factor (tribalism, racial discrimination, favoritism, and corruption at work) is the most frequently cited demotivator.

The fourth factor identified from analysis of items from bad critical incidents again seems to represent an inverse of a motivating cluster defined earlier as Growth and Advancement Opportunity. The four items judges clustered to constitute inadequacy or absence of growth and advancement are lack of chance for more learning or training on the job, absence of job rotation, lack of chance for promotion, and interference in one's work by superiors or outsiders (e.g., politicians). Thus, presence of Growth and Advancement Opportunity can encourage hard work while absence of growth and advancement chances can discourage hard work. Rankings (Table 1) of the items grouped under the positive and negative components of Growth and Advancement Opportunity suggest that subjects associated this factor more with increasing than deflating motivation. This is so because motivating items generally rank higher than demotivating items.

Another cluster identified from analysis of demotivating items pertains to an employee's relations with other organizational members. If unfavorable relations are present, motivation to work is negatively affected. Items grouped under this factor are lack of recognition by superiors and coworkers, bad supervision, laziness and incompetence among superiors and coworkers, bad interpersonal relations and unjustly

blaming or suspecting an employee for something he or she did not do. This cluster of items, like the others discussed earlier,.is the demotivating component of the factor Relations with Others which was defined from analysis of motivating items. Consequently, Relations with Others can increase and also decrease motivation. Items clustered on the demotivating part of this factor generally rank higher than the corresponding motivating items (Table 1). Thus, it seems that the factor Relations with Others is more often associated with impairing than enhancing work motivation.

The sixth and final factor relates to non job-related employee problems. Items clustered around this variable are an employee's mood or feeling of not working, domestic problems or quarrels, hangovers resulting from alcohol consumption, hunger, and death or sickness in the family. This factor has been defined as Personal Problems. Unlike the other five, Personal Problems seems to have power to only impair but not increase work motivation since there were no motivating items to constitute an inverse of this factor.

Except for the last cluster (Personal Problems) these results generally contradict Herzberg's position that factors affecting motivation positively are independent from those affecting it negatively. What has been observed however, is that most factors have either a greater positive than negative or a greater negative than positive impact on work motivation. There are, however, a few items which were either clustered only on the motivating component or the demotivating component of a factor.

Relationships with Biographic and Other Variables:

The final set of results from the analyses deal with relationships among biographic and work related variables (age, education, length of employment, etc.) and between these variables and the various motivational items (factors) derived from the content analysis. Only some of these results are presented below; a fuller list of correlations are shown in Appendix 3. All correlations being reported in this section are based on the entire sample that was interviewed, that is N = 341.

One variable which was hypothesized a priori as likely to influence work motivation is an employee's level of education. The data show a meaningful pattern of correlations between level of education and other work related variables and between education and motivational factors: amount of education correlated negatively with age ($r = -.27$, $p < .001$). This result is to be expected in many developing nations where older persons tend to have less education because of the fewer educational opportunities that existed in those countries until very recently. Education yielded negative correlations with both the number of years spent with an organization ($r = -.24$, $p < .001$), and number of years in paid employment ($r = -.31$, $p < .001$) showing that more educated employees who also tend to be younger have not been long with their organization and have been in paid employment for a shorter time.

Of importance are the correlations between education and frequency of mentioning pay, job security and fringe benefits as motivators. More educated employees in the sample mentioned pay as a motivator fewer times than less educated employees ($r = -.18$, $p < .001$). This

relationship holds true for job security ($r = -.18$, $p < .001$) and fringe benefits ($r = -.13$, $p < .008$). More educated employees however, mentioned recognition ($r = .22$, $p < .001$), responsibility ($r = .19$, $p < .001$), chance for learning and training ($r = .15$, $p < .003$), and interesting, important and challenging work that has variety ($r = .30$, $p < .001$) as motivating them more often than their less educated counterparts said was the case. On the other hand, boring unimportant jobs were mentioned as sources of demotivation more often by more educated than less educated employees ($r = .11$, $p < .045$). These same people (more educated) cited bad physical working conditions and death or sickness in the family as demotivating them fewer times than was mentioned by the less educated employees ($r = -.15$, $p < .01$, and $r = -.17$, $p < .003$, respectively).

Another variable that was proposed a priori as likely to have impact on work motivation is an employee's occupational level. Although occupational level in this study was operationalized only through a rough ordinal scale (ranging from manager, technician, secretary, clerk to general worker), correlations between this variable and others provide meaningful data. A positive relationship between occupational level and education ($r = .68$, $p < .001$) shows that people in higher occupations tend to have more education. Another set of findings are that employees in higher occupations mentioned recognition ($r = .23$, $p < .001$), chance for learning and training ($r = .15$, $p < .003$), achievement ($r = .11$, $p < .021$), responsibility ($r = .17$, $p < .001$), and interesting and important, challenging work that has variety ($r = .25$, $p < .001$) as sources of motivation more often than employees in lower occupations. Employees

in higher occupations also cited lack of chances for learning and training to be a source of demotivation more often than their counterparts in lower occupations ($r = .12$, $p < .03$). Another notable result is that employees in high occupations mentioned hunger as a factor discouraging them from working hard less often than employees in lower occupations ($r = -.20$, $p < .001$). And, finally, as was the case with education level, high occupation level employees referred to death or sickness in the family and bad physical working conditions as sources of demotivation less often than did lower occupational level workers ($r = -.22$, $p < .001$) and ($r = -.11$, $p < .04$) respectively.

Age is yet another variable that was proposed to have impact on work motivation. Results show that age is very highly related to number of years in paid employment, ($r = .84$, $p < .001$) and to number of years with an organization ($r = .52$, $p < .001$) suggesting, as can be expected, that older persons have been working longer and tend to stay longer with an organization than younger employees. Older employees have also lived in urban areas longer than younger employees ($r = .30$, $p < .001$). Of more interest perhaps, are the correlations between age and motivational variables. Age correlated negatively with frequency of mentioning chance to learn more or have further training ($r = -.19$, $p < .001$) and with chance for promotion ($r = -.11$, $p < .03$). This means that older employees in the sample cited chance for more learning or training and promotion opportunities as sources of motivation less often than younger employees. Lastly, the relationship between age and frequency of mentioning urgently required work or work that has a completion deadline is low but negative

($r = -.11$, $p < .02$) suggesting that older employees in the sample are less motivated by urgent assignments than are younger employees.

Closely related to age (as shown by the high correlations between these two variables ($r = .84$, $p < .001$) is the number of years of paid employment. Years of paid employment shows a low negative correlation ($r = -.17$, $p < .001$) with frequency of mentioning chance for more learning or training, and with mentioning urgently required work as motivating ($r = -.10$, $p < ,029$). This indicates that employees with more years in paid employment were less likely to cite urgently required tasks and chance for more learning and training as motivating than employees with fewer years in paid work. These results are very likely to be confounded by age.

The last of the factors proposed a priori to have influence on motivation in this study was length of urban residence. This variable shows low positive but significant correlation with recognition ($r = .13$, $p < .009$) and achievement ($r = .12$, $p < .01$). This result suggests that people who lived in urban areas larger were more likely to mention achievement and recognition as tending to encourage them to work hard than would individuals who lived shorter periods of time in cities. Urban residence is also positively related to occupational level ($r = .12$, $p < .025$) indicating people who lived in urban areas longer are more likely to hold higher occupations than those with shorter residence in urban areas. Surprisingly, however, years of urban residence showed a negative relationship with mention of urgently required work as motivating ($r = -.11$, $p < .026$). But as years of urban residence was positively related to age ($r = .30$, $p < .001$) this finding may be confounded by the effect of age. Other relationships

are that years of urban residence is associated positively with both number of years with an organization ($r = .29$, $p < .001$) and with total years in paid employment ($r = .32$, $p < .001$).

One more variable investigated - though not one of the a priori factors - is sex. Sex correlated with years of paid employment ($r = .29$, $p < .001$) meaning that women have been in paid employment for fewer years than men. Women cited a lot of work or difficult work as motivating more often than men ($r = -.13$, $p < .01$) and spoke of being discouraged to work hard when too little or too much work was assigned more often than did men. On the other hand, women showed less concern for job security ($r = .18$, $p < .001$) and were less likely to be demotivated by unfavorable pay ($r = .16$, $p < .008$) than men. In addition, women were less discouraged from working hard by hunger and tribalism or favoritism than were men ($r = .10$, $p < .05$) and ($r = .16$, $p < .006$) respectively. But women reported loss of work motivation due to a "just don't feel like working" mood more frequently than men did ($r = -.13$, $p < .02$).

VII. DISCUSSION

At the beginning of this paper, I emphasized the complexity of human work motivation (pp. 4, 21) and rejected an approach or design that limited this research to studying work behavior within the conceptual framework of one or two established models of motivation. Results just presented clearly demonstrate the correctness of this view in that the data have yielded a formulation of work motivation based on six factors that support and accommodate some elements of goal-setting, two-factor, equity and achievement-need theories,

while new elements - unique to the situation and people studied - are also in evidence. At the same time, results pertaining to demographic and other work-related variables show support for the presence of a hierarchy of needs which affects employee work behavior. The findings from this research are particularly strong because of the confirmation of the critical incident interview data by means of a written questionnaire study.

In the discussion that follows, theoretical and practical implications of the factors identified and how their effects on motivation may be moderated by biographic and work-related variables are discussed, and a model of work motivation is proposed. The last part of the section explores in more detail the findings pertaining to biographic and other work-related variables.

In reading the practical recommendations contained in this section, the reader is cautioned that some recommendations may appear somewhat overstated. This is especially so in those cases where the author believed his inferences to be supported by previous research findings. In addition, since the recommendations are meant for practicing managers who are often looking for practical guidelines, the author considers specific recommendations to be more useful than vague and hesitant generalizations.

The Factors

Clustering of items independently by three judges yielded six factors, five of which can both enhance and impair motivation. In this section, the motivating segment of the factor is examined before the demotivating part; that is, factors will be discussed as

motivators then as demotivators. In this discussion, the term factor refers to a cluster or group of items while item refers to a single motivator or demotivator.

Growth and Advancement Opportunity:

The first factor from our analysis is Growth and Advancement Opportunity. The motivating segment of this factor, composed of six motivating items, is the degree to which job conditions allow individuals to advance and develop their skills and capabilities and thus experience some psychological growth. Results show that such conditions exist when chances for promotion, and opportunities for more learning and training are present on the job, employees are given responsibility, autonomy, and trust and confidence in their abilities is shown by superiors and colleagues, and when employees are properly placed in jobs with respect to their skills and previous training. Finally, growth and advancement opportunities on the job are enhanced when corrective feedback is given to employees.

The emergence of a growth and advancement factor in this study reaffirms what has already been found or implied in a number of studies and writings on motivation pertaining to human needs. Growth and advancement may be considered related or equivalent to self-actualization (Maslow, 1954), growth (Alderfer, 1969, 1972), higher order needs (Lawler, 1973), and advancement (Herzberg, 1966). It ought to be noted that two of the motivational items (chance for promotion and chance for further training or learning) which make up the growth and advancement factor were associated more with motivation (ranked higher) than pay, concern for job security and fringe benefits. This result like that of Orpen and Ndlovu (1977) cited

earlier (p. 10), casts further doubt on the view held by some cross-cultural researchers that concern for pay and other material and physical provisions will generally be more predominant among employees in less developed and less wealthy countries of the world. Instead of this global and rather simplified explanation, it is more useful to look at differences within nations. Such an approach as will be seen later in this paper proves more explanatory.

Growth and advancement opportunity, or rather lack of growth and advancement, has a depressing effect on employee work motivation. Four motivational items were clustered on the demotivating component of growth and advancement factor. These are lack of promotion, lack of rotation on the job, absence of chances for more learning or training on the job and interference in one's work by superiors or outsiders such as politicians. That absence of growth and advancement chances reduce work motivation is not surprising; for if employees perceive little chance for promotion, few or no opportunities for learning and further training and no likelihood of job rotation, they will come to believe that upward mobility and attendant higher rewards are nonexistent. Such employees will feel discouraged, can be expected to be dissatisfied and may seek better opportunities elsewhere if these are available. Further, interference in one's work by superiors or outsiders causes frustration when decisions are reversed and creates fear of making important decisions; as a result, chances for growth are reduced.

The motivational items grouped to form the lack of growth and advancement factor generally ranked much lower (have lower mention frequency) than their counterparts constituting presence of growth

and advancement opportunities. Consequently, it must be concluded that growth and advancement opportunity was linked more with enhancing than impairing work behavior by the subjects.

The effects of growth and advancement opportunity on motivation appear to be moderated by an employee's level of education and occupational level. Correlations between biographic and other work-related variables on the one hand, and motivational variables on the other showed that more educated organizational members holding higher level positions were motivated more by growth and advancement opportunity than were less educated employees occupying lower level jobs (see pp. 98-102 for detailed discussion). Consistent with Maslow (1954), employees in lower level jobs (low paying jobs) and who generally have less education showed more concern for material and physical provisions.

For the practicing manager, supervisor or consultant, it is important to set up work conditions that foster growth and advancement. Where possible, jobs should be designed such that there are several promotional steps to which employees keep aspiring. In addition, further training and learning on the job and the use of job rotation where possible, are not only desirable in terms of imparting skills leading to more effective work behavior, but because increased motivation results as well and which in turn leads to better performance. Caution must be exercised, however, in introducing training programs that raise employee expectations of promotion opportunities that may not exist as this would likely impair work behavior. In such circumstances, careful explanation of what employees can expect following training is important from the outset. Finally, allowing deserving

employees more responsibility and autonomy and showing trust and confidence in them is as important for employee development as it is for increasing motivation to work. Therefore, increasing job width and depth where possible is an important way to encourage hard work from organizational members.

In light of the moderating effects of level of education and job level, it is vital to ensure that growth and advancement opportunities are not imposed on organizational members who have no desire for such opportunities. For this type of employees - especially those in low level jobs and with relatively little education - other techniques such as providing extrinsic rewards like financial incentives, praise and benefits may be more effective in encouraging hard work. In fact, other studies have shown that differences in growth need strength (Hackman and Lawler, 1971), subcultural differences (Blood and Hulin, 1967), and differences in knowledge and skill levels (Hackman, 1977) affect employee reactions to enriched jobs or those providing some degree of growth and advancement. In line with practical suggestions outlined above, recommendations from these studies have been that extrinsic sources of motivation be used for employees who do not respond positively to enriched jobs.

Work Nature and Context:

The second factor is task-related and pertains to the amount and/or difficulty level and urgency of the task, the degree to which it is interesting, challenging, has variety and is perceived important, and the degree to which such a task allows employees a sense of achievement. One of the items composing this task-related factor is the amount and/or degree of difficulty of the assigned task.

Subjects reported exerting a lot of effort when a greater amount of work or more difficult was was assigned. This is in line with Locke's (1968) view that more difficult goals result in greater effort. Many subjects in this study reported, however, that when too much work was assigned or quality demanded was too high, they would put much less effort into their work. This result supports one of the main criticisms of Locke's formulation that when goals are too difficult, little commitment to attaining goals will be present (Dobmeyer, 1970).

Another motivational item making up Work Nature and Context is urgency of the work assigned. Employees reported working harder when an assigned task was urgent or had a completion deadline. Again this result is confirmatory of the goal-setting position that specific goals elicit more effort than nonspecific ones. The support for goal-setting is particularly strong in that the two motivational elements (a lot of work or difficult work, and work that is urgent or has a completion deadline) are the highest ranking (most frequently cited) motivators and the rankings were confirmed by data collected on a different sample using a different method.

Two other motivational items grouped under task nature are first, work that is seen as important, is interesting, challenging and has variety and second, work that allows employees a sense of achievement. That these two items emerged as motivators is in line with Herzberg's results since he also found them to be associated with high motivation.

Summing up, results show that the nature of the tasks and the way they are assigned greatly determine reaction to such tasks. Namely, tasks that are interesting, have variety and are considered important and are perceived to be challenging because a lot of work or high

performance standards are demanded, are highly motivating. Further work assignments which have completion deadlines, and which allow employees a sense of achievement, induce greater work effort.

It is important to note that Work Nature and Context is the most frequently mentioned motivating factor: Three of the motivational items constituting this factor ranked higher than all other items including those pertaining to growth and advancement and to pay, as will be seen later.

In direct contradiction of Herzberg's claim of independence of motivators and "hygienes," Work Nature and Context does not only affect employee work motivation positively, but can influence it negatively as well. Work Nature and Context becomes a demotivating factor when either too much or too little work is assigned, and when such work is boring and perceived unimportant, and when the work is poorly defined. The items clustered under this factor do not appear to be as frequently associated with work motivation as do their counterparts grouped under the motivating segment of the factor. That is, the three items (too much or too little work, boring unimportant work and poorly defined work duties) have very low rankings compared to the very highly ranked motivating items.

The data therefore suggest that Work Nature and Context has what might be termed as a differential positive-negative impact on motivation; i.e., presence of motivating elements of Work Nature and Context are cited as increasing motivation more than absence of these elements are said to reduce motivation.

It must be pointed out here that some subjects reported expending very little effort when assigned too much work while others reported

the same behavior when assigned too little work. It would appear that there is some variable, not explored in this research, which influences employee motivation differentially when too much or too little work is assigned. This explains the ambiguous result from the questionnaire data where the item too much or too little work showed a mean value ($\overline{X}$ = 2.38, σ = .67) higher than expected from demotivating items. In fact, the mean score of 2.38 of this item is ambiguous in that it was higher than expected for demotivators yet lower than the means of motivating items. Further studies are necessary to identify variables which will explain employee types and conditions or circumstances which determine when assigning too little or too much work, impairs motivation.

Like growth and advancement opportunity, the effects of work nature and context on work behavior are moderated by job level and the educational level of organizational members. Results from this study (pp. 68-70) showed more educated employees in high level occupations showed greater concern for tasks that are challenging, interesting, have variety and are perceived important than did less educated low occupation group employees (please see pages 98-102 for detailed discussion of these results).

Practical implications of these findings are that managers, supervisors or anyone overseeing the work of others should use a management by objectives approach. And even when this may not be feasible, an attempt should be made to assign subordinates specific goals that are more difficult (though not too difficult) than normal. In addition, attempts aimed at making tasks more interesting, increasing job width, depth and task significance are highly desirable

especially for employees with high levels of education. Further, work duties must be clearly defined and explained, and if it should become necessary to move employees from job to job, accompanying explanations and instructions should be available.

Material and Physical Provisions:

The third and next cluster is material and physical provisions. This factor, like the other two (Work Nature and Context, Growth and Advancement) just discussed has the potential to increase and reduce employee work motivation. As a motivator, material and physical provisions group together the motivational items of pay, concern for job security, fringe benefits and favorable physical work environment. Results show that employees who receive reasonable levels of pay or see possibilities for a pay raise, a merit increment, a bonus or other type of financial incentive will put more effort into their work. In addition, the perception that steadiness of employment or job security depends on hard work results in greater work effort than if no such perception exists. The providing of fringe benefits such as subsidized housing,[4] transport to and from work, company loans, subsidized lunch cafeteria etc., - though not so frequently mentioned (low ranked) - were reported to have a positive effect on motivation. Finally, favorable physical conditions such as good work layout, equipment, temperature, lighting also have a positive effect on work behavior.

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[4]Most employers in Zambia provide housing (house or apartment) at subsidized rent for employees, or pay those who cannot be housed a housing allowance. Generally, higher level employees are more likely to be housed.

This finding that pay and job security can increase motivation again directly contradicts Herzberg's results that these two items have no positive impact whatsoever on work motivation. As results have shown from the present study, both whole clusters (factors) and single motivation elements can both increase and reduce motivation; only a small number of items have completely conformed to Herzberg's motivator - hygiene independence proposition.

That pay and job security could increase motivation in our sample was expected in this study. But what is surprising about these results is that pay and job security were not mentioned even more frequently (did not rank higher as motivators considering the current unfavorable economic conditions in Zambia (see p. 35).

The lack or inadequacy of material and physical provisions, as stated earlier, can strongly impair employee work motivation. As a demotivator, material and physical provisions is constituted by six motivational elements: The first of these is pay - this could be low pay, lack of increments, bonuses, merit raises or other financial incentives. Pay was associated more often with depressing than increasing motivation; pay ranked third in frequency as a demotivator, but ranked seventh as a motivator.

The second item grouped under lack of material and physical provisions is absence or inadequacy of fringe benefits. Again it is notable that fringe benefits ranked more highly as a demotivator than it did as a motivator. The greater effect of this variable is most likely a result of inequity resolution when employees compare themselves to friends and family members working for organizations that provide fringe benefits. Another motivational item included

in this factor is disciplinary action especially demotion taken against employees. Demotion or other disciplinary action results in strong resentment and attempts to get even by the punished whose willingness to work becomes inevitably impaired. Other items clustered under lack of material and physical provisions are nonassured or threatened job security, shortages of food commodities in shops, and unfavorable or dangerous physical work conditions.

Although material and physical provisions can increase and reduce motivation, it is important to note that this factor appears to have greater negative than positive impact on work behavior. Rankings (Table 1) of motivational items grouped under this factor show that those tending to deflate motivation generally were cited more often than those tending to increase motivation. This observation can be seen as support for Herzberg, especially since pay (a so-called hygiene factor) ranked higher as a demotivator than it did as a motivator.

An important finding here is the result that shortages of food commodities in shops had a negative impact on work motivation, especially of women. This demonstrates the importance of understanding conditions that surround a given job situation to fully comprehend work behavior even though such conditions may seem unrelated to the job. Whereas commodity shortages may not be an important factor in some countries, they may affect work behavior considerably in others. This point may be important in understanding work behavior in countries where chronic food and commodity shortages are common occurrences.

Material and physical provisions appear to be particularly more important for employees with fewer years of education and who occupy

low level jobs, which generally pay very low in Zambia. Results from this study indicate that this group of employees cited (as coded from critical incidents) provision of reasonable pay, fringe benefits, favorable physical work environment and assurance of job security as encouraging hard work more times than the more educated high occupational group employees (pp. 68-70). Consequently, the practical recommendations below take on added significance for lower occupational group organizational members who generally tend to have less education.

On the basis of the factor Material and Physical Provisions, it is important for managers and organizations to pay their employees reasonable wages - of course depending upon the organization's financial standing - and design their pay structures in such a way that employees can always look forward to a raise, bonus, or some type of financial incentive if they work hard. Organizational policies must also be designed and communicated in a manner that employees fully understand that steadiness of employment is contingent on hard work. On the other hand, unnecessary threats to employee job security are highly undesirable as they tend to discourage hard work. Regarding fringe benefits, which many organizations may find hard to provide, it is advisable to provide some if the organization can afford them. Another recommendation here is that punishment such as demotion, loss of pay, suspension, etc., is undesirable because of its negative impact on work behavior. Those who have been punished may often react by restricting effort for periods that may vary from minutes to hours or even weeks. Consequently, it is advisable that punishment only be resorted to in cases where less negative means of achieving desired results are ineffective or unavailable.

Relations with Others:

The fourth factor has been defined as relations with others. Results show that the relations an employee has with others will lead to increased motivation when there is recognition of hard work by supervisors and coworkers, when supervisors and colleagues are hard working and display competence, when supervision received is not too close yet not laissez-faire and when good interpersonal relations exist in the job situation. Other motivational items constituting relations with others are support received from family and friends and degree of understanding of employee problems shown by the company.

It may surprise some to see recognition and supervision grouped under relations with others. But it should be remembered that the act of recognizing effort (by praise, reward, etc.) will most likely improve relations between the giver and receiver of the recognition. Similarly the type of supervision given does strongly influence a subordinate's feelings and reactions towards the supervisor and this often determines interpersonal relations.

The emergence of a relations with others factor as a motivator confirms one of the a priori propositions and shows the importance attached to amicable person to person interactions in developing nations, especially in Africa and Zambia in particular. Cross-cultural literature and anthropological writings (reviewed earlier, pp. 25, 36) and the author's own observations and experience in Zambia stressed the greater importance of interpersonal relations in developing nations compared to the more industrialized nations. It was pointed out that good relationships with others were not only

important in people's daily lives but assumed almost, if not, the same significance in work settings.

In conformity with other factors identified so far, relations with others can both encourage hard work and discourage it. But, like material and physical provisions, relations with others was more frequently mentioned as deflating than increasing work motivation when unfavorable relations with others exist. Unfavorable relations with others are present when superiors and coworkers show little or no recognition for hard work, bad interpersonal relations (quarrels, mistrust) exist in the work group, superiors and coworkers are lazy and/or incompetent, supervision is either too close or too loose, employees are wrongly blamed or suspected for errors they did not commit and, finally, when superiors or outsiders (e.g., politicians) interfere in an individual's work.

The motivational items that constitute unfavorable relations with others tend to be more highly ranked than these same items when they cluster under favorable relations with others. Thus, it must be concluded that the factor relations with others appears to be more associated with reducing than increasing work motivation. As was the case with material and physical provisions, this result may be considered somewhat supportive of Herzberg who contended that interpersonal relations was a hygiene and not a motivator. But, as the overall results of this study have shown, Herzberg overstated his findings by insisting that these factors had nothing to do with increasing motivation.

These results reemphasize the importance of maintaining good interpersonal relations among work groups. Supervisors, while

ensuring that tasks are effectively completed, must attempt to create an atmosphere that promotes good understanding and relations within and between work groups. As far as supervision goes, managers and supervisors should allow their subordinates some degree of independence once tasks are explained and assigned and only occasionally check on progress. For this reason, the need for managers and supervisors to know the abilities and skills of their subordinates and difficulty levels of assigned tasks is of utmost importance as such knowledge enables them to adjust their supervision (more close or more loose) accordingly. In addition, organizations should encourage employees to show recognition for hard work to subordinates, colleagues and even superiors, by whatever means may be available, as this promotes good relations with others. Finally, a note of caution here is that hard working employees should, where possible, not be put together with lazy and incompetent peers. This is because informal group pressure (Roethlisberger, 1941), social contagion (Milgram and Toch, 1969) and issues of inequity resolution (Adams, 1965) would tend to induce hard working persons to restrict effort on the job.

Fairness in Organizational Practices:

Another factor that shows greater potential to reduce than increase work motivation is the amount of actual and perceived fairness/unfairness present in organizational practices. Fairness in organizational practices is constituted by two items, viz: (1) fairness in personnel decisions such as promotions, awarding of pay raises, transfers, handling of complaints, etc., and (2) degree to which the organization and its officers fulfill promises made to the employees. Although fairness in organizational practices was mentioned as having

a positive effect on work behavior, relatively few organizational members cited this factor as a source of their work motivation in the critical incidents.

In contrast to fairness, unfair organizational practices were very frequently cited as discouraging hard work. With only four items grouped under it, unfair organizational practices is one of the most frequently mentioned demotivators identified in this study. The first of the motivational elements constituting the converse of fairness is the practice of tribalism (ethnicity), favoritism, racial discrimination, nepotism, or corruption in personnel decisions on promotions, work assignments, transfers, handling employee grievances and other personnel activities. Tribalism, favoritism, nepotism, racial discrimination (usually by expatriate employees), and corruption, which have been strongly condemned by national leaders in Zambia, were reported by subjects to elicit the strongest negative reaction from employees who believed themselves to be victims of such practices (this item ranked highest). Reactions ranged from quitting a job if another could be found, withdrawal (abseentism, tardiness) to restricting of effort for varying periods of time. Clearly this is an attempt to resolve inequity experienced by those who believed themselves wronged. This finding confirms two factors that were hypothesized to be important for motivation in Zambia, namely corruption (tribalism, favoritism, etc.) and equity related issues.

The second of the items making up unfair practices is the failure by organizations to keep promises made to employees. These could have been promises for further training, promotion, pay raises,

transfer to a more desirable position, among others. A third item in this cluster which has even greater mention frequency than failure to fulfill promises is failure or unwillingness by the organization to listen to or seem to care about employee problems and welfare. Employee problems may vary but very often include important personal matters (e.g., death or sickness in family, housing, legal or domestic problems and many others) needing quick attention. Often the employer may be asked for advice or some form of assistance. If such requests are not attended to or perceived by the employee to be unjustly disposed of, work motivation is greatly impaired. This is because the paternalistic[5] practices of most organizations in Zambia have led employees to expect employers to listen to and show concern for their (employees) problems and welfare.

The fourth motivational item grouped under unfair organizational practices is bad company policies and procedures. Policies and procedures were said to be bad if they were vague and not uniformally applied in various cases or when such policies and procedures are so long and cumbersome that employees have to wait a long time for complaints, problems, or cases to be resolved.

On the basis of these results the need for executives, managers and supervisors to base their various employee-related decisions (job placement, promotions, pay raises, transfers, demotions, complaint resolution, etc.) on merit and relevant work-related

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[5]Most organizations in Zambia provide housing or pay employees a housing allowance, some provide transport to and from work. Some even help make funeral arrangements and donate money towards funeral expenses for employees and in some cases for members of the employees' immediate family, among other things.

information cannot be overstressed. In addition, the organization should emphasize to its officers that no promises should be made to subordinates unless what was being promised was certain to occur; and that in the unlikely event that the superior or organization could not keep the promise to the worker, adequate explanation should be made. Further, all those in managerial and supervisory positions should, where possible, make employees feel that the organization and its officers care for, and are interested in, their well being and welfare. To avoid workers feeling that they are being subjected to discrimination, favoritism, nepotism or corrupt practices, organizations should have clear cut policies pertaining to issues affecting employee well-being. Such policies must be clearly communicated to all workers. Finally, organizational policies, apart from being clear, should be accompanied by relatively short and simple procedures (where possible) which allow quick feedback on action or progress made towards resolving employee problems, complaints or grievances. A case review or follow up procedure open to employees is also highly desirable.

Personal Problems:

Finally, the last factor defined from the data is Personal Problems. Items judges clustered under personal problems include the occurrence of death or sickness in a worker's family, domestic quarrels or problems, and weakness due to hunger resulting from inability to afford food because money had run out especially towards the end of the once-a-month pay period. Two other items are weakness caused by hangovers as a consequence of alcohol consumption, and an employee's mood, feeling or disposition of not working - "I don't

feel like working" - or "I am not in a working mood." This last item (feeling or mood) was reported to occur more frequently on Mondays, pay days and on days preceeding major national holidays such as Independence Day, Christmas, or New Year's Day.

This personal problems factor differs from the other five factors discussed so far in that personal problems' impact on motivation appears to be totally negative: Presence of personal problems was reported to impair motivation, but subjects did not report increased motivation when personal problems were absent. It is surprising that absence of personal problems did not emerge as a motivating factor. One explanation for this might be that this study, which collected two incidents per subject, did not sample a sufficient number of critical incidents. That is, if more incidents had been collected, lack of personal problems would have surfaced as a motivator. This explanation, however, is weak, considering the reasonably large sample size of 341. Perhaps a more plausible explanation might be that absence of personal problems have such low positive effect on motivation that incidents in which they were a factor were not considered critical by subjects. One could even take this reasoning further and state that perhaps absence of personal problems is simply not an important determinant of work motivation. This explanation seems more appealing especially as all items constituting the personal problems factor pertain mostly to events or conditions outside the work situation. Nevertheless, only further research, perhaps involving more critical incidents per subject, might resolve this issue.

The observation that the cluster personal problems has a negative but no positive effect on work behavior does, however, provide support

for the two-factor theory's motivator - hygiene independence hypothesis (Herzberg et al., 1966). The fact that personal problems that appear non work-related showed impact on motivation also confirms a previous finding. That is, support is given to results from the interview program of the Hawthorne studies and ideas strongly embraced by the Human Relations movement which held that conditions and events from a worker's family, social networks and activities outside the work situation can and do have effects on work behavior.

Decline in work motivation as a result of personal problems, especially in cases of death and sickness in the family appears less pronounced for employees possessing high levels of education and holding high occupational positions. Correlational results, discussed on pages 98-102, showed less educated organizational members who occupy low level jobs more frequently indicated (in their critical incidents) death and sickness in the family as adversely affecting their work behavior than did more educated and higher occupation job holders.

Personal problems present a difficult hurdle for managers and practitioners since organizations have little control over the personal lives of their employees outside the work situation. One course of action for organizations may be to provide some type of counseling to employees whose work behavior is seriously impaired by personal problems. And from the results of this study, another approach is for organizations to minimize loss in performance emanating from employees "not being in the working mood" or "just not feeling like working" by setting difficult tasks with specific completion deadlines on those days when employees appear most

susceptible to this feeling. In addition, paying employees bi-monthly rather than monthly might, perhaps, prove useful in that employees will reach another pay period before they get too broke.

A Differential Positive-Negative Impact Model of Work Motivation:

The results and preceeding discussion lead to proposing a theory of work motivation based on six factors: Work Nature and Context, Growth and Advancement Opportunity, Material and Physical Provisions, Relations with Others, Fairness in Organizational Practices, and Personal Problems. The theory accommodates, within its factors, elements from goal setting, equity, need for achievement, and the two-factor approaches as is clear from the discussion of the factor structure.

Each of the six factors represents a continuum ranging from presence (abundance) through a neutral point to very little or none of the motivational elements clustered under the particular factor. The middle position on the continuum (the neutral point) is a spot where very little positive or negative motivational elements are present as perceived by the employee in the situation. The neutral point is not a spot of zero or no motivation. There is a degree of motivation present but this degree is much lower than is the case when motivating factors are present. On the other hand, level of motivation at the neutral point is higher than in cases where demotivating factors are present. That is, motivation is greater at any point to the right and lower at points to the left of the neutral position - see Figure 2 (p. 96). In practice, however, the situation

is more complicated in that work situations nearly always provide a mix of various levels of motivating and demotivating factors at the same time.

For the factor personal problems, one end of the continuum (presence of personal problems) depresses motivation while the other end (absence of personal problems) of the continuum, the neutral point, seems to have little or no effect on motivation. But, as pointed our earlier, further research is needed to establish conclusively whether this factor has totally no positive effect on motivation. Such research must involve collecting several critical incidents per subject to increase chances of absence of personal problems (if they are important at all) being included in some. If analysis of such incidents fail to show absence of personal problems as a motivator, then it will be concluded that this factor has no positive impact on employee motivation.

For the factors Growth and Advancement Opportunity, Work Nature and Context, Material and Physical Provisions, Relations with Others, and Fairness in Organizational Practices, one end of the continuum represents high motivation while the other is associated with high demotivation. For example, presence of material and physical provisions is motivating while absence or even inadequacy of material physical provisions tends to impair motivation. However, none of the factors apears to enhance and impair motivation with equal strength: Examination of the magnitude of each item's effect on motivation [measured by frequency of mention rankings (Table 1) which were confirmed by results of the questionnaire study] show that motivating items clustering on a given factor generally ranked higher

than demotivating items within that factor or vice versa. For instance, items grouped under the motivating components of the factors Work Nature and Context and Growth and Advancement Opportunity have generally higher ranks than those constituting the demotivating part of these factors. But, for the factors Fairness in Organizational Practices, Material and Physical Provisions, and Relations with Others, the opposite is true.

Thus, while the five factors have potential to impact both positively and negatively on motivation, they show a tendency to influence work behavior with greater magnitude in one direction than the other. That is, each factor has either more power to increase than decrease employee motivation or more power to decrease it. Hence the factors have what can be said to be a differential positive-negative impact on motivation. Figure 2 presents a diagramatic representation of the differential positive-negative impact model of work motivation.

It is important to point out that high motivation, as represented on the motivation continuum, is the desire and willingness to exert effort to attain the organizational goals of putting forth effective work behavior. At the opposite end of the continuum (high demotivation), on the other hand, motivation to achieve organizational goals is so low that, in fact, negative work behavior may be in evidence. Such activities as sabotage, pilferage of materials and tools, influencing coworkers to reduce effort, among others, may be considered as indication of very high demotivation. But because organizations act to stop such behavior through dismissals and other disciplinary actions, such negative work behavior may not be readily observed. Besides as

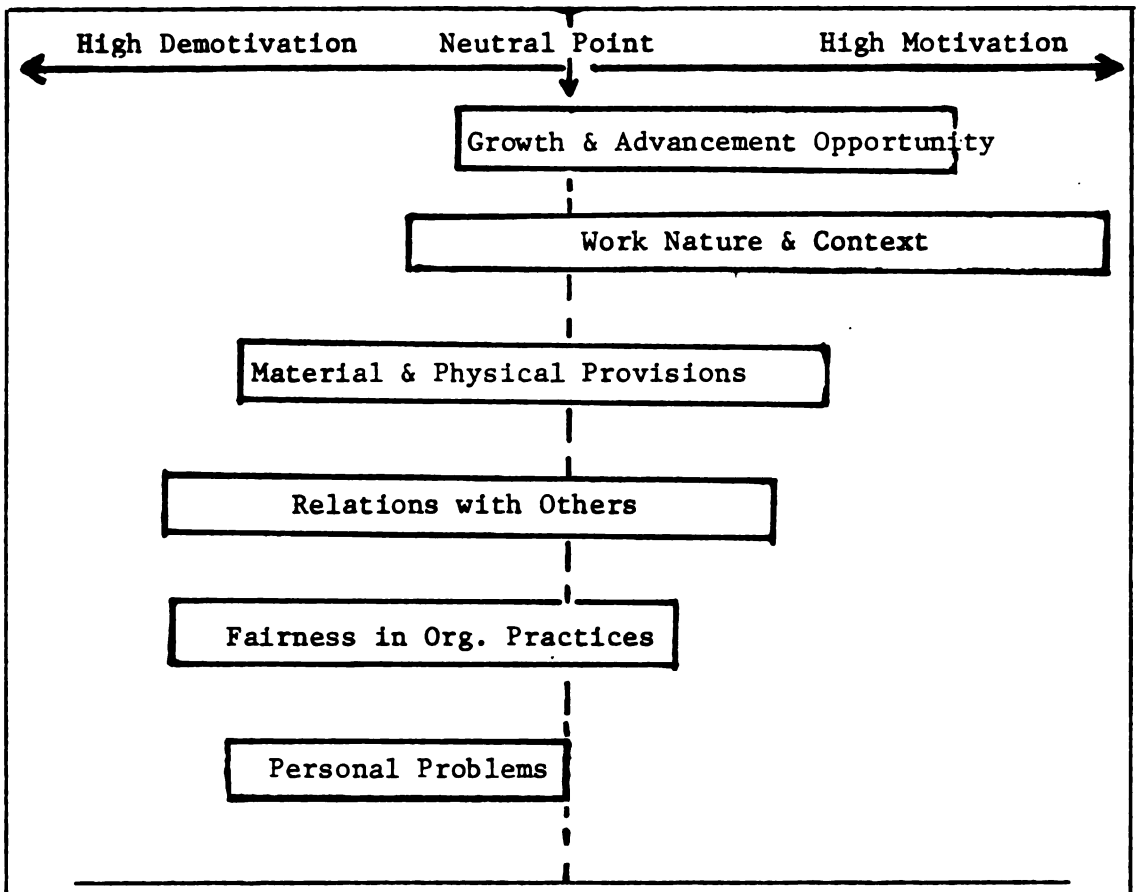

Fig. 2 Diagramatic representation of the Differential Positive-Negative Impact model. Length of bars based on sums of standardized scores of item frequency rankings (Table 1) composing the factor.
Note: The neutral point is the center of the motivational continuum. At this point there are very few motivating or demotivating factors.

pointed out earlier, work situations nearly always offer a mix of motivators and demotivators so that even a very demotivated employee will show some minimal level of positive work behavior.

The differential positive-negative impact model can be seen as a restatement of the two-factor theory (Herzberg et al., 1966). Herzberg's motivators, advancement, work itself, achievement, and responsibility (except recognition) have all been subsumed under factors - Work Nature and Context and Growth and Advancement Opportunity - which have greater positive than negative impact on

motivation. His hygiene factors, pay, supervision, company policies, working conditions have been clustered under factors (Material and Physical Provisions, Relations with Others and Fairness in Organizational Practices) which impair motivation more than they enhance it. The departure of the differential positive-negative impact model from Herzberg is the recognition that the various factors can both increase and reduce motivation. This position has been advocated by both critics and some proponents of the two-factor theory (Lawler, 1973). Rather than independence of the factors, the position of the model proposed in this paper is that some factors increase motivation more than they reduce it while the opposite is true for other factors.

Motivation and Other Work-Related Variables

Another set of important results from this study are the relationships between the motivational elements that have been grouped into the six factors just discussed and demographic and other work-related variables. These demographic and work-related variables (e.g., age, amount of education, length of employment, length of urban residence and occupational level) were proposed a priori as variables that would affect motivation.

In looking at the results and discussion that follow, the reader is reminded that the aim of this study was, among other things, to collect data that would adequately represent and explain work motivation in Zambia. To do this, data was collected from a very heterogeneous sample of employees belonging to five occupational groups representing widely varying industries drawn from different parts of the country. As a result, little, if any, restriction of range may have affected correlational relationships being discussed in this

section. Studies using a more homogeneous sample, or studies which are based in a single organization might obtain weaker correlational relationships than the ones discussed here because of restriction of range. However, the fact that correlations obtained in this study are generally low (pp. 68-72) means that the same motivators and demotivators affect all people relatively similarly.

Education:

The first of the a priori factors is a worker's level of education. An employee's amount of education is one variable that has been shown to be related to work motivation, (see review, p. 27). Findings from the present study show some meaningful links between education, other work-related variables and especially between education and motivation: First, the amount of education of organizational members is negatively correlated with age. This negative relationship is to be expected in a developing country like Zambia where until independence in 1964, education opportunities were severely limited. Second, education was negatively related to the total number of years of paid employment since most of the people with more education (who tend to be younger) have not been working for very long. In addition, more educated employees showed greater mobility or willingness to change jobs than less educated employees. Further, education and number of years worked in a given organization had a significant negative correlation ($r = -.24$, $p < .001$). Evidently the more educated employee, who by virtue of their education can easily find jobs in other organizations are more likely to change jobs than their less educated counterparts.

Besides, since people with more education tend to be younger, it can be expected that these people have not stayed in work organizations for very long.

The relationship between amount of education and various motivational elements is notable but to be expected. More educated employees in this study mentioned pay as motivating them to work hard less often than the less educated employees. This relationship holds true for fringe benefits and job security as sources of work motivation. The more educated persons whose earnings from their jobs are much greater than less educated or uneducated employees and who can more easily change jobs are less concerned about material and physical provisions or what Maslow called lower order needs (Maslow, 1954) than are their less well-paid, less educated counterparts who are not able to change jobs as easily.

Another result suggesting the less concern attached to material and physical provisions by the more educated is the finding that these employees reported dangerous or unfavorable working conditions to be a source of demotivation less often than the less educated employees ($r = -.15$, $p < .01$) - reflecting the generally better physical work environment of the more educated worker. But it may be expected that these more educated employees would show greater concern for factors related to growth and advancement and other high order needs. Results do in fact confirm this thinking. More educated employees showed greater concern for the opportunity for more learning and training, responsibility, work that is important, interesting, is challenging and has variety, and recognition than the less educated workers. On the other hand, more educated

employees cited boring, unimportant work as demotivating them more often than did less educated employees. This is strong support for need hierarchy theory which holds that higher order needs are only of concern when basic ones are gratified.

While generally supportive of the need hierarchy concept, these results show no evidence of a greater general concern with survival or existence needs (material and physical provisions) across the whole sample. These results together with the fact that the factors growth and advancement opportunity, and work nature and context generally showed greater potential to affect motivation than material and physical provisions, contradict the suggestion that physical rather than psychological needs would generally tend to be dominant in economically disadvantaged nations (Tannenbaum, 1980). It is evident that physical needs are a more predominant concern for the more economically disadvantaged employees than for all organizational members. Consequently, these findings lead to a rejection of the attempt to explain differences in motivation across whole nations using the need hierarchy model. As suggested earlier and as these data clearly show, use of the need hierarchy concept to explain differences in work behavior within a nation or related group of nations may yield results that are more consistent with the theory.

The finding that lower level occupation employees showed more preoccupation with material and physical provisions than growth and advancement imposes limitations on the effectiveness of job enrichment in many developing countries. (Recall that job enrichment was recommended earlier as a means to increase work motivation.) The limitation being that for lower level jobs which are traditionally

lowly paid and often performed under unfavorable physical environments, job enrichment is unlikely to be effective unless earnings of employees are first increased and work environments are made more favorable.

Finally, more educated employees reported their work motivation to be negatively affected by death or sickness in their families fewer times than was mentioned by less educated employees. That is to say that the motivation of more educated organizational members is less impaired than that of their less educated counterparts when death or sickness in the family occurs. A related finding is that employees in higher occupations (see next paragraph) also mentioned sickness and death in the family as a source of demotivation less often than was reported by employees in lower occupation groups. This result ($r = -.22$, $p < .001$) is, perhaps, an indication of the cultural and social changes taking place in some developing nations and as such, confirms our view (p. 31) that forces of social change may and do, in fact, affect the motivation to work. It would appear that more educated workers who tend to be younger, and also hold high occupations, are breaking away from what Kingsley calls "the strong African sense of solidarity with an obligation to family and kin" (1980, p. 22), and appear more able to isolate family problems from the work situation and become more loyal to the organization than to family and kin. Further confirmation of this result is necessary, however, before this can be conclusively established as a trend of social change.

Occupational Level:

Another work-related variable which has been of interest in work settings and which was proposed a priori as likely to have some effects

on work motivation, is an employee's rank or occupational level. In this study, occupational level was operationalized via a rough five-point ordinal measure ranging from manager , technician, secretary, clerk to general worker. Despite the weaknesses of this kind of scale, analysis of its relationship with other variables proved very useful. A strong positive relationship between occupational level and education ($r = .68$, $p < .001$) shows as can be expected, that people in higher level occupations have more education than those holding lower occupations. And, as was the case with education, employees within higher occupations cited recognition, chance for more learning and training, responsibility, and interesting, important work that has challenge and variety as being motivating more often than was mentioned by low occupation employees. In addition, people in the higher occupations reported exerting greater effort when assigned tasks that allowed them to experience a sense of achievement. But employees in higher occupations associated loss of motivation with absence of training and learning opportunities more often than did employees in lower occupations. Further, high occupation level employees referred to hunger and unfavorable physical work conditions as depressing their motivation less often than did occupants of low occupations. These results give further support to the need hierarchy formulation of motivation in that higher occupational employees showed more concern for the so called high order needs while low occupation group employees showed more preoccupation with material and physical provisions. High occupation group employees suffered less decrement in motivation than low occupation group employees ($r = -.22$, $p < .001$) when death or sickness in the family

occurred. As discussed above, this result suggests a shift in social values for employees in high occupations towards more loyalty to the organization.

Age:

Age is yet another of the variables that were expected, in fact proposed, to influence motivation in this study. There are some notable but expected relationships between age and the other work-related variables investigated here: The observed moderately high and significant relationship between age and number of years spent with an organization ($r = .52$, $p < .001$) indicates that older people tend to stay with a given organization longer than younger employees. This is to be expected since younger people have not been working for very long. An additional explanation is that older persons are more likely to prefer to stay in familiar work surroundings than younger workers. Besides, because of the less education of older employees, alternative jobs may not be readily available. Older employees have also lived in urban areas longer than younger employees. This, too, is to be expected since older employees - who according to this study have more years of paid employment - had to live in some urban area to hold paid jobs as most rural areas, until recently, were generally subsistence communities. Further, older employees have been around for much longer anyway.

An interesting result here is that age correlated negatively with mentioning of opportunities for more learning and training on the job and with mentioning chance for promotion as sources of motivation. This means that opportunities for promotion and training or learning on the job do not appear to be as powerful in encouraging much older

employees to work than they can younger employees. This result perhaps reflects the fact that older employees expect less advancement on their jobs because of having less education which is one of the most stressed criteria for promotions in most Zambian organizations. For these employees, it is necessary to increase their expectations of upward mobility by reducing emphasis on education as a promotional criterion if chance for promotion, learning and training on the job is to motivate them. Such an approach would be consistent with expectancy theory (Vroom, 1964).

Another notable result is that a low but significant negative relationship ($r = -.11$, $p < .02$) between age and frequency of mentioning urgently required work or work that has a completion deadline as motivating. In other words, much older employees reported themselves much less often as being encouraged to work hard by urgently required tasks than did younger employees. This result is perhaps explained by the fact that older employees exemplify the traditional attitude towards time noted in some parts of Africa; that is, in traditional Africa, workers did not consider the time element as important as successful completion of the task in performing their work (Durand, 1960). Another possible explanation might be that because of being older, these employees may not like work assignments that rush them and therefore do not see such tasks as motivating. These explanations should only be regarded as speculative. Only further research can shed more light on this interesting finding.

Years of Paid Employment:

Very strongly related to age, according to the results, is the number of years a person has been in paid employment ($r = .84$, $p < .001$).

This result is to be expected in that older employees who have been around for much longer can be expected to have been working for a longer period than their younger counterparts. Like age, length of paid employment showed a negative but significant relationship with mentioning chance to learn and/or train more on the job as being motivating ($r = -.17$, $p < .001$). Meaning that employees who have been in paid jobs for a longer period are much less likely to cite chance for more learning or training as encouraging them to put in more effort into their work. This relationship also holds true for mentioning of urgently required tasks as motivating. Again, expectations of advancement held by these employees may be important in explaining these results. Being much older, organizational members with many years of paid employment may have low expectations of advancement on their jobs. This is especially so since employees with more years of paid employment in Zambia have less education which, as pointed out earlier, is one of the most stressed criteria for promotion.

Length of Urban Residence:

One other work-related variable which was hypothesized to affect motivation is the length of urban residence. It will be recalled that results from cross-cultural research (see p. 26) showed a positive association between, on the one hand, exposure to and experience with work organizations and, on the other, psychological adjustment to, and compatibility with, the demands of the industrial work setting (Inkeles and Smith, 1974). Findings from this study appear to support the Inkeles and Smith observations since low positive but significant correlations were obtained between years of urban residence and

mentioning recognition ($r = .13$, $p < .009$) and achievement ($r = .12$, $p < .01$) as encouraging hard work. Thus employees with longer years of urban residence cited recognition of their work and ability, and work that allowed them achievement as motivating them more often than did employees with less years of urban residence.

Although it is conceded that being motivated by recognition and tasks that allow one a sense of achievement does not constitute adequate evidence of psychological adjustment to, and compatibility with, a work situation, they do in fact indicate a degree of compatibility and some adjustment to the requirements of organizational work settings. Consequently, on the basis of these results and those of Inkeles and Smith (1974), and those of Elden and Leviatan (1974), it can be expected that the workforce in developing nations will become more and better adjusted to organizational work situations as urban populations continue to grow and stabilize.[6] Hopefully this increased adjustment and compatibility will result in higher work motivation and increased productivity. Another result that seems to support the idea of adjustment and compatibility with the organizational work situation is that years of urban residence showed a low positive but significant association with occupational level. In other words, people with longer urban residence were more likely to hold higher occupations than those with shorter residence.

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[6] In many former colonies of the Third World particularly in Africa, the practice among indigenous populations was to work in urban centers then retire back to the rural home area. More recently, especially after independence, most people now make urban areas their permanent homes. And because of greater employment opportunities in the cities, populations of urban areas have continued to grow.

Length of urban residence also correlated positively and significantly with age, number of years spent with one organization, and with total number of years in paid employment. These results are meaningful since people with longest urban residence are likely to be older employees and who, by virtue of their age, have been in paid employment for much longer. And because of reasons discussed earlier (p. 103), older organizational members have stayed longer with a given organization.

Finally, length of urban residence showed a negative relationship with frequency of mentioning that urgently required tasks encourage expending more effort at work. This result is surprising in that it seems to somewhat contradict the association between urban residence and adjustment to organizational work situations just discussed. Nevertheless, because of the positive relationship ($r = .30$, $p < .001$) between length of urban residence and age - which was also negatively related with viewing urgently required work as motivating - the observed negative association between urban residence and mentioning of urgently required work may be confounded by the age variable. Only further research can resolve these seemingly contradictory results.

Sex:

The observed relationship between sex and years of paid employment which showed women as having held paid jobs for fewer years than men is to be expected. In many countries and more so in developing countries, very few women held paid jobs until the last few decades. Not surprising too, are the findings that women showed less concern for job security and were less demotivated by unfavorable pay than

men were. In a country where many females use their incomes to supplement those of their spouses, low pay or even threatened job security may not have as much significance as they would for males who, in many cases, may be the single breadwinner in their households. Similarly, the fact that men cited tribalism, favoritism, or nepotism as demotivating them more often than women did, might again reflect the comparatively less concern for events in the work place shown by women. Since a lot of working women may be married or plan on getting married they perhaps do not see their jobs as important as they otherwise would if there was no chance of a second income (the husband's) whatsoever.

Sex also correlated with amount of difficulty level of assigned work. That is, female employees cited incidents where more work or work of greater difficulty was assigned as leading to greater motivation more often than men. This result may, however, be contaminated by occupation group effects since 72 of the 94 women in the sample were secretarial personnel. And, secretaries generally reported exerting greater work effort when a lot of work was assigned. Surprisingly though, women reported loss of motivation when too much or too little work was assigned fewer times than men did.

Difficult to explain, however, is the finding that female employees were more susceptible than males to impairment of motivation because of "not being in the working mood" especially on Mondays and days preceeding major national holidays. Perhaps women in Zambia are more likely than men to carry over to their work situation thoughts, memories from the past weekend and plans and ideas for the next weekend. Whatever the explanation for this phenomenon, its negative

impact on work behavior may be reduced by assigning greater amounts of work or of more difficulty and with completion deadlines to employees who appear to be in the "I just don't feel like working" mood. Such an approach to this problem is likely to be effective since results reported earlier showed that organizational members' work motivation is most enhanced when a lot of work or work that is difficult is assigned and when specific completion deadlines are set.

Motivation and Employees' Own Perceptions of What Motivates Them:

One notable result from this study concerns the extent to which agreement exists between what motivates the behavior of organizational members as derived from critical incidents and what the members themselves say would motivate them. Employees were asked (see method section) directly to state conditions, events or circumstances that would make them work as hard or as little as the critical incidents described. Correlations computed over 12 motivating and 17 demotivating items yielded a positive but nonsignificant correlation ($r = .394$, $p > .10$) between conditions employees claimed would encourage them to expend greater effort and the conditions which, according to critical incidents, led them to doing so. On the other hand, a strong positive relationship was obtained between conditions employees said would discourage them from working hard (when asked directly) and conditions which, based on critical incidents, discouraged them from hard work in real work situations ($r = .84$, $p < .001$). It would appear from this that employees can more accurately describe events, activities or conditions that annoy and lead them to inhibit effort than they can those that encourage them to exert greater effort. This contradicts the view by Vroom and

Maier (1961) who suggested that, because of defensive processes, individuals are likely to be more effective describing good critical incidents than bad incidents. It would appear from the present data that the opposite view might in fact be closer to reality than the Vroom and Maier position.

This finding could have important implications not only for design of research investigating factors that discourage hard work but also for managers, supervisors, and practitioners interested in identifying and reducing the impact of such factors. While they may have to use unobtrusive and more sophisticated designs to learn about factors likely to increase work motivation, they may simply ask employees to tell them what conditions, factors, or events would depress their motivation to work - a very inexpensive and non-time consuming technique indeed. And since this study has shown that most motivational factors have the ability to both impair and enhance work motivation. Further understanding and development of this approach may prove very useful. For once factors claimed by subjects to discourage hard work are obtained, the next step would be to reduce or eliminate such factors and observe if increased motivation would result. Future research should further investigate this phenomenon and look into conditions that may lead to even better agreement between employee assertions about motivation and what actually discourages them from working hard in real life work settings.

CONCLUSIONS AND DIRECTIONS FOR FURTHER RESEARCH

This study found that work motivation in the Zambian workforce is determined by six motivational factors: work nature and context, growth and advancement, material and physical provisions, relations with others, fairness-unfairness in organizational practices and personal problems. Contrary to the position of Herzberg's motivator-hygiene theory, all but one of the six factors can affect work motivation both positively and negatively. These factors, moreover, have a differential positive-negative impact on motivation, that is, any given factor tends to have greater potential to increase than to decrease motivation or vice versa.

The model of motivation in this paper incorporates within it elements of several (process and content) formulations of work motivation: Components of the goal setting, two-factor and need achievement approaches are embodied in the factor work nature and context. The powerful effects of inequity resolution on work behavior have been subsumed under the factor fairness-unfairness in organizational practices. A number of factors from the motivator-hygiene theory have been embodied in factors such as material and physical provisions, relations with others, and growth and advancement. And finally, although not directly incorporated in the differential positive-negative impact model, data in this study showed strong support for the existence of some type of hierarchy of needs with potential to moderate the effects of the model.

The fact that some components of various theories of motivation have been confirmed and have been incorporated in a more inclusive and possibly more powerful model suggested in this study should be

seen as a demonstration of some but incomplete validity of these theories. The lack of support from the data for some components of these theories is an indication of their shortcomings or partial deficiency with respect to validity. This point illustrates and reiterates the position (emphasized in the introduction of this paper) concerning the futility of attempting to explain complex work behavior relying on a single motivation framework or theory since, as has been demonstrated here, no single formulation of motivation appears to sufficiently explain work behavior. However, the theory proposed here has the advantage that it incorporates the more promising parts of several existing theories. Besides being empirically derived, the theory contains elements that may be unique to the social, cultural and economic conditions of many developing countries particularly Zambia.

The point that the differential impact model embodies elements that may be unique to Zambia raises the issue of generalizability of the model, especially as it was developed on data from conditions and a sample that was entirely Zambian. While this is acknowledged, the fact that the model has incorporated components of concepts from models of some demonstrated validity in some countries perhaps makes this criticism less damaging. Besides, elements incorporated in the six factors of the theory, that can be said to be unique to Zambia constitute only a small component of the model. The strength of the data presented in this paper and the resulting differential positive-negative impact model accrue from the care taken in the design of this study. First, unlike the Herzberg study which was criticized (Vroom, 1966) for asking employees to remember times when they were

very satisfied and very dissatisfied and proceeded to infer motivation from resulting data·(Herzberg, et al., 1966, p. 141), the present study focused on motivation by asking subjects to talk about incidents when they worked very hard and when they put very little effort into their work. Since working very hard or working very little are evidence of motivation, the study clearly addressed the issue of motivation more than the Herzberg study did.

Second, questions used in the interview were arrived at after extensive pretesting with a sample of 40 employees drawn from the five occupational categories used in the study. (The pilot study data were not included in the later analyses.) Third, the sample of 341 employees consisting of five occupational groups was carefully drawn from eleven organizations that represented the three main types of work organizations in Zambia - government, quasi-government and private. Finally, the greatest strength in the design of this research lies in the fact that results from content-analyzed critical incident-interview data were validated using a different method: A questionnaire developed from the data was administered to a new sample of 80 employees drawn from organizations not included in the original study but which again represented government, quasi-government and private organizations.

On the practical side, this study may prove to be of immense potential value to Zambia and surrounding regions if the practical recommendations presented in this paper were implemented. Consequently, from the point of view of the region studied, this paper goes a long way in helping develop a locally relevant body of knowledge which,

with further research and development, may, in the long run, help nations in that area to enhance productivity of their human resources.

It must be remembered, however, that this study was only exploratory and that, despite the very encouraging findings reported here, much work needs to be done to test and refine various aspects of the differential positive-negative impact model of motivation. To begin with, it is now necessary to draw hypotheses from the model and see if actual performance (both hard and soft) data in organizations confirm the predictions of such hypotheses. At the same time, priority must be given to the development of scales based on the six factors. Once the scales are developed, confirmatory factor analyses can be performed on data collected using these scales to empirically confirm the factors identified in this study. Further, the scales, once validated, can prove useful in gauging the level of employee motivation and can also serve as diagnostic instruments which could pinpoint job aspects deficient in certain desirable characteristics.

Another concern for research should be an attempt to replicate this study and to validate the differential impact model in other developing countries, particularly those which have social, cultural and economic conditions similar to Zambia. For although this author contends that the differential positive-negative impact theory will hold in many countries with varying social, cultural and economic conditions, the model would probably be more explanatory and predictive in regions that have conditions somewhat similar to those in Zambia.

Another issue deserving future research attention is the extent to which expectations of organizational members influence their

(members) work behavior in the presence or absence of various factors of the differential positive-negative impact model. An understanding of this issue would make it easier to anticipate and plan for some problems that may be encountered in applying this model to work situations.

Finally, more investigation should be made into the findings that there is high agreement between what employees say discourages them from working hard and what actually discourages them. As pointed out earlier, further research on this phenomenon can make it easier to learn about factors that adversely affect motivation to work by making the use of costly non obtrusive approaches unnecessary.

APPENDICES

APPENDIX 1

(Interview Questions and Introductory Statement)

Introductory Statement:

My name is ..... from the University of Zambia. I, together with one other associate, are conducting research on work motivation and productivity. The project we are working on will enable us to understand factors that influence people's work motivation on their jobs. We are interviewing (managers, clerks, secretaries, and labourers) from government departments, parastatals, private companies and the copper mines. Your cooperation and participation in this project is very important as it will help to understand how we, here in Zambia, can increase motivation in order to enhance productivity of workers.

I am going to ask you some questions about some of your job experiences. I would like you to answer them as accurately as possible. I will not ask for your name or write it down. Everything you will tell me is CONFIDENTIAL and WILL NOT BE TOLD TO ANYONE in this company or anywhere else--only the researchers will have access to this information. Before we say more about the research, do you have any questions?

Interview Questions:

Think of a time when you worked exceptionally hard (when you put in very little effort, for a "bad" incident) on your job or any other job you had before this one .... (pause) ... Please describe to me exactly what happened as you remember it.

1. How long ago did this happen?
2. What specifically led to the incident?
3. What did you do different from the way you normally do your job? Why?
4. Describe your feelings as the event took place.
5. What did your supervisor(s) say or do?
6. What did your coworkers say or do?
7. What did your subordinate(s) say or do?
8. What did you tell your family, friends about the incident?
9. What were the consequences (results) of this incident, short-term and long-term?
10. In what way(s) did the incident affect your thinking about yourself, your job, supervisors, coworkers or subordinates, company, friends, or family?
11. In what way(s) did you change the way you did your job as a result? Why?
12. Under what circumstances can such an incident happen again?
13. What can you do to increase/reduce the chances of this incident occurring again?
14. What can your supervisors, coworkers, subordinates do to increase/reduce the chances of a similar incident occurring?
15. What else is there that I should know that you may not have mentioned that I need to fully understand what happened?
16. a. In general, what is the one most important thing that coworkers or company can do in order for you to work very hard?--for good incident.

16. b. In general, what is the one most important think that can happen to cause you not to work very, very hard at you job (besides illness)?--for bad incident.

Appendix 2
(Validity Check Questionnaire)

JOB ATTITUDE SURVEY

Below is a list of factors or things that may encourage a person to work very hard on his/her job or to work very little. Basing on your own work experience (what has happened to you in the past) please indicate which of the listed factors would encourage you to work very hard and which would make you do very little work. If a factor has encouraged you to work very hard (basing on your past experience) write WHW (worked very hard) on the line beside the factor. If a factor has tended to make you work very little write WL (worked very little) on the line beside it. If you are not sure whether a factor has made you work very hard or work very little write NS (not sure) on the line beside that factor.

EXAMPLE:

1._____There was chance to retire at an early age.

If the chance to retire at an early age has encouraged you to work very hard then write WHW on the line beside statement number one.
If the chance to retire at an early age has tended to make you do very little work write WL on the line.
If you are not sure whether the chance to retire early has encouraged (or would encourage) you to work very hard or work very little write NS on the line beside the statement.

Please write your job title (rank) and sex on the lines shown.

JOB TITLE: _____SEX:_____

USING INSTRUCTIONS ABOVE AND YOUR OWN PERSONAL EXPERIENCE INDICATE WHETHER YOU HAVE WORKED VERY HARD OR WORKED VERY LITTLE OR ARE NOT SURE WHAT YOU DID OR WOULD DO WHEN:

1._____There is a lot of work to be done.

2._____Your superiors or bosses are lazy and incompetent

3._____You have been assigned either too much or too little work.

4._____There is a chance to be complimented, appreciated, praised or recognized for working hard.

5._____Superiors or bosses practice tribalism, racial discrimination, favouratism, nepotism or corruption.

6._____There are good relations, understanding between yourself, bosses and your workmates.

7._____You are promoted or that there are chances for promotion.

8._____The work is urgent and/or must be completed within a deadline.

*9._____It has been raining all day.

10._____Company or employer does not care or listen to personal problems.

11._____Pay is reasonable and there is possibility for increment, bonus, merit increment or financial incentive.

12._____There is no praise, appreciation, compliment or recognition for hard work.

13._____Job is secure (you are not likely to be sacked).

14._____The job offers fringe benefits (company housing, loans, transport to work, salary advances).

15._____You just do not feel like working.

16._____You are demoted, suspended or subjected to disciplinary action.

17._____The company or superiors do not keep their promises which were made to you.

18._____The job allows you responsibility and chance to make decisions.

19._____There is sickness or death in the family or you have other personal or domestic problems.

20._____There is a chance to learn more about the job or there is chance for further training.

21._____Pay is low and increments, bonuses, merit increments or other financial incentives are unlikely.

22._____There are bad relations or misunderstandings between yourself, your superiors or bosses and your workmates.

23._____The work is interesting, important, challenging or has variety.

24._____Promotions or chances for promotion are very unlikely.

25._____Job security is threatened (you are likely to be sacked).

26._____There is a possibility for achievement on your job.

27._____Your boss/supervisor supervises closely (breathes on your neck) or hardly looks at your work at all.

*28._____It has not rained for a few days.

29._____There are little or no fringe benefits (housing, loans etc.).

30._____There is little chance to learn more on your job or little chance for further training.

31._____Work is not properly explained or that you have no specific job, You are continuously moved from job to job.

*Item was included only to help randomize placement of motivating and demotivating items in questionnaire and was not scored.

Appendix 3.

Correlations[1] Among Work-Related Variables

and Motivational Variables[2] identified from

Content Analysis of Critical Incidents
(for All Correlations N = 341)

A. Correlations with Motivating (Good Incident) Variables

Occupational Level

(Coded as follows: manager 5, technician 4, secretary 3, clerk 2, general worker 1)

Variable	Correlation	p
Amount of education	.68	.001
Years of urban residence	.11	.02
Chance for learning training	.15	.003
Work that is interesting, important, challenging and has variety	.25	.001
Responsibility	.17	.001
Recognition	.23	.001
Achievement	.11	.021

Type of Organization

(Coded as follows: private 3, quasi-government 2, government 1)

Pay	.15	.002
Work that is interesting, important, challenging and has variety	-.15	.003
Job security	.15	.003
Supervision	.11	.02

Location

(Coded as follows: Copperbelt 2, Lusaka 1)

Job security	.12	.017
Interpersonal relations	-.10	.032

[1]Due to the large number of variables in the analysis (23 from good and 27 from bad incidents plus 9 work related variables) it was decided to report only some of the correlations. Correlations not reported are generally those with values very close to zero.

[2]All motivational variables were dichotomously scored, i.e., a variable received a score of one if it was mentioned or zero if it was not.

Variable	Correlation	p
Sex		
(Coded as follows: men 2, women 1)		
Years of urban residence	.29	.001
Amount or difficult level of work	.13	.01
Job security	.18	.001
Years of paid employment	.29	.001
Age		
Amount of education	-.27	.001
Years with the company	.52	.001
Years of paid employment	.84	.001
Years of urban residence	.30	.001
Work that is urgent	-.11	.02
Chance for learning/training	-.19	.001
Chance for promotion	-.11	.026
Education		
Years with the company	-.24	.001
Years of paid employment	-.31	.001
Pay	-.18	.001
Chance for learning/training	.15	.003
Work that is interesting, important, challenging and has variety	.29	.001
Responsibility	.19	.001
Recognition	.22	.001
Job security	-.18	.001
Fringe benefits	-.13	.008
Years with the company		
Sex	.23	.001
Years of paid employment	.62	.001
Years of urban residence	.30	.001
Recognition	-.12	.01
Supervision	-.10	.03
(also see under age and education)		
Years of paid employment		
Years of urban residence	.32	.001
Work that is urgent	-.10	.02
Chance for learning/training	-.17	.001
(also see under sex, age and education)		

Variable	Correlation	p
Years of urban residence		
Work that is urgent	-.11	.02
Recognition	.13	.009
Achievement	.12	.01
(also see under occupational level, age, years with the company and years of paid employment)		

B. Correlations with Demotivating (Bad Incident) Variables

Variable	Correlation	p
Occupational level		
Lack of chance for learning/training	.12	.03
Hunger	-.20	.001
Bad interpersonal relations	.15	.01
Unfavorable physical work conditions	-.11	.04
Death or sickness in family	-.22	.001
Type of organization		
Bad supervision	.19	.001
Lack of recognition	.14	.01
Shortages of commodities in shops	-.11	.04
Lack of fringe benefits	-.14	.01
Failure to keep company promises	.10	.05
Company not caring for employee welfare	-.13	.02
Threatened job security	.15	.01
Location		
Low, inadequate pay	.18	.003
Demotion/disciplinary action	.12	.03
Lack of fringe benefits	-.18	.003
Interference in an employee's work	.10	.05
Threatened job security	.19	.002
Sex		
Too much/too little work	-.14	.013
Feeling/mood	-.13	.02
Low, inadequate pay	.16	.008
Hunger	.10	.05
Tribalism, favoritism, corruption	.16	.006
Age		
Too much/too little work	-.12	.03
Feeling/mood	-.11	.04
Interference in an employee's work	.14	.01
Drinking (hangover)	.13	.02
Education		
Boring, unimportant work	.11	.04
Lazy/incompatent superiors, coworkers	.11	.05
Demotion/disciplinary action	-.10	.05
Hunger	-.20	.001
Bad supervision	.17	.04
Unfavorable physical work conditions	-.15	.01
Lack of fringe benefits	.15	.005
Failure to keep company promises	.16	.006
Death/sickness in the family	-.17	.003
Poorly defined work	-.11	.04
Years with the company		
Too much/too little work	-.15	.009
Feeling/mood	-.12	.03
Demotion/disciplinary action	.10	.05
Interference in an employee's work	.18	.003
Years of paid employment		
Drinking (hangover)	.14	.01
Lazy/incompetent superiors, coworkers	-.12	.03
Interference in an employee's work	.13	.02
Years of urban residence		
Too much/too little work	.11	.04
Lack of chance for learning/training	-.10	.05
Lack of promotions	.11	.04
Drinking (hangover)	-.10	.05
Demotion/disciplinary action	.12	.03
Tribalism, favoritism, corruption	.13	.02

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