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MOTIVATION AND ACHIEVEMENT OF NIGERIAN STUDENTS

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CHAPTER 1

INTRODUCTION

The focus of the present study is to determine how different reward structures (positive motivation vs. negative motivation or discouragement), socio-economic status and religion affect students' self-concept on achievement tasks.

There are corpus of materials on motivation achievement and socio-economic status on students in the Western industralized societies, but only a dearth exists on students in the developing countries and even less on religion and achievement.

The thrust of this paper would thus be to attempt to explore the effects of these variables on students' performance in the developing countries--in particular on students in one of the Northern states of Nigeria. But before discussing the study under our purview, I deem it pertinent to make a general survey of the various theories of motivation and how they relate or enhance our cognitive processes and behavioral changes. We shall also attempt to incorporate some studies which were done on motivation and achievement, and try to relate the effects of the family background on learning in general.

Various psychologists have approached the concept of motivation differently; consequently, there is no consensus of opinion on any one operational, all-encompassing definition of the term. McClelland might have spoken the views or minds of many psychologists when he observed that, "contemporary psychological theory stresses the importance of motivation but provides no satisfactory method of measuring it at least at the human level".[1] Another pessimism was expressed by B. R. Bugelski when he observed that "no function in behavior has so confounded the interpretation of understanding of learning as has that of motivation".[2] The confounding arises from the multiple roles assigned to motivation in theoretical prouncements where it has been described as cause, as effect, as general drive (D), or as specific incentive, as director, or energizer. Soem psychologists, vis-a-vis educators, have thought of motivation as a mere "scientific fiction since no one has ever seen a motive".[3] The concept has however survived, despite the affront on definition and the different conceptions about it, because many psychologists and

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[1]David C. McClelland; Measuring Motivation in Phatasy: The Achievement Motive; Contributions to Modern Psychology; Don E. Dulang, Jr. et al (eds.) Oxford University Press 1963, p. 238

[2]B. L. Bugelski, Human Learning; Handbook of General Psychology; Benjamin B. Wolman, (Ed.), Prentice-Hall, Inc. 1973, p. 517.

[3]Kuhlen, R. G.; Studies in Educational Psychology; Blaisdel 1965 Pub. Comp., p.80.

educators have found it an important instrument in explicating our differential behavior patterns and input receptions. Its powerful influence upon both our early latent period and later adult learning and intellectual functioning cannot be underestimated.

One of the first and widely accepted basic hypotheses of motivation was the homeostasis hypothesis formulated by Walter B. Cannon (1915). Homeostasis denotes the optimal conditions of equilibrium in the organism; the main point of this hypothesis is that all biological processes (including behavior) are determined by a disturbance of homeostasis and that the processes go on until homeostasis is regained (or the organism is dead).

Classical among these hypotheses are Hull's (1943) where "need" was conceived of as a disturbance of homeostasis and the functional relationship may be presented as: Need ——→ Drive——→ Behavior——→ Need—— Reduction.[4] Hull's theory thus tried to explain learning (as well as motivation) on the basis of homeostasis.

Freud's theory also contains a version of a homeostasis or equilibrium; his conception of the mental apparatus "as possessing a stimulus-reduction function" together with his definition of drive may be regarded as forming a homeostasis hypothesis.

The homeostasis hypothesis was criticized by H. F. Harlow (1953) as being too superficial for explaining human motives and behavior. He pointed out that there were other biological

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[4]K. B. Madsen; Theories of Motivation; B. B. Wolman (Ed.) Handbook of General Psychology; Prentice-Hall, 1973, p. 692.

primary motivations than homeostasis drive. Another opponent of the homeostasis drive was P. T. Young; he gathered mass evidences from experimental data with animals concerning the existence of food preferences which were not based on homeostasis (1941). Young proposed a "hedonic hypothesis" which was conceptually inherent in Thorndike's Law of Effect" and Freud's "Pleasure-Principle". Other psychologists, for instance, were in sympathy with Hull and did not reject his homeostasis theory outright, but introduced some other operational concepts as did K. W. Spence who introduced the theory of "incentive motivation".

Other psychologists had different approaches--"Cognitive" hypothesis of motivation, for instance, is contained in the classic Gestalt theory (Fritz Heider, 1960). The "tendency to closure" or "to create the good figure" was treated by the classic Gestalt psychologists as a dynamic factor or force in motivational theory. Heider used the Gestalt conceptions to elaborate a "theory of balance" in explaining motivation of social behavior. Leon Festinger postulated the concept of "cognitive dissonance theory" (1957) which he defined as a discrepancy between precepts and concepts. His cognitive dissonance was assumed to motivate cognitive processes, defense mechanisms and behavior generally. The most highly developed and influential cognitive hypothesis however is included in Tolman's theory where, besides needs and drives, he assumes the existence of "cognitive determinants" of behavior such as expectations. Tolman contends

that these cognitive determinants play important roles in learning and achievement or performance. "It is neither reinforcement (drive-reduction) nor S-R associations through contiguity that are critical factors in learning, but rather the individual's cognitive organizing of guiding structures (cognitive maps)".[5]

A modern conception of the cognitive hypothesis of motivation is presented in J. Mcv. Hunt's theory of "intrinsic motivation". He defines the term as "a motivation inherent in the organism's informational interaction with circumstances through the distance receptors and in its intentional goal-anticipating actions" (1965).[6] Hunt attempts to trace the developmental stages of intrinsic motivation and shows its relationship with the Russian 'orienting response" which has both "attentional" and "emotional" aspects. Hunt has demonstrated that J. Piaget's theory of cognitive development implicitly contains a basis hypothesis about intrinsic motivation. Robert S. Woodworth postulated that it is not only cognitive processes that possess their own intrinsic motivation, but that all behavior is intrinsically as well as extrinsically motivated by needs and incentives. Woodworth's postulation has more in common with Hunt's intrinsic motivation but differs from it only on its broader basis. Rudolf Pinter and his colleagues consider motivation as being central to all learning processes. They assert that it not only sets in motion the activities that result in learning, but sustains and directs it.[7]

White proposed the use of "competence motivation" to explain all the manifestations of early infancy's interaction with the environment; to him the concepts of competence motivation embraces all motivational theories (1959). Effectance motivation he conceptualized as an intrinsic drive for transactions with the environs. Effectance or competence motivation is believed to be aroused by novel stimulation and is sustained when the resultant inquisition and exploratory actions produce further elements of novelty in the stimulus field. The effectance motive presumably develops through cumulative acquisition of knowledge and skills in dealing with the environment. It seems, however, that the process by which an effectance motive emerges from effective transactions with the environment is not explicitly spelled out in White's theory. Nor is the existence of the motive easy to verify or substantiate, because effectance motivation is inferred from exploratory behavior which it supposedly causes.

There are other psychologists who have approached motivation with a humanistic bias. The two prominent amongst these are Allport and Maslow. Allport's basic hypothesis of motivation is termed "functional autonomy"; he postulates functional autonomy as it relates to motivation in adult human beings. To Abraham H. Maslow, Freud's and animal-learning theorists' hypotheses of motivation are only valid for what he calls "deficiency motivation". To him, this kind of motivation is the determiner of behavior in animals and neurotics. He asserts that the behavior of normal, healthy adults, whose deficiency needs are satisfied, is determined by a different

kind of motivation which he terms "growth motivation"--later he calls it "metamotivation". This kind of motivation, to him, includes the need for self-realization, creative work and altruistic actions. Some psychologists consider motivation as primarily concerned with activation and persistent behavior and is rooted in cognitive activities. They contend that by making self-rewarding reactions conditional upon attaining a certain level of achievement, individuals create self-inducements to persist in their efforts until their performance matches self-prescribed standards. Having thus accomplished a given level of performance successfully, such individuals are no longer satisfied with it and make further self-reward contingent upon higher attainments. Not only does perceived self-efficacy have directive influence on choice and persistence of activities and tasks, but through expectations of eventual success it can affect coping efforts once they are initiated. Efficacy expectations determine how much effort people will expend and how long they will persist in the face of obstacles and adverse experiences such as failure. The stronger the perceived self-efficacy or concept, the more active the efforts. The information that a student will perform better or is capable of performing raises mastery expectations while information of incapability lowers them--particularly if that information or mishap occurs early in the course. After a strong self-concept or efficacy expectations are developed, the negative impact of occasional

failure is reduced to a minimum.[8] In fact, Davidson and Lang (1960) have found a significant relationship between self-concept and academic achievements--in 1955 Reeder found the same result. Mead argues in support of the self-concept that the individual "experiences" himself indirectly from his perceptions of the attitudes others have towards him and internalizes those perceptions--the control students in our present study can be said to have internalized the sort of negative self-concept presented to them. It has also been found that students with high self-concepts have a higher percentage of task-oriented behaviors than students with low-self concepts.[9] Students with high self-concepts may not only be more confident about their learning tasks and abilities, but may also be more likely to persevere at a task. Such students are assumed to attain a personal sense of competency and receive more positive motivational and social reinforcers from their teachers and peers.

McClelland et al have found that where learning is possible in a complex task or subject course, the highly motivated subjects will succeed. It has also been found that as achievement increased in intensity, it tended to orient subjects first around avoiding failure and then around attaining success. Those with high achievement are concerned more directly with achieving suc-

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[8]Albert Bandura; Self efficacy: Toward a Unifying Theory of Behavioral Change. Psychology New; Vol. 84, March 1977, p. 193.

[9]Nancy Shiffler and Judith Lynch--Saucer; Relationship Between Self-Concept and Classroom Behavior in Two Informal Elementary Classrooms; J.E.P. Vol.69, August 4, 1977, p. 350.

cess or attaining a maximum level of aspiration. McClelland et al have obtained highly significant correlations between achievement scores and college grades on two occasions.[10] The capacity of individuals to be made uncomfortable by the mere prospect of traumatic experiences in advance of actual occurrences was observed by both Freud and Pavlov. In a recent contribution, Bruner, Matler and Papnek (1955) make a strong case for the concept of breadth of learning and provide additional evidence that it is favored by moderate and hampered by strong motivation. A strong or inordinate level of motivation, they contend, "has the effect of speeding up learning at the cost of narrowing it".[11]

Keislar suggests the use of descriptive terms, i.e. words which refer only to observable events in their mathematical relations rather than the usual constructs such as "motive" or "interest". He further purports that when we say a student is motivated, we are actually saying he is or probably will be active. Motivation conceived in Keislar's view will, he maintains, have far greater utility for education when they specifically refer to antecedent as well as consequent conditions. Keislar has found a statistically significant correlation (P L.01) between the performance of a group with incentives--motivation--presented and those without.[12]

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[10]Dulany, Don E. (Jr.); Contributions to Modern Psychology. Oxford University Press, 1963, p. 237.

[11]Kuhlen, R. G. Studies in Educational Psychology, Blaisdell Pub. Comp. 1968, p. 93.

[12]op. cit., p. 98.

W. J. McKeachie stresses the individual's habits and skills which are acquired at home as being important variables in determining motivation and achievement of subjects. Atkinson (1958) has also suggested that "motivation for achievement will be highest when subjective probability is moderate, i.e. when the uncertainty of the outcome is at a maximum".[13] To explicate this statement in more operational terms, we may conveive of two students with strong achievement motives and select the same instrumental habits to achieve their goals, i.e. they may both do their homework, but if they differ in their subjective probability of success, their motivation will differ and we may expect differences in attentiveness, persistence and, ultimately, in achievement. Probability of success, hence, is an important indicator of persistence at a task and subsequent success or better performance.

From the preceding discussion we can infer that a moderate level of motivation helps us to form a positive self-concept of our own ability, and this enhances our subsequent achievement at a learning task or subject course. By creating motivational and instrumental expectancies for students in the classroom, as we shall do, different results are provided; one group was responsive while the other did not respond as much. In this instance we are invariably faced with the question of why the differences. It seems to me that we have to go beyond the "habits" and "skills" acquired at home to the realm of religion.

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[13]W. J. McKeachie, Motivation, Teaching Methods, and College Learning: Kuhlen, R. G. Studies in Educational Psychology, Blaisdell Pub. Comp.; 1968; p. 110.

Several studies have attempted to explore the effects of the home environment on a student's achievement and self-concept.

A study by Frances K. Trotman shows that there is a direct relationship between the intellectual home environment and the child's I.Q. He found that among middle class black families, the degree to which the family exhibited an intellectual home environment was at least as good a predictor of the child's academic achievement as was his intelligence score.[14] These observations are in consonance with Getzels' observation of the child's home environment. Getzels in his article, "A Note on Discontinuities" (1974), noted that "all children acquire their fundamental 'codes for future learning' or 'learning sets' in the family during the period ascribed to socialization".[15] He conceptualizes two categories of codes--"language code" and "value code". The language code is the medium whereby the child communicates and expresses his experiences, while the value code tells him what in his experiences is important. Getzels aptly points out that "for one child, the codes learned in the family and those required by the school may be continuous; for another they may be discontinuous".[16] The school, as he points out, requires "an achievement ethic" with high valuation of the future, deferred gratification and "symbolic commitment" to success. Thus for a student whose parents are not exposed to

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[14]Frances K. Trotman; Journal of Educational Psychology. vol. 69, June 1977, p. 269.

[15]J. W. Getzels; Teachers College Record, vol. 76, 1974, p. 219.

[16]Ibid.

the values of success and schooling, these codes may dawn on him but may be too late. The child may not have the opportunity to perceive that any one can get to the top; to him "survival or subsistence rather than an achievement ethic" is all that matters. To such a student the school's emphasis on the future and not the present is vague and without substance. Such children, as implied in Getzels' article, face severe discontinuities in values and language codes when they come to school--discontinuities often have a profound effect on their behavior and achievement motivation. What has been said of values is also true of language; "The parental models of language, language interactions in the family, the content and form of the language used...have profound social value on a child's achievement in school." Thus we can see that the child faces two disadvantages, both of which have profound consequences on his future success. Basil Bernstein has identified two levels of language codes--the "elaborated" and "restricted". The elaborated code, he maintains, is the language of the middle class while the restricted is that of the lower class. The school, as we observed earlier, is concerned with the elaborated language codes. Robert D. Hess and V. C. Shipman have made the observation that the growth of cognitive processes is fostered in the family control systems which offer and permit a wide range of alternatives of action and thought--a view analogous to Bernstein's elaborated language code. Getzels and Jackson made similar observations in their article entitled: Family Environment and Cognitive Style, that "the intellectual differences between these two groups and

the underlying pscho-social orientations have their sources not only in the immediate school experience, but in the family environment in which the adolescents grew up".[17]

The preceding observations are relevant and pertinent as far as the Western industrialized socities are concerned; but it does not seem to be applicable to the developing countries--Nigeria in particular. The reasons for this contention or observation are that there is no easy way of making the distinctions between the different social groups. By this I mean that the standard operational economic indicators used in the Western countries are not suitable. A man may be illiterate in the African society and yet be considered a middle class because of his property which may be anything from the size of his herd to the amount of money stashed away. In this instance, Getzels' "continuous" and "discontinuities" are rendered invalid because children from such a family are exposed to similar values and language codes as the neighboring lower class children. Most rich illiterate middle class don't reside in an exclusive neighborhood; they reside and mix freely with the lower class occupants and the only distinction is that they may have a better looking house. Hence, it can be argued that the family environment in the African setting would have little effect on a child's performance. This is so even when we consider the small class of the emerging elite; these people may be literate but have illiterate wives and so the environment in the home is nothing

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[17]Jacob W. Getzels and Philip W. Jackson, Recent Discoveries in Psychology; James O. Whittaker (Ed). W. B. Saunders Comp. 1972, p. 279.

different from the lower class neighbor. The elite in the developing countries still have social distance with their children; thus, Bernstein's elaborated language code is hardly observable or applicable because the child is still expected to just take instructions. There is very little chance for him to talk back or express his views on issues. It is thus contended that any differences we may observe must be explained through another intervening variable--religion.

It is unfortunate that what seems to be our important variable in this essay is the least that has been observed by other researches either in the Western industrialized world or the developing countries of Africa and Asia. The dearth of material on religion is suggestive of its inherent difficulty for objective observation and analysis. It also reflects our conception of human nature and its belief systems. The available material on religion and performance or achievement comes from Freud, and even Freud only alluded to it in passing. According to Freud, because religious doctrines "are not precipitates of experience or end-results of thinking" but "illusions", they do not, as a consequence, help man to make optimum use of his "reason" and potentiality; rather they hinder his progress and force him to seek santuary in his "wish fulfillments"[18] which he contends are infantile in origin.

Freud contends that "many brilliant intellects have broken down over" the impossibility of proving the truth of religious

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[18]Freud, S; The Future of an Illusion. W. D. Robson-Scott (translated). Doubleday & Comp., Inc., p. 49.

dogmas. He further contends that religious doctrines are a threat to man's civilization in that they block the way for him to know himself, i.e. to acquire happiness and contribute optimally to the society of which he is a member. To Freud, religion "presupposes an intimidation of the intelligence".[19] It is probably not so much that religion "presupposes an intimidation of the intelligence", but rather what are the values that the different religions try to inculcate in the minds of youth as they grow up-Max Weber's Protestant Sects and the Spirit of Capitalism is quite relevant to this view.

In all of Freud's writings on religion, however, he did not credit the dilemma to any one specific religion--his was an interstitial discussion on religions and their hold on man's intellect in general. It is therefore not fair to associate him with propounding that a particular religion is more progressive and democratic than the rest. Under our present study, however, some groups of students of a particular religion seem to have performed better after both groups have been equally exposed to the same motivation. The question, therefore, is not whether religion corrupts "brilliant intellect" as argued by Freud, but rather why should one group be responsive to motivation and the other not.

Levine did some studies in Nigeria on need achievement on the various tribal groups. His findings were that the frequency

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[19]Freud, S.; Civilization and Its Discontents. James Strachey (Ed.); W. W. Norton & Comp. 1961, p. 31.

of achievement imagery in dreams are greatest for the Ibo who are, in most cases, Christians--followed by the Southern Yoruba, Northern Yoruba and the Hausa. He also found that Muslim-Christian differences were highly significant.[20] Frequency of obedience and social compliance value themes on success was however found to be statistically significant for the Hausa--followed by the Yoruba and the Ibo. Levine therefore formulated the hypothesis that the frequency of n achievement in a group is determined by the more or less accurate perception of the growing child as to his chances of rising socially and the behavior that leads to success in the status system.

The child's perception, Levine contends, is enhanced by different "significant others" such as institutions, books, school teachers, religious instructions, etc. If the child's perception is that competition with a standard par excellence is what is valued and leads to success, then he will manifest achievement motive; if, however, his conception of social upward mobility is determined by obedience and social compliance, then he will not manifest the achievement motive. Thus, he argued, the frequency of n achievement in a population may co-vary with the strength of the incentives for achievement behavior perceived by the man as being offered by the status mobility system during the years in which they were growing up. According to Levine, therefore,

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[20] R. A. Levine; Dreams and Deeds: Achievement Motivation in Nigeria; D. R. Price - Williams (Ed.) Cross-Cultural Studies; Penguin Books; 1969, p. 274.

religion is a paramount factor in determining n achievement and "pushing ahead" or upward mobility on the status rung. We shall try to show later how the achievement of a group is a reflection of the value systems inculcated in childhood as Levine tried to do with students' and adults' dream imagery of success among Nigeria's three largest tribes.

Thus, I have attempted to present the general theories of motivation and the studies that have been carried out to measure its efficacy on human behavior and cognitive processes in general. In retrospect, however, I should like to allude to McClelland's observation that though psychologists have stressed the importance of motivation, there is hardly any satisfactory method of measuring its various facets on human behavior and learning processes. It is also pertinent at this juncture to recall B. R. Bugelski's expressed view that there is no function in behavior that has confounded our interpretation of learning processes as that of motivation. Motivation in the context of our present study will be conceived as that, which enhances self-concept or efficacy. It has been observed that after having accomplished a given level of performance, individuals, if highly motivated, are no longer satisfied with the level achieved and will make further self-rewarding contingencies upon the attainment of higher goals or achievements. The value of conceptualizing motivation in this way would help us to evaluate its ability to predict or produce behavioral changes through different treatment methods.

CHAPTER TWO

EXPERIMENTAL DESIGN

i METHOD
DESIGN AND SUBJECTS

There were two groups in the study, both of which received treatments that differed in content. The experimental group was highly motivated--this it was believed would enhance their self-concept consequently leading to higher achievement. The control group received discouraging comments--low level motivation. Both groups were comprised of middle and low class students (subjects answered a questionnaire which helped the experimenter determine their class-appendix p. 43), Christians and Muslims. The level of their achievement (or gain) was finally based on their scores on the pre and post treatment measures.

The population universe in the present study consisted of students who were working on their pre-degree study (Nigerian Certificate in Education N.C.E.). The true and working universe were sixty first-year N.C.E. Georgraphy students (48 men and 12 women) who were haphazardly selected on the basis of their performance on the common entry departmental test (pre-test). The sixty students selected were from the upper 25% of the entry examination. After the students were haphazardly selected from the population (based on their scores), they were randomly

assigned to one of the two groups. Table 1 shows the distribution of the subjects.

TABLE 1

SUMMARY DISTRIBUTION OF SUBJECTS

N	GROUP	%	EXPERIMENTAL	CONTROL
12	Women	20	5	7
33	Christians	55	14	19
27	Muslims	45	16	11
39	Grade Two	65	20	19
20	W.A.S.C.	33.3	9	11
1	G.C.E.	1.7	1	--
20	Mid-S.E.S. Group	33.3	10	10
40	Low-S.E.S. Group	66.7	20	20

The educational institutions that the subjects attended vary, as can be observed from Table 1; but to be admitted into college, they had to satisfy the entry requirement. The requirement was that at least every candidate must have obtained five credit (C) passes either at the West African School Certificate level or at the Teachers Grade Two level or the General Certificate of Education (G.C.E.). One snag, one may say, is how do you assess the strength of credit from these various institutions? The answer

is that all of these examinations are moderated by one central body, West African Examination Council, which also serves other countries in West Africa, eg. Ghana. The groups can thus be assumed to have some similar educational experiences. Though total homogeneity cannot be claimed, they form as close a homogeneous group as one can get. Another element of their homogeneity is that they all had to pass the entry departmental test which was conducted during the interview. These subjects were rigorously screened from thousands who applied and were further meticulously screened during the interview before finally being offered admission.

The grading system of the West African Examination Council (W.A.E.C.) is another basis for homogeneity; it is uniform throughout the country and for all subject courses. The highest grade on the marking scale is Excellent (EX), followed by Very Good (V.G), followed byGood (G), and then Credit (C). (There are as a matter of fact several levels of credit--1, 2, 3, 4, 5), and below the credit level is Pass (PASS) and at the bottom is Fail (F). Your final score on all of the courses offered would determine your final passing category (Division 1, Division 2, Division 3,... Fail). The entry requirement of at least five credit passes is thus a sort of median; students with passes above credit would meet the requirement and can be admitted; but those with passes below the credit pass can not or are rarely considered for admission.

The mean age of the subjects was about twenty years. As can be observed from Table 1, the bulk of the subjects (66%) came from the low socio-economic class and a third from the middle socio-economic class. (Class distinction in Nigeria is very difficult to define as will be pointed out later.) The presence of a sizable number of grade two subjects can be explicated by the fact that when the program was first established in 1962, it was meant and designed to produce teachers for the lower forms (grades) of secondary schools; the tendency was to recruit those who were already teachers. Over the years, however, the trend has dramatically changed. The reasons, of course, are: the nation's growing demand for more secondary schools hence secondary school teachers; the phenomenal number of secondary school pupils who are turned out every year cannot be absorbed in the schools for basic studies (S.B.S.) or colleges of technology.

ii PROCEDURE

An allusion has already been made to the fact that the study dealt with two treatment groups whose main criteria for justified admission into the college was based on performance at the W.A.S.C. and the entry departmental test (pre-test). They were first selected from a pool of over six hundred students (those who applied for admission to read Geography) and a further selection from a pool of one hundred and fifty students (those who gained admission). To be admitted, as mentioned earlier, you must meet the entry requirement of at least five credit passes and secondly you must pass the departmental test. On the basis of

these observations, one can conjecture that the subjects were a relatively homogeneous group. Initially sixty-two subjects were haphazardly selected; but before too long, two subjects had left --one joined the Nigerian Defence Academy in Kaduna and the other went to preliminary studies in Kano. After the haphazard selection from a population of one hundred and fifty, one student was assigned randomly to an experimental group and another to a control group. Random assignment to groups was to ensure that the selections were not biased for any of the treatment or motivational methods.

The experimental group was given motivating words based on the observation of his previous performances on the W.A.S.C. examinations and the entry test. The approach was intended to enhance their self-efficacy, which consequently was presumed to lead to their better performance; in other words, to increase the level of their subjective probability of success. The other members of the faculty[1] were not informed of this study so as to avoid the experimental bias known as the "Rosenthal Effect".[2]

Following is the motivating statement addressed to the experimental group (verbatium).

"You have been carefully chosen from a large population that applied for admission to the college; for each one of you here there were ten rejected. You know what it means to qualify

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[1]There were five other staff members besides the experimenter.

[2]R. Rosenthal; "The Effect of the Experimenter on the Results of Psychological Research". Progress in Experimental Personality Research, 1964, vol. 1, p. 79-114.

for admission to the college. You must have noticed the large number called for interviews, but after a vigorous screening and selection, only one hundred and fifty of you were admitted. Furthermore, of those admitted in this department (Geography) you are perceived by the staff to be the best. Your past performances, both at W.A.S.C. exams and the entry test, is a reflection of your ability and a testimony to our estimation of you. The department is proud of having made such an objective and good selection. The staff believe that you can successfully undertake the course of studies here and even beyong--B.A. or B.S. We (the staff) also believe that amongst you here are the best future Geography teachers that the college will ever produce. We know that you will live up to our expectations; that you will work diligently and maintain the high standard and reputation you already established in your previous performances. You are welcome to come to the staff with any academic problems you may encounter in the course of your studies here. I am pretty sure they will happily render you any assistance you may need. I wish you the best school year in the college. Do not feel hesitant to consult with any staff member; feel free to call at any time. Best of luck to all of you."

To the control group a negative approach was adopted, except that they too were encouraged to contact the staff with their academic problems. (The students did not know their scores on the departmental test.) The experimenter ended the control group's session with a stern caveat: "Some of you think you are here because of your merits or good certificate; such people ought to

know that this is far from the truth; some should know that they gained admission on the basis of a quota system; that is that they had to be admitted in order that certain geographical areas were represented. I shall not, in the least, be surprised thus if some of you are dropped at the end of the current session."

The addresses to both groups took about an hour and a half. After the first session, the experimenter met with the separate groups on one occasion each. He reminded each group of his earlier observation and comments to them. During the whole experimental session (three months) the investigator maintained an unobtrusive presence as far as the subjects were concerned and came in only during his normal lecture periods.

However, because of the nature of this study, such factors as anxiety and subjects' individual personality differences were not effectively controlled and might have contributed to or exaggerated the effectiveness of the experimental manipulation.

CHAPTER 3

RESULTS

A two-way analysis of covariance was used to test the first hypothesis (HO_1), that there would be no significant differences in geography achievement between treatment and socio-economic class for the groups, i.e. between treatment groups of middle and low classes.

TABLE 2

Experimental and control group means on post-test achievement scores adjusted for pre-test scores.

		EXPERIMENTAL			CONTROL		
UP	N	Post-Test Mean	Pre-test Mean	Adjusted Mean	Post-test Mean	Pre-test Mean	Adjusted Mean
lle	10	66.1	54.6	26.1	63.00	60.2	22.9
	10	67.9	61.4	26.5	60.2	56.0	17.9

TABLE 3

Analysis of covariance for post-test geography achievement scores adjusted for pre-test scores.

ce of Variation	D.F.	(SS) Sum of Squares	(MS) Mean of Squares	F
tment	1	348.1	348.1	4.45+
o-economic class	1	52.9	52.9	.67(NS)
raction	1	72.8	72.8	.93(NS)
in treatments	36	2811.2	78.1	

+PL.05

These two tables show that when post-test scores were adjusted for pre-test scores, there was a significant difference in treatment groups but no significant differences found among the other variances. A similar analysis was done with Christians of different socio-economic status, i.e. between the middle and low classes. The result was the same; as a matter of fact, not even treatment was found to be significant. This most probably was due to the size of the sampling (only sixteen subjects, i.e. four in each cell). It was not possible to perform the same test with Muslims of different socio-economic status, again because of the sampling size (only one middle class control subject).

Thus, basing our conclusion on the subjects randomly selected we can infer that socio-economic status was not an important determining factor for student achievement in this population. Therefore, the hypothesis (HO,a), that there would be no significant differences between treatment groups, was rejected while the hypothesis (HO,b), concerning socio-economic status, was accepted.

This means that we have to seek for another intervening variable to explain any differential treatment in the socio-economic groups. Our second hypothesis (HO_2), thus, would be that there is no significant differences between the achievement level of the Muslim and Christian groups, even when treatment is administered.

An analysis of pre-test and post-test scores in the Georgraphy achievement test for both experimental and control Muslims and experimental and control Christian groups is shown in Table 4. The table shows that mean changes were not only significant beyond 0.01 level of confidence in each treatment group, but also for the two Religious groups.

TABLE 4. Pre-Test

Mean score changes in treatment Religious Groups with respect to Georgraphy Achievement

	Control		Experimental		
	Mean (X)	(SD)	Mean (X)	(SD)	
Low M.	58.1	6.5	59.8	5.7	NS
Low C.	62.2	5.4	59.8	5.6	

TABLE 5. Post-Test

Mean score changes in treatment Religious Groups with respect to Geography Achievement

	Control		Experimental		
	Mean (X)	(SD)	Mean (X)	(SD)	
Low M.	55.7	6.2	61.7	5.4	PL.01
Low C.	61.8	7.1	65.8	6.1	

vs

TABLE 6. Pre + Post

Mean score changes in treatment Groups with respect to Geography Achievement

	Control		Experimental		
	Mean (X)	(SD)	Mean (X)	(SD)	
Low M.	17.6	6.8	21.9	6.3	PL.01
Low C.	19.6	5.6	29.7	5.0	

The intervening variable that seems to make a profound difference, as revealed by tables 4, 5 and 6 is religion. The tests were significant when Muslim and Christian treatment groups were tested with religion as an intervening factor (PL.01).

A two-way analysis of covariance was further conducted to test the second hypothesis (HO_2), that there would be no significant differences between the achievement level of the Muslim and Christian groups. This was done to support an analysis presented in tables 4, 5 and 6. However, because of the sampling size, only the low class group was used in both tests. The two results (tables 4, 5, 6 and 7) are consonant with each other.

TABLE 7

Analysis of covariance for post-test Geography achievement for low S.E.S. Muslim and Christian groups. Scores adjusted for pre-test.

SOURCES OF VARIATION	D.F.	(SS) SUM OF SQUARES	(MS) MEAN SQUARES	F
Treatment	1	418.4	418.4	21.9**
Religion	1	200.10	200.10	10.5**
Treatment X Religion	1	80.10	80.10	4.19*
Within Treatments	36	688.8	19.1	

*PL.05
**PL.01

Tables six and seven show that when post-test scores were adjusted for pre-test scores, there was significant difference in treatment methods and that religion was a significant factor (PL.01).

Therefore, the hypothesis (HO_2) that there would be no significant differences between treatment groups of different religions was rejected while the HA_2 was to be accepted. A similar test was done with the post-test (table 5) with similar results--both treatment methods and religion were significant at 0.01 level. To assess the effect of interaction effect, the figure below was drawn to support the analysis results of tables four, five, six and seven.

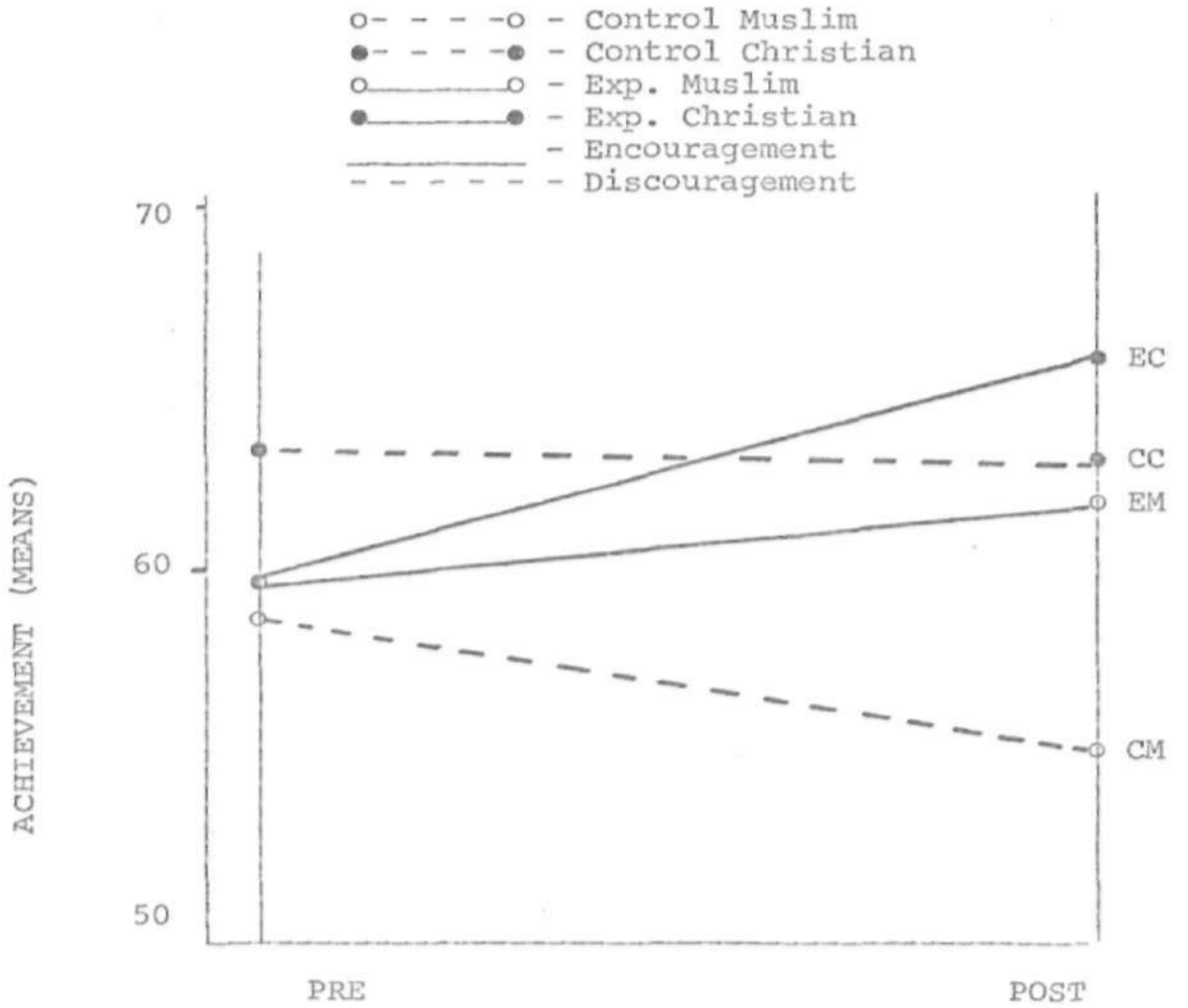

Fig. 1 Achievement gain as a function of Religion: Interaction Effect.

Fig. 1 (PRE) shows the performance of the two groups prior to treatment administration. An analysis of variance shows none of the factors to be significant, an indication of the relative homogeneity of the group. This result looks plausible in light of the fact that there was no treatment administration at this time. The result also shows that in the absence of any motivational treatment, the differences between the groups are not salient. The difference in performance, therefore, stems from their response to motivation.

The interaction effect of encouragement and discouragement on performance and treatment are shown by the post-test and post-test adjusted for pre-test scores of the two religious groups (tables 5 and 6). The significant outcome of the tests is that we have reason to believe that treatment and religion do have an effect upon the achievement of the two groups. However, any prediction based upon this result must be made with caution; that is, we have to know more about the status of the individuals being tested.

Fig. 1 also shows the relative effect of the performance and interaction effect of the two groups taken individually as compared with the groups considered in pairs (Muslim vs Christians).

The analysis of variance reveals the significance of interaction effect on the treatment groups; (PL.05) this implies there are some implicit value differences in the way the two groups respond to motivation. This we shall attempt to explicate in the next chapter. For any predictive value of the experiment, we would need to explain why Christians were more responsive than Muslims to the words of encouragement and words of discouragement.

CHAPTER 4

DISCUSSION

The test of two hypotheses of the present study has shown that irrespective of socio-economic class, only treatment was found to be superior. The first test showed treatment to be significant (PL.05) while socio-economic variable was not. The second test showed both treatment and religion to be significat (PL.01). The results of the second test lead us to inquire into the role of religion and achievement, especially with respect to treatment--Encouragement-Discouragement. Getzels has shown how "for one child the codes learned in the family and those required by the school may be continuous; for another they may be discontinuous". In essence, this implied that for one child the school was an extension of the family because both (school and family) required "an achievement ethic", while for the other the two were discordant or miles apart. Getzels' findings as applied to the Western industrialized middle class might be correct, but might not hold true when applied to the agrarian developing countries. The mitigating factors against its applicability or validity are: for both middle and low class children, the language used in the home is different from that used in the school; hence the question of the transfer of the middle class "language code" is not obvious --in fact, one can say that it's nonexistent. A middle class family

in such an agrarian society may not even be literate, let alone be exposed to certain values through travel that would be different from the society in general. Therefore, the values are typically that of the general society. (Status may be measured in terms of the size of the herd, family or farm.) There is hardly any distinction between middle and low class residential areas; as a matter of city, the middle class person may prefer to settle amongst his own kind. If he lives a distance away or in the city, he may have several cousins, nephews or uncles staying with him. Since the pervasive, well-knit Western-type family unit does not exist, the parents have nothing more in terms of values to impart to their children than those of the general society. The "elaborate" language code which in the West is associated with the middle class is therefore absent. (Children in the developing countries are more often than not only to be seen and not to be heard; their views are rarely sought in family discussions or plans.) Another factor which is equally profound is that an elite may have a wife (or vice versa a husband) who is illiterate and for whom the Western values and language codes are as alien as they are to the child. In this respect we cannot expect that the values inculcated will be those of the school. All of these factors, therefore, militate against the notion that for the middle class the school is an extension of the family and not to the low class. The social milieu of the two classes varies very insignificantly. Of course, the middle class family may have some expensive merchandise and a stack of books (Western or Arabic) around, but as noted by Getzels and Jackson,

"...we do not intend to suggest that the presence of books or specialized knowledge in the family leads invariably to high IQ...."[1]

The analysis above is supportive of the result of our test on socio-economic status and achievement; treatment was found to be significant but the individual class had little if any impact on achievement. Of course there is an emerging elite class where both parents are literate (in the Western sense) and where English or the "language codes" and the value codes of the school are important, but such a group is too small at the moment to effect any change.

We have found that Christian subjects were responsive to treatment while the Muslims were not. A study by Kagan et al has found cultural differences in competition and school achievement among low income Mexican-American children to be significant.[2] Kagan et al further contend that competitiveness increases as a function of increasing generation level and acculturation. To this finding I concede, especially when viewed from the perspective of the differences between the two groups. It is my contention that as more and more Muslems become educated and less dogmatic to religious doctrines, the less vulnerable they will be in succumbing to the notion that "upward rising" is a mere function of obedience

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[1] Getzels and Jackson; Family Environment and Cognitive Style; James O. Whittaker (Ed.). Recent Discoveries in Psychology, W. B. Saunders Comp., 1972, p. 279.

[2] S. Kagan; G. L. Zahn and J. Gealy; Competition and School Achievement Among Anglo-American Mexican American Children; Journal of Educational Psychology, vol. 69, Aug. 1977, p. 432.

and social compliance. Consequently, it is held that their achievement and competitive motives would equal or be similar to the other groups. For the present, however, Levine has observed that n achievement for the Christians was significantly greater than for the Muslims, while obedience and social compliance was equally significant. Levine explained the differences in the two traits as indicative of the stern Islamic teachings of obedience and compliance, and the belief in the institution of clientage --the practice of this traditional institution is common among the Fulani-Hausa Muslims where an individual attaches himself to a father surrogate or "god father" (mentor) whom he believes will help him achieve successes or to whom he goes if he has any problems, financial, social or otherwise--among the Muslims as opposed to the liberal teachings ofChristianity which teaches individualism and independence.

In theory it has been found that n achievement is closely related to self-reliance and individualism as personal attributes (or dispositions); hence, individuals and groups of high achievement should be low on dependence and submission to authority. The more a man is disposed to yielding or succumbing to the commands of others, the less he is likely to set his own goals and strive to achieve them (indicative of the performance of the Muslim and Christian control group).[3] As alluded to earlier, n achievement

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[3]Table 4

in a group is determined primarily by the more or less accurate perception of the growing child as to his chances of survival and the avenues open to him for upward social mobility. If the values inculcated during his formative years stress obedience and compliance as the normative process to upward social mobility, the child will grow up with this notion and not the notion of "an achievement ethic"--rather he would be clientage-dependent oriented. If, on the other hand, his image is that his chances of upward rising depend upon competition with a standard of excellence, then he will manifest an achievement ethic as he grows up. Admittedly, in any society the culture and value indoctrinated during childhood have a profound influence upon the future functioning of its adults. The Christian teaching of individualism and independence, as we noted in the preceeding paragraph, is closely related to self-reliance and more responsive to motivation than obedience and social compliance. In fact, the rise of capitalism is not far divorced from the teachings of Christianity, of independence and individualism--the individual "was allowed and expected to succeed in personal economic gains as far as his diligence, intelligence, courage, thrift or luck would lead him".[4] The teaching of Christianity undoubtedly emphasized individualism too--"the individualistic relationship to God was the psychological preparation for the individualistic character of man's secular activities".[5]

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[4]Erich Fromm; Escape From Freedom; Avon Books, 1969, p. 126.

[5]op. cit., p. 129.

Another inherent factor which might have led to the differences between the two religious groups' response to treatment and consequently to higher achievement, is probably best expressed by Getzels and Jackson: Family Environment and Cognitive Style: when they say, "the intellectual differences between these groups and the underlying psycho-social orientations have their sources not only in the immediate school experience, but in the family environment in which the adolescents grow up".[6] It may correctly be assumed that most of the Christian subjects went to missionary controlled schools (private schools) where the size was small and teacher-student ratio comparatively "better" than in the provincial or government controlled schools (public). If this assumption is correct, we can infer the effects that such early exposure to education will have on the subjects.* In the small schools the values would be Christian values--independence and individualism --and the teachers would be more friendly and willing to devote some time for individual attention; this would mean the individual was important and was known, hence competition would be great. This would be so because of the need to enhance one's own self-concept. In the larger schools, however, there would not be any specific value to be stressed, but rather the general societal value--usually a mixture of all religions. If the general societal value is that which teaches obedience and social compliance, dependence instead of competition would be fostered. Teachers in

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[6]Ibid., p. 279.

such large schools were rarely friendly, hence were less willing to give extra time to the individual. The individual was no longer important--only the group was important; consequently there was little motivation if any at all. Early missionary penetration into the "pagan areas" meant the Christian subjects were exposed to Western values quite early in Life through their parents' association with the missionaries. The importance of this would be that the subjects acquired the Western-type of emphasis on individualism and independence very early, whereas the Muslim subjects were brought up under stern authoritarian ideology reinforced by teachings of Islamic Orthodoxy with its emphasis on obedience and social compliance. It also meant that the Christian subjects were exposed to the concept of "deferred gratification", and "symbolic commitment" to success quite early, while at the same time the Muslim subjects were exposed more to the notion of clientage.

The Christian parents' early contact with the missionary exposed them to the "power" of the printed word and would therefore consciously try to encourage their children to "read hard" and acquire the same "power" or status. Furthermore, while the Christian child might come in contact with toys, pencils and books before he went to school--the missionary "Master" would give these to the parents--, the Muslim child would be sent to the "Koranic schools" where strict codes of behavior and choral memorization of the Koran was the practice rather than the exception, but which were not in any way relevant to the Western-type education and values into which the child would later be immersed.

The size of the family might also be important; most Muslim families are large, hence the individual child is not important, whereas the Christians tend to have a small family and only one wife. It can, therefore, be inferred that for one child the social milieu in the family based on the religious orientations was "continuous" with Western-type schooling and values, while for the other it was irrelevant and "discontinous".

In retrospect, if our conjecture that the Christian subjects attended smaller or private schools is correct, we can make the assumption that they had an early solid and better exposure to learning experiences than the muslim subjects. Such early exposure coupled with availability of equipment--books, laboratory etc.--and friendly atmosphere will undoubtedly lead to their higher achievement and a consequent confidence in their own abilities. Bruner has cogently observed that early achievement, confidence and a sense of future success "affects the unfolding and nurturing" of our abilities positively. The size and atmosphere of such schools is quite ideal for the "training" of the "intuitive operations" of students, i.e. it encourages and fosters learning through discovery and insight instead of mere "rote" and trial-by-error learning. In contrast to teachers in large schools (such teachers operate under constant pressure and stress), teachers in the smaller schools can afford to spend "Substantive" time with and on individual problems, hence the individuals have greater opportunity of developing their intuition and cognitive skills or domain. The result of their earlier learning experience may thus help to offer a partial explanation for their present differences.

The Muslims defeatism attitude of projecting every occurrence to "Ikon Allah", i.e. "God's will" or "Allah zai bada ta gobe", i.e. "God will provide for tomorrow", is probably psychologically good in a simple agrarian society where "give and take" is frequent, but not conducive to the competitive modern society. It makes one depend too much on the "force outside" himself instead of the one "within" which is a prerequisite for positive self-concept enhancement. Such defeatist attitude is likely to affect one's competitiveness in the modern society.

CHAPTER 5

CONCLUSION

The study has shown how differences in religious background may affect one's response to encouragement or discouragement. A central problem for educators, vis-a-vis psychologists, has always been that of getting students to change their behavior as a result of being presented with information or a pattern of stimuli. In this study, we have used religious background as a basis for students' differential response to encouragement and discouragement. The "why" and "how" religion effects motivation is not an easy matter to conjecture. We have attempted to explicate the factors that might have been responsible, however the crux of the problem is still a moot one.

The fact that a child's n achievement is determined primarily by the more or less accurate perception of the social values inculcated during his formative periods has also been observed by Mead, "The individual 'experiences' himself indirectly from his perception of the attitudes others have toward him and internalizes those perceptions".[1] Thus the Muslem students internalized the value taught to them early in life--obedience and compliance --

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[1]op. cit., Nancy Shiffler, p. 349.

while the Christian subjects internalized the teachings of their early socialization--independence and individualism. We have also noted how achievement is closely related to self-reliance and competition. The Christian subjects knew from childhood that they had to strive for their upward social mobility--there is no other alternative but excellent performance. The Muslim subjects on the other hand internalized obedience and social compliance--the more a man is disposed to yield to the commands of others, the less he is likely to set his own goals and strive to achieve them[2]--and the potent traditional institution of clientage. The doctrines precipitated during our early periods of growth, therefore, affect not only our intellectual functioning but social as well. The early self-concept--behavior growing out of social experience--emphasis that the Christian subjects were subjected to by their parents, has assisted to enhance their performance in the present study. It has been found that students with high self-concept have higher percentages of task-oriented behavior than students with low self-concept.[3] Such students may not only be more confident about their learning tasks and abilities, but are more likely to persevere at a task against any odds.

The implication of this study for the social and political life of the country, as reflected in the different values inculcated by the different religions, is for the government(s) to try as much

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[2]Levine, R. A.; op. cit., p. 276.

[3]Nancy, S. et al; op cit., p. 350.

as possible to educate the public more on democratic principles and a de-emphasization of the teachings of religious precepts. The Universal Primary Education (U.P.E.) introduced in 1976 is a positive approach in the right direction. For, as we maintained earlier, the more education penetrates into the local areas--Muslim and Christian alike--the less dogmatic people will perceive the stern and authoritative teachings of social compliance. The institution of clientage is bound to collapse if children's perception of their only chance of survival as adults depends upon their capability to compete to a certain accepted standard, rather than being "tied" to a "god father's" apron strings.

The struggle hence is not between conservatism and modernism or between ethnic groups, but rather between authoritarian versus democratic ideology and Islamic obedience versus Christian individualism.

The present study neither claims to have explained the inexplicable influence that religion has on achievement nor claims that Christians are generally better than Muslims. What it purports to expound is why the two groups responded differently to encouragement and discouragement, resulting in higher achievement scores for theChristians. An allusion has been made in the preceding sections cautioning us about how to regard the results of the study. The results of the findings should be regarded as tentative for a few reasons: the nature of the selection; the size of the sampling population; and, importantly I believe, that a subject of such magnitude would need several supportive findings before it could be accepted as valid and enduring.

APPENDIX

A Questionnaire on SES and Religion

Choose one of the three alternative answers in each section that best applies to you.

1. What is your father's level of education?

   a. Never been to school, b. Has Primary School education

   c. Has Sec. School education, d. Has a College education.

2. What is your mother's level of education?

   a. Never been to School, b. Has Primary School education,

   c. Has Sec. School education, d. Has a College education.

3. What is your father's occupation?

   a. Farmer, b. Trader, C. Government employed, d. Works in the Private sector.

4. What is your mother's occupation?

   a. Farmer, b. Trader, c. Government employed, d. Works in the private sector.

5. What grade level range best describes your father's annual income earning?

   a. Grade Level 1-4; b. G.L. 5-8; c. G.L. 9-12; d. G.L. 13-17.

6. What grade level range best describes your mother's annual income earning?

   a. Grade Level 1-4; b. G.L. 5-8; c. G.L. 9-12; d. G.L. 13-17.

7. How many younger siblings do you have?

   a. None, b. More than one but less than five, c. More than five.

8. How many older siblings do you have?

   a. None, b. More than one but less than five, c. More than five.

9. Where do your parents reside?

   a. Rural area, b. Urban Centre

10. Do they own their own house?

    a. Yes, b. No.

11. What is your father's Religion?

    a. Christianity, b. Muslim, c. None of these.

12. What is your mother's religion?

    a. Christianity, b. Muslim, c. None of these.

13. What is your own Religion?

    a. Christianity, b. Muslim, c. None of these.

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