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APPLICATION OF THE MOTIVATOR - HYGIENE THEORY OF JOB SATISFACTION AND JOB DISSATISFACTION AMONG ADMINISTRATORS AND ACADEMIC STAFF OF A SELECTED UNIVERSITY IN NIGERIA

The University of Oklahoma PH.D. 1983

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THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

APPLICATION OF THE MOTIVATOR - HYGIENE THEORY OF JOB SATISFACTION AND JOB DISSATISFACTION AMONG ADMINISTRATORS AND ACADEMIC STAFF OF A SELECTED UNIVERSITY IN NIGERIA

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

Degree of

DOCTOR OF PHILOSOPHY

BY

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Norman, Oklahoma

April, 1983

APPLICATION OF THE MOTIVATOR - HYGIENE THEORY OF JOB SATISFACTION AND JOB DISSATISFACTION AMONG ADMINISTRATORS AND ACADEMIC STAFF OF A SELECTED UNIVERSITY IN NIGERIA

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CHAPTER I

INTRODUCTION

Background of the Study

University development in Nigeria is said to be relatively young.[1] It was in 1948 that the University College at Ibadan was founded as an affiliate of the University of London. Having recognized the impressive panorama of the role and impact of higher education in the growth of a nation, the authorities in Nigeria have since embarked on vigorous and extensive developments of university education in Nigeria. Since the attainment of independence in 1960, the number of universities in Nigeria has increased from two to the current total of twenty-three.[2]

At present, all the 23 universities in Nigeria are public institutions, all except 5 being federally owned and controlled. Furthermore, more than half the total funding allocated for education by the federal government goes to the universities.[3] In return, the universities are expected to play a multi-faceted role in the building of the nation.

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[1] "Basic Information Kit on Nigerian Universities," Occasional Publication of the Nigerian Universities Commission, Washington Office, Vol. 1, No. 2, May 1982, p. 1.

[2] Ibid. [3] Ibid.

Besides the traditional mission, the universities are considered the instruments of national unity, and the focal points of local pride and achievement.[1] To accomplish these aims, and in projecting Nigeria's federal character, these federal universities are distributed all over the country, as shown in Appendix D. To assist the Federal Government and the Ministry of Education, an independent body called National Universities Commission was established in 1962.

The Commission serves as an advisor and mediator between the political authorities and the universities, thus making it possible to preserve university autonomy and providing "a framework that ensures orderly and balanced developments" of the system.[2]

This agency has played a significant role in the establishment of the new federal universities in Nigeria. Under the provisions of a 1974 decree, by the military government,[3] the N. U. G. is, among other things, empowered to:

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[1] Ibid.

[2] Ibid.

[3] Ibid.

1) Advise on the creation of new universities and institutions.

2) Prepare periodic masterplans for the balanced and coordinated development of the university system;

3) Distribute government grants in accordance with set formulae;

4) Collect, analyze, and publish information relating to university development and education in Nigeria;

5) Develop general programmes to be pursued by the universities in order to ensure that they meet national needs and objectives;

6) Recommend the establishment of new faculties and post-graduate programmes in existing institutions;

7) Undertake periodic reviews of the terms and conditions of service for personnel engaged by the universities;

8) Act as the agency for channeling all external aid to the universities in Nigeria.[1]

The governing body of each of the universities is patterned in a manner reflecting the British civic universities. Periodically, the federal government of Nigeria appoints some laymen from various parts of the country, with a limited representation of ministries such as education, health, and finance. The constitution of each university provides for a visitor, a chancellor, a council and its chairman called the pro-chancellor, a senate and its chairman called the vice-chancellor (president), and other principal officers such as deputy vice-chancellor, registrar, bursar and librarian. Of all these, the governing body is the university council,

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[1]Commonwealth University Year Book, 1981, p. 1970.

responsible for the general management of the university.[1]

There are two main categories of university employees, the academic staff (faculty) and non-academic staff (administrative). The latter are generally appointed by the university council itself, whereas the former, the academic staff, are appointed by an appointment board largely representing the professorial senate members, though a representation of the council is necessary.[2] Members of both groups have complained at one time or the other about job situations or conditions of service in their respective positions. It has been alleged, rightly or wrongly, that the military administration starved universities of funds and tried to harmonize the service conditions of the university staff with those of the civil service.[3]

Members of the two factions keep complaining until they flare. Accusing fingers have been pointed towards different directions, including toward each other. In most cases, the common accuser is the sole employer -- the federal government. Everyone seems to know there are problems, but no one really knows from where these problems stem. The obvious thing is that dissatisfaction is a common expression. According to newspaper reports, complaints range from alleged inadequate teaching materials to make university-education teaching meaningful for students and lecturers, to salary adjustments.

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[1] Ibid., p. 1971. [2] Ibid., p. 1971.

[3] Daily Times of Nigeria, February 15, 1982.

They claim that under the name of austerity measures, many rights and privileges of university workers were curtained and working environments were impoverished.

The academic staff union declared a trade dispute and eventually went on strike. As usual, the federal government responded with the setting up of a commission -- the Cookery Commission -- to look to the complaints and make recommendations. The Cookery reports, coupled with government promises did not procure a permanent solution. For several days, the teaching staff refused to go back to classrooms. The administration did not go on strike, neither did they stop complaining about the status quo. They submitted their memoranda in support of the demands for improvement of conditions of service in the universities. Recently the reports from Nigerian newspapers indicated that senior administrators are demanding salary parity with some faculty ranks. This triggered newspaper battles of articles between the two categories.

Rationale for This Study

The Federal Government of Nigeria seems to have done everything within its bureaucratic scope. Salary adjustment has been made benefiting the striking academic staff. The newspapermen have tried to educate the public about situations in these universities. No formal research seems to have been carried out on the problem, especially after the government had financially rewarded these university employees. There

seems to be a need for such a study. Clark Kerr once observed that generally the university is a remarkably unstudied institution.[1] This observation is particularly true of the Nigerian universities. Besides, an analysis of job satisfaction and job dissatisfaction focused on Nigerian higher educational system, using Herzberg's dual factor theory, would not only attempt to throw light on problems plaguing these new universities, thus arousing further research efforts, but would also contribute to a body of knowledge relating to this theory.

Statement of the Problem

The present study has been designed to examine this question:

What are the situational elements related to the Motivator-Hygiene theory of job satisfaction and job dissatisfaction among the faculty and senior administrative staff in Nigerian universities? Specifically the study proposed to find answers to the following questions:

1) What are the leading situational elements (Herzberg's motivators) promoting job satisfaction among university administrators and faculty in Nigeria?
2) What are the leading situational elements (Herzberg's hygienes) responsible for job dissatisfaction among university administrators and faculty in Nigeria? For example, is

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[1] Clark Kerr, The Uses of the University with a Postscript, 1972, p. vii.

dissatisfaction with pay and condition of service more apparent than other situational elements?

3) Are the situational elements best enhancing job satisfaction and job dissatisfaction among the faculty members comparable with those situational elements best promoting the same among the administrative staff?

4) How do these research findings relate to Herzberg's findings?

Theoretical Background of the Research

In this study the theory to be used would be the two-factor model of job attitudes by Frederick Herzberg and his colleagues in 1959.[1] Herzberg himself later elaborated on this theory in 1966.

Herzberg and his associates felt that man's nature exhibits a duality. Their study was designed to test the concept that man has two sets of needs, "his need as an animal to avoid pain, and his need as a human to grow psychologically."[2]

The study was carried out in Pittsburgh involving about 200 engineers and accountants. These subjects were asked about events they had experienced at work which either

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[1] Herzberg et al., Motivation to Work, 1959, p. 3.

[2] Ibid., p. 57.

had brought them an improvement in their job satisfaction or had caused a marked reduction in job satisfaction. These engineers and accountants were to recall a moment when they had felt exceptionally good about their jobs and another moment when they had felt exactly the opposite.[1]

The outcome was that Herzberg discovered that certain determiners of job satisfaction and job dissatisfaction stood out to be recognized as affecting job attitudes of these engineers and accountants.[2] These were grouped into determinant factors motivating job satisfaction and determiners producing job dissatisfaction. Of the former, Herzberg calls them "motivators" because they are capable of motivating people to work. The latter were named "hygienes"[3] because of the medical connotation of the environmental factors involved. The six motivators (satisfiers) are possibility of growth, achievement, recognition, responsibility, work itself and advancement. The ten hygienes (dissatisfiers) are company policy and administration, supervision, salary, interpersonal relations (superordinates), interpersonal relations (subordinates), interpersonal relations (peers), working conditions, status, factors in personal life, and job security.

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[1] Ibid., p. 58.

[2] Ibid.

[3] Ibid.

Summary

Chapter I presents the background of the present study as well as the rationale of the study. Thus, it provides information on higher education system in Nigeria and discusses the statement of the problem. The chapter ends with the discussion on the background of the theory to be applied in the present study.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

This chapter deals with the review of other works or literatures relating to this study. It presents the historical background of job condition improvement, theories on job satisfaction, other applications of Herzberg's theory, and the pros and cons of the theory.

Michael Gruneberg[1] has indicated that no definite list of the number of publications in the concept of job satisfaction exists. However, there is a canvas of literature supporting the fact that much work has been done in the area. Reviewing the literature in 1976, Locke[2] estimated that over 3,000 articles and dissertations have been produced. There is no doubt that this number has increased severalfold since then. The reason for the flux of interest in this subject is not farfetched. Work dominates the greater part of the waking day of a man, whether positively or

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[1] M. M. Gruneberg, Understanding Job Satisfaction, p. 1.

[2] E. A. Locke, "The Relationship of Task Liking and Satisfaction," J. Applied Psych. 49: 379-85.

negatively. As Herzberg puts it, work may be the source of great satisfaction for the lucky or the cause of grief for others.[1] Most people spend a considerable amount of their living at work; therefore, an understanding of situational elements promoting job satisfaction seems relevant to these individuals' well-being.

Meaning of Job Satisfaction

Most writers differ in their attempts to define the concept of job satisfaction. Some attempt to distinguish between job satisfaction and job morale. Gruneberg believes that morale refers to group well-being, whereas job satisfaction concerns the individual's emotional reactions to a particular job.[2] Locke defines job satisfaction as "a pleasurable or positive emotional state, resulting from the appraisal of one's job or job experiences.[3] There is no single agreed upon definition. It all depends on whose work you are reading. However, the most important difference between definitions seems to be in the manner in which certain aspects of job satisfaction are grouped.[4] Wanous and Lawler propose nine different operational definitions, each depending on a different theoretical background.[5]

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[1]Herzberg et al., The Motivation to Work, p. 3.

[2]M. M. Gruneberg, Understanding Job Satisfaction, p. 2.

[3]E. A. Locke, "The Relationship of Task Liking and Satisfaction," J. Applied Psych. 49:379-385.

[4]M. M. Gruneberg, Understanding Job Satisfaction, p. 3.

[5]J. P. Wanous and E. E. Lawler, "Measurement and Meaning of Job Satisfaction," J. Applied Psych. 58 (1972): 327-32.

The Historical Background

The work on job condition improvement is age-old. Karl Marx was among the early writers who pointed out that the way work was being fragmented usually led to a lack of fulfillment and gave rise to feelings of misery rather than enjoyment.[1] Frederick Taylor's famous study at the Bethlehem Steelworks involved redesigning equipment and choosing the right men for the job, leading to an increase in production.[2] Critics such as Gruneberg and others have questioned whether or not changes in job satisfaction per se have really been of effect on production in the dramatic way Frederick Taylor illustrated.

The Hawthorne studies of the 1920's by Elton Mayo and his associates were another development of historical importance.[3] The role of friendly supervision was found to be an important factor to increase productivity. He realized that undue emphasis was placed on technical efficiency, whereas social needs of individuals were pushed into obscurity.[4] Mayo seems to be perturbed by apparent failure of some social and political institutions to provide means of increasing human collaboration for team work. Mayo's study at Hawthorne plant was therefore of considerable historical import in the

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[1]M. M. Gruneberg, Understanding Job Satisfaction, p. 6.

[2]Daniel Wren, Evolution of Management Thought, p. 86.

[3]Ibid.

[4]Elton Mayo, The Social Problems of an Industrial Civilization, p. 116.

it led to the so called "Human Relations School of Thought."[1] This school dwells on the assumption that job satisfaction leads to boosting productivity and that human relationships serve as a key to job satisfaction.[2] Perhaps of more importance in Mayor's contribution to this field was his exposure of "Rabble Hypothesis."[3] Refuting the view that human society was a horde of unorganized individuals craving for self-preservation and self-interest, Mayor postulates that every individual tends to protect his group status and not his self-interest.

Robert Hoppock's monograph on job satisfaction in 1935 was regarded by some writers such as Gruneberg as perhaps the major work employing survey methods and attitude scales to examine the problem of job satisfaction.[4] Reviewing the literature, Gruneberg asserts that Hoppock's approach typifies the traditional approach to job satisfaction because it assumes that "if the presence of a variable in the work situation leads to satisfaction, then its absence will lead to job dissatisfaction and vice versa."[5] Studies conducted by Hoppock involved 500 teachers who responded to a questionaire on different aspects of their job. Their responses

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[1] M. M. Gruneberg, Understanding Job Satisfaction, p. 8.

[2] Ibid., p. 7.

[3] Daniel Wren, Evolution of Management Thought, p. 293.

[4] M. M. Gruneberg, Understanding Job Satisfaction, p. 8.

[5] Ibid.

were analyzed and the subjects were grouped into the most satisfied and the least satisfied. Emotional maladjustment was found to be the most discriminatory factor.[1] In this study Hoppock found interestingly that about 21 percent of the least satisfied teachers had parents with unhappy marriages, as contrasted to six percent of the most satisfied teachers. These findings suggest that certain factors will determine that someone will be job satisfied or job dissatisfied.

Reviewing the literature, Gruneberg observes that certain views of job satisfaction held by Elton Mayo and Robert Hoppock were challenged by Herzberg.[2] In 1959 Frederick Herzberg argued that the causes of job satisfaction and dissatisfaction were separate and distinct.[3]

Theories of Job Satisfaction

There has been much theorizing that is of some relevance for the study of job satisfaction. Campbell and his colleagues have classified present-day theories of job satisfaction into two categories, content theories and process theories.[4] Content theories account for the factors influencing job satisfaction while process theories provide an account of the ways by which a person's values, needs or drives interact with job factors to elicit satisfaction or dissatisfaction.[5]

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[1]J. Hoppock, Job Satisfaction (New York: Harper, 1935), p. 9.

[2]M. M. Gruneberg. Understanding Job Satisfaction, p. 9.

[3]Herzberg et al., Motivation to Work, p. 3.

[4]J. P. Campbell, Managerial Behavior Performance and Effectiveness, 1970, p. 355.

[5]Ibid.

Process Theories, according to Gruneberg, aim at depicting the interaction among variables in their relationship to job satisfaction.[1] The process theorists believe that satisfaction on the job is being determined by the nature of the job, job context as well as the needs, values and expectations of individuals in relation to their job. There could be instances where certain people have a greater need for recognition than others on the job, and where a job does not provide opportunity for recognition, such people tend to be more frustrated than those who have less need for recognition. The process theories often discussed include equity theory, reference group theory, and needs/value fulfillment theories.[2]

The central point of equity theory argues that people have a concept of what is just reward for their efforts. Workers tend to relate what they are getting to what others are getting as reward and if they find themselves getting too little, they become dissatisfied. That is, only where the rewards and efforts are seen as equitable in terms of the rewards of other workers will they have satisfaction.

According to equity theory, when there is a discrepancy between the individual's effort and reward and

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[1]M. M. Gruneberg, Understanding Job Satisfaction, p. 19.

[2]Ibid.

those of others, the worker may put less to his work, take extended coffee breaks and produce poorer quality work. Lawler and O'Gara report in their experiment that their subjects increased the quantity but reduced the quality of their work in order to increase payments for less input.[1] This was an instance showing that when underpaid, individuals behave in a way to increase outcomes but to reduce inputs. The studies made by Pritchard, Dunnette and Jorgenson and reported in 1972 also confirm that under-reward leads to dissatisfaction.[2]

Equity theorists would have us believe that if the individual is given a higher reward than he considers equitable, this too could also cause dissatisfaction. Pritchard argues that in industrial situations, where there is overpayment, individuals tend to believe that others are underpaid and that it is the fault of the management. Naturally the situation whereby one is overpaid seems to be more tolerable to live with than one in which one is underpaid. Writers have argued that equity theory does not provide a clearly straightforward evidence. Lawler contends that the problem with equity theory is not so much that it has been shown to be wrong but that it is so loose that it is able to account

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[1]E. E. Lawler and P. W. O'Gara, "Effects of Inequity Produced by Underpayment on Work Output, Work Quality and Attitudes towards Work." J. of Applied Psych. 51:403-410.

[2]Pritchard et al., "Effects of Perception of Equity and Inequity on Worker Performance and Satisfaction," J. of Applied Psych. 56 (1972): 75-94.

for anything.[1] Other writers argue that equity theory appears capable of accounting for some aspects of satisfaction but not others.

Reference group theory is another type of process theory of job satisfaction. It is said to be of critical importance in understanding job satisfaction. Hulin and Blood have argued that an understanding of the groups to whom the individual relates is of great import in the theoretical consideration of job satisfaction.[2]

Klein and Maher suggest in their study the importance of reference groups.[3] They have found that college-educated managers were less satisfied with their pay than non-college educated managers. As suggested by Hulin and Blood, an explanation for this is that college-educated managers have higher expectations of pay because of their education. They therefore tend to relate their salary to a different reference group, such as a highly educated and highly paid group, whereas the non-college educated managers tend to compare their salary with other non-college educated and lower paid people. Critics of reference group theory

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[1]E. E. Lawler and P. W. O'Gara, "Effects of Inequity Produced by Underpayment on Work Output, Work Quality and Attitudes towards Work." J. of Applied Psych. 51:403-410.

[2]C. L. Hulin and M. R. Blood, "Job Enlargment, Individual Differences and Worker Responses," Psycho. Bulletin 69: 41-65.

[3]S. M. Klein and J. R. Maher, "Educational Level and Satisfaction with Pay," Person. Psych. 19: 195-208.

such as Korman have pointed out that reference group theory leaves many questions unanswered.[1] Gruneberg points out that the only certainty is that reference group theory is at best a partial explanation of how individuals regard the inputs and rewards of the job as equitable. Expectations based on reference groups seem to be defensible only if argumented by a knowledge of personality factors and of individual needs and values in any assessment of what the individual considers equitable in relation to his or her job satisfaction.

In 1976, Lawler has questioned whether expectations and their relationship to what the job actually gives, have any significant effect in understanding job satisfaction.[2] This argument is that when expectations and reality are different the reaction is not dissatisfaction, but surprise. According to Gruneberg, whether we are satisfied or dissatisfied depends upon the value we place on our reward.[3] He argues that we may be extremely satisfied with unexpected promotion or pay hike and equally be very dissatisfied with unexpected dismissal. This is a reasonable argument.

Reviewing the literature, Gruneberg reports that

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[1] M. M. Gruneberg, Understanding Job Satisfaction, p. 23.

[2] E. E. Lawler and P. W. O'Gara, "Effects of Inequity Produced by Underpayment on Work Output, Work Quality and Attitudes towards Work." J. of Applied Psych. 51:403-410.

[3] M. M. Gruneberg, Understanding Job Satisfaction, p. 25.

empirical evidence is available to indicate that changing expectation without changing values will produce no significant effect on the expressed satisfaction.[1] He and Amae have found that the new university students usually come to the doors of the university with little or no knowledge of the role of a university instructor.[2]

Amae was said to have investigated separately the effect on the degree of teachers' reported satisfaction when students were provided with realistic information about their instructors.[3] In this study, students were told that university lecturers were normally not supposed to be trained teachers since they, the university lecturers, should have other functions than teaching, namely research and administration. The latter two functions were said to be of essence to the efficient running of the university. These reasons suffice to say that time to teach undergraduates is very limited. The results revealed that there were considerable changes in what the students expected as the lecturers' role but no significant change in the satisfaction with the quality of teaching. An expected explanation to this is that college oriented people go to the university to obtain a degree, for which teaching is an essential aspect. As Gruneberg puts it,

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[1] Ibid.

[2] Ibid.

[3] Ibid., p. 24.

finding that they will be getting this from untrained teachers who also have other engagements may change their expectations.[1]

Other studies like that of Scott[2] and Wanous[3] carried out at different times indicate that giving individuals a more realistic expectation of the universities they join and the role they will be playing has a positive effect on job satisfaction. According to Gruneberg, providing adequate information may also clarify the roles some individuals are supposed to play in any organization.[4] Gruneberg submits that when expectations affect self-esteem, they may also affect job satisfaction.

Another group of theories belonging to Campbell et al.'s process theories is "needs discrepancy" theory or needs-value fulfillment theory. Realizing that each individual differs in what he or she wants from a job, the need discrepancy theorists aim at examining the way such differences occur in relation to job satisfaction. Two forms of the need-fulfillment theory have been investigated by Vroom.[5] The

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[1] Ibid.

[2] R. D. Scott, "Job Expectancy - An Important Factor in Labor Turnover," Pers. Jour. (May 1972), p. 3603.

[3] J. R. Wanous, "Effects of a Realistic Job Preview on Job Acceptance, Job Attitudes and Job Survival," J. of Applied Psych. 58 (1973): 327-32.

[4] M. M. Gruneberg, Understanding Job Satisfaction, p. 25.

[5] V. H. Vroom, Work and Motivation, p. 10.

subtractive form is based on the argument that job satisfaction is negatively related to the degree of discrepancy between one's needs and how these needs are supplied by the job. If the discrepancy is large, the satisfaction derived on the job will be less, otherwise the satisfaction becomes greater.

It has been argued that a view of job satisfaction which ignores the relative importance of needs is inadequate.[1] The degree of importance of needs varies from individual to individual. Certain needs may be more essential to some individuals than they are to others.[2] Because of the fact that individual discrepancies affect the significance of needs and need fulfillment on the job, it has been suggested that the subtractive model has provided only a partial solution.

Vroom then proposes his second model, the multiplicative model of need fulfillment. Here, need importance is considered, by multiplying the perceived amount of need fulfillment the job provided by the importance of that need to the individual.[3] The products for each need are then summed up together to give a total measure of job satisfaction. So for instance, if a person "received five units of achievement from his job and thinks that the job has seven units of importance, then the five is multiplied by seven to give thirty-five

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[1] M. M. Gruneberg, Understanding Job Satisfaction, p. 25.

[2] R. G. Kuhlin, Needs, Perceived Needs Satisfaction and Satisfaction with Occupation," J. of Applied Psych. 47 (1963): 56-64.

[3] Ibid.

units."[1]

Like the subtractive model, Vroom's multiplicative model attracts some criticisms. Locke points out that it fails to differentiate between how much an individual needs something and how much of it does an individual need.[2] Locke contends that people may be influenced by value, and they may be influenced by the difference between what they want and what the job offers.

Content Theories. Prominent among the content theories are the works of Maslow and Herzberg. In the hierarchy of needs theory, Abraham Maslow developed an interesting framework that helps to give an account of the strength of certain needs. Maslow contends that human needs tend to arrange themselves in a hierarchy of prepotency with these needs divided into those of a lower order and those of a higher order. The higher order needs are esteem (recognition) needs and self-actualization needs. The lower order needs are the basic physiological needs, safety and security needs, and social (affection) needs. According to Maslow, only after the lower

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[1] Ibid.

[2] Ibid.

[3] A. H. Maslow, "A Theory of Motivation," Psych. Review. (1943), 50:370-396.

order needs are satisfied is man capable of being concerned with fulfilling higher order needs.[1] Gratification thus has an important role in motivation theories, argues Maslow.

Maslow's need hierarchy concept has been extended to the problems of job motivation; thus the basic biological motivations are usually found to be at an adequate level of satisfaction. The result is, according to Campbell, that the hierarchy lies within the various psychological and social needs of an indiviaual.[2] In the job situation, the theory would suggest that only after an employee's lower order needs for security and pay have been gratified will the employee seek satisfaction and achievement from the work itself.

Maslow's work has drawn praises and criticism. Gruneberg feels that the theory has great intuitive appeal.[3] Locke observes some flaws in the theory.[4] He could not find evidence for this hierarchy of needs. Gruneberg on the other hand thinks there is evidence that Maslow's theory is capable of accounting for findings on occupational level and job satisfaction.[5]

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[1]A. H. Maslow, "A Preface to Motivation," Psychosomatic Medicine 5 (1943): 85-92.

[2]A. H. Maslow, Motivation and Personality, p. 56.

[3]J. P. Campbell, Managerial Behavior, Performance, and Effectiveness, p. 59.

[4]M. M. Gruneberg, Understanding Job Satisfaction, p. 10.

[5]Ibid.

Maslow's theory of needs hierarchy has been expanded by Frederick Herzberg. Herzberg postulated the existence of two classes of work motivators -- extrinsic and intrinsic factors -- involved in job satisfaction.[1] Herzberg and his associates worked on this in 1957 but Herzberg himself advanced this research in 1966. He later referred to intrinsic factors as "motivators" and extrinsic factors as "hygiene factors"; hence he currently labels his resultant theory as the "motivation-hygiene" theory.[2]

Extrinsic factors or hygiene factors, Herzberg argues, tend to prevent the onset of job dissatisfaction or tend to remove it once it has become manifest in a job situation. In other words, when hygiene factors are inadequate in a job situation, they lead to job dissatisfaction. Herzberg interestingly points out that the adequacy of these factors does not lead to job satisfaction. Such factors include financial reward or salary increase, supervision, job security, and physical working conditions. These factors correspond to Maslow's lower order of needs hierarchy.[3] Herzberg's intrinsic factors or "motivators" include achievement or completing an important task successfully, recognition of being singled out for praise, responsibility for one's own work assignment, and advancement or changing status via

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[1] Ibid.

[2] Herzberg et al., Motivation to Work, p. 44.

[3] Ibid., p. 113.

promotion. These factors, according to Gruneberg, are related to Maslow's higher order of "self-autonomy," and "self-actualization" in his hierarchy of needs.[1] If present in a job situation, Herzberg submits, motivators tend to increase job satisfaction. That is, the absence of these intrinsic factors does not lead to job dissatisfaction.

Herzberg views the "motivators" as stemming from the individual's relation to the job itself; hence the label "job content factors." He argues that hygiene factors stem from the organizational context and, therefore, an individual has no direct control over them.[2] By grouping the factors involved in job satisfaction in this manner, Herzberg seems to have effectively hypothesized job satisfaction and job dissatisfaction to be two separate and distinct entities originating from different antecedents. Perhaps, analogous to this is the concept of illness and health. A person tends to appreciate good health more only when he does not have it, more especially if the individual is admitted to the hospital.

Applications and Replications of Herzberg's Theory

Applications or replications of Herzberg's original work have been reported in a wide range of job levels.

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[1] M. M. Gruneberg, Understanding Job Satisfaction, p. 11.

[2] Ibid.

The first replication of the theory was by Milton Schwartz and his colleagues at Rutgers University.[1] They specifically worked on persons "with supervisor responsibilities in nonprofessional occupations."[2] Their subjects were three male supervisors who were participating in a management-training program at the Rutgers University extention division. The Schwartz group used a questionnaire instead of Herzberg's interview pattern in the original study. Their findings indicate that the motivators favor the satisfaction events while the hygiene factors relate to the dissatisfaction events. This study was said to be "corroborative of the motivation to work theory."[3]

The second duplication of dual-factor theory was by Herzberg himself when he studied lower level supervisors in Finland during his sabbatical leave to Tampere, Findland.[4] Interestingly, Herzberg used a translated version of the questionnaire by Schwartz. The 139 subjects completed the questionnaire when they were enrolled in managerial development conference at the Institute of Industrial Supervision in Helsinki.[5] According to Herzberg, the Finnish study further confirmed his theory.

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[1]P. Schwartz, Attitudes of Middle Management Personnel. Pittsburg: American Institute for Research, 1959.

[2]Ibid., p. 25.

[3]Ibid.

[4]Frederick Herzberg, "The Motivation to Work Among Finnish Supervisors," Pers. Psy., 18:393, Winter, 1965.

[5]Ibid.

Yet in another study by Denzil Clegg, as reported by Herzberg himself, the dual-factor theory, was replicated.[1] Clegg's study involved only 58 county administrators. A minor variation was introduced by Clegg by providing the respondents with three positive and three negative incidents. According to Clegg, this was to assure the collection of the really important events, since the respondents were asked to rank these events in order of importance. For his analysis, Clegg chose the most important one of each set. The findings of Clegg's study were in line with Herzberg's except with minor differences.

Several other studies, including those of George Allen,[2] Saleh,[3] and Friedlander,[4] have considerably agreed or defended Herzberg's motivation-hygiene theory.

Pros and Cons of Dual-Factor Theory

Like Maslow's work on hierarchy of needs, Herzberg's dual-factor theory was widely accepted and debated. It also attracts a pool of criticisms. As Paul Hersey and Kenneth Blanchard point out, Herzberg's work was one of the most

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[1] Ibid., p. 105.

[2] G. Allen.

[3] S. Saleh, "Sources of Job Satisfaction and Their Effects on Attitudes Toward Retirement," Jour. of Industr. Psyc. 1: 158, 1963.

[4] F. Friedlander, "Underlying Sources of Job Satisfaction," Jour. of Applied Psyc. 47: 246, Aug., 1963.

attitudes.[1] John Campbell and others comment that Herzberg's study stresses that there are motivational advantages to be gained from creating a stimulating job environment.[2] According to Gruneberg, a large number of studies using Herzberg's technique of data collection have confirmed his findings for a great variety of samples.[3] The methodology employed by Herzberg is known as the critical incident technique in which employees were asked to think of a time when they felt exceptionally good or exceptionally bad about their present job or any other job they had had.

One major criticism of Herzberg is said to be that "his conclusions are based on far too narrow a sample of the working population."[4] Gruneberg asserts that much of the argument over Herzberg's theory stems from the fact that he ambiguously interprets the outcomes of his finds.[5] Locke too has challenged Herzberg's theory concerning ideas on mental health. He indicates that lack of self-esteem instead of failure to cope with hygience factors seems to be a major factor in "neurosis."[6] Contributing to this argument Gruneberg adds that his part in Herzberg's theory does not provide

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[1]Herzberg et al., The Motivation to Work, p. 114.

[2]Paul Hersey and Kenneth Blanchard, Management of Organizational Behavior, p. 64.

[3]J. P. Campbell, Managerial Behavior, Performance, and Effectiveness, p. 59.

[4]M. M. Gruneberg, Understanding Job Satisfaction, p. 12.

[5]Ibid. [6]Locke, J. Applied Psych. 58.

enough evidence and thus renders Herzberg's argument susceptible to criticism.[1]

In spite of these criticisms, as pointed out earlier, a large number of studies using Herzberg's technique of data collection have confirmed his findings. Even Herzberg's apparent major critic, Gruneberg, has pointed out that "his emphasis on the importance of motivators rather than hygiene factors as contributing to job satisfaction is justified and has wide acceptance."[2] What is more, several researchers, including Locke, readily accept Herzberg's argument that those who derive satisfaction from hygiene factors rather than motivator factors "are missing out on life."[3]

Herzberg himself argues that it is only when hygiene factors such as salary increase are adequate that one begins to structure a job to allow motivators to play a part in the individual's job satisfaction.[4] The motivation-hygiene concepts have been applied to a wide range of personnel programs in industries' schools, including selection, training, management development, college recruiting, job enlargement, quality control, wage and salary administration, and morale surveys.[5] The concepts involved serve as an underlying philosophy for

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[1] Ibid.

[2] M. M. Gruneberg, Understanding Job Satisfaction, p. 17.

[3] Ibid.

[4] Ibid.

[5] Frederick Herzberg, Work and the Nature of Man, p. 126.

personnel practices.

The choice of Herzberg's dual-factor theory for this study is primarily based on its popular acceptance by several researchers on job satisfaction. Besides, it has been argued that Herzberg's exploration into the nature of job motivation sheds light on the nature of job attitudes. There is a canvas of literature supporting this view. Repetitions and applications of the original work have been reported in a wide range of skills, job levels, and different organizations or societies including cross-cultural samples in Finland, Hungary and the Soviet Union. At the time of this proposal writing, none has been reported in Africa or Nigeria in particular applying Herzberg's dual-factor technique. It was the hope of this researcher that an application of this theory in another cultural setting, especially in a multicultural job environment like Nigeria, might possibly elicit interesting and usable findings.

Summary

Chapter II has presented the description of other studies in the concept of job satisfaction. The chapter has presented the historical background of job condition improvement. The theories relating to job satisfaction have been described in this chapter. Also treated in this chapter were the pros and cons of this theory of motivation-hygiene factors, originally developed by Herzberg.

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[1] Ibid., p. 160.

It has been indicated in this chapter that the choice of Herzberg's theory for the present study was based on its popular acceptance. Also pertinent to this conclusion was the fact that an application of the theory in Nigerian concept would explore the nature of job motivation in Nigeria.

CHAPTER III

DESIGN AND METHODOLOGY OF THE STUDY

Introduction

This chapter describes how the present study would be carried out. Included in the chapter are the restatement of the problem, the testable hypotheses for the study, how the sample was selected, and how the data were collected and and analyzed.

Restatement of the Problem

As suggested in Chapter I, certain situational elements must be responsible for the apparent job dissatisfaction among the faculty and the administrators of Nigerian universities, while others possibly create or promote job satisfaction among these employees. Are the situational elements responsible for job satisfaction and job dissatisfaction among the university administrators and faculty in Nigeria comparable with the factors related to the Motivator-Hygiene theory of job satisfaction and job dissatisfaction? Questions such as below were investigated in this study:

1) What are the leading situational elements (Herzberg's motivators) promoting job satisfaction among university administrators and faculty in Nigeria?

2) What are the leading situational elements (Herzberg's hygienes) promoting job dissatisfaction among the faculty and university administrators in Nigeria?

3) Are the situational elements (Herzberg's motivators and hygienes) best promoting job satisfaction and job dissatisfaction.

Hypotheses

In order to study this problem the following testable hypotheses served as guidelines for this study:

H_1 There is significant difference among all the six situational elements. /Herzberg's motivators/ promoting job satisfaction among the faculty staff.

H_2 There is significant difference among all the six situational elements /Herzberg's motivators/ promoting job satisfaction among the university administrators.

Herzberg's six motivators are: achievement, recognition, advancement, responsibility, possibility of growth, and work itself.

H_3 There is significant difference among all the ten situational elements /Herzberg hygienes/ promoting job dissatisfaction among the faculty staff.

H_4 There is significant difference among all the ten situational elements /Herzberg's hygienes/

promoting job dissatisfaction among the university administrators.

Herzberg's ten hygienes are: salary, supervision, working conditions, status, job security, policy and administration, factors in personal life, interpersonal relations (I.R.) with peers, I.R. with superordinates, I.R. with subordinates.

H_5 The leading situational elements (motivators) promoting job satisfaction among university administrators are the same as those promoting job satisfaction among the faculty members of the same Nigerian university.

H_6 The leading situational elements (hygienes) promoting job dissatisfaction among university administrators are the same as those promoting job dissatisfaction among the faculty members of the same Nigerian university.

Ho For the two categories of university employees studied, Herzberg's motivators and hygienes are not applicable.

Selection of Sample

The sample for this study was drawn from one Nigerian university, the University of Lagos, compromising university administrators and faculty members. The rationale for choosing the University of Lagos was based on two things. First, the University of Lagos was one of the first universities in

Nigeria serving as a model for the new ones. Secondly, it was the only university that was strategically located in the federal capital of Nigeria at the period this study was done, and this feature seemed to suggest that the university would attract more Nigerian employees from all parts of the federation than any other Nigerian university situated elsewhere, thus promoting tribal heterogeneity in a university setting.

The university had 195 full-time faculty members and 70 senior administrative officers at the period of this study. These figures did not include several faculty members and administrators who were on study leave with or without pay at the time of this study. There were 29 academic departments, each of which had a head. The heads play dual roles in the university. Some heads combined teaching duties with administrative functions and some did not. In this study, the heads were considered administrators because the nature of their functions tends to be more administrative than pedagogical, and also because the department heads are often shown in most college administrative personnel charts such as it was included in that of Bethany Nazarene College in Appendix E.
than when they do not serve as heads.

Instrumentation

The instrument for this study was a questionnaire

partly developed from Herzberg's instrument but one which follows the pattern used by George R. Allen of Arizona State University while testing Herzberg's theory. There were two major parts to this questionnaire. Each of these had a subpart. The first part asked the respondent to report a specific incident that occurred in his work at the university that resulted in his feeling very good about his present job in the university. This part was followed by a subpart containing follow-up questions to be answered by the subjects. The second major part asked the same respondent to think of another time and report a specific incident when he felt very bad about his present job at the university. This part also contained a subpart with follow-up questions.

The first and second major parts were very similar to what Herzberg and his associates did except that theirs was a face-to-face interview. The subsections of parts one and two follow the adapted pattern used by George R. Allen of Arizona State University, who also structured his instrument to avoid interview process. Certain changes were made in the instrument for this study in order to suite the nature of this study. Instead of bank supervisors and non-supervisers as in George Allen's instrument, this instrument contains faculty and administrators. Also the wording of the first and second major parts of the instrument were different from those of Allen.

The choice of this approach instead of a face-to-face interview was based on the native nature of this study. First, in order to allow the subjects to brood over the question, remember and record fairly well the said incident, a "take-home"

questionnaire was suggested. The second reason that goes along with the locale of the study was that of tribal sensitivity of the subjects. A biased reporting of what really happened might occur if, for instance, the researcher, a member of one of the major tribes in the population of Nigeria who could quickly be recognized by his tribal marks, posed the question on tribal differences. The respondent, if from another tribe, might well provide skewed information because of tribal differences or rivalries. If the respondent's supervisor or subordinate was from the same tribe as the researcher but not from his own, he might not accurately report his tribal feelings. The same argument was true of religious differences. Copies of the instruments may be found in Appendix A.

Data Collection Procedure

The instruments were distributed to the participants through the departmental and unit heads. Relatives of this researcher had helped in the distribution of the instruments to the unit and departmental heads. Participants were told that they were allowed three days to complete the instruments, after which time this researcher would collect them back through the unit and departmental heads. They were also informed that anyone who was able to complete the questionnaire earlier and was willing to return the questionnaire before the third day was free to do so. The collection period went past the period anticipated despite the cooperation of the unit and departmental heads.

The questionnaires came to this researcher in three stages. The first batch was directly collected by the researcher, his relatives, and friends, followed by two other batches that were received through the mails.

Of the 150 questionnaires distributed 143 were returned. Out of these, only 6 (4.2 per cent) were either wrongly completed or were incomplete because the respondents left out some essential parts unfilled. Therefore only 137 questionnaires were considered complete and would be used for this study.

TABLE I

NUMBER OF INSTRUMENTS DISTRIBUTED AND NUMBER ACTUALLY RETURNED OR USED

	Faculty	Administrators
Number of Instruments Distributed	105	45
Number of Instruments Returned	101	42
Number of Instruments Used	97	40

The Elements of Statistical Analysis

For the analysis of this study, a chi square test was used. A chi square test is a statistic used when the population to be studied is not based on an assumption of a normal distribution. Chi square is said to be often used, when the research is not aiming at having the findings representing the entire population or most aspects of the population. The choice of

chi square for analysis of this study was based on the fact that the outcome of the study could not have represented the feelings of the entire population of administrators and faculty members in all the universities in Nigeria.

Moreover, chi square, as Downie and Health put it in their Basic Statistical Methods, is mostly used as a test of significance when the research data are expressed in frequencies. The present study has determined how many times each of the testable factors was mentioned by the respondents, and these were expressed in frequencies. The frequencies were used to compute the chi square for each category. The value of chi square was used to accept or reject the hypotheses presented, depending on the value of the calculated chi square as compared with the table chi square.

Chi square tests have been used by many researchers in analyzing their data. George R. Allen of the University of Arizona used chi square in a study similar to the present study.[1]

According to Edward Minium,[2] the chi square statistic χ^2, provides a measure of the discrepancy between the expected frequency and obtained frequency for two-celled test, as in the present study,[3] the standard formula for chi square is:

$$\chi^2 = \frac{(fo_1 - fe_1)^2}{fe_1} + \frac{(fo_2 - fe_2)^2}{}$$

With 'fo' representing the obtained frequency and 'fe' representing the expected frequency.

Because the distribution of chi square is discrete whereas the values obtained by the use of the formula give a continuous probability, a correction called Yates' correction

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[1]George R. Allen, "Testing Herzberg's Motivation-Maintenance Theory in Commercial Banks," Unpublished Dissertation, University of Arizona, 1967, p. 72.

[2]Edward Minium, Statistical Reasoning in Psych. and Education, 2nd Ed. 1978, p. 428.

[3]The two cells in this study are the Bad Feelings Column and the Good Feelings Column.

is often applied to this formula. The formula with Yates' correction was employed for all chi square computations to allow conservative statistical testing in this present study.[1]

The researcher has introduced some new symbols in the formula for the purpose of convenient description in the use of this formula for the present study.

The revised chi square with Yates' correction was used to obtain all calculated chi square values for this study. Formula for the chi square follows:

$$\chi^2 = \frac{(Oc_1 - Ec_1 - .5)^2}{Ec_1} + \frac{(Oc_2 - Ec_2 - .5)^2}{Ec_2}$$

Oc_1 = Observed frequency on the first cell. This is the same as the number of times each of the categories was mentioned in the bad feelings questions. Oc_1 appears on the subcolumn under the bad feelings column on Table III and all similar tables.

Oc_2 = Observed frequency on the second cell. This is the same as the number of times each of the categories was mentioned in the good feelings questions. Oc_2 appears on the subcolumn under the good feelings column on Table III and all similar tables.

Ec_1 = Expected frequency for the first cell.

Ec_2 = Expected frequency for the second cell.

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[1] Edward Minimum, Statistical Reasoning in Psych. and Education.

Observed frequencies for each chi square calculation, as indicated above, corresponds to the number of times each of the categories was mentioned either in dissatisfaction or satisfaction feelings questions.

Method of Data Analysis

A content analysis approach, such as used by Herzberg was used to clarify responses. Classification was in accord with 16 categories, the criteria developed by Herzberg, and used in his original study.[1] The categories included in the analysis were the six motivators and the ten hygienes of Herzberg's Theory given below. Their operational definitions follow. These definitions have followed Herzberg's pattern[2] except that they are redefined to suite this study. The operational definitions for motivators follow below:

Achievement: This category was defined to be the occasion when a university employee experienced a successful completion of his job, or when he reported his obtaining a solution to a job-related problem. An example was when a faculty member successfully completed a research or an academic project or when an administrator reported a successful completion of an aspect of his job. A paper published by a faculty was considered an achievement. A faculty reporting that the

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[1] Ibid., p. 93.

[2] Ibid., p. 37.

achievement of a former student was his source of good feeling was in this category. A negative achievement was the occasion when he experienced failure in his job or he was unable to see the results of his work.

Recognition: This category was defined to mean the occasion when a university employee's successful work was praised, noticed or when his good idea about the job was accepted. If a faculty member received compliments from colleagues or from any institutional authority, this was regarded as an occasion of recognition. The negative recognition was when a university employee was criticized or blamed or when his successful work was not praised or noticed.

Responsibility: This category was defined as an occesion when a university employee was allowed to work without supervision or when he was given responsibility for the work of others. This included an instance when a university employee reported that he derived satisfaction from being given responsibility for his own work or for the work of others or from being given new responsibility. The category also included reports indicating a loss of satisfaction or a negative attitude towards the job because of a lack of responsibility when a university employee was not given responsibility for the work of others.

Work Itself: This was a category which included occasions when the university employee mentioned the actual

doing of the job as a source of good or bad feelings. It was a situation wherein a university employee considered his job or aspects of it challenging, creative. It also included situations wherein the employee considered his job or aspects of it unchallenging or uncreative. An instance of this category was when a university employee reported that the duties of his position provided an opportunity to carry through an entire operation or when he was restricted to one minute of it.

Advancement: This category was defined as a situation in which a university employee experienced a positive change in academic or administrative work such as a promotion or when the university employee received a negative change in academic or administrative rank such as a demotion.

Possibility of Growth: This category was defined to mean opportunities or lack of opportunities for growth or advancement in skills or talents. A report indicating availability or non-availability of funds for research or to carry out certain departmental programs or projects was included in this category.

The operational definitions for hygienes follow below:

University Policy and Administration: This category included either beneficial or harmful personnel policies of the university as related to organizational and institutional goals. Federal or state governmental regulations affecting the university was considered in this category.

Supervision - Technical: This category included situations when a university employee reported the competence or incompetence, fairness, or unfairness, of a superior university employee with whom the faculty or administrative member of the university was involved.

Salary: This category included any events described by the university employee in which compensation played a role. Issues on salary increases or unfulfilled expectation of salary increases were such events.

Interpersonal Relations with Superordinates: This category described the characteristics of interactions between a university employee and a superior officer at the university. Events describing a friendly relation an employee had with his supervisor, and the way in which a supervisor supported him with management were classified in this category. An event describing an unfriendly relationship or a situation in which a supervisor was unwilling to listen to suggestions fell into this category.

Interpersonal Relations with Subordinates: This category described the characteristics of interactions between

a university employee and another university employee subordinate or inferior to the reporting employee. Events reporting good or poor working relationships with subordinates fell into this category.

Interpersonal Relations with Peers: This category described the characteristics of interactions between a university employee and his colleagues. Events describing cooperation or lack of cooperation of co-employees experienced by the respondent were in this category.

Working Conditions: This category describes events when a university employee reported that his working situation was physically and socially good, or that he was working with good facilities. It also included reports indicating poor physical surroundings and poor facilities.

Status: This category described an occasion when a university employee reported that he had experienced signs of prestige or lack of it. Only when the university employee actually mentioned some sign of status or prestige as being a source of his feelings about the job was a change in status considered for this category.

Factors in Personal Life: This category involved the private life of the university employee in those situations which affected his job, situations in which some aspect of the job affects his personal life in such a way that the effect was a factor in the respondent's feelings about his job. If, for instance, the university requested that a person should move

to a new location in which the employee's family was unhappy, this situation was to be included in the category.

Job Security: This category described the permanence or temporariness of a job situation. The assurance of keeping a job or the threats of losing it was included. Tenure and institutional stability or instability were in this category.

The classification of responses included determining the possibility of coding responses as one of the motivators or as one of the hygienes. In order to eliminate bias, three independent "raters" were employed. This was an approach used by another researcher in this field at the University of Arizona, George R. Allen,[1] while testing "Herzberg's Motivation-Maintenance Theory in commercial banks." The content analysis of the questionnaires were done separately by the independent raters and this researcher. There were comparisons between the independent raters and this student researcher on sources of satisfaction and sources of dissatisfaction respectively.

Process of Content Analysis

According to Herzberg,[2] there are two fundamental approaches to content analysis. One is an a priori approach based on outlined schematic system. The analysis is done by making use of the literature review, searching for existing facts

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[1]George R. Allen, "Testing Herzberg's Motivation-Maintenance Theory in Commercial Banks," unpublished Diss. University of Arizona, 1967, p. 65.

[2]Frederick Herzberg, Work and Nature of Man, p. 130.

about the problem to be analyzed. The other approach is an a posteriori approach in which the categories of analysis are taken from the data collected. In his original study, Herzberg chose an a posteriori approach. The analysis of the present study was done by making use of an a priori approach of content analysis.[1] The reason for choosing this approach was based on the fact that 16 categories were already made available by Herzberg's original study. This study was, therefore, made by identifying from each questionnaire the response that fitted into each of the existing 16 categories.

The process was started by a careful reading and an understanding of each respondent's answers to questions on satisfaction and dissatisfaction feelings. The researcher classified each response on one of the 16 categories according to the pattern developed by Herzberg.[2] This content analysis involved the use of Arabic numerals for the categories instead of words. As shown below, the sixteen categories were then numbered 1 through 16. By substituting numbers for words reporting was made easier and faster for raters.

1. for Achievement
2. for Recognition
3. for Responsibility
4. for Work itself
5. For Advancement
6. for Possibility of growth
7. for Administration and Institutional Policy

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[1] Ibid. [2] Ibid.

8. for Supervision
9. for Salary
10. for Interpersonal Relations (I.R.) -- Superordinates
11. for I.R. -- Subordinates
12. for I.R. -- Peers
13. for Working conditions
14. for Status
15. for Personal factors in life
16. for Job Security

As mentioned above, numbers instead of words or phrases were used in rating the responses. Three independent raters, described below, were properly trained to enter their ratings in figures as did the researcher himself.

Training of the Independent Raters

In order to secure the reliability of the researcher's rating, three independent raters (R_1, R_2 and R_3) were employed. This was due to the fact that the researcher was familiar with the theory to be applied and that the hypotheses to be tested were developed by him, in which case bias could have been introduced into classification of the responses provided by the participants. Therefore, the independent raters, who were not familiar with the theory and did not know the hypotheses to be tested, analyzed all the questionnaires after being trained by the researcher.

The three raters were engaged for two sessions. In the first session, they were provided with the operational definitions of the sixteen categories. The researcher went over each of the sixteen categories, explaining the examples for each category. After satisfactorily answering questions posed by the independent raters, the researcher provided them with an example which had been constructed for the purpose of the training. The purpose for this example was to test the raters for one hundred per cent understanding ofthe training and the use of the operational definitions.

Then, the researcher provided the independent raters with ten seemingly difficult but actual responses that had been selected by the researcher for the training exercise. The testing of the three raters each on the preselected ten responses was to find out the possibility of having their 29 classifications of the responses the same as mine with only one incorrect classification. This was achieved and it ended the training and the first session for the independent raters' participation.

The second session was the actual rating session. The raters were put into separate rooms and the questionnaires were distributed among the three raters. Upon finishing, the questionnaires were collected by the researcher for comparison with his. Each rater's ratings were compared with those of the researcher, otherwise called here as the research rater (RR). All the questionnaires were prenumbered 1 through 137 before the rating work began. By so doing, it

was possible to identify each questionnaire rated in case one needs to refer to it later. Prenumbering the questionnaires also allowed the researcher to identify the questionaires in which is ratings differed from those of the independent raters. A summary of disagreements between raters and the researcher follows:

TABLE I

SUMMARY OF DISAGREEMENTS BETWEEN THE RESEARCH RATER (RR) AND THE INDEPENDENT RATERS (R1, R2, R3) ON SATISFACTION FEELINGS

Instrument No. Disagreed On	RR	R1	R2	R3
1	2	10	10	7
15	2	5	2	2
47	3	10	6	3
73	2	2	5	2
80	6	2	6	6
94	1	1	1	2
111	2	7	2	2
136	2	10	2	2

As regards questions on satisfaction feelings, the three independent raters disagreed with the researcher in the rating of responses on eight questionnaires whose serial numbers are shown on Table I. What that meant was that there was six per cent disagreement as opposed to ninety-four per cent

agreement between the researcher's ratings and those of independent raters on the question of satisfying feelings.

TABLE II

SUMMARY OF DISAGREEMENTS BETWEEN THE RESEARCH RATER (RR) AND THE INDEPENDENT RATERS (R1, R2, R3) ON DISSATISFACTION FEELINGS

Instrument No. Disagreed On	RR	R1	R2	R3
1	2	11	11	2
4	16	10	16	7
15	15	9	15	15
20	15	9	15	15
73	2	2	3	2
80	13	13	12	12
94	12	12	12	2
110	7	7	7	10
136	8	8	8	13
137	8	8	8	10

As regards questions on dissatisfaction feelings, the researcher's ratings differed with those of the independent raters on ten questionnaires. That is, there was seven per cent disagreement while there were ninety-three per cent agreement on the question dealing with dissatisfaction feelings.

The two tables above were drawn to summarize the

differences between the research rater's ratings and the ratings of the independent raters. Table I contains the comparison of disagreements on satisfaction feelings question between the raters. It shows that the independent raters ratings agreed 94% with the research rater's ratings but disagreed only 6 per cent. Table II contains the comparison of disagreements on "dissatisfaction feelings" question between the raters and the researcher's ratings. It indicates that the independent raters agreed 93 per cent with the researcher's ratings but only disagreed 7 per cent.

As shown on both tables, the research rater (RR) and the three independent raters agreed over 90 per cent on both the satisfaction feelings and dissatisfaction feelings ratings. Therefore, the researcher was able to conclude that bias has been minimized in the content analysis of the questionnaires and that his ratings of the questionnaires were fairly reliable and could be used in the present study.

Summary

In Chapter III, the design of the study was described. The research problem was restated, and the hypotheses were presented to know what questions were to be investigated. There was a discussion on the selection of the university under investigation. It has been indicated in the chapter that a questionnaire was to be used for this study. Data collection procedure as well as the proposed method of data analysis were described. In the chapter was also presented the training of

independent raters as well as the description of their rating differences with the researcher.

CHAPTER IV

FINDINGS OF THE STUDY

Introduction

The purpose of this chapter was to report the findings obtained from the present study. It follows then that the chapter was to give an overall data presentation as well as the presentation of separate data from the faculty and data from the administrators.

The chapter thus includes the general findings, analysis of data collected from the faculty, and the analysis of data from the administrators. The factors promoting job satisfaction and job dissatisfaction feelings were analyzed. Those factors that most promote satisfaction and dissatisfaction feelings within the faculty were compared with those with the administrators. The research hypotheses were tested on the basis of the findings of the present study. At the conclusion, the findings of the present study were compared with some of the findings of Herzberg's original study.

Presentation of Data From Faculty

When the responses from the faculty were separately analyzed, the results showed that motivators were more

frequently mentioned sources of satisfaction feelings among the faculty members than the hygiene factors were mentioned. As indicated in Table III, 69 out of a total of 97 faculty members who participated in this study had cited motivators as sources of their satisfaction feelings while 28 of the faculty mentioned that hygiene factors were responsible for their satisfaction feelings. Hygiene factors were together more mentioned than motivators as sources of dissatisfaction feelings among the faculty studied. As shown in Table III 83 faculty members attributed their dissatisfaction feelings to hygiene factors while only 14 of them claimed that their dissatisfaction feelings were caused by motivators.

The analysis showed that three motivators, namely achievement, advancement, and possibility of growth, stood out as the major sources of satisfaction feelings among the faculty. While two motivators -- recognition and responsibility -- did fairly well as sources of satisfaction feelings among the faculty, work itself showed up in this study as the least mentioned motivator as a source of job satisfaction.

The three factors indicated above were frequently mentioned by the faculty as sources of their satisfaction feelings whereas they (factors) appeared very infrequently when the faculty were asked to describe events that were parallel to job dissatisfaction feelings. Achievement was the most frequently mentioned factor as a source of satisfaction feelings by the faculty. Twenty faculty members cited achievement alone as a source of their satisfaction feelings.

Advancement and possibility of growth followed with 16 and 12 faculty members respectively mentioning them as sources of satisfaction feelings.

TABLE III

THE NUMBER OF TIMES THAT THE FACULTY MENTIONED MOTIVATORS AND HYGIENE FACTORS AS SOURCES OF JOB SATISFACTION AND JOB DISSATISFACTION FEELINGS

Motivators	Frequency of Entry n = 97 Dissatisfaction	n = 97 Satisfaction
Achievement	3	20
Recognition	2	9
Responsibility	1	8
Work Itself	1	4
Advancement	3	16
Possibility of Growth	4	12
Motivators' Total	14	69
Hygiene Factors		
Administration & Inst. Policy	14	3
Supervision	7	6
Salary	13	3
Interpersonal Relations - Superordinates	8	1
Interpersonal Relations - Subordinates	6	4
Interpersonal Relations - Peers	6	4
Working Conditions	6	4
Status	8	1
Personal Factors in Life	7	1
Job Security	8	1
Hygienes' Total	83	28
TOTAL	97	97

It has been found in this study, and as shown in Table III that while two hygiene factors, salary and administration and institutional policy, were significantly mentioned as sources of dissatisfaction feelings among the faculty, other hygiene factors showed similar frequencies. Administration and institutional policy as a factor was mentioned by 14 faculty members, salary was mentioned by 13 faculty members as the causes of their dissatisfaction feelings. Three hygiene factors were each mentioned 8 times as shown in Table III. Status, interpersonal relations with superordinates, and job security were each mentioned as the cause of dissatisfaction feelings. Another three hygiene factors scored 6 each. Interpersonal relations with subordinates was cited by 6, interpersonal relations with peers was cited by 6 and yet another 6 faculty members cited working conditions as sources of dissatisfaction feelings.

On the percentage basis, 71.1 per cent of the faculty cited motivators as sources of satisfaction feelings while 28.9 per cent of them cited hygiene factors as sources of satisfaction feelings. As shown in Table IV , 85.6 per cent of the faculty mentioned hygiene factors as sources of dissatisfaction feelings, while only 14.4 per cent mentioned motivators as the causes of dissatisfaction feelings. On the whole analysis, there was a great number of similarities in frequencies entered for hygiene factors while the figures entered for the motivators showed differences. These findings are indicated in Table IV.

TABLE IV

PERCENTAGE DISTRIBUTIONS OF FACULTY RESPONDENTS AMONG FACTORS RESPONSIBLE FOR SATISFACTION AND DISSATISFACTION FEELINGS

	Percentage Distributions	
Motivators	Dissatisfaction	Satisfaction
Achievement	3.1	20.6
Recognition	2.1	9.3
Responsibility	1.0	8.2
Work Itself	1.0	4.0
Advancement	3.1	16.5
Possibility of Growth	4.0	12.4
Motivators' Total	14.4	71.1
Hygiene Factors		
Administration & Institutional Policy	14.4	3.1
Supervision	7.2	6.2
Salary	13.4	3.1
Interpersonal Relations - Superordinates	8.2	1.0
Interpersonal Relations - Subordinates	6.2	4.1
Interpersonal Relations - Peers	6.2	4.1
Working Conditions	6.2	4.1
Status	8.2	1.0
Personal Factors	7.2	1.0
Job Security	8.2	1.0
Hygienes' Total	85.6	28.9
TOTAL	100.0	100.0

The values of calculated chi squares shown in Table V indicate that five out of six motivators were statistically significant when considered on individual basis as sources of satisfaction feelings. Achievement has the chi square value of 12.609 and thus was statistically significant as a source of satisfaction feelings at the .001 level.

Advancement was significant statistically with chi square value of 8.947 and the level of significant was .01. Three motivators -- responsibility, recognition and possibility of growth -- were each statistically significant at level .05 as shown by their chi square values in Table IV. Only work itself was shown in this study as a non-significant motivator among the faculty. On the overall analysis, motivators showed the overall chi square value of 36.458 and they were together found to be statistically significant as sources of satisfaction feelings among the faculty at the .001 level.

The values of chi squares calculated from the data analyzing the faculty responses also showed that six out of ten hygiene factors were significant each at the .05 level, while the remaining four were non-significant in this study as sources of job dissatisfaction feelings among the faculty. These results are shown in Table IV.

TABLE V

CHI SQUARE VALUES AND LEVELS OF SIGNIFICANCE OF MOTIVATORS AND HYGIENES AMONG THE FACULTY

Motivators	Chi Square Values	Level of Significance
Achievement	12.609	.001
Recognition	4.545	.05
Responsibility	5.555	.05
Work Itself	2.00	ns
Advancement	8.947	.01
Possibility of Growth	4.063	.05
Motivators' Total	36.458	.001
Hygiene Factors		
Administration and Institutional Policy	7.176	.05
Supervision	0.154	ns
Salary	5.313	.05
Interpersonal Relations - Superordinates	5.555	.05
Interpersonal Relations - Subordinates	0.500	ns
Interpersonal Relations - Peers	0.500	ns
Working Conditions	0.500	ns
Status	5.555	.05
Personal Factors in Life	4.625	.05
Job Security	5.555	.05
Hygienes' Total	27.261	.001

Testing Hypothesis One (H_1)

There is significant difference within the six situational elements (Herzberg's motivators) promoting job satisfaction among the faculty staff.

This research hypothesis was tested by the inspection and discussion of Tables III and IV above. The description of the findings of the study on faculty has shown a considerable amount of variations within the six motivators that were used in describing the events

that led to faculty's satisfaction or dissatisfaction feelings. Table III shows that five out of six motivators were found to stand out as essential sources of faculty's satisfaction feelings. Comparing the number of faculty respondents that mentioned each motivator as sources of satisfaction feelings, it was found that the frequencies vary within these factors. Out of the six motivators, only two showed a close amount of frequency, the rest motivators showed staggering differences within themselves. No two motivators were each mentioned by the same number of faculty members in this study. Therefore the frequencies vary within the motivators.

Table IV which shows the percentage distributions of respondents within the factors also demonstrates differences within these motivating factors. Suffice it to conclude in this study, that there were clear differences among the motivators, thus making it appropriate to accept the research hypothesis.

Testing Hypothesis Three (H_3)

> There is significant difference within the ten situational elements (Herzberg's hygienes) among the faculty.

On the basis of the data shown in Tables III and IV the research Hypothesis above was tested.

The results of this study have shown that generally the hygiene factors were more frequently mentioned by the faculty as sources of dissatisfaction feelings than sources of

satisfaction feelings. However, the frequencies for the hygiene factors were not significantly different from one another as shown in Table III. Table IV showing the percentage distributions indicates, similarly, that there were no significant differences among the factors. For example, Table III shows that three hygiene factors -- job security, status and interpersonal relations with superordinates -- were each mentioned by 8 faculty members as sources of their dissatisfaction feelings. Similarly, three other hygiene factors -- working conditions, interpersonal relations with subordinates, and interpersonal relations with peers -- were each mentioned by 6 faculty respondents as sources of their dissatisfaction feelings. Again, two other hygiene factors were at parity in the frequency of distributions. Supervision was cited as a factor promoting job dissatisfaction by 7 faculty members and another 7 faculty members mentioned personal factors for the same reason. The same similarities within the hygiene factors were shown by percentages on Table IV. Based on these findings, the researcher fails to accept the research hypothesis.

Presentation of Data from Administrators

When the responses from the 40 administrators were separately analyzed, the results showed again that only work itself did not stand out as a major source of satisfaction

feelings among the administrators. As in faculty, five of the six motivators stood out as essential determiners of satisfaction feelings. As shown in Table VI, recognition and responsibility were the leading motivators promoting job satisfaction feelings among the university administrators in this Nigerian University. Recognition was cited by 8 administrators and responsibility was also mentioned by 8 administrators both as sources of their satisfaction feelings. Achievement, advancement, and possibility of growth were each cited by 6 administrators as sources of satisfaction feelings. Work itself scored the lowest frequency with only 2 administrators out of 40 altogether citing it as a source of job satisfaction feelings.

On an individual basis, as shown on Table VIII, Achievement, recognition, responsibility, advancement, and possibility of growth were each significant, as sources of satisfaction at the .05 level on statistical standpoint. Work itself was found to be of non-significance on statistical basis. On the overall basis the six motivators were together found statistically significant at level .001 among the administrators in the present study.

TABLE VI

THE NUMBER OF TIMES THAT THE ADMINISTRATORS REPORTED MOTIVATORS AND HYGIENE FACTORS AS SOURCES OF SATISFACTION AND DISSATISFACTION FEELINGS

n - 40

Motivators	Frequency of Entry Dissatisfaction	Satisfaction
Achievement	0	6
Recognition	1	8
Responsibility	1	8
Work Itself	3	2
Advancement	0	6
Possibility of Growth	0	6
Motivators' Total	5	36
Hygiene Factors		
Administration & Institutional Policy	4	0
Supervision	4	0
Salary	6	0
Interpersonal Relations - Superordinates	4	0
Interpersonal Relations - Subordinates	2	1
Interpersonal Relations - Peers	4	1
Working Conditions	1	1
Status	6	0
Personal Factors	0	1
Job Security	4	0
Hygienes' Total	35	4
TOTAL	40	40

TABLE VII

PERCENTAGE DISTRIBUTIONS OF ADMINISTRATORS AMONG FACTORS RESPONSIBLE FOR SATISFACTION AND DISSATISFACTION FEELINGS

Motivators	Percentage Distribution	
	Dissatisfaction	Satisfaction
Achievement	0.0	15.0
Recognition	2.5	20.0
Responsibility	2.5	20.0
Work Itself	7.5	5.0
Advancement	0.0	15.0
Possibility of Growth	0.0	15.0
Motivators' Total	12.5	90.0
Hygienes		
Administration & Institutional Policy	10.0	0.0
Supervision	10.0	0.0
Salary	15.0	0.0
Interpersonal Relations - Superordinates	10.0	0.0
Interpersonal Relations - Subordinates	5.0	2.5
Interpersonal Relations - Peers	10.0	2.5
Working Conditions	2.5	2.5
Status	15.0	0.0
Personal Factors	0.0	2.5
Job Security	10.0	0.0
Hygienes' Total	87.5	10.0
TOTAL	100.0	100.0

The results of the present study also show that status and salary were the leading job dissatisfiers (hygiene factors) among the administrators. Both status and salary were mentioned as the causes of the job dissatisfaction feelings each by 15.0 per cent of the 40 administrators as shown in Table VII. Five other hygiene factors in this study were shown each with 10.0 per cent. These factors were job security, interpersonal relations with superordinates, supervision, interpersonal relations with peers, and administration and institutional policy. Working conditions, interpersonal relations with subordinates and personal factors were not shown as significant hygiene factors in the present study on the basis of frequency of entry and percentage distributions shown by Tables VI and VII respectively.

Considered on individual basis, six out of ten hygiene factors shown in Table VIII were each found to be significant at the .05 level as sources of dissatisfaction. These hygiene factors were administration and institutional policy, supervision, calary, status, job security, and interpersonal relations with superordinates. However, working conditions, personal factors, interpersonal relations with superordinates and interpersonal relations with peers were found to be statistically non-significant, though they were mentioned as sources of dissatisfaction feelings among these administrators.

On overall basis, the hygiene factors were together found in the study to be significant as sources of dissatisfaction feelings at the .001 level among the administrators.

TABLE VIII

CHI SQUARE VALUES AND LEVELS OF SIGNIFICANCE OF MOTIVATORS AND HYGIENE FACTORS AMONG ADMINISTRATORS

Motivators	Chi Square Values	Levels of Significance
Achievement	6.166	.05
Recognition	5.555	.05
Responsibility	5.555	.05
Work Itself	0.400	ns
Advancement	6.166	.05
Possibility of Growth	6.166	.05
Motivators' Total	23.464	.001
Hygiene Factors		
Administration & Institutional Policy	4.250	.05
Supervision	4.250	.05
Salary	6.166	.05
Interpersonal Relations - Superordinates	4.250	.05
Interpersonal Relations - Subordinates	0.666	ns
Interpersonal Relations - Peers	2.00	ns
Working Conditions	0.500	ns
Status	6.666	.05
Personal Factors	2.000	ns
Job Security	4.250	.05
Hygienes' Total	24.66	.001

Testing Research Hypothesis Two (H_2)

There is significant difference within the six situational elements (Herzberg's motivators) promoting job satisfaction among the administrators.

On the basis of the data analysis presented on Tables VI and VII, the Research Hypothesis (H_2) was tested.

As discussed earlier,the motivators except work itself did not show any significant difference within themselves. It has been shown in the findings that the frequencies for the motivators did not differ significantly. Likewise the percentage distributions look alike among the motivators. Therefore by the data presented in this study we fail to accept the research Hypothesis (H_2).

Testing of Research Hypothesis Four (H_4)

There is significant difference within the situational elements (Herzberg's hygienes) promoting job dissatisfaction among the administrators.

Again making use of the data analysis of responses from the administrators as indicated in Tables VI and VI, the above Hypothesis was tested.

As shown by Table VI and discussed earlier, the hygiene factors cited by the administrators in this study did not show much difference between themselves. Both the frequencies in Table VI and the percentage distributions in Table VII display similarities within these dissatisfying factors. Suffice to conclude that there were enough data in the present study that make it possible to reject the research hypothesis, because there was no significant difference within the hygiene factors promoting dissatisfaction among the administrators.

Comparison of Faculty and Administrators

A comparison of the data obtained from both groups of the university employees reveals some differences and similarities. On the overall analysis, the data analyzing faculty and administrators indicated that motivators in each classification were more related to satisfaction feelings than they were to dissatisfaction feelings. Similarly, on the total analysis, hygiene factors in each classification were more related to dissatisfaction feelings than they were to satisfaction feelings. Thus, motivators were collectively significant as sources of satisfaction feelings at .001 level and also the hygiene factors were statistically significant at .001 level as sources of dissatisfaction feelings.

However, when considered individually and compared with each other, differences are obvious between the factors promoting satisfaction or dissatisfaction feelings among the faculty and the administrators.

Table IX shows that the leading motivators among the faculty are not necessarily the leading motivators among the administrators in this study. Table IX indicates that Achievement was the leading motivator among the faculty. 20.6 per cent of the faculty cited achievement as the source of their satisfaction feelings. On the other hand, recognition and responsibility were the leading motivators among the administrators. Recognition was mentioned by 20.0 per

cent and responsibility also by 20.0 per cent of administrators as sources of satisfaction feelings.

TABLE IX

COMPARISON OF FACULTY AND ADMINISTRATORS RESPONSES (in percentages) ON MOTIVATORS AND HYGIENE FACTORS

	Dissatisfaction		Satisfaction	
Motivators	Faculty	Admin.	Faculty	Admin.
Achievement	3.1	0.0	20.6	15.0
Recognition	2.1	2.5	9.3	20.0
Responsibility	1.0	2.5	8.2	20.0
Work Itself	1.0	7.5	4.0	5.0
Advancement	3.1	0.0	16.5	15.0
Possibility of Growth	4.0	0.0	12.4	15.0
Motivators' Total	14.4	12.5	71.1	90.0
Hygiene Factors				
Administration and Institutional Policy	14.4	10.0	3.1	0.0
Supervision	7.2	10.0	6.2	0.0
Salary	13.4	10.0	3.1	0.0
Interpersonal Relations - Superordinates	8.2	10.0	1.0	0.0
Interpersonal Relations - Subordinates	6.2	5.0	4.1	2.5
Interpresonal Relations - Peers	6.2	10.0	4.1	2.5
Working Conditions	6.2	2.5	4.1	2.5
Status	8.2	15.0	1.0	0.0
Personal Factors	7.2	0.0	1.0	0.0
Job Security	8.2	10.0	1.0	0.0
Hygienes' Total	85.6	87.5	28.9	10.0
TOTAL	100.0	100.0	100.0	100.0

Testing Research Hypothesis Five (H_5)

The leading situational elements (motivators) promoting job satisfaction among the university administrators are the same as those promoting job satisfaction among the faculty of the same university.

The comparisons of data from faculty and administrators provide a means of testing the above hypothesis.

As described above, the findings shown above prove that the most frequently mentioned motivator among the administrators was not the most frequently mentioned motivator among the faculty studied. While achievement was the most frequently mentioned motivator among the faculty, recognition and responsibility were both the most frequently mentioned motivators among the administrators. Therefore, there were not enough data in the present study to accept the hypothesis (H_5) above.

Table IX again shows that the leading hygiene factor among faculty in this study was administration and institutional policy, while status and salary were the most frequently mentioned hygiene factor among the administrators. As a hygiene factor, administration and institutional policy was mentioned by 14.4 per cent of the faculty while status and salary were each mentioned by 15.0 per cent of the administrators.

Testing Research Hypothesis Six (H_6)

> The leading situational elements (Hygienes) promoting job dissatisfaction among the university administrators are the same as those promoting job dissatisfaction among the faculty of the same university.

Again, making use of data analysis on Table IX gives room for the testing of the research hypothesis above.

As shown in Table IX, and discussed above, the

leading hygiene factors among the administrators in this study were status and salary while administration and institutional policy appeared significantly a leading hygiene factor among the faculty of this same university. Thus the data presented in this study are not enough to accept the research hypothesis above.

TABLE X

FREQUENCIES OF RESPONSES BY FACULTY AND ADMINISTRATORS AND CHI SQUARE VALUES ON FACTORS RESPONSIBLE FOR SATISFACTION AND DISSATISFACTION FEELINGS

n = 137

Motivators	Frequency of Entries		Chi Square	
	Dissatisfaction	Satisfaction	Value	Level
Achievement	3	26	18.275	.001
Recognition	3	17	9.850	.01
Responsibility	2	16	10.944	.001
Work Itself	4	6	0.500	ns
Advancement	3	22	14.480	.001
Possibility of Growth	4	18	7.880	.01
Motivators' Total	19	105	59.653	.001
Hygiene Factors				
Admin. & Inst. Policy	18	3	10.762	.01
Supervision	11	6	1.529	ns
Salary	19	3	11.682	.001
Inter. Rela.-Superord.	12	1	9.385	.01
Inter. Rela.-Subord.	8	5	0.769	ns
Inter. Rela.-Peers	10	5	1.733	ns
Working Conditions	7	5	0.416	ns
Status	14	1	11.333	.001
Personal Factors	7	2	2.888	ns
Job Security	12	1	9.385	.01
Hygienes' Total	118	32	49.313	.001
TOTAL	137	137		

Testing Null Hypothesis (H_o)

For the two categories of university employees studied, Herzberg's motivators and hygienes are not applicable.

This null hypothesis was tested on the basis of Table X in particular and other findings presented in previous tables as well as the discussion on Figure 1.

The two initial studies made by Frederick Herzberg, now of the University of Utah, involved two categories of respondents. The original study which led to the motivation-hygiene theory, involved about 200 engineers and accountants from eleven industries around Pittsburgh. Herzberg conducted another study that involved some Finnish supervisors and non-supervisors. The present study too has involved two groups: the faculty staff and the administrative staff of a Nigerian university. In both of his studies, Herzberg concluded that on an overall basis, motivators were related to job satisfaction and hygienes were related to job dissatisfaction. Similarly on an over-all basis, this study has pointed to the fact that the motivating factors among the two groups of university employees were related to job satisfaction while the hygiene factors among them were related to job dissatisfaction. Thus, in general, the findings of the present study are similar to those reported by Herzberg.

However, some differences were noted in the findings for individual motivators and hygienes. In the study that involved Finnish supervisors and non-supervisors, Herzberg concluded that possibility of growth was not a significant source of job satisfaction. The present study is in disagreement with that. As shown in Table V and supported by Tables VI and VII, possibility of growth was statistically significant as an essential source of satisfaction among both the faculty and administrators. It is hard to know what

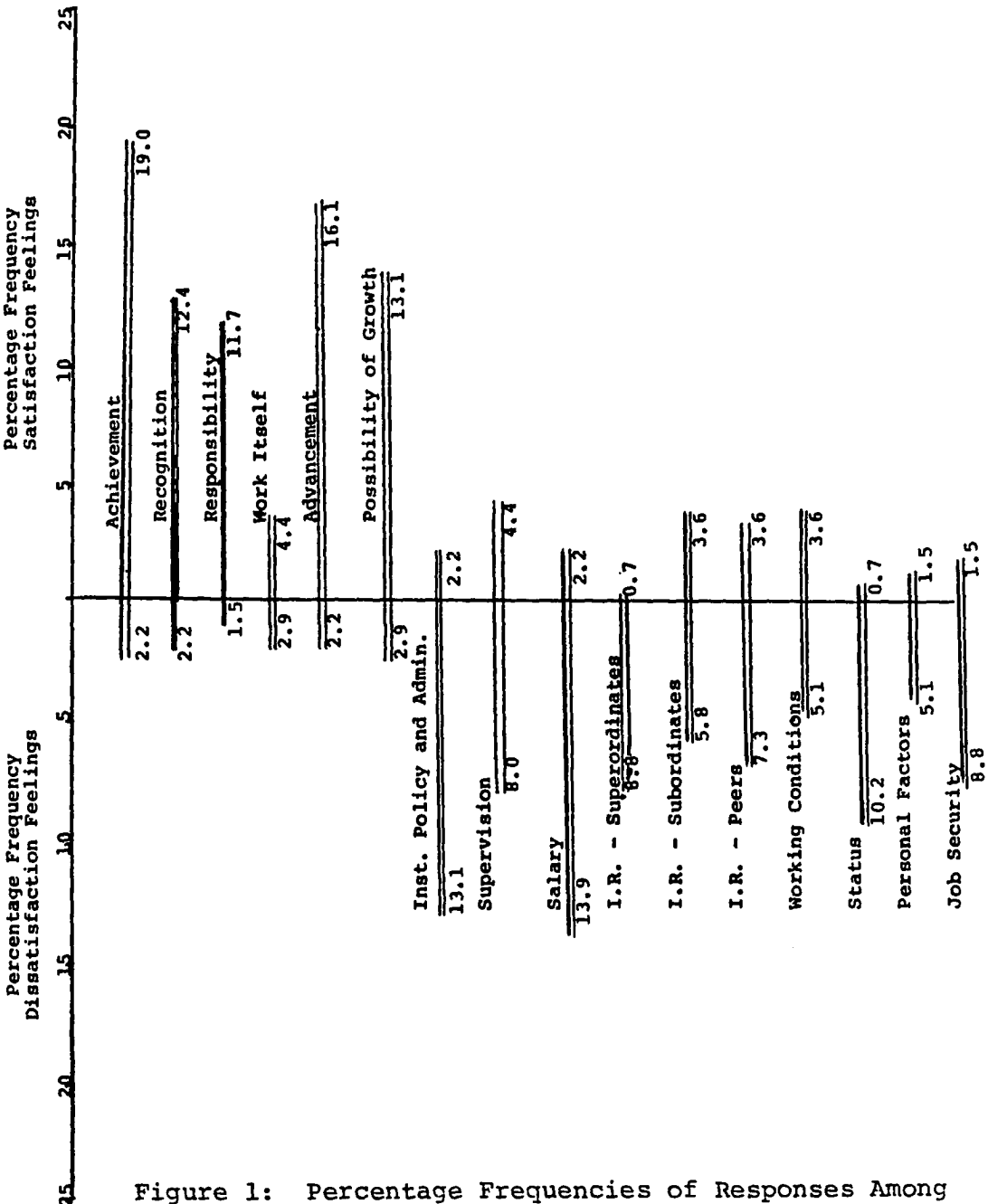

Figure 1: Percentage Frequencies of Responses Among Faculty and Administrators as Regards Satisfaction and Dissatisfaction Feelings.

could have led to this difference. It could be the differences in profession of respondents of both studies. However, for the remaining five motivators, the findings of this study are in agreement with those of Herzberg.

When in this study the overall motivators and their counterparts, hygienes, were compared, as did Herzberg, the findings seemed to have agreed with Herzberg's hypothesis that "the satisfier factors are much more likely to increase job satisfaction than they would be to decrease job satisfaction but the factors that relate to job dissatisfaction very infrequently act to increase job satisfaction."[1]

Figure 1 shows the overall results of the present study. It indicates that most of the motivators and hygienes operate in an unidirectional manner. For example achievement appeared in 19.0 per cent of the satisfaction feelings direction as opposed to its 2.2 per cent of the dissatisfaction feelings direction. Similarly, institutional policy and administration appeared in 12.1 per cent of the direction of dissatisfaction feelings. The study thus supports Herzberg's indication that motivators are unidirectional in their relationship to satisfaction feelings and that hygienes are unidirectional in their relationship to dissatisfaction feelings.

The present study and Herzberg's original study seem to be in basic agreement. Therefore, it may be enough here to say that we fail to reject the null hypothesis (H_o).

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[1]Frederick Herzberg, Motivation To Work, Second Ed., 1967, p. 80.

General Findings

The analysis of responses from all the 137 participants in this study seemed to be primarily pointing to two main findings. The general findings showed that the six motovators were related more to satisfaction feelings than they were related to dissatisfaction feelings. The ten hygiene factors were also found to be more to dissatisfaction feelings than they were to satisfaction feelings in this study. There were more respondents in this study who had cited motivators as sources of their satisfaction feelings than those who mentioned motivators as sources of dissatisfaction feelings. Similarly, there were more respondents in this study who cited hygiene factors as sources of dissatisfaction feelings than those who cited them as sources of satisfaction feelings.

On the overall analysis, 105 out of 137 respondents mentioned motivators as sources of satisfaction feelings, 32 attributed their satisfaction feelings to hygiene factors. 118 respondents cited hygiene factors as sources of dissatisfaction feelings while 19 claimed motivators to be responsible for dissatisfaction feelings.

Of the six motivators -- Achievement, recognition, responsibility, work itself, advancement, and possibility of growth -- all but work itself stood out as strong determiners of job satisfaction feelings among the faculty and administrators involved in this investigation. All except work itself, occurred more frequently in the satisfaction feelings incidents than in dissatisfaction feelings incidents. These findings are shown in Table XI.

TABLE XI

FREQUENCIES OF RESPONSES
BY THE FACULTY AND ADMINISTRATORS ON FACTORS
RESPONSIBLE FOR THEIR SATISFACTION AND
DISSATISFACTION FEELINGS
n = 137

Motivators	Frequency of Entries	
	Dissatisfaction	Satisfaction
Achievement	3	26
Recognition	3	17
Responsibility	2	16
Work itself	4	6
Advancement	3	22
Possibility of Growth	4	18
Motivators' Total	19	105
Hygiene Factors		
Admin. & Institutional Policy	18	3
Supervision	11	6
Salary	19	3
Interpersonal Relations - Superordinates	12	1
Interpersonal Relations - Superordinates	8	5
Interpersonal Relations - Subordinates	10	5
Working Conditions	7	5
Status	14	1
Personal Factors	7	2
Job Security	12	1
Hygienes' Total	118	32
TOTAL	137	137

Of the ten hygiene factors, five appeared with significantly greater frequency in dissatisfaction feelings than in satisfaction feelings. While salary was the most frequently mentioned dissatisfier (hygiene factor) by both the faculty and administrators, working conditions and personal factors were the least cited sources of dissatisfaction feelings among

them. Out of a total of 118 respondents who cited the hygiene factors as sources of their dissatisfaction feelings, 19 mentioned salary alone, 7 mentioned working conditions, while another 7 cited personal factors in life as the origins of their dissatisfaction feelings on the job.

As shown in Table XI , the most frequently mentioned motivator as a source of satisfaction feelings was achievement and the least mentioned motivator as a source of satisfaction feelings was work itself. Achievement was mentioned by 26 faculty members and administrators. Only 6 respondents altogether mentioned that work itself was the cause of their job dissatisfaction.

Table XII shows the chi square values of the factors as well as the levels at which they were found to be significant. With the chi square value of 59.653 shown in Table XII, the six motivators were together statistically significant as sources of satisfaction feelings at the level of .001. When considered on individual basis, 5 of the 6 motivators showed that they were each statistically significant while one of them was statistically non-significant. This was work itself with chi square value of 0.500. On Table XII, "ns" stands for non-significant. All hygiene factors show the total chi square value of 49.3313 on Table XII. It means that they together were significant as sources of dissatisfaction at the level of .001. On individual basis, salary and status with chi square values of 11.682 and 11.333 respectively took the lead as sources of dissatisfaction while working conditions and interpersonal relations with subordinates were the dissatisfiers with non-significant chi square values of 0.416 and 0.769 respectively.

TABLE XII

CHI SQUARE VALUES AND
LEVELS OF SIGNIFICANCE OF THE MOTIVATORS
AND HYGIENE FACTORS

Motivators	Chi Square Values	Level of Significance
Achievement	18.275	.001
Recognition	9.850	.01
Responsibility	10.944	.001
Work Itself	0.500	ns
Advancement	14.480	.001
Possibility of Growth	7.880	.01
Motivators' Total	59.653	.001
Hygiene Factors		
Admin. & Institutional Policy	10.762	.01
Supervision	1.529	ns
Salary	11.682	.001
Interpersonal Relations - Superordinates	9.385	.01
Interpersonal Relations - Subordinates	0.769	ns
Interpersonal Relations - Peers	1.733	ns
Working Conditions	0.416	ns
Status	11.333	.001
Personal Factors in Life	2.888	ns
Job Security	9.385	.01
Hygienes' Total	49.313	.001

Table XIII presents the percentage distributions among the factors of the two groups studied. It shows that 76.6 per cent of the total respondents mentioned that the motivators were responsible for their satisfaction feelings, only 13.9 per cent of them indicated that the motivators were responsible for their dissatisfaction feelings. While

86.1 per cent of the respondents (faculty and administrators) mentioned that the hygiene factors were the causes of their dissatisfaction feelings, 23.4 of them indicated that the hygiene factors have created their satisfaction feelings.

Considering the factors individually, the data analysis shows that achievement was the leading motivator among the two groups of employees, with 19.0 per cent of them citing achievement as the major source of their satisfaction feelings, while work itself, with 4.4 per cent, is the least cause of these feelings. In the same token, salary seemed to be the greatest cause of dissatisfaction feelings when the data from the two groups were considered together. About 13.9 per cent of all the respondents mentioned salary as the main agent of job dissatisfaction among them.

Percentage-wise, therefore, more respondents gave credits to motivators for their satisfaction feelings than they did to hygiene factors for the same. More of them also gave credit to hygiene factors for their dissatisfaction feelings than they did to motivators for their dissatisfaction feelings.

TABLE XIII

PERCENTAGE DISTRIBUTIONS OF ALL RESPONDENTS AMONG FACTORS RESPONSIBLE FOR SATISFACTION AND DISSATISFACTION FEELINGS

	Percentage Distributions	
Motivators	Dissatisfaction	Satisfaction
Achievement	2.2	19.0
Recognition	2.2	12.4
Responsibility	1.5	11.7
Work Itself	2.9	4.4
Advancement	2.2	16.1
Possibility of Growth	2.9	13.1
Motivators' Total	13.9	76.6
Hygiene Factors		
Administration & Institutional Policy	13.1	2.2
Supervision	8.0	4.4
Salary	13.9	2.2
Interpersonal Relations - Superordinates	8.8	0.7
Interpersonal Relations - Subordinates	5.8	3.6
Interpersonal Relations - Peers	7.3	3.6
Working Conditions	5.1	3.6
Status	10.2	0.7
Personal Factors in Life	5.1	1.5
Job Security	8.8	0.7
Hygienes' Total	86.1	23.4
TOTAL	100.0	100.0

Summary

The thrust of this chapter has been on the findings of the present study. An overall presentation has been made as well as the analysis of data separately from the faculty and then from the university administrators.

The general findings had shown that the motivators except work itself were strong determiners of job satisfaction among both the faculty and the administrators. Hygiene factors have also been shown to be the major sources of job dissatisfaction feelings among the two groups studied.

On individual basis, it has been shown that most of the motivators and hygiene factors were statistically significant as sources or satisfaction and dissatisfaction respectively among the two groups. When the data results were used to test the six research hypotheses, one was accepted while there seemed not to be enough data to accept four of the research hypotheses. The only null hypothesis was accepted in the study. Through this chapter it was possibleto show that the most mentioned factors by one group were not the most mentioned factors by the other. Achievement was thus the leading motivator with the faculty while administrators cited recognition and responsibility as the greatest sources of job satisfaction among them. Even the leading hygiene factors among the faculty were not found to be leading with the administrators. Generally the study is basically in agreement with Herzberg's previous findings.

CHAPTER V

CONCLUSION AND SUGGESTIONS FOR FURTHER RESEARCH

Summary and Conclusions

The primary intent of this study was to test the applicability of Herzberg's motivation - hygiene theory in Nigeria. This study, therefore, was designed to investigate the leading satisfying and dissatisfying factors among the faculty staff and administrators of a Nigerian university. One hundred and thirty-seven (137) university employees were asked to fill out a questionnaire each and these provided the data for this study. The questionnaire asked respondents to report a specific incident that has led to their feeling very good and another specific incident that has led to feeling very bad about their present job at the university. Other follow-up questions were asked such as whether the respondent was an administrator or a faculty member; the length and the strength of the feelings at the time of occurence; level of education; ethnic grouping, sex, marital status and religous preference. The data were analyzed, first on an overall basis, then the data for faculty and

administrators were analyzed separately. All data were analyzed by the use of a modified chi square test.

Herzberg's 6 motivators (satisfiers) and 10 hygienes (dissatisfiers) represented a kind of shorthand for summarizing the incidents reported by the respondents in the present study. Their operational definitions appear in Chapter III.

On an overall basis the data for this study supported Herzberg's motivator - Hygiene theory. Satisfaction feelings were related to motivators and dissatisfaction feelings were related to hygienes. Statistically, the differences in sources of satisfaction feelings and sources of dissatisfaction feelings among the faculty and administrators were significant at .001 level. An analysis of the data for the faculty alone indicated that the findings tended to support the theory. When analyzed separately the findings for the administrators also support the theory.

On the basis of the overall data presented in Chapter IV, it was concluded in this study that the six situational elements (Herzberg's motivators) were the major sources of job satisfaction among both the faculty and the administrators. It was also concluded in this study that the ten situational elements (Herzberg's hygienes) were the major sources of job dissatisfaction among the faculty and the administrators.

There was a significant difference (see Table VI, Chapter IV) between the situational elements (motivators)

promoting job satisfaction feelings among the faculty staff, whereas no such significant difference was found within the situational elements that seemed to be promoting job dissatisfaction feelings among this same faculty. However, among the administrators, no significant differences were found within the motivators and hygiene factors promoting satisfaction and dissatisfaction feelings respectively.

When the findings shown by the pattern of responses by the faculty to satisfaction feelings questions were compared with the findings shown by the pattern of responses by the administrators to satisfaction feelings questions, differences were found in terms of the leading motivators and the leading hygiene factors among the two groups studied. The leading motivator found among the faculty was achievement, whereas, the leading motivators among the university administrators were found to be recognition and responsibility. Whereas, institutional policy and administration was mentioned as the most outstanding hygiene factor promoting job dissatisfaction among the faculty, salary and status were cited by the university administrators as the most significant sources of job dissatisfaction.

An explanation as to what these findings mean may be attempted by considering the nature of the professions of the subjects involved in this study.

Salary was not found as a leading satisfier (motivator) within the two groups, faculty and administrators. However,

a leading role as a dissatisfier (hygiene) among the administrators but it was not among the faculty. Perhaps, this is because members of a university faculty like the one in this study are usually the individuals who prize the joy of teaching and research more than anything else. Salary, though a necessary rewarding material, therefore did not stand out among the faculty to be a major dissatisfying factor as it was among the administrators.

The author recalls that in 1981 the entire faculty in the country embarked on an industrial act by going on a strike to back up their demands on job situational improvement. Despite the federal government's financially rewarding the striking university teachers, they did not call off the strike, meaning that salary was not the major issue among their complaints. One of their chief complaints was the federal government's policies towards the faculty, such as absolute non-involvement in politics. It is no surprise therefore that this hygiene factor was the most frequently mentioned by the faculty in the present study.

The reason why the administrators cited status in addition to salary as the leading hygiene is hard to interpret or explain. However, as indicated in Chapter I, though the administrators did not go on strike yet, they did not stop complaining. They have recently formed themselves into a pressure group in order to collectively fight for what they call parity with the faculty. This probably signifies status consciousness on the part of administrators and may

partially explain their preference in this study.

The reason why the faculty chose achievement and advancement while the administrators cited recognition and responsibility as the leading sources of their satisfaction feelings may not be obscure. As indicated in the definitions of the terms elsewhere in this study, achievement was to include a successful completion of a project or when a faculty reported the achievement of a former student. Most faculty in this study probably had experienced success in a research project, or had obtained pride from their former student's achievements. An instance here was when a faculty member mentioned that he became proud of his job when he learned of his former student's becoming an Ambassador. Achievement in research work completed or in work published may lead to promotion or advancement. So it is not quite unexplainable why faculty in this study also included advancement as one of the leading motivating factors, as shown in Table IX.

The reasons why the administrators cited recognition and responsibility as sources of satisfaction feelings might be related to the nature of their profession. They probably would be called upon from day to day to take charge of more varied duties than the faculty would have been because of the faculty, in a teaching duty, probably have less flexible situations, like a routine assignment for a full semester or academic year.

Suggestions For Further Research

There is a canvas of literature supporting the fact that much work has been done in the area of job satisfaction but the application of Herzberg's motivation - hygiene theory on job satisfaction seems inexhaustible. There is no single literature referring to its application in West Africa, especially in Nigeria, and even though there is an increasing frequency of the application of this theory, the widely divergent conclusions, as Allen puts it, calls for additional research in order to accept, improve or reject the theory.

This particular study covered, involved one of the older universities in Nigeria. The question might be, if the study had been directed toward new ones would the findings be the same or not? Maybe not. This researcher suggests that this theory should be tested among the newly established universities in Nigeria. The theory has been tested among engineers, accountants, supervisors and non-supervisors of various working life situations, namely the banks and industries. Since none of these was in West Africa, the researcher suggests that the theory should be tested among other professional bodies in West Africa especially in Nigeria. The reason for this suggestion being that different groups might have different work-value systems as found in Friedlander's study.[1]

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[1]Frank Friedlander, "Comparative Work Value Systems," Personnel Psych., 18:1-20, Spring, 1965.

The hypotheses tested in this study might need to be tested with larger samples of individuals with different professional groups. They need to be tested in a wider range of occupational groups. Medical doctors and postal service workers who often embark on industrial action in Nigeria need to be included in this kind of investigation. One of the objectives of research with a wider range of job situations might be to observe the characteristics of people who present interpersonal relations and other job context factors as sources of dissatisfaction feelings on the job . It is possible that a study of these workers may be of great importance in developing new kinds of selection methods. Further studies dealing with the way employees interact on the job and how differences in sex, religions, ethnic backgrounds, and educational levels interfer with their jobs, seem to be necessary in Nigeria.

Assumptions and Limitations

This study was carried out on the assumption that the impact of unionism would not be borne by respondents belonging to the Faculty Association (ASUU) or the University Senior Staff Association (USSA).

Other limitations seem to come from the design of the study. The assumption on the sampling is that about 150 participants altogether will be involved in the study. Chances were that this figure may not be accurate. The possibility of encountering cooperative or uncooperative participants was taken in to consideration. Also, there was a limitation of not having enough respondents to make a good statistical conclusion of the findings. There might, in

addition, be a problem with the logic of the design. It might be difficult to make any generalized conclusions while comparing responses on satisfaction and dissatisfaction feelings.

Definition of Terms

For the purpose of this study the following terms, words or phrases will be defined in the manner that they are defined below:

Visitor: In Nigerian concept, the visitor to the university is the head of federal government representing the residual powers of the government as proprietor and financial source.

Chancellor: The titular head of the university, usually an elder statesman or a prominent public figure.

Council: Consists mostly of laymen appointed by the government of the day. It appoints non-academic staff.

Prochancellor: Chairman of the university council.

Ethnic Grouping: A tribal group in Nigeria with certain unique subculture in Nigeria. Examples are Yoruba, Hausa, Ibo, Fulani, Benin and Kanuri tribes.

Senate: Consists of professors, heads of academic departments, and elected members from

non-professorial academic staff.

Vice-Chancellor: The university chief executive officer or president, usually appointed.

Academic Staff: Faculty or teaching staff of the university.

Non-Academic Staff: Administrative officers or non-teaching staff.

Motivators: Satisfier or intrinsic factors for job satisfaction.

Hygienes: Dissatisfier or extrinsic factors.

Satisfier: A factor responsible for the job satisfaction.

Dissatisfier: A factor responsible for job dissatisfaction.

Duality: A state of being two.

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A P P E N D I X A

Control #_____

JOB ATTITUDE QUESTIONNAIRE

Religious Preference (Please Check One): Christian_____
Islam_____
Other_____

Collecting information about the morale and job attitudes of university administrators and faculty members may assist in the identification and treatment of personnel problems in Nigerian universities before they become major crises. Accordingly, you are invited to participate in this study of attitudes toward work in your university.

Part I: In the space below, please report a specific incident that occurred in your work at this university that resulted in your feeling very good about your present job in this university. Please describe circumstances that led you to have these feelings.

PLEASE PROCEED TO ANSWER QUESTIONS ON THE FOLLOWING PAGE

Part IB:

PLEASE ANSWER THE FOLLOWING QUESTIONS AS ACCURATELY AS YOU CAN

1. As a result of the incident described, how long did your good feelings remain high?

   Less than an hour_____

   Less than a day_____

   A whole day_____

   Less than a week_____

   More than a week_____

2. How would you rate the strength of your feelings at the time the incident happened?

   Very high_____ High_____ Moderate_____

3. Did these feelings affect the way you did your job?

   Yes_____ No_____

4. Did what happened change the way you got along with other people on the job?

   Yes_____ No_____

5. Did what happened involve someone from a tribe other than yours? Yes_____ No_____

6. Did what happened involve someone of a different religious faith?

   Yes_____ No_____

7. Did what happened involve someone of superior status to you?

   Yes_____ No_____

8. Did what happened involve someone of the same status with you?

   Yes_____ No_____

9. Did what happened involve your subordinate?

Yes_____ No_____

10. Which of the following suggests your institutional status at the time this incident described happened.

_____Faculty (Rank_____) Department_____

_____Administrator (Rank_____) Department_____

11. Please check your highest educational level at the time the incident described happened.

Bachelor's_____ Master's_____

Doctorate_____ Other Professional Diploma_____

12. Please check your ethnic grouping:

Benin_____ Fulani_____ Hausa_____

Kanuri_____ Yoruba_____ Other_____

13. Sex: Male_____ Female_____

Part IIA: Now think of another time, and report below, when you felt very bad about your present job at this university. Please describe below circumstances that led you to have these feelings.

PLEASE PROCEED TO ANSWER QUESTIONS ON THE FOLLOWING PAGE

Part IIB:

PLEASE ANSWER THE FOLLOWING QUESTIONS AS ACCURATELY AS YOU CAN

1. As a result of the incident described, how long did your bad feelings remain low?

   Less than an hour_____

   Less than a day_____

   A whole day_____

   Less than a week_____

   More than a week_____

2. How would you rate the strength of your feelings at the time the incident happened?

   Very high_____ High_____ Moderate_____

3. Did these feelings affect the way you did your job?

   Yes_____ No_____

4. Did what happened change the way you got along with other people on the job?

   Yes_____ No_____

5. Did what happened involve someone from a tribe other than yours?

   Yes_____ No_____

6. Did what happened involve someone of superior status to you?

   Yes_____ No_____

7. Did what happened involve someone of different religious faith?

   Yes_____ No_____

8. Did what happened involve someone of the same status with you?

   Yes_____ No_____

9. Did what happened involve your subordinate?

Yes_____ No_____

10. Do you think that what happened was influenced by:

_____Religious difference

_____Tribal difference

_____Political difference

_____None of the above

11. Which of the following suggests your institutional status at the time the incident described happened?

_____Faculty (Rank_____) Department_____

_____Administrator (Rank_____) Department_____

12. Your highest educational level at the time the incident described happened was:

Bachelor's_____ Master's_____

Doctorate_____ Other Professional Diploma_____

13. Your ethnic grouping:

Benin_____ Fulani_____ Hausa_____

Kanuri_____ Yoruba_____ Other_____

14. Sex: Male_____ Female_____

A P P E N D I X B

UNIVERSITY OF LAGOS
LAGOS, NIGERIA.
SCHOOL OF POSTGRADUATE STUDIES

Prof. I. AYINDE ADALEMO, A.B. A.M. Ph D. (MICHIGAN)
DEAN



OFFICE OF THE DEAN
Telephone: 800500-30 EXT 516
Telegram: UNIVERSITY. LAGOS.

Ref. PGS/D/ 18/Vol.I/

13th October, 1982

Mr. T. Dele Olasiji,
203, Wadsack Drive, Apt. D,
Norman,
Oklahoma 73069,
U.S.A.

Dear Mr. Olasiji,

Your letter dated August 28, 1982 and addressed to the Vice-Chancellor, University of Lagos, has been directed to me for action.

The Vice-Chancellor has approved your request to use the University of Lagos as one of the institutions in which to carry out your research on "the characteristics of events and situations that possibly promote or lead to job satisfaction and job dissatisfaction among academic staffs and senior university administrators of selected higher educational institutions in Nigeria".

Since you did not indicate any other special needs in your letter, we take it that the University is not being required to provide you with any services. I wish to state that the University will not be in any position to give financial support. But, if there is any way in which we can assist in securing the cooperation of members of our staff, we shall be very glad to oblige if you let us know ahead of time.

Please let us know the probable dates of your visit to the University during the summer and fall semesters.

Yours sincerely,

Professor I. A. Adalemo,
Dean.

203 Wadsack, Apt. D
Norman, OK 73069
U.S.A.

August 28, 1982

Vice Chancellor
University of Lagos
Lagos, Nigeria

Dear Sir:

I am a Doctoral Candidate in Higher Educational Management with special emphasis on University Administration and Planning at the University of Oklahoma.

I am writing my dissertation on job satisfaction and I intend to investigate the characteristics of events and situations that possibly promote or lead to job satisfaction and job dissatisfaction among academic staffs and senior university administrators of selected higher educational institutions in Nigeria.

This letter is to seek your permission to carry out this research.

Yours sincerely,

T. Dele Olasiji

203 Wadsack, Apt. D
Norman, OK 73069
U.S.A.

Feburary 28, 1982

Executive Secretary
National Universities Commission
18, Alhaji Ribadu Road
Lagos, Nigeria

Dear Sir:

I am a Doctoral Candidate in Higher Educational Management with special emphasis on University Administration and Planning at the University of Oklahoma.

I am writing my dissertation on job satisfaction and I intend to investigate the characteristics of events and situations that possibly promote or lead to job satisfaction and job dissatisfaction among academic staffs and senior university administrators of selected higher educational institutions in Nigeria.

This letter is to seek your permission to carry out this research.

Yours sincerely,

T. Dele Olasiji

NATIONAL UNIVERSITIES COMMISSION

Executive Secretary:
YAHYA ALIYU, B.A. (Lond), Dip. TESL, AMNIM.
Cablegrams: UNICOMM LAGOS
Telephone: 680882

18, ALHAJI RIBADU ROAD
S.W. IKOYI
P.M.B. 12694
LAGOS, NIGERIA

Your Ref:.....
Our Ref: NUC/ES/240

OFFICE OF
THE EXECUTIVE SECRETARY

4th May, 1982

Mr; T. Dele Olasiji,
203, Wadsack Dr. Apt. D.,
Norman, Ok 73069,
U. S. A.

Dear Mr. Olasiji,

This is to acknowledge, with thanks, the receipt of your letter dated 23rd February, 1982, seeking for permission to undertake research within our University system for your doctoral dissertation.

I am to inform you that as a citizen of Nigeria, you are free to undertake your field research without seeking formal permission from this Office. You are therefore free to communicate directly with the institutions concerned and we wish you the best of luck in your studies.

DAVID OGEDO
for EXECUTIVE SECRETARY.

Center for Studies in Higher Education
University of Oklahoma
Norman, Oklahoma
Aug. 25, 1982

Dr. Frederick Herzberg
John Wiley and Sons
New York, New York

Re: Permission for Reproduction and Use of the Questionnaire used by Herzberg and Others

Dear Sir:

I am writing to request permission to reproduce and use the questionnaire used by Herzberg and others on Job Satisfaction and Dissatisfaction Among 200 Engineers and Accountants in Pittsburg.

An early response to this request would be highly appreciated as this would help me to complete my doctoral dissertation on schedule.

Yours sincerely,

Thompson D. Olasiji

TDO:mmp

OK
7 91

Frederick Herzberg
Distinguished Professor of Management
THE UNIVERSITY OF UTAH

Rec'd 9/14/82 mb

A P P E N D I X C

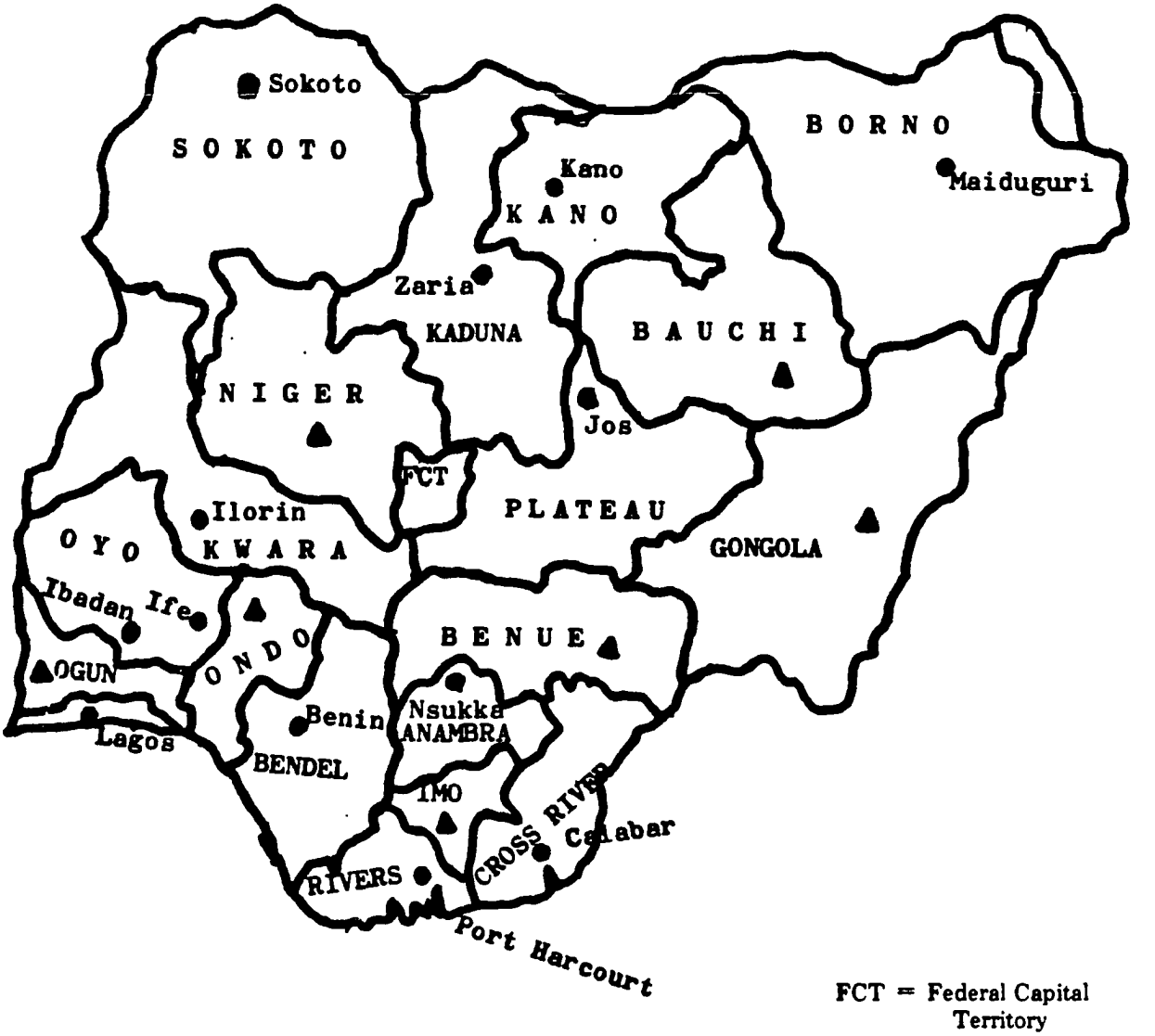
Distribution of χ^2 for Selected Probabilities P and Degrees of Freedom ν

ν \ P	.99	.98	.95	.90	.80	.70	.50	.30	.20	.10	.05	.02	.01	.001
1	.000	.001	.004	.016	.064	.148	.455	1.074	1.642	2.706	3.841	5.412	6.635	10.827
2	.020	.040	.103	.211	.446	.713	1.386	2.408	3.219	4.605	5.991	7.824	9.210	13.815
3	.115	.185	.352	.584	1.005	1.424	2.366	3.665	4.642	6.251	7.815	9.837	11.345	16.268
4	.297	.429	.711	1.064	1.649	2.195	3.357	4.878	5.989	7.779	9.488	11.668	13.277	18.465
5	.554	.752	1.145	1.610	2.343	3.000	4.351	6.064	7.289	9.236	11.070	13.388	15.086	20.517
6	.872	1.134	1.635	2.204	3.070	3.828	5.348	7.231	8.558	10.645	12.592	15.033	16.812	22.457
7	1.239	1.564	2.167	2.833	3.822	4.671	6.346	8.383	9.803	12.017	14.067	16.622	18.475	24.322
8	1.646	2.032	2.733	3.490	4.594	5.527	7.344	9.524	11.030	13.362	15.507	18.168	20.090	26.125
9	2.088	2.532	3.325	4.168	5.380	6.393	8.343	10.656	12.242	14.684	16.919	19.679	21.666	27.877
10	2.558	3.059	3.940	4.865	6.179	7.267	9.342	11.781	13.442	15.987	18.307	21.161	23.209	29.588
11	3.053	3.609	4.575	5.578	6.989	8.148	10.341	12.899	14.631	17.275	19.675	22.618	24.725	31.264
12	3.571	4.178	5.226	6.304	7.807	9.034	11.340	14.011	15.812	18.549	21.026	24.054	26.217	32.909
13	4.107	4.765	5.892	7.042	8.634	9.926	12.340	15.119	16.985	19.812	22.362	25.472	27.688	34.528
14	4.660	5.368	6.571	7.790	9.467	10.821	13.339	16.222	18.151	21.064	23.685	26.873	29.141	36.123
15	5.229	5.985	7.261	8.547	10.307	11.721	14.339	17.322	19.311	22.307	24.996	28.259	30.578	37.697
16	5.812	6.614	7.962	9.312	11.152	12.624	15.338	18.418	20.465	23.542	26.296	29.633	32.000	39.252
17	6.408	7.255	8.672	10.085	12.002	13.531	16.338	19.511	21.615	24.769	27.587	30.995	33.409	40.790
18	7.015	7.906	9.390	10.865	12.857	14.440	17.338	20.601	22.760	25.989	28.869	32.346	34.805	42.312
19	7.633	8.567	10.117	11.651	13.716	15.352	18.338	21.689	23.900	27.204	30.144	33.687	36.191	43.820
20	8.260	9.237	10.851	12.443	14.578	16.266	19.337	22.775	25.038	28.412	31.410	35.020	37.566	45.315
21	8.897	9.915	11.591	13.240	15.445	17.182	20.337	23.858	26.171	29.615	32.671	36.343	38.932	46.797
22	9.542	10.600	12.338	14.041	16.314	18.101	21.337	24.939	27.301	30.813	33.924	37.659	40.289	48.268
23	10.196	11.293	13.091	14.848	17.187	19.021	22.337	26.018	28.429	32.007	35.172	38.968	41.638	49.728
24	10.856	11.992	13.848	15.659	18.062	19.943	23.337	27.096	29.553	33.196	36.415	40.270	42.980	51.179
25	11.524	12.697	14.611	16.473	18.940	20.867	24.337	28.172	30.675	34.382	37.652	41.566	44.314	52.620
26	12.198	13.409	15.379	17.292	19.820	21.792	25.336	29.246	31.795	35.563	38.885	42.856	45.642	54.052
27	12.879	14.125	16.151	18.114	20.703	22.719	26.336	30.319	32.912	36.741	40.113	44.140	46.963	55.476
28	13.565	14.847	16.928	18.939	21.588	23.647	27.336	31.391	34.027	37.916	41.337	45.419	48.278	56.893
29	14.256	15.574	17.708	19.768	22.475	24.577	28.336	32.461	35.139	39.087	42.557	46.693	49.588	58.302
30	14.953	16.306	18.493	20.599	23.364	25.508	29.336	33.530	36.250	40.256	43.773	47.962	50.892	59.703

Source: Harman, Harry H. Modern Factor Analysis, Second ed., 1967, p. 437.

A P P E N D I X D

UNIVERSITY TOWNS IN NIGERIA



FCT = Federal Capital Territory

● Old Universities

▲ New Universities of Technology

UNIVERSITIES WHOLLY FUNDED BY THE FEDERAL GOVERNMENT OF NIGERIA

The following is a brief statistical report on each of the Federal Universities in Nigeria, arranged in their alphabetical order, for your information:

AHMADU BELLO UNIVERSITY

ZARIA, KADUNA STATE

Founded: 1962

Location: Zaria (population 250,000) is a walled and turreted Hausa-Fulani city, founded in the 16th century, and is now a major processing centre for agricultural products. Zaria is located in rolling savanna approximately 160km south of the International Airport at Kano, to which it is connected by a good motorway. Local economy: livestock; vegetables; rice; cotton; nuts; tobacco; food processing.

Libraries: 1978 — 236,000 volumes; 2,900 periodicals

Student Enrolment: 16,000

Faculties: Administration; Agriculture; Arts and Social Sciences; Education; Engineering; Environmental Design; Law; Medicine; Pharmaceutical Sciences; Science; Veterinary Medicine.

Affiliated Bodies: Division of Agricultural Colleges; Institute for Agricultural Research and Special Services; Institute of Administration; School of Basic Studies; Centre for Nigerian Cultural Studies; Centre for Social and Economic Research; Institute of Education; Educational Technology Centre; Centre for Islamic Legal Studies; Institute for Health; Teaching Hospital; Computer Centre; University Press.

Student Enrolment:	1980	@3,000
Faculties	Arts, Education; Medicine; Science; Social Sciences; Law; Agriculture, Management Science.	

UNIVERSITY OF IBADAN

IBADAN, OYO STATE

Founded:	1962; previously established as University College, Ibadan, 1948.
Location:	Ibadan (population 2 million), is the largest city in tropical Africa and thanks to its famous university, is the intellectual capital of Nigeria. An ancient Yoruba metropolis, Ibadan now has a vibrant, cosmopolitan character. The city is situated in a zone of hilly, mixed forest. Local economy: yams; maize; tobacco; cassava; cocoa; oil palm; citrus fruits; marble; talc; food processing; brewing; cigarettes; tires; textiles, and vehicle assembly. The city has over 70 secondary schools, an International school, a large State Polytechnic, the International Institute of Agriculture (supported by the Rockefeller and Ford Foundations),an office of the I.C.A., a big University teaching hospital, and many hotels of international standard.
Libraries:	1978 — 600,000 volumes 6,000 periodicals
Student Enrolment:	@ 10,000
Faculties:	Agriculture and Forestry; Arts; Education; Medicine; Science; Social Sciences; Technology; Veterinary Medicine; Post-graduate School; Management Sciences; Law.
Affiliated Bodies:	Institute of African Studies; Behavioral Sciences Research Unit; Institute of Child Health; Institute of Education; Health Education Centre; Teaching and Research Farm; University College Hospital; Virus Research Laboratory; Computer Centre; University Press; Zoological Gardens; Staff Schools.

BAYERO UNIVERSITY

KANO, KANO STATE, PMB 3011

Founded: 1977; full university status; previously affiliated with Ahmadu Bello University, 1962.

Location: Kano (population @ 1 million) established in the 11th century as a terminus of the trans-Saharan trade, is the largest of the Hausa cities and the largest city in Savanna Africa. Kano is characterized by traditional architecture and city walls measuring nearly 20 km in circumference. Now a fast-growing commercial centre, Kano is the site of a major international airport. Excellent recreational facilities may be found at nearby Bagauda Lake. Local economy: groundnuts; cotton;livestock; leather goods; ceramics; dyed textiles.

There is an office of the I.C.A. (International Communications Agency) located in Kano.

With the exception of the General Education Programmes, all Faculties of Bayero University will move from their present facilities to a new campus on an adjoining site. When current development plans are completed in 1985, Bayero University is expected to have a student enrolment of 10,000.

Libraries: 1980: 75,000 volumes
1,200 periodicals

Student Enrolment: 1980 3,000, expected to be 10,000 eventually.

Faculties: Arts and Islamic Studies; Education; Law; Science: Social and Management Studies; Technology; Medicine.

Affiliated Bodies: Centre for the Study of Nigerian Languages; School of General Studies; Staff School.

UNIVERSITY OF BENIN

BENIN CITY, BENDEL STATE, P.M.B. 1154

Founded: 1970; established as Institute of Technology; full status as Federal University since 1975.

Location: Benin City (population 120,000), founded in the 10th century A.D., was the heart of the great Kingdom of Benin, a renowned centre ofart and culture. Although it has developed into a modern city, relics of the past remain, including the defensive city walls and moat and the fascinating Oba's Place. Benin lies in the lowland rain forest, approximately 330 km east of

Lagos. Local economy: natural rubber; oil; gas; limestone; coal; wood products; yams; cassava; oil palm; cocoa; cement and building industries; brewing.

The University of Benin is presently divided between two sites, but development of the permanent campus, about 10 km west of Benin City, is nearly complete. There is also an excellent teaching hospital and a big museum in the town.

Libraries: 1980 44, 699 volumes
3, 000 periodicals

Student Enrolment: 1979/80 @ 5,000

Faculties: Arts; Education; Engineering; Science; Social Science; College of Medical Sciences (Schools of Dentistry; Medicine and Pharmaceutical Science).

Affiliated Bodies: Centre for Social, Cultural and Environmental Studies; Computer Unit; Institute of Education; Teaching Hospital.

UNIVERSITY OF CALABAR

CALABAR, CROSS RIVER STATE, P.M.B. 1115

Founded: 1975: full university status; from 1973-1975 was Calabar campus of University of Nigeria.

Location: Calabar (population 120,000), is an old city that is just now recovering its former importance after years of isolation. Calabar is a major port and trading centre with an airport. The city is attractively situated on high ground overlooking the Cross River estuary and surrounding mangrove lowlands. The warm waters of the Bight of Bonny to the south, and the pleasant uplands to the north in Obudu, offer good recreation nearby. Local economy: lead; zinc; clay; oil; gas; limestone; timber; rubber; oil palm; fish; market gardening; food processing; shipping; cement and furniture manufacturing.

The University of Calabar now occupies temporary facilities; development of a 10,000 acre/10,000 student permanent campus, which will include a large teaching hospital, is well underway.

Libraries: 1980 4,600 volumes
2,000 periodicals

UNIVERSITY OF IFE

ILE-IFE, OYO STATE

Founded: 1961

Location: Ile-Ife (population 130,000) a city of great historical importance, dates from the 8th century A.D., and is the legendary birth place of the Yoruba nation. It is situated in an area of rolling forest about 90 km east of Ibadan. Ife is the home of the fine and naturalistic terra cotta and bronze heads seen in museums all over the world. Local economy: yams; cassava; cocoa; citrus fruits; food processing and brewing.

The University of Ife, one of Nigeria's architectural show pieces, is located about 5 km outside the city of Ile-Ife. Future development plans include a central technological workshop, a natural history museum, and new staff and student accommodations. There is a State College of Arts and Science in Ile-Ife.

Libraries: 1978/79 — 197,000 volumes; 5,000 periodicals

Student Enrolment: 1978/79 — @ 9,000

Faculties: Administration; Agriculture; Arts; Education; Health Sciences; Law; Medicine; Science; Social Sciences; Technology.

Affiliated Bodies: Institute of Agriculture, Research and Training; Institute of Education; Adeyemi College of Education; Ondo Institute Physical Education; Drug Research and Quality Control Unit; Centre for Photogammetry and Aerial Survey; Computer Centre.

UNIVERSITY OF ILORIN

ILORIN, KWARA STATE, PMB 1515

Founded: 1975; established as University College affiliated with University of Ibadan; full university status 1977.

Location: Ilorin (population 400,000), is an old market town, now the sixth largest city in Nigeria. Located in the transition zone between forest and savanna, Ilorin also lies at the confluence of the cultures of Northern and Southern Nigeria. Borgu Game Reserve and Kainji Reservoir offer recreation to inhabitants of Ilorin. Local economy: fish; rice; cassava; corn; sugar cane; cotton; tobacco; yams; rubber; kola nuts; timber; iron ore; coal; limestone; marble; hydro-electric power; textile; paper and food processing.

The University of Ilorin currently occupies two facilities, one formerly the site of the Kwara College of Technology. The permanent 17,000 hectare campus is located 12 km east of the city of Ilorin, on the banks of the River Oyun. There are several excellent secondary schools in the town: one Federal Secondary School (co-educational), and a State Government Girls' School. There is also an excellent State Polytechnic and an international airport.

Libraries: 1979 — 17,500 volumes; 650 periodicals (basic acquisition scheme underway)

Student Enrolment: The university is expected to have 10,000 students at the time of its full development.

Faculties: Arts; Education; Engineering and Technology; Health Sciences; Science; Agriculture.

UNIVERSITY OF JOS

JOS, PLATEAU STATE, PMB 2084

Founded: 1975; previously established as the University of Ibadan, Jos Campus, 1972.

Location: Jos (population 200,000), is an expanding modern city and the centre of the tin-mining industry. Located on a high plateau and surrounded by picturesque rocky hills, Jos enjoys a pleasant, cool, dry climate and is a popular holiday area. Local economy: millet; yams; corn; rice; potatoes; livestock; dairy products; leather goods; tin; coal; columbite, tourism, brewing.

The University of Jos is presently spread over several sites. Construction has started north of the city on a main campus that will eventually accommodate 10,000 students. There is a State Polytechnic about 20 km away and an excellent Federal Government College for boys and girls, and the Hillcrest School, mainly for the expatriate community, offering American and English high school curricula.

Student enrolment: 1979/80 — @3,000

Faculties: Arts; Education; Environmental Science; Law; Medicine; Natural Sciences; Social Sciences; Continuing Education, Architecture.

Affiliated Bodies: Centre for Development Studies; Teaching hospital (temporary); Staff School.

UNIVERSITY OF LAGOS

LAGOS, LAGOS STATE

Founded: 1962

Location: Lagos (population 2,000,000) is the commercial and administrative capital and the most cosmopolitan city of Nigeria. Lagos has experienced phenomenal growth in recent years and now sprawls over a number of sheltered islands. A city of tremendous variety and contrasts, Lagos is famous - some might say notorious - for its hectic, bustling atmosphere. Local Economy: poultry and dairy farming; market gardening; commerce; shipping; administration and banking; manufacturing industries.

There is a huge international airport, the Murtala Mohammed Airport, at Ikeja on the outskirts of Lagos. There are also excellent but expensive hotels at Ikoyi and Victoria Islands of Lagos. Most major countries have embassies and consular offices in Lagos.

The University of Lagos is situated north of the city, overlooking Lagos Lagoon. The site has been occupied since 1965. Plans are underway to have another campus somewhat removed from the existing congested facility. The teaching hospital is about 10 km away from the main University campus.

Libraries: 1979 — 130,000 volumes; 4,000 periodicals

Student Enrolment: 1979/80 — @8,000

Faculties: Arts; Business Administration; Education Engineering; Environmental Design; Law; Medicine; Science; Social Sciences.

Affiliated Bodies: Centre for Cultural Studies; Continuing Education Centre; Comparative Education Study and Adaptation Centre; Institute of Child Health; Institute of Education; Nigerian Institute of Advanced Legal Studies; Computer Centre; Teaching Hospital; Staff School.

UNIVERSITY OF MAIDUGURI

MAIDUGURI, BORNO STATE, PMB 1069

Founded: 1975

Location: Maiduguri (population 140,000) is an attractive town of broad avenues and many trees. Despite the proud local traditions and comparative isolation on the northeastern fringe of the Savanna, Maiduguri is a rapidly evolving commercial and administrative centre. Among the attractions of the area are the magnificent horsemen of the Shehu of Borno and the scenery and wildlife of the Lake Chad district. Local economy: livestock; fish; wheat; millet;

corn; groundnuts; cotton; limestone and leather products.

The University of Maiduguri currently occupies quarters which formerly housed the Northeastern College of Arts and Sciences. A new campus, capable of accommodating 10,000 students by the year 1990, is under construction, about 12 km from the city centre. There is also a large university teaching hospital in Maiduguri.

Libraries: 1979/80 — 23,000 volumes; 1,100 periodicals (basic acquisition scheme underway)

Student Enrolment: 1980 — @ 3,000

Faculties: Agriculture; Arts; Education; Law; Medical Sciences; Sciences; Social and Management Studies; Veterinary Medicine; Agriculture.

UNIVERSITY OF NIGERIA NSUKKA

ENUGU, ANAMBRA STATE

Founded: 1960

Location: The main campus of the University of Nigeria is located in what may accurately be characterized as the "university town" of Nsukka (population 35,000), in a region of hilly savanna and mixed forest. Enugu (population 160,000), 64km to the southeast, where the Faculties of Law, Medicine and Business Administration are located, is the capital of Anambra State and an important coal-mining centre. Local economy: cassava; rice; oil palm; iron; lead; marble; clay; cement and steel making.

Continued expansion and development of all aspects of the University of Nigeria is envisaged. A student enrolment of 10,000, with particular emphasis on post-graduate studies, is expected in 1985.

Libraries: 1978/79 — 356,000 volumes; 3,000 periodicals

Student Enrolment: 1978/79 — 7,000

Faculties: Agriculture and Veterinary Medicine; Arts; Biology and Pharmaceutical Sciences; Business Administration; Education; Engineering; Environmental Studies; Law; Medicine; Physical Sciences; Social Sciences.

Affiliated Bodies: Institute of African Studies; Economic Development Institute; Curriculum Development and Instructional Materials Centre; Institute of Education; Centre for Demographic Research; Teaching Hospital; Computer Centre; Staff School; University Press.

UNIVERSITY OF PORT HARCOURT

PORT HARCOURT, RIVERS STATE, PMB 5323

Founded: 1975; full university status 1977.

Location: Port Harcourt (population 200,000), located in the heart of the Niger River Delta, is a centre of the oil industry and the second largest port in Nigeria. Founded in 1912, Port Harcourt is a modern, well-planned town with a large foreign population and a major airport. Local economy: oil; gas; limestone; market gardening; shipping; oil refining.

The University of Port Harcourt is located on a temporary site at Choba, some 15km from Port Harcourt. New, permanent facilities have been under construction nearby since 1978.

Libraries: 1980 — 19, 628 volumes
1, 316 periodicals
(basic acquisition scheme underway)

Student Enrolment: 1978/79 — 3,000 and growing

Faculties: Biological Sciences; Chemical Sciences; Educational Studies; Humanities; Physical Sciences; Social Sciences; School of Basic Studies; Schools of Engineering and Medicine, and Graduate School of Management.

UNIVERSITY OF SOKOTO

SOKOTO, SOKOTO STATE, PMB 2346

Founded: 1975

Location: Sokoto (population @ 100,000), is an attractive Hausa-Fulani town of pronounced Islamic character situated on the banks of the Sokoto River, near the northwestern edge of the Nigerian Savanna. Sokoto is associated with the pious 19th century scholar and religious reformer, Usman Dan Fudiye, and is the seat of the Sarkin Musulmin, the spiritual head of Nigerian Moslems. Local economy: groundnuts; rice; millet; livestock; gum-arabic; limestone; gold; leather goods and cement.

The University of Sokoto is now operating on a temporary site;

construction of a permanent campus nearby began in 1977, and the ambitious three-stage development plan is scheduled for completion in 1990. Some departments have already moved to their new facilities.

Libraries: (basic acquisition scheme underway)

Student Enrolment: 1980 @2,000 and growing

Faculties: Arts and Islamic Studies; Education and Extension Service; Law; Science; Social Sciences and Administration. New Faculties in the following fields are planned: Agriculture; Engineering; Medicine; Pharmacy and Food Science; Veterinary Science.

FEDERAL UNIVERSITIES OF TECHNOLOGY

Beginning in 1981, three technically-oriented universities received their first students. They began operations in temporary facilities with limited enrolments, but are all slated for extensive development in the near future.

Two other Federal Universities of Technology were established in 1982 at Yola, Gongola State, and Akure, Ondo State. Others are planned for Ogun and Niger States, and the Federal Capital Territory of Abuja, probably in 1985.

FEDERAL UNIVERSITY OF TECHNOLOGY, BAUCHI

BAUCHI, BAUCHI STATE PMB 0248

Location: Bauchi (population @ 70,000), is a busy, traditional Hausa town, famous for its mosque and Emir's Palace. Bauchi is located on a scenic savanna plateau about 120 km north-east of Jos, and enjoys a similar temperate climate. Recreation may be found nearby in Yankari Game Reserve and Warri Hot Springs. Local economy: coffee, cotton; millet; groundnuts; livestock and meat processing; automotive, agricultural, and armaments manufacturing.

The university has taken over the facilities of the former College of Arts and Sciences in Bauchi, which are quite adequate for the formative years of the university.

FEDERAL UNIVERSITY OF TECHNOLOGY, MAKURDI

MAKURDI, BENUE STATE PMB 2372

Location: Makurdi (population @ 60,000), is located 330 km south of Jos and is attractively sited amid wooded hills by the banks

of the River Benue. The state capital, Makurdi, is the centre of the Tiv and Songi peoples, who are famous for their dynamic music and dance. Local economy: rice; fish; yams; soya beans; coffee,and boat building. Makurdi is a major Army and Air Force base, as well as a major railway junction.

FEDERAL UNIVERSITY OF TECHNOLOGY, OWERRI

OWERRI, IMO STATE, PMB 1526

Location: Owerri (population @ 400,000), a largely Igbo-speaking town, is located about 110 km inland from Port Harcourt in an area of flat, densely-forested terrain which is traversed by many small rivers. Owerri was the scene of desperate fighting during the Civil War, but is now once again a thriving market town within easy reach of most of the cities of Eastern Nigeria. Local economy: market gardening, cocoa; rubber; oil palm; sugar cane; coal; iron; lead; zinc; brewing; ceramics, and textiles. The university presently occupies the facilities of a former Federal Secondary School.

FEDERAL UNIVERSITY OF TECHNOLOGY, AKURE

AKURE, ONDO STATE, PMB 704

Location: Akure, the state capital, has a population of about 100,000 people. The city is an ancient Yoruba city, historically and dynastically related to Benin. There are excellent roads linking the increasingly modern city of Akure to Ile-Ife, Benin City, Ondo, Owc, and Ado-Ekiti. Local economy is based primarily on cocoa farming. There are excellent secondary schools in Akure and in Ado-Ekiti, Owo and Ondo, which all lie within a thirty mile radius of Akure. The university is temporarily housed on the site of the Federal Polytechnique, which itself is moving to Ado-Ekiti. Life in Akure is relaxed and slow-paced, but the state offers attractive recreation and holiday resorts, such as the Ikogosi warm springs and the scenic beauty of the hills and mountains of the state.

FEDERAL UNIVERSITY OF TECHNOLOGY, YOLA

YOLA, GONGOLA STATE, PMB 2076

Location: Yola, with its population of about 100,000, is the capital of the second largest state in the Federation after Borno. Gongola is an ethnically plural state, but Yola is largely a Fulani town. Local economy is largely pastoral and agri-

cultural. The weather is hot, and Yola is built on the banks of the Benue, making the climate very humid. There is an advanced Teachers' College in the city, and a considerable number of secondary schools. Yola also has a large airport which is being expanded to international standards. The university is housed in temporary quarters.

STATE UNIVERSITIES

Higher education, according to the Constitution, is on the concurrent legislative list, which is to say that the states as well as the Federal Government are empowered to establish universities and other tertiary institutions in Nigeria. In this connection it is instructive to know that all State Governments have in effect established Polytechniques and Advanced Teachers' Colleges, just as the Federal Government has done. States, however, have for economic reasons been rather cautious in establishing their own universities. Nonetheless, a few states have taken the plunge and founded universities, and the future of higher education in Nigeria may ultimately depend on how successful these State Universities are. If they do succeed, most of the State Governments are likely to follow suit and establish State Universities because of the healthy political rivalry that has characterised the development of higher education to date.

A list of the currently existing State Universities would include the following:

Anambra State University of Technology. Founded 1980. Campuses at Awka and Enugu. P.M.B. 5025, Enugu; P.M.B. 1660, Awka.

Bendel State University. Founded 1981. Ekpoma, P.M.B. 14.

Imo State University. Founded 1981. Campuses at Etiti and Aba.

Rivers State University of Science and Technology. Founded 1980. Campus at Port Harcourt.

Obafemi Awolowo University (Ondo State). Founded 1982. Ado-Ekiti, P.M.B. 5363.

APPENDIX E

CHART OF ADMINISTRATIVE PERSONNEL

