

AN INVESTIGATION INTO THE COMPONENTS OF MOTIVATION
SO FAR AS THESE DETERMINE EMPLOYEE STABILITY AND
WORK SATISFACTION AMONGST EUROPEANS AND AFRICANS
ENGAGED IN THE SAME OCCUPATIONAL GRADING IN THE
COPPER MINING INDUSTRY OF ZAMBIA

BY

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....There is a distinction, which is
one of the greatest moral dilemmas
that face men today —

the distinction between
"what men are interested in....."
and
"what is to the interests of men..."

— C. Wright Mills

To my mother, my wife,
Dálmairie and Almoro.

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R H O D E S U N I V E R S I T Y

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ACKNOWLEDGMENTS

What we have set out to do in this thesis is simple enough. We wanted to produce a theoretically oriented investigation into the sociological factors which contain man's motivational urges in his course through a career. In the treatment throughout we have endeavoured to team the theoretical aspects with the practical applications as they were observed. While the purpose of the thesis is simple enough, its execution is not. To do justice to a subject of this magnitude requires a knowledge of modern sociological theory, since all that sociologists know is needed to conceptualise adequately the various components which all blend into a complex whole to personify man and his wishes. This presents some difficulties because how can we or any one person know so much?

First of all, I should like to acknowledge a deep indebtedness to Prof. James Irving of Rhodes University, who, in this, my second thesis under his promotion, once again, through his inspiration and complete knowledge of the subject guided me throughout in his inimitable way of cooperation. Thanks further goes to Prof. Frederick Herzberg of the Western Reserve University for his guidance in the setting up of all schemata and planning of this study. Had it not been for Mr. M.W. Stephenson, General Manager of Rhokana Corporation, who afforded me with the opportunity of conducting this study this thesis would not have been possible. I also owe a very special debt to Mr. L.O.W. Leimer, Manager of the Anglo American East Daggafontein Mines, who often gave generously not only of his time and advice, but also in eventually making this study possible. I also wish to record my indebtedness to the three examiners, who after the initial submission of this thesis, extended an invitation to the author to resubmit it after suggested modifications have been affected. Their suggestions not only proved invaluable to the general order of the text but they also helped to clarify the methodology as well.

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J.A.G.C.

INTRODUCTION

A. AIMS OF THE STUDY AND STATEMENT OF CENTRAL PROBLEMS

The aim of this study is to analyse the motivational system¹, so far as this regulates and orients the stability and work satisfactions of Europeans and Africans, in a supervisory occupational category engaged in industrial-mining in the Copper Mining Company of Rhokana, Zambia, during a period of six years, ending in 1963.

This latter date is important due to the vast economic, social and technological changes which took place in this period of rapid social change². It should be added that the industrial mining system in which the study was conducted was an integrated multiracial system in the sense that Europeans and Africans were regarded in the work situation, as occupational "status-equals" in their respective spheres within the occupational grades. Given this condition, race differences have diminished importance in view of this relative occupational equality of status which is characteristic of the particular system under investigation. The fact that most of the African Supervisors interviewed had not attained equivalent skills with the European Supervisors is a minor matter for this study. It was clear at the time of investigation, that the disparity in skills was, from the Africans' point of view, a condition of gradual maturation and training which they believed would lead, finally, to equality of skills. (Some differential effects we discuss later.) Further, it will be observed that the group is approximately uniform in occupational level in terms of status and salary. No attempt has been made to work over too wide a scale of occupational or income levels. In a copper mine the listed

1 - Cf top of p.9 for definition.

2 - The investigator has outlined the basis of political, economic and social change in Zambia in his M.A.Thesis (unpublished), Rhodes University, entitled "An Investigation of the Role of Conflict in the stratificationary process of the African in the Copper Mining Industry of Northern Rhodesia between the years 1943 - 1961."

occupations could rise to approximately three hundred occupational categories. The principle on which this study is based is not only, however, a monographic and intensive study of one occupational level but we believe it casts light on methods and results likely to be obtained in a wider range of occupations. Where there are differences of race or occupational function or social situations likely to influence motivation or work attitudes, these will be indicated later.

B. METHODOLOGICAL PROBLEMS

The methodological problem in this investigation is how to bring sociological theory into the field of motivational analysis and closer to the possibilities of such theory becoming capable of being guided and tested through empirical research. In industrial investigations the problems and methods are deeper, however, than a choice of instruments for research.

A study of relevant literature in industrial sociology reveals that industrial systems are, in many cases treated not directly as "action systems" but as sets of institutionalised patterns: they yield, as such, readily describable and testable empirical generalisations. This approach, in turn, makes it possible that such processes can be treated as forms of action within role-playing systems in terms of conformity or deviations from expectations of sanctioned role definitions; deviation from the expected roles, or loss of efficiency in role playing is considered as consequential or conflicting expectations and held to be inherent in the balance (or imbalance) in the institutional mechanisms which are supposed to orient the role participant's behaviour.

It is in this connection, that we accept as a theoretical operational base, Talcott Parsons' statement of the problem, namely, that the validity of an investigation "lies in the theoretical elaboration and refinement of structural-functional analysis of social systems, including the relevant problems of motivation and their relation to

culture patterns."¹ This statement constitutes the central axis of this investigation.

The conceptual scheme of this investigation lies within the framework of "the theory of action" with special reference to the motivational response components which are here isolated for special attention. It is necessary to stress the essentially sociological approach so far as most work done in the field of motivation, and industrial motivation in particular, has been oriented to psychological rather than sociological analysis. A case in point is the valuable article of Frank A. Heller entitled "Measuring Motivation in Industry".² Heller is interested in the same content as we are in this investigation: he conceives of "goals" (ends) as "any target or incentive which attracts or repels behaviour." Goal-striving is meant to be descriptive of these psychological conditions which are responsible for the movement towards or away from a goal. As will be seen later our concern is also with goals (or ends). The presence of objective value hierarchies in "end" perceptions as controllers of motivations is stressed by us, whereas he is wholly concerned with the psychological and subjective elements as measured by a "Level of Aspiration Test." The result is psychologically interesting but has little sociological significance so far as structured institutional activity plays no part in the analysis of the behaviour of individuals within the system. His categories are derived from the individual. We seek social or group categories.

The task we have undertaken is concerned with responses, values, motives and behaviour as seen in work situations in an action system of an industrial mining character. It is within the Weberian and Parsonian frames of reference, in the first instance at least, and within the limits of their categories and concepts, that we develop a theoretical analysis later. As Parsons has changed his position and definitions from time to time, it should be

1 - PARSONS, Talcott: Structure of Social Action, Cap. 1, pp. 49 et seq.

2 - HELLER, Frank A.: Occupational Psychology, Vol. XXXVI, 1952, National Institute of Industrial Psychology, London, pp. 86 - 95.

added, that we have accepted those concepts defined in The Structure of Social Action¹ even though these are not the latest.

These we restate as follows keeping in mind that we abstract only as much as is required and that we utilise to a limited extent action system analysis; more so we use the terminology and conceptual system of the action typology.

1. An action system consists of actors or agents behaving within a system of linked interactional relationships with other actors;
2. For purposes of clarification and definition, "acts" or sequence of "acts" must have an "end" which orients the actors, and which is discernible to the actor subjectively and to an external observer objectively though not necessarily identically inferred by both parties;
3. Action must be future-oriented so that a state of maturation of the perceptual clarity of the end(s) perceived by the actor or the observer can be observed; the "end" is thus dynamic and is constantly being redefined as action proceeds;
4. The "act" is always initiated in a "situation" in which the trends of development produce differences in one or more important aspects from the state of affairs in which the motivated action originated. The beginning and end are never identical. The "act" and the "end" are, sequentially, changing and are thus dynamic, not static;²

1 - PARSONS, Talcot. The Structure of Social Action, Cap. I pp. 49 et seq.

2 - The author is greatly indebted to Professor James Irving of Rhodes University, Grahamstown, for valuable suggestions in evolving this part of the discussion. The "act", while being initiated in the "situation", does not necessarily change the situation and seldom influences it, but we wish to stress that the "situation" is a condition limiting or facilitating action in this conceptual framework. This being the case, it is clear, that the beginning and the end of a sequence of unit acts cannot ever be identical with each other since both originate from different "conditions".

5. The situation provides a set of limiting conditions so far as it defines ends and actions towards ends;
6. There must be conditions of actions controlling the acts¹.
7. There must exist between these elements or components of action a favourable relationship which permits "orientation of action". At least one condition would inhibit all behaviour. All others permit behaviour of some kind and thus some kind of oriented action;
8. There must be a "condition of acceptance", by the actors though not necessarily a full accommodation to the total situation. Action within the system implies "less than full" accommodation and an action towards full accommodation and adaptation. The actor acts only when there is a subjective tension between immediate reality and future ends producing tension and action resolution.

To attain a broad base of acceptance for this conceptual scheme, and also to secure scientific validity for this approach, an outline of some major implications is necessary which is used operationally at a later stage.

- a. The first implication: for the purposes of this investigation, each act has to be bound in time to a time frame; there must be a definite beginning and a definite end in a unit act, the sequence requires to be discernible. As will be shown later in this text, the time factor is basic to the scheme which indicates that the concept - "end" - implies a component of future reference, to a state which is either not yet in existence and would

1 - Here it must be in accordance with the general theme of this investigation, viz.: a defined action should be discernible to both the actor and the observer, bounded in time and have a future-projected nature and this action should be linked with an interpretation of the event. In Weber's sense it must be continuously interpreted by actor and observer and the conditions of action observed as imposing limits.

not be realised unless something is done by the actor. This "involvement in action", in its Parsonian meaning, is thus taken as a conditional prerequisite of the understanding of behaviour.

- b. The second implication: though not so subjectively connected is the opportunity of a range of multiple choices open to the actor with reference both to ends and means: these might be selected, either singly or in combination. This range of choice implies the possibility of failure to attain ends or to make the adequate choice of means. The complementary factors, which contribute to the actor's inability to arrive at "the adequate choice" will form one of the major themes to be developed in the text. Ends and means form a normative hierarchy: selection of ends and means are limited by the normative system in the specific situation which acts as a set of limiting conditions.
- c. The third implication: the frame of reference of the conceptual schema, is subjective in a specific sense: it deals with phenomena, with persons, things and events as they appear from the point of view of the actor whose action is being analysed and evaluated. It is accepted that the "external world", in its social, cultural and physical contexts, plays a major part in influencing action so far as these are components of the situation in which the actor operates, but in so far as they can be utilised in this theoretical scheme, they must be reducible to terms which are subjective in this particular sense. Within the Parsonian model it is stressed that this subjectivity is of cardinal importance to the understanding of some of the apparent eccentricities of the actors under consideration in this study. It should be pointed out further that this condition introduces yet another implication which must be continually kept in mind: it may be said that all empirical science is concerned with understanding the phenomena of the external world. If this be granted, then the facts of action are, to the scientist who studies

them, facts of the external world, and being external facts are thus objective. In this study, unlike that of physical sciences, the phenomena studied have a scientifically relevant subjective aspect: while the social scientist is not concerned with studying the content of his own mind, he is very much concerned with that of the subjective states of the persons whose actions he is studying so far as they play socially defined roles and act towards socially defined ends. This distinction, and the relation of subject-object to each other, is of great importance because "objective" in this context means "from the point of view of the observer of action" and by "subjective", "from the point of view of the actor". In Weber's sense, and that of Mead and W.I. Thomas, the categories yield a subjective-objective compound category which is the necessary condition of understanding the motivations of the actors.

Closely linked with the foregoing is the implication thrown up by the subjectivity of categories in the theory of action, and as this aspect has a bearing on our argument later, it should be mentioned here. Parsons states that when a biologist or a behavioural psychologist studies a human being it is an organism, "a spatially distinguishable separate unit in the world". (pp. 49 op. cit.) The unit of reference in our investigation is not this "organism", but in Mead's sense it is an "ego" or "self". This difference needs further clarification¹. The principal importance of this consideration is that the body of the actor forms, for him, just as much part of the situation of action as does the "external environment". It is therefore important to note that among the conditions to which action is subject are those relating to his own body; through language, and symbolic communications, the end result is the development of the body-self-mind-society continuum as Mead shows. This analytical distinction between the "minded" actor and the social situation demarcates and limits actions and cannot

1 - Parsons, after discussion, leaves the biological, physiological and psychological outside his frame of reference as all pertain to individuals. He pays attention to the social categories and action only. Cf. Toward a general Theory of Action, Harvard, 1959, pp. 8 - 9.

be identified with the distinction between pure organism and pure environment. It is not so much a question of polarisation of opposites, but a matter of compound analysis based upon a unity of differences: things which are different are not necessarily opposed. They may be, as here, complementary: subjectivity and objectivity are co-existent and co-ordinate. The concept "social system" includes organism-self-mind-society and is relevant so far as it is a subject of social action.

A further point concerning the validity of the conceptual scheme must be mentioned before proceeding to define such concepts as "ends", "means", etc. for the purposes of discussion later in the text. In both Weber's and Parsons' sense, this consists in generalising the conceptual scheme so as to bring out functional relationship involved in the facts already descriptively arranged. These interrelationships must be clearly seen, and by considering one of the main functions of an analytical as opposed to a descriptive scheme in this context, it is necessary to distinguish the role of the normative system so far as values give direction to action, from the point of view of the actor. It is clear, therefore, that not the "total" state of affairs (Gestalt), but only certain aspects of it can be attributed to normative elements. Other elements can be "externally attributed" to the actor in the situation in which he acts.

As a deduction from the actor's empirical behavioural role-playing, an "end" can be defined as a "concrete anticipated future state of affairs"¹. Correspondingly, adapted to subsequent reasoning "means" will not refer "to concrete things which are used in the course of action" and which are used here as instruments to ends only, but we refer only to those elements and aspects of these which are "capable of control" by the actor. In attempting to define "norm", Parsons is again quoted: "a norm is a verbal description of the concrete course of action regarded as desirable, combined with an injunction to make certain future actions conform to this course." Similarly, "normative" will be taken to mean "as applicable to an aspect, part

1 - PARSONS, Talcott. Op. cit. p. 49

or element of a system of action if it may be held to manifest or otherwise involve sentiment...regardless of its status as a means to any other end".¹ Motivation is, therefore to be regarded as a series of actions, directed objectively towards a set of values in an anticipated future state utilising selective means, as defined to aid the consummation of the value oriented actions of the actor.

Rather than interpret actions and symbols as external(objective) manifestations² of subjective and latent elements in individuals in a Freudian manner, the empirical task of this investigation is the location of specific patterns of action which operate within typical frames of normative oriented actions and to isolate socially situated patterns of motives. We agree with C. Wright Mills when he states that "the language of situations, as given, must be considered a valuable portion of the data to be interpreted and related to their conditions to simplify these vocabularies of motives...is to destroy the legitimate use of motive in the explanation of social actions".³ In this study we do not stop at a mere list of motivational factors but relate verbal data as yielded by the actors as explanatory materials of the action system.

With a theoretical framework and the explanatory notes set out above it is possible to develop a number of postulates to govern the development of the discussion: these are not hypotheses but propositional statements, which, taken together in logical sequence, constitute a propositional system. The hypotheses evolve at the end of the study.

Postulate 1

Where differences are found in motivation in a common group framework or any component or cluster of components of such groups, these differences must imply differences in position of the actors in social strata even where individuals bear the same occupational title, receive the same salary, etc. Variables are present and require to be isolated.

1 - PARSONS, Talcott. Op. cit. p. 75

2 - MILLS, C. Wright: Power, Politics and People, Ballantine Books, N. Y. p.452

3 - MILLS, C. Wright: Op. cit. p.452

Postulate 2

- a. Where differences are found in a social group from other groups bearing the same occupational title, such differences may induce tension expressed by lack of satisfaction in the job role in the groups who are located lower in the hierarchy of stratum grading.
- b. If all groups are at the same occupational level and all are in the same occupational stratum, then identity of the satisfaction level is to be expected, tension may be held to be absent as a consequence of identity of position. This follows as a converse proposition from 2(a) above.

Postulate 3

To the extent that tension is shown to exist due to real or imagined differential social positioning in the social strata, then the group not disadvantaged can be regarded as dominant over the group so disadvantaged, or be deemed to be so by the disadvantaged. Attitudes of a negative type thus are indices of unfulfilled motivational urges projecting strains on to the believed real dominant group in spite of functional-structural equalities between the groups. These differences could be fictional or real but the strains are real.

Postulate 4

The social stratification position of newcomers to an occupational stratum is at a disadvantage relative to those who, historically, were socially located earlier in the group in time. As a category of worker (apart from race altogether) Europeans precede Africans and thus are dominant or deemed to be so. Differential results may be expected within the group due to historical-time factors.

Postulate 5

The social position of newcomers is different from, and independent of the social position of those who are earlier entrants into the occupational level. Identity of occupational levels is not, necessarily, identity of social levels and expected motivational expressions. A new white worker, notwithstanding Postulate 4 above, might rank socially higher in the same occupational grade than an African located earlier. It is the

location of groups which concerns us, not individual locations. This differential location, if structured into the system, could, we suggest, cause differential motivational expression.

Postulate 6

As the groups increase in knowledge or skills, if still separated by any other attribute, they will become more separated if stress is placed on the separative attributes, and conversely, will be assimilated to equality, if skill identity is attained and less stress is placed on this as a separative attribute. The motivational situation is thus dynamic, positively or negatively, and can be increased or diminished in speed and direction by changes in the functional relationships of the groups or the presence or absence of attributes which lend themselves to cohesion or to dissociation.

These research postulates suggest that there is a direct association between cultural and social differences and where two (at least) groups are culturally different, the risks of social conflict are high even if occupationally the personnel in most attributes is identical. If no conflict emerges in the direct physical sense, then the dominant group will be "satisfied" with its relatively dominant position and the subordinate group will be "dissatisfied". In Homan's sense, industrial conflicts emerge in part only in the industrial setting but can be located in the external social system. It follows that measurable differences in behaviour indicate a measurable difference in the actors' orientation towards the common value system, yielding satisfaction to some and dissatisfaction to others within the mining closed system.

In later sections we measure the variable responses of European and African workers and we show that there is a variability of response. From the postulates set out above it follows that, in spite of structured equality of the two groups (status, wages, prospects) other factors must determine the variable expressing tensions due to attributes other than those under managerial or workers' control. The variables between Black and White must, on the basis of the postulates be located in the external cultural system and the tensions are a measure of the intensity of the Black and white relationships outside the mine.

C. MEASUREMENT OF OCCUPATIONAL RESPONSE PATTERNS

A variety of measures exist to gauge occupational responses. These fall broadly into two classes.

1. The employee is asked to express his degree of occupational satisfaction directly by answering questions. An example of this method is Hoppocks research¹ where its usefulness becomes apparent in the investigation of variables. By analysis one can compare the morale of employees in terms of the variables of social class, educational level, sex, age, etc.
2. Inventories of morale are used on the assumption that it is possible to summate many motivational responses and ultimately arrive at an overall index that expresses the collective employee morale. An example of scaled inventories is that of The Science Research Associates². The theory of scalar analysis has reached an advanced level in the hands of Guttman, Riley, Bogata and students of Michigan and Rutgers Universities³ and at the Massachusetts Institute of Technology. Motivation and responses are rated on a scale or scales.

The classical Hawthorne Study⁴ typifies a method of dealing with the effects of group pressures of various types and of supervisory behaviour of the employees: an evaluation of morale is arrived at by direct study of group behaviour and elementary group dynamic analysis.

The answer to the question is important to industry because it offers a clue to management towards ways of motivating employees by incentive developments and it leads to interpretative understanding of group-social forces.

Answers can be found in three directions -

1. A priori lists of factors can be presented to employees who are then asked to rate and rank these in order of desirability. Examples are - improved communication, supervision, promotion, wages, etc., (Special area inquiries)

1 - HOPPOCK, R: Job Satisfaction, N.Y. Harper, 1935.

2 - S.R.A. Employee Inventory, Chicago, Science Research 1953.

3 - RILEY, M.W., RILEY, J.W. and TOBY, J. Sociological Studies in Scale Analysis, Rutgers Univ. Press, 1954.

4 - Roethlisberger & Dickson: Management and the Worker, Cambridge, Mass., Harvard Univ. Press, 1947.

2. Employees can be asked to indicate which aspects they like or dislike in the job situation. A subsequent analysis of the listed aspects reveals the existence of some of the problems. The frequency of response for each forms the basis for eventual weighting. (severity scales).
3. The administration of multi-item inventories or questionnaires which make it possible to apply statistical techniques of analysis over any selected field. (Statistical survey enquiries).

As a result of research in the directions indicated, various inventories of components have been established by various writers: most of these lists show a broad similarity depending on the technique used to elicit the information. In our review of the literature on this point it is clear that there is a difference in the primacy of components, depending upon whether the investigator was looking for things the employee liked about his job or things he disliked. This led us to the inference that we must accept the concept that some components of motivation are "satisfiers" while others are "dissatisfiers". This provides a basic duality within the inventories of some considerable value to us at a later stage of this study. Two poles of satisfaction-dissatisfaction constitute extremities of a possible continuum.

D. PREVIOUS STUDIES

The degree to which studies in occupational motivation (sociological or socio-psychological) have been made a basis for fruitful theorising is disappointing indeed. There are few studies in which theory was used as a starting-point for these investigations. The pioneer Hawthorne Studies¹ under the guidance of Elton Mayo is not primarily theoretically oriented, nor was it intended to be. In an indirect way, however, it has a contribution to make to theory. The discovery, that the relationships between employees and their supervisors tend to influence output more than any other manipulation of environmental conditions and that the informal associations of a group of men at work act as an inhibitor, expander or stabiliser of production, were made the basis of a new approach in industry and led to the development of small group studies². The research work which as a consequence, followed the changes in industrial practice

1 - MAYO, ELTON: The Human Problems of an Industrial Civilisation, N.Y., MacMillan, 1933.

2 - HARE, P., BORGATA, F., BALES, R.F.: Small Groups, Knopf, N.Y., 1954.

have fulfilled the function of theory. As far as we can discern, the application of formal sociological and socio-psychological theory to the analysis of a man's motivations towards his job, has been limited to the study of social groups. The theories of Lewin¹, Hughes² and Homans³ in sociology have led to a study of groups and their dynamics. The typical focus is on the group as the unit, the individual plays roles primarily in terms of the position in the group or his contribution to the evolution of group-culture-processes. This has led to a dual approach: to studies of individuals within groups, such as in group dynamics or to studies of total systems, externally studied, as in social action theory, such as the Parson's system. The frame of reference of both rejects the individual as a focus of explanation and both, in different ways are group oriented.

E. SOME RESULTING CONCEPTS.

Within the framework of such studies useful concepts have been developed, some of which we propose to discuss briefly in connection with this investigation:

1. A group can be viewed as having a formal structure which is dependent on the nature of the communicative interaction among its members and this, in turn, is dependent upon the intended functions of the organisation. This viewpoint can be structured so that it can define influence or authority and, therefore, can exercise profound effect⁴ in directing the activities of personnel or defining the orientation of the members towards goals. Structure constitutes a limiting condition of behaviour within the system when related to functional goal definitions.
2. Cohesiveness of a group is conditional on its integration: this can be demonstrated by the degree of attraction of members towards mutual goals where the group has the

1 - LEWIN, K.: Resolving Social Conflict, N.Y. Harper, 1950.

2 - HUGHES, E.C.: The Knitting of Racial Groups in Industry, Amer. Social Review, 1946, 11, pp 512 - 19.

3 - HOMANS, G.C.: The Human Group, N.Y. Harcourt, Brace, 1950.

4 - BAVELAS, A.: Group Dynamics, Evanston, Illinois: Row, 1953.

ability to control the behaviour of its members¹, either positively or negatively. The higher the degree of mutual attraction to common goals, the greater the degree of cohesion and thus of group power to affect issues.

3. Where there is goal oriented action the group is likely to be led by leaders who give direction to the group as an entity². Their position and functions depend on the cohesion and consensus of the group. The practical application to supervisory functions in industry will be obvious.

One of the most important sets of concepts on industrial groups³ is that of "employee-centred supervision". Beginning with the findings of Hawthorne Studies one is forced to accept the fact that a supervisor is successful to the degree to which he focuses on the needs of the employees under his guidance rather than on production⁴. The attitudes of the supervisors later investigated bear on this point.

The industrial group is approached by Argyris⁵ from an entirely different view. He concentrates on the individual rather than the group which, therefore, means that he advances a forceful defence of the individual's integrity - indeed a very stimulating corrective for the group-approach. The individual approach is meaningless, however, if no reference is made to situational group controls. The mine is a social system and behaviour is only to be understood within the contexts of the social system. To concentrate on the individual is to return to the "rabble hypothesis" abandoned by Mayo. At the least it is a different level of abstraction and is thus irrelevant to this study.

As has been pointed out, the major failings of previous work on job attitudes, has been its fragmentary nature.

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- 1 - SEASHORE, S.E.: Group Cohesiveness in the Industrial Work Group, Arbor; University of Michigan, 1954.
 - 2 - KATZ, D.: Morale and Motivation in Industry, Pittsburgh University Press, 1949, pp. 145 - 171.
 - 3 - OLMSTED, M.S.: The Small Group, Randon House, N.Y. 1959.
 - 4 - KATZ, MACCOBY & MORSE: Productivity, Supervision and Morale in an Office Situation, University of Michigan, Survey Research Centre, Michigan, 1947 and 1954.
 - 5 - ARGYRIS, C.: Personality and Organisation, the Conflict between System and Individual, N.Y. Harper, 1957.

Studies in which motivational factors are exhaustively probed usually include information on the effects of these motivations. Studies of effects however, seldom included data as to the origin of the attitudes¹. Often too, cases in which effects are studied, yield inadequate information about the attributes of the members of the group, their needs, their aspirations or their standard of living. In this study we accept the primary need to be an investigation of occupational motivation in its totality: a study in which motivations and their effects are investigated together with other associated factors including the effects of the external and internal group determinants together with the factors involved in producing differential responses as indicated in our preliminary postulates².

In the discussion which follows an attempt is made to advance a representation of the problem and to indicate an appropriate methodology.

For many years a technique has been used by Flanagan³ in his investigations into the "critical incident" as a basis for developing a theory of job specification. Flanagan's ultimate goal was to develop a device based on measuring high and low performance on the job. His criteria are external to psychological processes⁴ of the individual reporting on his attitudes. In the present study the materials are based on the interviewee's judgement of his psychologic-state during the critical event. This, in turn, serves as an index to pressures operating in the internal and external systems of which he is a member. This approach makes the critical incident an internal factor whose origin is derived from externality. Flanagan's "critical incident" concept is utilised here but with a different approach so far as we in-

1 - As an example of how little place "attitude and its effects" have in the literature, refer to p.122 of Industrial Sociology, MILLER, D.C. and FORM, W.H., Harper, N.Y., 1951, where two pages are devoted to the problem out of 896 pages! In the new book - Man, Work and Society (1964), NOSOW, S. and FORM, W.H., N.Y. Basic Books, the problem is not even mentioned.

2 - Cf. Postulates, page 9.

3 - FLANAGAN, J.: The Critical Incident Technique, Psychol. Bull., 1954, pp. 327 - 358.

4 - ZALESNIK, CHRISTENSEN & ROETHLISBERGER: The Motivation, Productivity and Satisfaction of Workers, Boston, Harvard University, Division of Research, 1958.

clude subjective-objective response analysis.

Another social scientist who had studied variation of responses concerning occupation at different times is Hersey¹. In his study, for example, the cyclical nature of emotions concerning the job is related to the frequency of accidents. His central discovery was that a large proportion of accidents occurred during the interviewee's "low" morale periods. Hersey, while dealing with the psychological conditions of individuals, refers their causation to group influences. He does not, however, analyse the group factors involved so intensely as those of the individual psychological responses.

Sociologists and anthropologists have investigated industrial work groups as well² in terms of motivations, attitudes and morale, but here the focus is on the nature of formal and informal structure and leadership in groups, or the effect of conflicts between the informal leader and the formal hierarchy, some concentrate on the causes of industrial disputes and their relation to Joint Consultation organisation.

The crucial axis of the approach in this survey is to be found in the technique whereby the individuals investigated were asked not only to verbalise the state of their morale on given issues but also to give illustrative examples of their emotions/state in a series of critical incidents occurring in their past working experience. It is appreciated that data relating to an interviewee's past is necessarily highly qualitative, some kind of quantification is necessary. This involves methods of interpreting verbal statements and involves the use of "contents analysis". The development of the procedure for content analysis is outlined by Laswell³ and Berelson⁴: this method is used to translate qualitative

1 - HERSEY, R.B.: Emotional Factors in Accidents, Pers. Journ. 1936, No. 15, pp. 59 - 65.

2 - ARENSBERG & MCGREGOR: Determination of Morale in an Industrial Company, Appl. Anthropol. Jour. 1942, pp. 12-34.

3 - LASWELL, H.: Language and Politics, N.Y. Stewart, 1949.

4 - BERELSON, B.: Content Analysis in Communication Research, Illinois, Free Press, 1952.

material into quantitative terms. In a content analysis qualitative material is analysed by the assignment of "thought units" to categories which are themselves organised in a classificatory order.

These subjective categories can be made objective by the utilisation of empirical criteria and it is possible to obtain a high degree of reliability. The frequency of occurrence of classified categories provides a quantitative basis for precise tests of hypotheses or postulates and for the organisation of data into meaningful classifications and conceptual categories. Content analysis should be, not an end in itself, but a step towards the development of hypotheses and thus be a useful instrument of research.

P A R T I

DESIGN OF THE EXPERIMENTAL

PROJECT

Pilot No. I - Chapter 1

Pilot No. II - Chapter 2

CHAPTER 1

THE DESIGN OF THE PROJECT

The general design of the project remained constant from the inception to its conclusion; it is possible, therefore, to detail the basic features of the project. In the light of two experiments changes were made in methods of analysis but the major approach was undisturbed.

1. The Role of Feeling States

A primary characteristic of the study is the request made to the interviewee to describe periods in his life which he could identify as being "high" or "low" in his description of his job. These two polar emotional states are extreme conditions. The need for a refining instrument is met in this study by specific and intentional questioning to assess depth of feeling. The two extremities can be referred to technically as "positive" and "negative" self feeling. The terms are defined and discussed by McDougall¹ and appear to be applicable to the model. This procedure has the advantage that it avoids semantic problems inherent in the weighting of verbal descriptions; no comparisons need be drawn from one individual to another nor is it necessary to evaluate the liability of the assessment so far as the emotional state is evaluated by the interviewee himself and is not inferential. All that is necessary is to get a worker to evaluate his feelings on stated issues within a specific period of time, to identify the extremities of this period of time and to select those extreme situations by defining the positive and negative self feeling states. This constitutes the actor's subjective view of objective situations as evaluated by himself.

1 - McDOUGALL, W.: Introduction to Social Psychology, 23rd ed. 1936, Methuen, London, p. 373. Cf. also Parsons' Pattern alternatives detailed in footnote p. 34.

2. Identification of Components of Job Motivation

The ranking of the components, that is sub-divided parts of motivational complexes which are embodied in total job attitudes, can be obtained directly from the interviewed worker by asking him to evaluate and rank predetermined components¹. Some of the factors that may influence such a self-evaluating procedure are likely to be:

- a. It is possible that unconscious operators may have an effect on the responses; for example, habitual conformists conceivably may upgrade their evaluations rather than appear to be critical deviates, or conversely, components may be selected as aggression expressions.
- b. Resulting from over-evaluation of pressures, the normal response curve will be exaggerated — the result being atypical, or erratic and non-standard responses.
- c. Loyalty to the work group may also have a determinative role, the response being governed by this rather than a personal evaluation.

3. Job Motivation as defined by Effects

The identification of components, within the frame created by the research worker as we have pointed out, does not depend on the inferences drawn by anybody other than the interviewee himself, nor are they based on the group generalisations of other employees. This, in turn, highlights Wallace and Weitz's² view that criteria studies are weakest in industrial psychology, because, in the past, the fact that external factors influence productivity, was never fully accepted in its complexity.

1 - Cf. Appendices II, III and IV.

2 - Annual Review of Psychology, Stanford Univ. Press, 1955.

Other investigators like Brayfield and Crockett¹ found that criteria measures based on supervisors ratings, are untrustworthy as a result of inherent weaknesses in the rating system itself. If, in the interviewed worker there is a degree of self-insight and readiness to rapport, then he is the best source to supply information concerning his own attitudes and whether his interactions, on and off the job, with others affect his own adjustment. We return to the validity of these interview reports when we discuss effects and results later.

4. The Interviewing Technique

In this study the "semi-structured"² interview is utilised. In this technique the interviewer uses a specified set of questions with further questioning as the course of the interview develops. In the structured interview, by contrast, the interviewer is restricted to the specific set of questions as they are detailed on his questionnaire; in the "free" interview the interviewer extracts, from discussion, only the relevant information. The semi-structured interview therefore, has all the merits of the structured interview and, in addition, includes a method which can be as keen as that of psychiatric analysis. The reason for the choice of this technique is, firstly, to allow the interviewed worker the widest freedom to select the incidents which he wishes to describe, and, secondly, the questions can be so framed that the desired factors-motives-effect can be obtained with relative certainty of accuracy.

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- 1 - BRAYFIELD & CROCKETT: Employee Attitudes and Employee Performances, Psychological Bulletin, No. 5, 1955, pp. 396 - 424.
- 2 - MERTON, R.K. et al: The Focussed Interview, Glencoe, Illinois, Free Press, 1955.

5. Reasons for the choice of this approach

After studying various other possible approaches, sufficient evidence was found to indicate they could not profitably be used in this instance. Examples of methods rejected after investigation are:

a. The group-comparison method

The chief technique used here has been to compare two or more groups for which some known measurable characteristic could be taken as a variable. The Survey Research Center¹ contrasts, for example, groups of "high" and "low" productivity with groups of "high" and "low" morale. In other surveys, again, higher and lower productivity groups are compared. In spite of their understanding of the problem and their contribution to the theory of job attitudes, group assessments show various shortcomings of which the following are outstanding:

1. It was shown that during similar surveys a considerable time lag exists between the measures of the variables which led to the formation of these groups and the criterion measures which served as the dependent variable. It could therefore be, that an individual with a "high morale", or positive self feeling as it is termed in this investigation, at the inception of the survey, could have a "low" morale when the dependent variable had to be defined, the span being between two points of time.
- .11. Added to the foregoing, further problems were encountered when decisions have to be taken as to the measures that furnish the various variables.

1 - KATZ & KAHN: Some Recent Findings in Human Relations Research. ANN ARBOR: Univ. of Michigan Serv. Res. Center, 1952. See also KATZ: Productivity, Supervision and Morale in an Office Situation(Part 1)Univ. of Michigan, 1951. Also MANN, F. et al: A Comparison of High Morale and Low Morale Employees, quoted by Herzberg in The Motivation to Work, John Wiley & Sons, N.Y. 1959.

A typical problem could be that a man who finds work and promotional opportunities excellent registers highly on the morale test but may actually feel "low" about the job when he is confronted by such problems as wage or production difficulties, or specific aspects of working conditions.

111. Where two groups are compared whose members are from different cultural groups, variables are likely to be culturally based rather than based on the job situation. We discuss this point, in detail later.

Factors leading to job assessments and the effect of these assessments must be related to one another in different ways for each individual who is questioned, otherwise there is very little predictive power obtained from a correlation between, say, productivity of a group and its morale. Again, the unity of relationships between working conditions and the resultant behavioural responses could be obscured by the complexities inherent in the design of this kind of study, quite apart from complex problems of methodological analysis of the resulting materials of the investigator.

b. Time and Motion, and Observational Studies

This method, by its very nature, could not have been employed in this investigation in spite of the fact that observational studies, and to a lesser degree time and motion studies, form the core of much work in industrial sociology as well as studies in group behaviour in other contexts¹. In this study this would have been impracticable: we had neither the time nor the funds to engage in prolonged observations. An additional hazard exist also in the use of observation — including the fact that the approach of the interviewer could affect the interviewee, it is more likely that the observer (interviewer), over a lengthy period of observation, would exert much more profound influences, as a function of time and close association with the worker.

1 - Cf. WICKERT, F.: Turnover and Employees' Feelings of Ego-Development in the day-to-day Operations of a Company, Personnel Psychology, No. 4, 1951, pp. 185 - 197.

We need only quote the Hawthorne Studies where no manipulation or incentives affected productivity as much as the exposure to observation.

In choosing the retrospective (recall) method of interviewing as offering the best opportunities for obtaining meaningful results, it is felt, with the interviewee actually divorced from the situation in time, this being past, he would not have any deterrent to give an accurate account of his feelings. His descriptions would be personally subjective and, therefore, not in any way derived from generalisations of similar circumstances or the immediate occasion. His verbalisations make the subjective materials explicit and objective to the investigator.

THE PRELIMINARY TEST

Before embarking on the major study it was necessary to test the reliability of the approach by supplying empirical answers to the following questions:

- i. Can coherent accounts be expected from interviewees covering the positive self feeling phases and negative self feeling phases in their life history related to the situations in which the emotions had emerged?
- ii. Equally important, would it be possible to develop a scientifically valid interpretation of the various factors by means of sets of classified categories assuming data was satisfactory from (i) above?
- iii. Would sufficient detail be forthcoming to present a scientifically accepted account to reveal the effects as distinct from causative factors?

To answer these questions it was necessary to develop instruments as follows:

a. An Interview-development Schedule

The development of this schedule was required to yield answers to the basic questions from which inductions can be made. This approach, in the first instance, was limited to the following basic questions:

1.

Positive
Self
Feeling

 "Will you please tell me a past experience of yours in which you felt exceptionally happy about your job. It need not be in your present job nor with this company."

2. "Now that you have told me about this

Negative
Self
Feeling

 happy phase, can you also relate a past
experience when you felt exceptionally
unhappy about your job?"

Additional probe questions, such as: "How long ago was this?" "What were the effects of this incident?" "Were there any special circumstances to prompt this incident?" had to be inserted to get more detail.

INVESTIGATION 1 - THE PILOT

a. The Pilot Group:

The group, consisted of eight workers comprising industrial relations officers, underground operation supervisors and artisans of both races, was selected to give a cross section of opinion to check the work ability of the enquiry in its most general approach. All but one of the interviewees was able to relate occasions when they felt exceptionally positive or negative about their jobs. The descriptions were vivid and it appeared that the questions were meaningful.

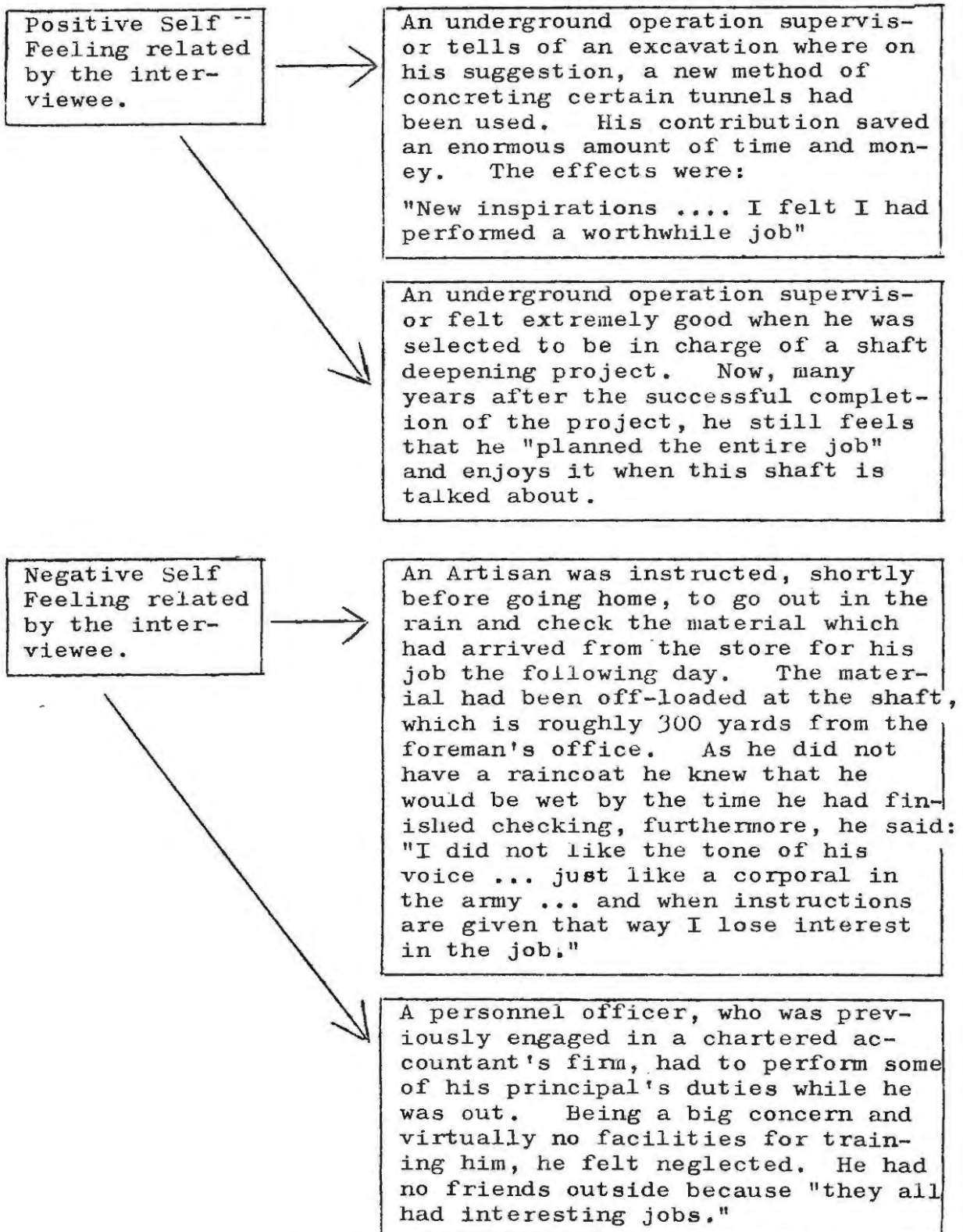
b. The Development of an Analytical Procedure:

It became evident that more exact specification of the various elements or components which might lead to positive or negative feelings about the job, and of the effects of these feelings on performance, had to be developed. Due to the small numbers involved it would have been unwise to attempt to test any hypotheses and this was not our purpose at this stage but it was noted that the intrinsic nature of the job, the characteristics of supervision, the interviewees' work group, promotional opportunities, the character of the company, where the events occurred, helped to determine feelings about the job.

It was clear that it could be stated, without reservation that this technique could provide materials that were capable of being analysed and it was likely to provide sufficient scientific material for testing hypotheses or provisional postulates such as those offered in the introduction. (Page 9). A further comment in connection with this first experimental group is necessary: examination revealed that the expectation

that the data would consist almost wholly of the "critical incident"¹ type of report had to be modified. An excessive frequency of this occurrence would have yielded interesting psychological information but it would have seriously disturbed the intentions of the present study. It was clear that minor incidents could disturb situations seriously and, thus, must be integrated into the analysis.

The following examples of interviews, which fit the "critical incident" concept are given below:



1 - A critical incident is defined as an incident critical in its nature to the ego but of low probability of occurrence ...the seldom encountered experience not the most potent or most frequent or typical.

The foregoing cases depict specific incidents which make the interviewee feel "positive" or "negative" about his job, but they yield accounts also of an overall feeling about the jobs which is likely to affect the immediate reaction depicted but which also regulates action over the total relationship with the job, physically and socially and over a long period of time. The linked relationship which exists between the specific reaction-response and the total continuing job-appraisal is likely. The phenomena of projection from the specific to the general is held to be hypothetically, most probable.

In the description of "critical incident" situations the term "sequence of events" or "sequence" has come into general usage.¹ The terms signify the expansion from the specific incident to a generalised total response: it will be seen later that complexes of minor non-critical incidents can induce the same effect albeit the analysis becomes increasingly difficult as these components multiply in almost every permutation and combination. A limited number of combinations are discussed later.

Narrowly delimited events, about which exceptional feelings can be related, are classified as "short-range sequence of effects", and can, to some extent, be identified with Flanagan's "critical incidents". In our definition of "long-range minor incident sequence of effects" we had to devise rules of significance according to the following criteria:

- a. To be of significance a long range sequence of effects, as defined, implies a minimum period of several months. No upper time limit is imposed on the period of the sequence.
- b. In long-range sequences of minor effects the interviewee must be in a position to verbalise the intensity of these feelings about the events. Minor fluctuations of feeling have to be ignored; for example: an employee who is generally very happy in his job could have an occasional setback. This setback, however, does not deter him from reporting his attitude towards the job as entirely satisfactory.
- c. Long-range sequence effects must be clearly demarcated

1 - After CAPLOW & MCGEE's usage: The Academic Marketplace, N.Y., Basic Books, 1958, pp. 135 - 156.

from the rest of experiences. In other words: the report, bounded in time, should therefore, describe the events that started the sequence and those that terminated it, if it was not presently continuing. It must be pointed out that a sudden beginning or dramatic end was not expected — all that was required of the interviewee was that he should be able to say "this is how it started..." and "this is how it ended", thereby signifying a period of time — an isolation of the sequence from other, prior, present or future events.

- d. The incidents had to be minor and non-critical and had to occur in sequences of events in time.

EVALUATING THE RESULTS OBTAINED

FROM INVESTIGATION I

The results of Investigation I did not meet the expectations originally visualised and required us to develop the more detailed tools set out above and it was decided therefore, before starting a second investigation, which for obvious reasons was necessary, to determine the reasons for some of the unexpected results. The following inferences are drawn from Investigation I:

- a. Postulates underlying the expected responses were incorrect: the response "spectrum" was too wide so far as the replies of the interviewees yielded much non-classifiable responses and therefore, the values assigned to the independent variables were too diffuse, inadequate or unable to be utilised for analytical purposes.
- b. The assumption made concerning the weighting given to certain classifiers (i.e. money, status, etc.) was inaccurate as different occupational groups stressed different components: the assumptions of universality of the concepts was, therefore, unsound.
- c. The interrelationship of the variables was too complex for the needs of the experiment. This follows from (a) and (b) above. These required simplification.

In assessing these inferences it was decided to take one step at a time: it was decided to introduce the following steps in evaluating the results of Investigation I in projecting steps towards a second investigation.

- a. This analysis¹ permitted noting statistical associations existing in the data regardless of what the causative factors were. It permitted us also to see which of the indicators (or their combinations) clustered into associative patterns. Stuart Rice² says that "mental states have been discussed in a manner very much as if they were objective realities which could be defined and measured. Now attitudes and motives offer a valid subject of scientific inquiry, but they are not susceptible of measurement. It is only when they find expression in behaviour that they yield to quantitative analysis"³. Verbalisation of subjective states is objectified behaviour. It was at this point in the process of evaluating the results that we can, more easily, study measures for estimating responses. This was possible after the application of the questionnaire to the interviewee and the indicators utilised as classification headings had been satisfactorily developed.
- b. - Any statistical inferences drawn from Investigation I are invalid for the reasons stated. This is not to suggest that this investigation was valueless: it has served, as indicated above, to provide a framework and a closer definition of objective than a direct approach to the central problem would have allowed. The inductions relate to:
- i. the necessity for preparatory creation of indicators to permit classification of data. This has been done and included in Append.II.
 - ii. the questionnaire as an instrument designed to permit the emergence of the indicators in (i) above and the manner of its construction to allow the materials yielded to be classified by the indicators.

1 - It is preferred to use the concept "indicator" rather than "variable". For the role of indicators in classification systems refer to Sect. B(3-4) pp. 35 et seq Language of Social Research, LAZARFIELD & ROSENBERG, Free Press, N.D.

2 - RICE, Stuart: Method in the Social Sciences, Univ. of Chicago Press, 1931.

3 - For a list of indicators used, see Appendix II p.

CHAPTER 2

INVESTIGATION II

MODIFICATION OF OBJECTIVES

A second pilot project was developed to verify that the technique would be acceptable to the interviewees as an operational tool and likely to produce scientifically-oriented material useful for testing hypotheses or postulates. An attempt was also made to regroup the occupational statuses in terms of a more homogeneous job spectrum in place of the diversified group of previous investigation. In this second pilot project all the interviewees were in charge of workers, in some measure their work task involved that of supervisory functions.

This second pilot project can also be used to test general hypotheses concerning job responses such as the following:

- a. Job responses, result from short-range effect sequences, are likely to have different effects in terms of personal evaluation by the interviewee of his retrospective experiences from those effects caused by long-range sequences.
- b. Short-range effects are the results of different kinds of responses derived originally from different social positionings of the interviewees. Here we test our original postulates which pass over from postulates to hypotheses.

The group in this investigation was selected from European and African underground and surface supervisory personnel working on widely diversified projects. For this second investigation eighteen employees were interviewed. Six of these were engineers working in different sections of the plant, the remainder were shiftbosses, mine captains and sectional foremen. All had supervisory functions over the labour of other workers and it is this last attribute which unifies the population.

As in the first investigation the answers were descriptive, vividly told and, as had been hoped were intense-

ly personal. There were reports of positive self feeling¹ relating to various accomplishments - mostly in the technical field. The negative self feelings occurred in most cases where the interviewee received non-sympathetic answers to his appeals relating to his bonuses, for higher incentive pay, for a change of jobs which was rejected or for information about his future prospects in the company. The most negative states appear where replies to the workers' queries were inconsistent or evasive. The two aspects together lead to the conclusion that men like their work but do not like rejection of their personally estimated worth.

Without a single exception, all the interviewees were able to give sequences of events which allowed classification by the indicators. The presentation of these interviews could easily be classified typologically by grouping the indicators and analysing them afterwards. In spite of minor problems which required adjustment the second pilot investigation yielded theoretically meaningful results even from an examination of the small number of responses. It showed the indicators were acceptable as classifiers of the materials of the questionnaire and the interviews.

When examined in detail, however, the analytical scheme was found to contain a methodological error, which could give rise eventually to problems at the interpretative level. It was found that interviewees showed no discrimination between factual description and their inclusion of values inherent in the description. For example: two interviewees would give two completely different responses when the one said that he had received a merit increment and the other, that his work was highly esteemed. In our present scheme no provision existed for this subtle difference of evaluation. Both interviewees had positive self feelings yet evaluated a common "approval situation" in different terms and thus ascribed different weighting to the same incident. If this variation in level applies to the positive self feelings it equally applies to negative self feelings, and it was necessary to take cognizance of this fact by devising a corrective device.

Cognizance of this fact led to the following

1 - These levels correspond to areas in which self assertion is linked with positive self feelings and self abasement with negative self feelings. These ego responses are important, obviously, for production studies.

modifications of technique:

1. Additional questions required to be asked which would yield information relating to the subjective states and reactions to events during both "high" (positive) and/or "low" (negative) periods. These questions, therefore, were required to supply the answer to why the interviewee felt the way he did, or what these events actually meant to him. In short, the technique must allow for wide variations within the indicators even if the level and intensity is held to be identical.
2. The factors eventually leading to job motivational evaluation require to be divided into two classes:
 - a. The first class which may be described as the individual's self feeling in the situation before he reported his changed attitude towards his job, he was required to describe definite situational changes of events. This state, the first, is termed "PRIMARY SOURCES OF SELF FEELING". This corresponds to Parsons' Pattern Alternative "affective neutrality" where the feeling state is neutral.
 - b. The congruent set which is termed the "SECONDARY SOURCES OF SELF FEELING" to describe the resulting feelings to the impact of events and was required to be arranged in sequential order after the Primary Source had operated in the interviewee. This corresponds to Parsons' "Gratification - Deprivation Level of Pattern Alternative". The events cause a shift to a gratification level which is Positive Self Feeling or to deprivation which is Negative Self Feeling, which is broadly the same as Parsons' Affectivity - Neutrality Dilemma.
 - c. Another modification derived from Investigation II was necessary. Previously it was assumed that the intensity of the responses did not require comment. It was discovered that a considerable degree of variation existed in the felt importance of the responses regarded evaluatively from person to person. Apart from the extent of the effects, some of the sequences of events were acknowledged to be more critical and hence more personal-subjective to one than to another inter-

viewee placed in an identical situation. This aspect made it clear that there were multiple and varied components, which, if suitably organised, would enable us to form estimates of attitudinal responses in considerable detail and graded in intensity. It was required therefore to have acceptable answers to the two following questions which were specifically framed to cover this condition.

- i. The first question¹ asked the interviewee to intimate whether the events described by him made -
 - a. his future career different,
 - b. any changes in his attitude towards his security.
- ii. Whether -
 - a. his attitude (in his estimation) had affected his feeling towards his employers, or
 - b. towards his job in particular, and
 - c. towards certain individuals in general (i.e. foremen, supervisor, etc.)

This was likely to yield further information regarding the ramifications of the response to the situation of the interviewee.

---ooOoo---

1 - It will be noted that the dichotomy - "Short Range" and "Long Range" effects and/or one crucial incident with no Long Range effects compared with effects which carry over throughout the working career, correspond to Parsons' Pattern Alternative, "Particularistic - Universalistic" Patterns and to "Specificity and Diffuseness" Patterns. The relevance of these questions, and the responses to the questions indicated later, would permit a full scale investigation of the data presented here as empirical material for testing Parsons' hypothetical "Pattern Alternatives". A crude relationship is shown above but which cannot be developed here. All five pattern alternatives appear in our data as analytical possibilities. (I am obliged to Prof. James Irving for pointing out the presence of these patterns in the material and for his discussion on the point.)

P A R T II

THE TABULATION AND CODING SYSTEM OF THE RESULTS

TO BE OBTAINED FROM THE EMPIRICAL DATA

OF

INVESTIGATION III

CHAPTER 3

OUTLINE AND PREPARATION FOR THE

MAJOR STUDY

(INVESTIGATION III)

1. The Choice of the field of Investigation

With a preplanned technique and a set of operational postulates to be tested, we are now ready to apply these to the local situation. The field to be investigated was dictated by local possibilities and facilities and the investigator's position as Industrial Relations Officer on the mines proposed to be investigated. The conditions were:

- a. A middle-sized mining company employing approximately 10,000 employees,
- b. A company that employs people of various ethnic backgrounds - both European and African - varied nationalities and tribes,
- c. A company that has active trade union organisations and a well organised industrial relations structure,
- d. A company that is in a competitive labour market and has no monopoly over employment of labour, horizontal and vertical mobility and transference can take place within the geographical area and jobs are easily obtained outside the company,
- e. A company in which the principles of modern management are adhered to, known to all grades as in line with modern management practices in under-developed areas.

2. The Choice of the Group Investigated

The following criteria were used in selecting the particular group to be studied: All interviewees are supervisors of labour and in:

- a. A department concerning itself with a stable occupation structure in which the tasks of the individual workmen are uniform and repetitive,
- b. A department which did not anticipate too many personnel changes during the study,
- c. A department employing personnel of varied ethnic



backgrounds and covering a wide range of skills, i.e. in which there will be a wide range of job and social statuses. The European group of interviewees consisted of English, Afrikaans, Polish, Greek and Italian workers, while the African group comprised Bemba, Ngoni, Kaonde and Tumbuka tribes,

- d. A department that can readily be observed without causing any disruption in output by the intrusion of the investigator,
- e. A department in which potential interviewees may readily be contacted without causing disturbances.

The reasons for the selection of a particular department are governed by these conditions. In the first investigations as has been shown, those interviewed belonged to the same job stratum. Frequently they were approximately the same age and of the same ethnical background. This major investigation, however, extends the investigations so as to contain a wider range of jobs supervised, varied salary within the grades, lengths of service, ages and ethnical background. We require the group to include a high percentage of Africans in supervisory categories of jobs equally with Europeans. Only this wider range of differences in cultural background and job roles permits appreciation of the influences of social and psychological stresses in the same work structure. The group is not a sample but half of a total population.

A group limited to one profession would have yielded results of doubtful generality. To develop findings independent of the peculiar circumstances of the engineer, for instance, we require to study comparable groups. Such a variety makes it likely that the personnel officer, or the mine captain or the foreman, would show variance from the engineer, within the common supervisory occupational framework. This group to be investigated is therefore extracted from:

- a. underground supervisory personnel, (40% of total complement)
- b. surface plant supervisory personnel, (60% of total complement.)
- c. personnel department, (50% of total complement.)
- d. underground and surface engineers, (including supervisory functions), (50% of total complement.)
- e. African supervisory personnel. (54% of the total complement).

All have in common supervisory role functions. For Investigation III, 114 employees were interviewed; it was known that resources would be adequate for such a study and that the volume of data derived from this number of interviewees would be sufficient for an evaluation of the results and for the testing of the postulates and hypotheses.

The Investigator made every effort to dissociate himself from his status in the company, and to assure interviewees of the confidentiality of their responses and to maintain his status as a scientific investigator. An indicator of success is to be found in the nature of the material supplied. After a brief introduction in which the nature and purpose of the investigation were explained, the interviewee was told to relate his actual experiences only and to avoid hearsay and second hand information. It was assured that the interviewee understood the short-range and long-range sequences¹;

1 - cf. p. 45 as well: The classification of each sequence as short-range or as long-range followed the basic criteria described earlier (see p. 26). In our coding we found that it was very easy to become confused because often the interviewee would speak in one breath of the actual duration of the events and in another of the duration of the feelings that were set into motion by the events. The classification of range was based entirely on the duration of the events. The duration of the feeling was dealt with separately. This distinction within the range was extremely important because of a need to differentiate between short-range sequences of effects which have lasting consequences and those which have not. The distinction provides for four kinds of short-range sequences:

- a. The events and feelings are approximately coincidental. A sharp spurt of feelings up or down lasting as long as the event itself is characteristic here.
- b. In this short-range sequence the feelings may persist long after the event, for example, the turning down of a good suggestion by the immediate supervisor.
- c. Here the interviewee states that although the feelings had died down, they are periodically reawakened by some stimulus, for example, bypassed for promotion.
- d. In this short-range sequence a change of feeling is involved which is initially very sharp, then tails off, but never reverts to normal.

For the long-range sequence the distinction was quite easy since all sequences here involve reports in which the feelings are coincidental with the events being described.

Furthermore, no restrictions were imposed as to which sequence the interviewee wished to relate first. After the first sequence was thoroughly dealt with, the interviewee was asked to relate an opposite sequence, that is, if he chose a short-range first he was then purposely asked to give a long-range sequence next. As had been indicated, the course of the guided interview (as each sequence was described), consists of a search for the factors, both primary and secondary, in the revealed data.

The complete form of the semi-structured interview is set out in Appendix I which should be consulted at this stage.

To apply the technique of content analysis, it is necessary to decide on one of the two accepted approaches detailed hereunder:

1. To assume an "a priori" approach, the material being based upon previously defined schematic structures. For example: material could be arranged in such a manner to distinguish between evaluative and factual statements, which would mean that all material must be sorted into two categories which have been predetermined. This is usually the preferred method in the treatment of psychological tests;

OR

2. To assume an "a posteriori" approach, where the material itself defines the categories for classification. As was indicated, and following Laswell¹, this second approach erects categories that are meaningful in terms of the empirical material gathered.

1 - LASWELL, H.D.: Language and Politics, N.Y. : E.W. Stewart, 1949.

It would have been possible in this investigation to have used either with success - in fact, the list of indicators and effects in job responses gleaned from a review of existing literature could have provided a classificatory framework without much more labour. In some ways this would definitely have eased the task considerably because of the precoding that might have been done on the material.

In selecting the second method it was felt that a more valuable analysis could be produced as it emerged from the material itself, and perhaps, highlights certain aspects which would not emerge when cast into ready-made moulds. It was therefore, felt that the material produced evidence which was based on the data itself and that the characteristics of the classification of indicators into categories are "situation-centred" and "subject-object" oriented.¹ That is, it allows of interrelationship and the standpoint of the actor (here the supervisors) and also for the standpoint of the investigator objectively and takes account of the situation in which the incidents occur. It takes account thus, of the components of the action system and, in total it indicates units of action in Parsons' sense.

It was noted that the verbal replies to the questionnaire could be cast into "sub-classifications" of statements centering on a single event and/or situation that led to a declared feeling or state. Examples of typical responses are quoted below: these lead to primary indicators and by further analysis to secondary derivations:

STATEMENT	INDICATOR
a. "You can judge the results for yourself"	- Pride
b. "The reasons for this act are evident"	- Frustration
c. "I knew it would not work"	- Recognition
d. "He was indifferent"	- Unfairness

The responses of interviewees were classified under twenty-six indicators, of which 16 are primary and

1 - FRIEDMANN, E.A. & HAVIGHURST, R.J.: Work and Retirement, pp. 41 - 44, Chapter 2, Essay No. 5 in NOSOW, S. & FORM, W.H. : Man, Work and Society, Basic Books, N.Y., 1962.

10¹ are held to be secondary. These indicators² and their

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- 1 - Cf. pages 46 et seq. for detailed primary/secondary response classifications.
 - 2 - To recapitulate the interviewing procedure: the nature of the survey was again detailed; the author informed the interviewee that he was primarily interested in hearing about actual experiences. Long-range and short-range sequences of events were also again explained. The interviewee was told that he could "start with any experience you like - either a time when you felt good or a time when you felt bad about your job, either a long-range sequence of events or a short-range incident." After the first sequence was completely explored, the interviewee was asked for the second. This time, however, he was given somewhat less freedom to choose the kind of story. If he had given a long-range sequence, he was asked for a short-range one. This note on procedural action is given so that the results, given in tabulated form in the next chapter, may be better understood by the reader. Since 114 interviews were conducted and efforts made to code the responses into 16 primary source categories, (from which the 10 Secondary Derivations are arrived at as detailed on p.49) the bulk of the various responses arrived at were computed as follows:

114 interviewees times 4 (to get long- and short-range sequences covering positive and negative self feelings about the job) divided into the total of 4062 indicator responses obtained from all the interviewees, giving an average of 8.901 responses per interviewee. All the responses were then electronically computed and reduced to a base of 100. In certain cases such as Table No.1 for instance, the percentage, in order to have meaningful significance, was rounded off to the nearest .5%. To put it in another way: each interview, as the sequence was described, consisted of a search for the indicators - their classification (into primary sources and thence to secondary derivations in the positive and/or negative self feeling stages) and the tertiary or attitudinal effects.(p.49) What one requires to remember is that percentages, unless indicated, are not percentages of the 114 interviews but of the components of the total response mass.

This explanation, the writer feels, shows that the number of interviews has no necessary correlational relationship with the percentages given under each indicator in the various tables since these percentages were electronically computed from the bulk response-mass obtained during the entire survey where each interview yielded an average of 8.901 responses per interview.

combinations may be permuted into cluster response groups and were carded in triplicate on 4 x 5½ inch cards to simplify indexing. These were then cross-classified into three categories:

1. primary indicators,
2. secondary indicators, and
3. classification of the resultant effects, derived from 1 and 2 above.

After the completion of the indexing according to indicators, a detailed analysis could begin. Each set of indicator cards was taken and analysed in terms of the verbal content indicators and their concomitant emotional effects.

3. Criteria Regulating the "Sequence of Events" Concept¹

The following criteria were utilised to define "sequence of events" as they were employed during this investigation:

- a. The sequence had to describe an event(s) in which "something" was happening. The objective here was to limit the interviewee's value-injections and to confine his rendering of events to factual statement.
- b. It should be such a factual description that a definite beginning and end could be distinguished. The objective here was to delimit a specific period of time in which the event had occurred, and could be classified as a short-range or long-range sequence. The end indicates the value orientation.
- c. The sequence description had to include a period when the interviewee's feelings were either particularly "positive" or "negative". This, however, is to be distinguished from a "critical incident" as defined on page 16 so far as it is not too intense or too infrequent and is not determinative of a limiting response.

1 - Cf. Chapter 2 for other limiting conditions on sequences.

- d. The interview must be concerned with a period in the interviewee's life when he held a similar position to the one he occupies now. The objective here was to get comparable information otherwise it could have produced reports where a supervisor was reporting about his apprenticeship; this guarded against the dislocation of time and status by past-historic reference.
- e. The description had to be confined to his feelings in connection with the job itself - external and unrelated data were not considered for inclusion.
- f. The description was required to have behavioural(action) aspects contained in it. The objective here was to measure the depth of the emotional disturbance by relating the state of emotion to the behaviour.
- g. Even if it required to be supplemented by additional questioning, all reports had to show whether the event described, influenced the interviewee's job outlook for the future.
- h. Outside influences, such as the death of an intimate friend, matrimonial discord or political upheavals, would have been of great interest but had to be ignored as they are related to the external system and we wish to confine ourselves to the internal action system. To this degree the analysis is abstractive.

4. The Definition of "Sequence of Events"

In the division of the sequences of events we established the classification of long and short-range sequences which was defined when dealing with the second investigation¹. It is necessary to note that some degree of confusion could arise if no further demarcation is made between the actual duration of events and the duration of feelings, these being independent variables. The event could last a second in time and the effects influence behaviour for a lifetime afterwards.

1 -. Cf. Chapter 2.

The analysis of the duration of feeling, is an important part of this investigation because short-range sequences, could have permanent effects. Specific attention should, therefore, be paid to short-range sequences, since virtually all long-range sequences would involve feelings which would be coincidental with the event which is described.

Hereunder is given a detailed definition of "short-range sequences":

In the delineation of short-range sequences it was anticipated that the end of the sequences will be:

1. To define the effects on the person since he (the interviewee) will be recalling the situations valuatively; here goal(end) and values are related as in the Weber/Parsons systems.
2. Spontaneous dissipation of feelings due to end (goal) attainment - equilibrium without value feeling.
3. Ended by factors separating from outside the internal system and thus involuntarily with frustration value feelings.
4. Ended by the interviewee himself by
 - a. escaping physically(terminating contract),
 - b. escaping socially (adjustment approach),
 - c. remaining in the system with aggression feelings.

Listed below are the short-range sequence possibilities which we have concentrated on:

1. Those which involve a sharp change of feeling but which eventually fade and have no further significance.
2. Those which, in spite of having faded are periodically reawakened.
3. Those where the feelings linger for a long time but left no permanent effect which could be distinguished.
4. Those where the events and feelings are recalled simultaneously but fade immediately when the events end.

5. Those where an immediate feeling is aroused but cannot be ascribed to a specific event.
6. Those where the feelings have been awakened and remained permanently (due to their psychological impact).

To simplify the classification of indicators each sequence of events has to be reviewed by the investigator so as to understand the involvement with regard to:

- a. Measurement of the depth of the positive or negative feeling by interviewee's self-evaluative assessment.
- b. To establish the range of the sequence.
- c. To establish the relationship between the duration of the feelings and the range of the sequence.

The permutations of these involvements finally present themselves in the following typologies which we used to ascertain the duration of the responses¹:

1. Short duration of feelings - positive short-range sequence
2. Short duration of feelings - negative short-range sequence

AND

3. Long duration of feelings - negative long-range sequence
4. Long duration of feelings - negative short-range sequence

AND

5. Long duration of feelings - positive long-range sequence
6. Long duration of feelings - positive short-range sequence

The empirical data and the tabulation of these results appear in the following chapter. The results obtained are grouped under the indicators based on the duration of feeling and resulting in the eventual attitude which is related to the pattern of behaviour as expressed.

6. Definition of Indicators

One of the basic aims of this investigation is to ascertain within the limits and probabilities of the empirical data, what happened in an event distinguished by an interviewee, and how this "what happened..." influences his subjective attitude. The "indicators" are the signs and symbols objectivised of the subjective states of the interviewees! they develop as a result of events that have

1 - These permutations, as direct resultants of the sequences, comprise the major variants in this survey.

happened in the action system. They assist the interviewee "in making up his mind" and directing his actions to ends (goals): here we have the characteristic orientation of the actor.

Since different interpretations could be attached to the reports of different people we detail below the classification of the indicators.

7. Primary Source Indicators¹

As defined previously, the primary reactions are those reactions in which the interviewee first became aware of a source or cause for his positive or negative feeling. These "source situations" are set out below as a list of indicators used in classifying "source situations".

1. The Job Situation Itself

This indicator was used when the interviewee mentioned it in connection with the performance of the job. It contained many and varied aspects, such as "routine jobs", "creative jobs", "interesting jobs", etc. The value element is built into the job definition.

2. Personal Life Reactions

In spite of the fact that this is excluded as previously stated, we did however, allow events to be recorded where personal life and the effects of his feelings about the job or the extent to which events lead to one component of attitude about the job. They pertain to the external system, however, and are beyond the control of the internal system, but they bridge the internal/external.

3. Security

In this instance feelings of security, as such, were not considered since they are classified as secondary derivations, to be considered later. Indicator signs of security such as home ownership, company policy, etc., were taken into consideration so far as they are within the internal system.

1 - As a result of this definition of primary sources, secondary derivations may be defined as the interviewee's own evaluation of the effect which the primary sources had on him.

4. Job Status

Closely interlocked with the foregoing is the approach to status: this was considered when the interviewee mentioned it as an element of his feeling, for example, when he mentioned phrases like "I have so many people working under me," or "I am occupying a staff house," etc.

5. Conditions of work

This indicator is used when the interviewee describes the physical conditions of his job, the place of work, the adequacy or inadequacy of machinery, tools, labour, etc.

6. Company Policy

The overall characteristics of the company are involved in this category; here the interviewee describes such aspects as lines of communication, inadequate authority of the supervisor in assisting the job to be completed, the actual line of authority more so when it was apparent that some interviewees did not know to whom they were responsible.

7. Responsibility

This indicator is self explanatory; but we were interested in the fact whether the interviewee himself accorded responsibility to his job.

8. Supervision

Statements about the supervisor's willingness or his unwillingness to delegate authority, or his approach to render technical assistance to complete a task can be classified here. Interpersonal relationships, in which the competence or the incompetence, fairness or unfairness of the supervisor are critical characteristics and are included under this indicator.

9. Interpersonal Relationships

Coding of this category is restricted to statements in which actual descriptions are given by the interviewee about somebody else with whom he interacts. For further clarification two further

subdivisions were employed:

- a. interpersonal relations(with superiors),
 - b. interpersonal relations(with subordinates),
- which were sub-categorised as set out in Appendix II. These sub-categories enabled us to differentiate between the characteristics of interpersonal relationships which are purely social and those which were "socio-technical" as defined by Brown¹. A social statement would relate interactions within the working hours but independent of the job, while socio-technical statements involve relationships that arise when interaction takes place in the performance of the job.

10. Promotion

This category, also referred to as "advancement", is used when the interviewee mentions an increase in status coupled with increased responsibility.

11. Salary and Service payments

All sequences of events in which a financial nexus is indicated are coded here; incentive bonuses, overtime payments, work contracts and merit awards are included.

12. Acceptance

The major ~~crit~~erion here is the interviewee's feeling "that he belongs" or obtains some form of recognition expressed through acts of praise or blame by persons in authority.

13. Prestige

Prestige includes its opposite - failure - the diminution of recognised achievement. Solutions to problems, success in a venture or a feeling of failure are included.

14. Satisfaction

When the interviewee expressed his complete satisfaction with developments or his utter dissatisfaction, these statements are included under this indicator.

1 - Brown, J.A.C. The Social Psychology of Industry, London, Penguin Books, 1954, p. 63.

15. Workmates

The criterion here was restricted to the interviewee's views on the advantageous or harmful influence of his workmates on him in the completion of his task and where he could, without any doubt, ascribe his success or failure directly to the influence of his workmates.

8. Secondary Derivations

In the course of this investigation the interviewee was asked the question, "how did this or that affect you?" A feeling of prestige, for example, could come from words of praise - and more often than not, these derivations have to be based on inferences by the investigator and not on the interviewee's direct statement: they are secondary therefore in this sense to the source from which they emerge (the primary reaction). The primary sources, therefore, require to be identified before the secondary derivations can be indicated.

The secondary derivations used in this investigation can be set out as:

1. (Feelings of interest) in the performance of the job.
2. (Feelings of fairness or unfairness) on the job situation.
3. (Feelings of pride) in workmanship.
4. (Feelings about salary) in the company.
5. (Feelings about increased security) on the job.
6. (Feelings about performance) of the job.
7. (Feelings of "belonging" or "rejection") in the company.
8. (Feelings of responsibility) in the job.
9. (Feelings of promotion or retardation) within the company.
10. (Feelings of gratitude or satisfaction) on the job.

The enclosures within the brackets represent the secondary derivations, the unbracketed portion of the statements can be predicated as the primary sources.¹

Halo effects are produced by tertiary derivations which are defined on the next page.

1 - Cf. Appendix III

C. Tertiary Derivations(Attitudinal effects)

The category under this heading was set up to enable us to identify statements (and to estimate the frequency of the occurrence) in which the interviewee cited instances where his feeling towards his job, his colleagues or his company had changed. Here, also, are included both positive and negative statements. The frequency of occurrence does not concern this investigation.

1. Labour Turnover

In the analysis it was experienced, that a considerable spread exists between the two extremes where a man actually declines promotional transfers or resignation from his job. Interviewees with negative job attitudes will strive to make changes in jobs; others again, will contemplate resigning from their jobs but never get so far as doing it. In this analysis it is possible, therefore, to distinguish between concrete effects (such as actually taking decisions) and expressed effects. This is not included in this investigation as it does not affect nor does it yield additional information.

2. Interpersonal Effects

Interpretations as given by the interviewee, always exhibited two facets:

- a. an improvement in interpersonal relations,
- b. a deterioration in interpersonal relations.

These interpersonal effects always have a "feedback" which can affect the worker's domestic life. He is in a position to state that his domestic life suffered as a result of tensions on the job, or he found that he "could enjoy his social activities" when he had good feelings about his job.

3. Neuro-physical Effects

Job attitudes are affected and many statements cite changes related to neuro-physical and psychological tension on the job. This is a non-sociological category and is not included in this investigation's results. In spite of the fact

that these changes produced real neuro-physical symptoms, they do not lead to a diagnosis of a pathology. It is impossible during the limited time allocated to each interview to probe into the dynamics of the interviewee's personality, but we can, however, report on the frequency with which people describe these anxiety states as resulting from pressures on the job.

4. Production Effects

The following kinds of effects are distinguished:

- a. The interviewee could not say that his work showed any difference in spite of the fact that he did not feel the same about his job.
- b. The interviewee could definitely state that the quality of his work was affected, but that he maintained the volume of output in periods of negative self feelings towards his job.
- c. There were changes in the volume of production but the quality was maintained. Cases were related in more or less concrete terms where the interviewee has slowed down(during the negative period) or had speeded up(during the positive period).
- d. It is stated that "the job did not suffer" and this one has to distinguish between professional pride and effective self-adjustment.
- e. An inability to meet the required volume of output as set by the senior supervisor, appeared only twice. These form the least reliable data, but they indicate that the interviewee saw himself as working better or worse.

5. Status Effects

In this instance we were able to distinguish between two effects:

- a. When the interviewee acted in a higher capacity and had to revert to his substantive job on the return of the person for

whom he had acted,

- b. when the interviewee had to act indefinitely in a vacancy with a higher rating than his own.

6. Achievement Effects

This category is set up to establish the interviewee's view on his own success during the period under discussion. Negative and positive reports are considered.¹

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1- The nature of achievement effects described in our study deserves some special mention. It is clear that we have no quantitative measure of changes in output such as are available in many studies in industry. What we have is the interviewee's report of an achievement in the performance of his work, accompanied, for many, by a fairly precise and circumstantial account of the way in which this effect on productivity was perceived. Thus, we cannot compare any given instance of change with any other with respect to the amount of effect. However, we can count the frequency with which people report such changes in their work patterns.

CHAPTER 4

TABULATION¹ OF THE RESULTS OF INVESTIGATION III

FOR 114 CASES

A. PRIMARY RESPONSES IN POSITIVE SELF FEELINGS

Data relating to the responses of negative and positive feelings towards the job, form the basis of this investigation since we proposed to investigate whether different kinds of responses are responsible for bringing about variable resultant feelings about the job at the end of a sequence. In addition, attempts are also made to ascertain the depth of these reactions so that we may trace the neuro-sociological bases for these variations.

The examination of the results of the positive feeling sequences is examined first, thereafter the negative feeling sequences are examined. In both instances the primary source responses are presented, commented upon and an analysis is made to establish their range of interrelationships. To link the results at two levels the secondary derivations are later examined and a comparison made between positive and negative self feeling responses under the various indicators.

TABLE NO. 1

PERCENTAGE PRIMARY RESPONSES IN POSITIVE SELF FEELING JOB SITUATIONS²

N = 4062 INDICATOR-RESPONSES

STATUS INDICATORS	1. Prestige	21.0
	2. Acceptance or Rejection	19.0
WORK ROLE INDIC.	3. Line of Responsibility	13.0
	4. Job Situation	12.5
	5. Promotion	9.5
FINANCE INDICATORS	6. Salary	6.5
MISCELLANEOUS INDIC.	7. Satisfaction	3.5
	8. Job Status	3.0
	9. Interpersonal Rel. (Superiors)	3.0
	10. Interpersonal Rel. (Subordinate)	2.5
	11. Company Policy	2.5
	12. Supervision	1.5
	13. Conditions of Work	1.0
	14. Personal life	.5
	15. Security	.5
	16. Workmates	.5
		<u>100.0</u>

1 - For all Tables in this investigation the basis of computation is that set out on P. 41 - the percentages are for responses, not for number of interviews.

2 - All differences shown in the tables contained in this text are statistically significant at the .01 level of confidence or better. "Cf. p.87 for Chi Test"

Commentary on Table No. 1

The responses are ranked in order of percentage frequency in terms of positive self feelings towards the job. The table is subdivided into four classes and indicators:

- a. Status
- b. Work Role
- c. Finance
- d. Miscellaneous

1. The responses relating to "prestige" head the rank order since this appears in 21% of the sequences of events where positive feelings were reported. Each of these interviews contained an element of status-pride in spite of the varied nature of the jobs being reported upon. A mining engineer reported about outstanding achievements in planning a new underground project, another engineer reported about the impressive design which he had made for a new construction, etc.
2. Next in the rank order of frequency is "acceptance" which, by its very nature can come from many sources - from superiors, subordinates or horizontal equals in the industrial hierarchy. In this instance, however, the effectiveness of "acceptance" for producing positive job attitudes requires that it has achievement as defined by the hierarchy as its basis. It is, therefore, objective-subjective. There is a double valuation - of the man and also his employer. For example: a mine captain reports that he has to accompany a high ranking personality on an underground visit. The visitor later told the underground manager that he was highly impressed with the mine captain's section and that he gained the impression that efficiency appeared to be the watchword. This compliment was later passed on to the mine captain to whom it came as a profound surprise, since he had worked eleven years for the company and this was the first time that he had been recognised for anything but impersonal annual increments. A redefinition of the "ego" thus can develop as a consequence of acceptance.

3. "Responsibility" followed in the rank order of frequency. This reaction includes, responsibility for one's own decisions, responsibility for the work of others, always given new or challenging jobs but none having the actual characteristics of advancement - in other words, the lack of formal promotion did not affect positive feelings resulting from the increased responsibility.

The following report substantiates this: a shift boss in his early forties has to take over the duties of his mine captain who had to take urgent leave for a short period. In spite of his inexperience and recent transfer to this section, he was asked to take charge of the section. He was given the title of "acting mine captain" and received the customary acting allowance but he said that it gave him the opportunity to "prove himself". Determined to do the job well he consulted the "standard practices manual", rearranged two jobs and put in extra hours without expecting extra remuneration.

4. The "job situation" reports relate to various aspects of the job which gave positive satisfaction. These aspects are related to the nature of the job and offer no reward in themselves.
5. "Promotion", in point of fact, represents the culmination of the first four reactions, as it denotes growth, recognition, acceptance, achievement and responsibility. Of particular interest to this investigation is the fact that 42% of all the interviewees expected promotion. Obviously, many were likely to be unsatisfied.
6. Excepting "salary", for which additional information is required before it can be adequately analysed its part in producing "good" job attitudes, is observable in the Table under discussion: only the first five responses contribute towards increasing job satisfaction. They cover 75% of the responses -- the remaining 11 covering 25% of the possible responses. By comparing these five categories with the other eleven it can be noted that these five

are solely concerned with the job itself in various degrees, whereas the remaining indicators cover external operative factors.

It is recognised, therefore, as a fact of cardinal importance: the remaining eleven factors are rarely instrumental in bringing about positive feelings regarding the job: they do not feature in the job itself but rather on the characteristics and context in which the job is done. Closely linked with the foregoing, and exercising a certain degree of influence, are such components as company policies, administration, interpersonal relationships, supervision, salary and working conditions. The satisfying positive feeling reactions relate to the job itself and the dissatisfying negative feeling reactions relate to the job situation. The important fact emerges that: only a third of the reactions i.e. five out of a possible 16 responses have significance in defining the components of job satisfaction, which means that only a small proportion of reactions can be considered as active ingredients towards positive attitude formation. The components operating in a positive direction are much more weighty than those operating in a negative direction¹

Attitude Depth

Comparing long and short-range sequences

As has been set out before on page ⁴⁵ of this investigation, the permutations of the sequence of events present themselves in six basic groups, three of which are appropriate to positive feelings. One of the sequences, as can be seen, specifically asks for feelings which are aroused and terminated quickly. (No.1 on the permutation list). The other two sequences relate to responses in which the event described could be either a specific event or a series of events which had lasting effects on the feelings towards the job. (Nos. 5 and 6 on the permutation list).

1 - Cf Table No.3, page 57, where we have added a breakdown of the results of the 16 indicators which lead to long term favourable attitudes and for sequences which result in attitude changes of a short duration.

TABLE NO. 2
PERCENTAGE DISTRIBUTION OF
THE SIX PERMUTATIONS OF PAGE 45

	Positive Self Feeling	Negative Self Feeling
Long duration	21.0	49.0
Short duration(short range)	65.0	30.0
Short duration(long range)	14.0	21.0
Total	100.0	100.0

Commentary on Table No.2

The following observations can be made:

"Positive" feelings about the job continue longer after the event which caused them had happened, due to the fact, shown in the table, that the long duration's feelings are much weaker in frequency for the positive feelings than for the negative feelings, i.e. 21% as compared to 49%.

In Table 3 below the results of the sixteen reactions which lead to positive feelings about the job as set out in Table No.1 and a subdivision of long and short durations of the attitudes, are broken down: it must be borne in mind, however, that this investigation is solely concerned, in this instance, with the temporal duration of the feeling:

TABLE NO. 3
PERCENTAGE COMPARISON OF PRIMARY SOURCES OF LONG
AND SHORT-RANGE ATTITUDES WHEN FEELINGS ARE
POSITIVE TOWARDS THE JOB

N = 4062 Indicator-responses

	Long range	Short range
1. Prestige	17.5	34.0
2. Acceptance	16.5	42.0
3. Line of Responsibility	14.5	0.0
4. Job Situation	18.0	2.0
5. Promotion	11.0	3.0
6. Salary	10.0	10.0
7. Satisfaction	4.0	0.5
8. Job Status	2.0	2.5
9. Interpersonal Rel.(Superiors)	2.0	3.5
10. Interpersonal Rel.(Subordinate)	4.0	2.5
11, 12, 13, 14, 15, 16.(Averaged)	0.5	0.0
TOTAL	100.0	100.0

Commentary on Table No. 3

1. The responses viz. "line of responsibility," "the job situation" and "promotion" are almost always associated with long term changes in job attitudes; whereas "prestige" and "acceptance" result in job attitudes from events where "achievement" occur in a short-range sequence.
2. The deduction made from this is that since long-range (or long duration) attitude changes are also associated with greater performance effects, as will be shown in Chapter 5, page 73, the first three reactions, prestige, acceptance and line of responsibility, are active components for improving job attitudes. This does not mean, however, that "prestige" and "acceptance" should be over-rated. They do, in fact, play an important role in forming positive job attitudes, but it is clear that their role is limited, comparatively.
3. "Acceptance", the reaction with the highest frequency in the short range, is a better "satisfier" than "prestige". This can be explained in the following manner: the ratio between long duration and short duration attitude-changes favours "prestige".

As shown in the table, "acceptance" scored 42% for short duration changes to positive attitudes as against 16.5% for long duration attitude changes. The corresponding values for "prestige" are 34% for the positive short duration changes and 17.5% for the long duration attitude changes.

B. SECONDARY DERIVATIONS IN POSITIVE JOB SITUATIONS

As was shown, the primary sources represent the coding of objective events which are related. In this section an attempt will be made, within the limits of the empirical data, to isolate the components that affect one's job attitudes, by examining these resultant changes which are subjectively experienced by the interviewees. Up to this point in the investigation the interviewee has been required to reveal positive or negative self feeling about the job situation, but now an attempt is made to interpret the weight of these expressed feelings as objectively as

possible; hence the reason why particular attention is paid to the frequency with which the indicators were cited: the data obtained is collated in the following table:

TABLE NO. 4

PERCENTAGE FREQUENCY OF SECONDARY DERIVATIONS DISPLAYED
IN POSITIVE SELF FEELING SITUATIONS

N = 4062 Indicator - responses

<u>Indicator.</u>	<u>Long Duration Responses</u>	<u>Short Duration Responses</u>
1. Acceptance	20.6	39.2
2. Prestige	19.6	29.2
3. Satisfaction	14.0	6.8
4. Promotion	1.4	2.8
5. Responsibility	14.0	6.7
6. Group Feeling	3.8	3.4
7. Job itself	10.0	3.4
8. Status	8.5	1.7
9. Security	1.4	2.8
10. Salary	6.7	4.0
	100.0	100.0

Commentary on Table No. 4

1. As a secondary reaction, "satisfaction" forms a major indicator because here the events have a significance in terms of giving the interviewee a feeling of professional growth in terms of industrial status. In contrast to "prestige" and "acceptance", where long and short duration attitudes are about equal frequency, the reaction of "satisfaction" shows more than a two-to-one ratio in favour of the long positive changes towards the job, i.e. 6.8 to 14.0
2. "Satisfaction" appears very rarely as a primary source. The reason for this appears to be found in the fact that the test group, which was drawn from a company which has a virile training programme and where job rotations occur frequently, very rarely mentions these programmes for feeling positive about their jobs¹.

1 - Training programmes, which might lead to job satisfaction as we have proven thus far, must be linked to "reality needs" - they must satisfy a need. If they do not comply to this prerequisite it will always be found that training programmes, however well intended, do not achieve what they are intended for.



This again is indicative of the relatively slight degree to which these programmes have had an effect at the level at which the test had been conducted. Later on in this investigation mention will again be made of this incongruity.

3. The basic feeling of "acceptance" is associated with the positive reinforcements of "prestige", to which may be added "satisfaction" and "responsibility". Acts of recognition and specific achievements can act as partial reinforcers. A short duration sequence can therefore be considered as representing some form of sub-reward, which indicates to the worker that he is making vertical progress and thus forms a source for framing a positive attitude towards the job. When some of these reactions are present in the job situation, the individual can satisfy the fulfilment of his basic needs and he then enters a period of positive feelings towards his job.

4. The following observations can now be made:

or vice versa

- a. This analysis of the secondary derivations leads to the conclusion that a sense of "satisfaction" is the key to positive feelings about the job.
The primary sources define the "acceptance-responsibility-job-promtion" axis and lead to positive feelings of personal growth. The partial reinforcements stem from achievement and recognition. Basic needs in the satisfaction of these goals will be discussed in detail later.
- b. A very small percentage of factors is responsible for positive feelings about the job.
- c. All the reactions responsible for positive feelings about the job relate to the performance of the job itself rather than the situational context.
- d. Positive feelings about the job stem from reactions that are lasting rather than from those which are temporal in nature.
- e. When the positive feelings are of temporal nature they stem from specific achievements.

or vice versa

To ascertain the relationship between the various primary indicators the following table was compiled:

TABLE NO. 5

PERCENTAGE INTERRELATIONSHIPS OF THE PRIMARY INDICATORS

N. = 4062 INDICATOR-RESPONSES

<u>Indicators</u>	<u>Frequency</u>
1. Acceptance and Prestige	12.8
2. Prestige and Acceptance	8.4
3. Promotion and Salary	4.0
4. Promotion and the Job	9.2
5. Salary and Acceptance	5.4
6. Salary and Prestige	8.6
7. Responsibility and Acceptance	5.4
8. Responsibility and Prestige	8.6
9. Responsibility and the Job	11.2
10. Job and Acceptance	3.6
11. Job and Prestige	9.2
12. Job and Promotion	3.2
13. Job and Responsibility	10.4
	100.0

We are using the six major indicators only — the others, although of general interest, do not materially influence the data. The first indicator listed is the major indicator in the combination table — major in the sense that it is the largest component in the pair combination.

Commentary on Table No. 5

1. In those combination sequences in which "acceptance" was registered as the major component (12.8%), "prestige" also appears, whereas only 8.4% for "prestige" as the major in the next combination was registered. This means, therefore, that "prestige" is more independent of "acceptance" than "acceptance" is independent of "prestige".
2. "Prestige" is shown to be more frequently associated with other reactions than is "acceptance" which again underlines the subjective value attached by the interviewee to professional growth¹.
3. It should be noted that "prestige" can stand independently of "acceptance" as a source of positive feelings about the job. "Acceptance" appears to be more rarely independent of "prestige". This evidence supports the fact therefore that "acceptance" is not related to a specific sense of achievement and is, therefore, a relatively general but weak cause of positive feelings about the job.

1 - Professional growth is defined as the interviewee's own feeling of vertical progression in his job.



Commentary on Table No. 6

1. It appears from the table above that "company policy" is the major contributor towards negative feelings about the job. In 21.7% of the negative sequences this response was cited. It appears that two major reasons are responsible for this:

*or rationalised
in this
way.*

- a. the implementation of "undesired" policies. Most of the responses under this indicator viewed some aspect of company policies as "unfair" - a typical case revolved around an employee who states that his own career was jeopardised because of "company policy" to prefer technically trained supervisors to experienced practical men who had a sound formal training on the job, that is, it discriminates in favour of some and against others.
- b. The other type of response revolved mostly around "company policy" and its inability to curtail duplication of effort; its ineffectiveness to establish rationalisation of labour; the perpetuation of wasteful methods in the use of labour and materials, etc. - the rationalist complaint.

2. The next response, in order of frequency, is that of "supervision": this must be related to company policy in bringing about negative feelings towards the job because the inefficiency of the supervisor was directly attributed to general company policy. Reports were made of:

- a. the inability of senior supervisors to plan their jobs;
- b. the occurrence of breakdowns through lack of communication;
- c. a general failure to inspire men who are under their supervision;
- d. the supervisor's lack of the necessary authority to carry out his functions;
- e. a disinclination to delegate authority;
- f. the supervisor's failure to build up or maintain a team spirit among his men.

3. "Acceptance" was coded in fewer cases than was expected. In fact, when compared with the positive self feeling percentage, it registers less than half (11.6% against 24.9%). The interviews show situations where the interviewee did not receive enough (if any) recognition for work done by him.
4. The question of "salary" will be discussed later when more information becomes available from the empirical data.
5. Of the interviews regarding negative self feelings about the job, only a small proportion actually related to the job: this is the expected converse for in the positive self feeling analysis most of the latter was related to the job. An example of this type of material is given by a graduate learner underground operator. His interview relates to the time when he was engaged as a student with a B.Sc. Degree in Mining Engineering and had to undergo an 18 months spell of additional practical training. He looked upon this prolonged spell as "superfluous" as he had in his view, his technical training and was denied the opportunity to exercise his ability. He felt that he had become a mere number to the company during the training period.
6. The last response worthy of mention is that of "condition of work" — outstanding in this category were complaints of the possibilities of performing the job efficiently. One fact should be noted in this context: interviewees claimed that they could do much more work if they were provided, at the appropriate time, with the necessary materials and equipment. Reports were advanced that the employee had to "scrounge" the material needed for a job from from worked-out sites; others stated that half their time was consumed in "looking for the necessary parts" or to secure the parts they removed from broken-down machines.
7. In conclusion note should be taken of the fact that the short-term attitudes are very much more frequent than their equivalents in the positive feeling range. In the negatives, failure to be "accepted" (11.6%) is the key response in feelings which do not persist be-

yond a short spell of time. In referring to Table No.6 again, it appears therefore that "acceptance", similar to its role in the positives, is only a partial re-inforcer in the formation of job attitudes.

* * * *

The foregoing, with its various implications and deductions now require a further investigation into the interrelationship which might exist between the primary indicators in the negative self feeling responses since these responses seldom if ever occur in isolated units. The following table shows this interrelationship:

TABLE NO. 7

PERCENTAGE INTERRELATIONSHIP OF THE PRIMARY INDICATORS IN NEGATIVE SELF FEELING RESPONSES

Acceptance with company policy	7.3
Satisfaction ib. id.	12.3
Promotion ib id.	12.5
Salary ib id.	17.1
Interpers.Relationship with Supervision	14.6
Supervision with Interpers.Relationships	12.8
Company Policy with Salary	7.6
Working Conditions with Company Policy	8.5
Job with Company Policy	7.3
Total	100.0

Commentary on Table No. 7

1. Failure to be "accepted" was usually described in conjunction with some believed failing in company policy. As has been pointed out previously in the positive sequence analysis "acceptance" was usually related to some form of achievement. This contrasting feature suggests:

- a. that a trivial failure, without "acceptance", can be a source for job dissatisfaction; no acceptance is regarded as rejection.
- b. That without any "acceptance" at all, company policy forms the major foundation for job dissatisfaction; rejection(non-acceptance) leads to job negative self feeling.
- c. "Acceptance" in the positive sequences is generally related to the successful completion of a task,

whereas in the negative it is accepted as a reflection of a job situation brought about by some facet of company policy which is regarded critically.

2. This dualistic character of response is also found in "promotion". For example: in the positive attitude interviews numerous instances were cited of "interesting jobs", "challenging jobs", or "opportunity to prove yourself", whereas in the negatives it appears in 12.5% of the interviews as related to poor company policy. A promotion failure is rejective negative self feeling due to poor promotion policy.
3. Further inferences to be drawn from the data are:
 - a. When "satisfying indicators" are associated with negative job attitudes, these occur in situations surrounding the job rather than the job itself;
 - b. It follows that various components of the job itself and its rewarding qualities for positive self feeling can thus be completely obscured by negative self feeling;
 - c. On the other hand, in the positive attitudes, the "job" itself appears most frequently with "responsibility", and in the negative attitudes it is teamed with "company policy".
4. The existence of the dualism mentioned in item 2 above, without having any subjective connotations in any particular situation, can be accounted for by virtue of the fact that responses cannot ever be isolated as being individually responsible for the formation of any special attitude; responses are usually paired and in some cases even reinforced by multi-factoral components. These occur in clusters and obviously occur at variable frequencies. Some are highly associated so that their association can, within limits, be predicted as likely to occur in association one with the other.

Since the primary responses have now been investigated we turn to the secondary derivations in the table set up on the next page where we have made a percentage comparison of the positive and negative self feeling responses towards job attitudes.

TABLE NO. '8
PERCENTAGE COMPARISON OF THE POSITIVE AND
NEGATIVE SELF FEELING RESPONSES TOWARDS JOB
ATTITUDES IN THE SECONDARY DERIVATIONS
 N = 4062 Indicator-responses

<u>Indicators</u>	<u>Positive Feeling Duration</u>			<u>Negative Feeling Duration</u>		
	<u>Long</u>	<u>Short</u>	<u>Ave.</u>	<u>Long</u>	<u>Short</u>	<u>Ave.</u>
1. Acceptance	20.6	37.2	28.9	10.1	19.5	14.8
2. Prestige	19.6	27.7	23.7	4.4	15.8	10.1
3. Satisfaction	14.0	6.4	10.2	31.6	21.1	26.3
4. Promotion	1.4	2.5	1.9	1.3	0.7	1.0
5. Responsibility	14.0	6.4	10.2	5.1	5.3	5.2
6. Group Feeling	3.1	3.3	3.2	0.6	0.7	0.7
7. The Job	9.1	3.3	6.2	12.7	7.5	10.1
8. Status	8.4	1.6	5.0	7.6	3.0	5.3
9. Security	3.1	2.5	2.8	7.0	3.8	5.4
10. Salary	6.7	9.1	7.9	19.6	22.6	21.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

Commentary on Table No. 8

1. In contrast to the positive attitudes equivalent, the negative attitudes "satisfaction" has by far the greater frequency. The explanation here is that the employee, as a result of lack of concern on the part of the supervisor (who personifies the company to the employee) for him as an individual, he is dissatisfied with his job. It is accepted by the employee that he is a mere number and that his welfare is of no direct concern to the supervisor, who personifies the company.

2. Another observation obtrudes at this level: the great variability in the positive and negative percentages is directly attributable to the interviewee's interpretation of his "satisfaction" criteria. Any occurrence, if it is not in keeping with the employee's definition, will be interpreted as unsatisfactory and yielding negative self feeling. Rightly or wrongly the definition of the situation affects attitudes.

3. Since very little difference exists in the frequency of "salary" in both the positive and negative sequences (with a respective yield of 6.7% and 9.1% against 19.6% and 22.6%) it is felt that sufficient empirical data is now available to discuss this aspect in greater detail. It is usually recorded as the source of grievance.

a. Referring to Table No. 6 on page 62 again, it is noted that in the negative the "salary" has an appreciably higher frequency than the positive, which, therefore, means that "salary" is an active dissatisfaction index. In reviewing Table No. 7 on page 65 in conjunction with Table No. 8, (the interrelationship of primary sources) it is found that not only is this fact underlined, but that it readily affiliates itself with the indicator "company policy". In the positive attitudes, on the other hand, salary aligns itself with "promotion" and "satisfaction". This means, therefore, that in the negative it is associated with unfair "company policies":

i. it describes the economic system and its internal structures with regard to wages and earnings as "unfair". "Company policy" is the employee's definition of the situation.

ii. It ignores such employee characteristics as loyalty, craftsmanship, timekeeping, etc., and takes no cognisance of sentimental and economic factors.

b. In contrast with the foregoing in the positive sequences, when "salary" was mentioned, they were interlocked with and formed part of "achievement" — this, in fact, denotes much more than just money alone, because it also means a job satisfactorily done. This underscores a very important facet of employee relationships, because to the employee this means progression through the industrial hierarchical structural ladder and this is his definition of the modes of action to this end.

- c. A further observation can be made in this connection: the basic reward in the industrial structure is, of course, economic — salary or wages. From the viewpoint of the logic of the wage structure, equity in the distribution of economic rewards results when a salary scale reflects accurately differences in skill, education, experience and working conditions. It is important to note that no-where in the logic of job evaluation is account taken of social status or factors such as age, marital status or seniority. Workers would include these as variables in an equity definition.
- d. More specifically, there should be a relationship in any industrial situation between the volume of complaints and the degree to which wages are adversely out of line with its workers' contribution. Complaints are indices of maladjustments. In effect, an individual's social status represents what he invests in his job by way of energy contribution and time and becomes a yardstick for comparing his degree of reward with that of other workers. The criterion in a job is its reward. The respect and prestige a person receives from his supervisor are also rewards. The degree of energy and effort expended on any job is an investment or a contribution; the sense of responsibility a person develops for his work is similarly an investment.
- e. With these expanded categories of rewards and investments, the interpretation of satisfaction goes beyond a theory of explaining the complaints associated with the condition of insecurity felt. It is obviously more complex than this. Satisfaction includes all phases of job attitudes and opens up a more general theory of motivation with the introduction of the idea that individuals whose rewards are out of line with their social investments will attempt to bring these factors into line through behavioural responses either in the individual or by group pressures. The variety of ways of behaving to redress the balance seems almost infinite and all are aspects of the dynamics of action systems.

f. In an effort to arrive at the definitive qualities of the secondary derivations in attitude formation we give the following table:

TABLE NO. 9
THE INTERRELATIONSHIP OF
THE SECONDARY DERIVATIONS
(A percentage comparison)

	<u>Positive</u>	<u>Negative</u>
Acceptance and Prestige	10.2	- -
Acceptance and Satisfaction	11.4	-
Acceptance and Unfairness	-	23.7
Satisfaction and Acceptance	17.5	-
Satisfaction and prestige	8.6	-
Satisfaction and Unfairness	-	19.7
Salary and Acceptance	22.7	-
Salary and Satisfaction	19.4	22.8
Salary and Responsibility	10.2	-
Salary and Unfairness	-	33.8
TOTAL	100.0	100.0

Commentary on Table No. 9

1. By comparing the positive attitude sequence with the negative it is noted that "acceptance" in the positive is associated with feelings of "prestige" and "satisfaction".
2. In the negative attitude sequence interviews "acceptance" is most frequently associated with "unfairness" — a feeling which comes from the treatment of the supervisor or the company (rejective reaction of negative self feelings).
3. It should be noted that the response of "unfairness" did not appear in the positive self feelings interviews.
4. The empirical data defines the major differences between the negative attitudes and the positive attitudes:
 - a. the positive attitudes' responses, viz., prestige, acceptance, line of responsibility, the job, and promotion featured in approximately a third of the interviews.

b. As was noted, the percentage differences in the negatives are very small; and for the positives only a few responses could contribute towards "satisfaction". From this great variability the following inductions can now be made:

i. the results show that there are more responses leading to job dissatisfaction than to satisfaction.

ii. As a result of (i) above "satisfaction indicators" will have to be sought outside the known dissatisfying indicators.

5. In following up the dictum developed in item 4(b)(ii) above, and by superimposing the data obtained from Table No. 6 page 62, substantiating inferences can now be produced:

- a. The responses with the greatest frequency in the negative sequences hardly feature in the positive sequences which are "company policy" and "supervision";
- b. the responses with the greatest frequency in the positive sequences had a minor role in the negative sequences, which are "prestige", "acceptance", "line of responsibility", "the job", and "promotion". Hence the reason why these responses are now termed basic job satisfaction indicators.
- c. To be more specific in the demarcation of these responses, it appears that from the duration of attitude effects and their frequencies, that the three facets of the job, namely, the work in itself, the responsibility attached to this work, and the promotional possibilities offered by the job, form "en bloc" the major indicators involved in producing positive job attitudes;
- d. "company policy" in its various forms and practices, linked with "supervision", from the supervisor and upwards, present the major job dissatisfaction indicators and can therefore have no influence towards positive job attitudes the definitions of "company policy" or the workers' attitudes are modified.

- e. In the light of the empirical data, the expansion of an original postulate is now possible by stating that job satisfaction indicators are those responses which revolve around the performance of of the job, and that job dissatisfaction indicators concern themselves with responses that define job situations (bad working conditions, a poorly-defined company policy and poor supervision, etc.)
- f. The evidence further leads to the following propositions:
- i. by changing poorly-defined company policies to well-defined policies; by changing poor supervision to satisfactory supervision, or even by establishing better working conditions, these will NOT lead to positive job attitudes.
 - ii. If the negative effects as outlined in (i) above are to be offset, it can be accomplished by developing and sustaining those responses which make positive job attitudes — and they are, as was shown,
PRESTIGE, ACCEPTANCE, LINE OF RESPONSIBILITY, THE JOB and a REASONABLE OPPORTUNITY FOR PROMOTION.

CHAPTER 5

INTERPRETATION OF MOTIVATIONAL EFFECTS

ORIGINATING FROM PRIMARY SOURCES AND

SECONDARY DERIVATIONS

As stated, there was a necessity to clarify the minds of interviewees as to what types of responses were required¹. Another implication is that they had to be bounded in time, that is, reports had to show definite "beginnings" and "endings". In presenting the data on the effects of primary sources and secondary derivations, the reader should be aware that it is done with the full knowledge that these reports were elicited by specific questioning directed toward the kind of behaviour with which this study is concerned; thus the limits of content and time bind the responses. The responses being limited and controlled operate as ideal types rather than actual models. At this point of the discussion attention should be focussed on another operational factor which imposes another limitation — namely, that of the subjectivity of the data obtained. It is realised that the interviewees' interpretations cannot always be accepted as a direct consequence of their feelings as has already been pointed out: behaviour patterns are not governed by truth or falsehood or rightness or error, but values held subjectively motivate behaviour whether right or wrong. The direct statements of the interviewee is objectively valid to explain his behaviour and carries no connotation of its validity.

Before proceeding it should be indicated that the

1 - The crucial axis of the approach in this investigation is to be found in the technique whereby the individuals investigated were asked not only to verbalise the state of their morale on given issues but also to give illustrative examples of their emotions/state in a series of critical incidents occurring in their past working experience. It is therefore to be appreciated that data relating to an interviewee's past is necessarily highly qualitative, some kind of quantification is therefore necessary.

discussions on "effects" will be maintained in accordance with the framework of the content analysis as set out in Appendix II, viz., interpersonal relationships¹, attitudinal effects, demographic variables, attitudes towards the company, labour turnover, performance effects, and other related responses and will be used as indicators.

TABLE NO. 10
PERCENTAGE COMPARISON OF INTERPERSONAL
RELATIONSHIPS IN POSITIVE AND NEGATIVE
SELF FEELING SEQUENCES

	Positive Attitude	Negative Attitude
Long range	59.4	46.7
Short range	40.6	53.3
TOTAL	100.0	100.0

Commentary on Table No. 10

1. In spite of the fact that many interviewees stated they do not "take their jobs home", the table shows that more than half actually do so (59.4%), because their reports include as a component the effects of job attitudes. It is interesting to note that the interviewees who belonged to the higher bracket of supervisory personnel, returned 38% in the long range positive self feeling sequence as compared to 28% in the negative² self feeling sequence.

The inference shown of these results is that managerial personnel (to which the supervisory categories naturally belong) are more apt to allow their job attitudes to interfere with interpersonal relationships than those who are scaled lower down in the supervisory field.

2. The distinct difference in the frequency of effects between the positive and negative (59.4% compared with 46.7%) points to the fact that the degree to which a person allows his feelings about his job to spill over into his interpersonal relationships is more a function of the social dynamics of the job (supervisory) situation than of the individual himself, particularly, if he is placed on the higher levels of the managerial hierarchy.

1 - "Interpersonal" is here taken to mean the free and uncontrolled influence exercised by one individual on another in a spontaneous pattern of verbal and social interaction.

2.- Gathered from empirical data but not shown in tables.

3. The consistent, but not very significant tendency, for the long range sequences to include effects on interpersonal relationships more frequently, (59.4% against 46.7%) than the short sequences, (40.6% against 53.3%) indicates that positive self feelings towards the job more readily affects interpersonal relationships than the negative self feelings. This aspect, naturally, accentuates the role of the supervisory function in industry.

4. Having dealt with interpersonal relationships above, it is necessary to discuss the attitudinal effects as they are perceived from the empirical data further. It is therefore necessary to compile the table given below.

TABLE NO. 11
PERCENTAGE COMPARISON OF MOTIVATIONAL
EFFECTS IN THE POSITIVE AND NEGATIVE
SELF FEELING SEQUENCES

	Positive Self feeling	Negative Self feeling
Towards the company	41.6	33.1
Towards the job	16.8	17.4
Towards security	8.1	6.8
Towards confidence	28.8	7.8
Towards personal relationships	4.7	34.9
	100.0	100.0

Commentary on Table No. 11

1. There is a distinct difference between the motivational effects manifested in the positive self feeling and those in the negative self feeling. This leads to the following observations:

- a. the beneficial influence of positive self feelings about the job is extended to the persons attitudes towards the company, via the supervisory function, and
- b. even towards increased self-confidence, as a result of the role of "acceptance" in the work situation. (Cf. Table No.8, p. 67)

2. The motivational effects detailed in (1) above, coupled with the increase of positive feeling about the job, are more noticeable in the long range sequences.

3. The motivational effects in the negative self feelings are external to the person himself, that is, they are situational, and here too, as with performance effects, we can compare positive satisfaction with negative dissatisfaction. The results presented in this table are a further extension from the conclusion drawn on the previous finding that for positive self feelings, the specific attitude towards the job is likely to persist beyond the immediate time span of the incident.

4. The resultant permanent motivational effects are significantly greater in the positive self feelings (59.4% against 46.7%)¹.

With regard to demographic variables which operate in this study, we confine ourselves to the following observations: with the two exceptions of "line of responsibility" and "the job", there was essentially no difference in the weighting of effects produced by various responses. It is a fundamental conclusion arrived at in this study that responses are not equal in producing positive or negative self feelings, but IF a permanent attitude is produced by any response it is likely to produce an equally permanent effect.

* * *

In conclusion, to ascertain the role-effect of motivation in an industrial environment which has a definable hierarchical ladder of supervision, the interviewees were asked to indicate, where possible, whether definite events which can be distinctly demarcated affected their feelings towards the company. The results obtained in this survey follows.

TABLE NO. 12

RESPONSE CHANGES AS EXPRESSED BY THE INTERVIEWEES TOWARDS THE COMPANY IN POSITIVE AND NEGATIVE SELF FEELING SEQUENCES RESULTING FROM OUTSTANDING INCIDENTS AS A PERCENTAGE COMPARISON

	Positive Self feeling	Negative Self feeling
Long range sequences	52.3	69.0
Short range sequences	47.7	31.0
TOTAL	100.0	100.0

1 - Cf. Table No. 10

Commentary on Table No. 12

1. In both the long and short range sequences approximately half of the interviewees (52.3% and 47.7%) stated that one outstanding incident aroused a more positive feeling towards the company.
2. Arising from (1) above, this sizeable percentage in both the negative and positive self feeling attitudes argues that any company may expect the degree of loyalty it gets to vary in direct proportion with the degree of job satisfaction its employees feel. This is also borne out by the fact that the relationship between "job attitude" and "attitude towards the company" is greater in positive self feelings than in negative self feelings (Cf. Table No. 11, page 75)
3. As a result of the fact that a large number of negative sequences revolve around "company policy", it reinforces the propositional statement that job attitudes are activating forces in forming attitudes about the company.
4. Table No. 12 on page 76 shows furthermore that positive attitudes generate more influence than negative ones (52.3% against 47.7% and 47.7% against 31%).
5. As an obvious consequence of "attitudes towards the company" we have the relationship between positive and negative self feelings which is set out in the table hereunder:

TABLE NO. 13
PERCENTAGE COMPARISON OF THE EFFECTS OF
COMPANY POLICY IN POSITIVE AND
NEGATIVE SELF FEELING SEQUENCES

	Positive	Negative
Long range sequences	80.0	74.6
Short range sequences	20.0	25.4
TOTAL	100.0	100.0

Commentary on Table No. 13

1. Significant is the fact that the negative self feeling frequency is three times greater (74.6% against 25.4%) for long range than it is for the short range, which means: three times less resignations (separations) result from short range sequences.
2. Thus in the negative long range sequence 74.6% as shown above in Table No. 13 of the interviewees have already withdrawn from the job, perhaps not physically as

such yet, but it can be assumed that their performance efforts will be in a direct relationship to the motivational effects felt.

3. It falls largely outside the scope of this study to assess the effects of positive job attitudes in increasing the commitment of an individual to his job, but this aspect is mentioned in 80% of the positive sequences and only from interviewees who had offers of jobs with promotional possibilities elsewhere.
4. By combining items (1) and (3) above, the data obtained underlines the propositional statement that negative self feelings are potent factors in labour turnover.
5. Interlocked with and as a result of item (4) above, the interviewees' assessments of performance effects reveal two outstanding variables in terms of productivity:
 - a. subconsciously all interviewees arrived at a standard norm of task performances per day and were able to state that productivity rose beyond standard norms in a state of the positive self feelings and, conversely that production and output below operate when they are in a condition of negative self feeling. It follows from (5) above that if various indicators are associated with positive self feelings, these indicators indicate "at the norm" production level and "above the norm", and conversely if any indicator is associated with negative self feelings then it is associated with "lower than the norm" productivity level. We have shown in previous sections that certain indicators are associated with positive and others with negative self feelings (page 70) and that the finding in this section reinforces the previous hypotheses. The proof of association between positive and negative indicators and high and low productivity is thus, not direct, but logically inferential for the data.
 - b. The other variability noted was the wide disparity regarding specificity. Some reports described the performance accurately, even in assessing the volume and the rate in which the task was performed. In other cases though no exact detail could be given, interviewees stated that they could perform with "more enthusiasm". To ascertain the effects of performance and productivity the table on page 79 was compiled from the data to indicate the performance effects in the positive and negative self feeling sequences.

TABLE NO. 14
PERCENTAGE COMPARISON OF THE PERFORMANCE EFFECTS
IN THE POSITIVE AND THE NEGATIVE
SELF FEELING SEQUENCES

	Positive	Negative
Long range sequence	69.8	54.8
Short range sequence	30.2	45.2
TOTAL	100.0	100.0

Commentary on Table No. 14

1. It can be noted that 7 out of every 10 positive sequences involve an improvement in performance due to an improvement in attitude towards the job.(69.8%)
2. The difference in the long and short range sequences is accounted for by the fact that the long range sequences have job performance effects and these effects due to the attitudes, which are more lasting, have a greater tendency to affect job performance.
3. The negative sequences have job performance effects as well, but these are appreciably less than the high sequence percentages. The reason for this is in the fact that in spite of having negative self feelings about a job(or company) relationships are not severed because of the weight of other unnamed factors which appear in combinations with "performance effects". These unnamed factors could be domestic commitments, familial ties, etc., lying in the external system which are not attributable to job performances.
4. Emerging from the data the following inferences can now be drawn and set up as propositional statements:
 - a. Attitude towards the job plays a very important part in its manner of execution. During the survey 81% of the interviewees stated that they expected improved quantitative performances resulting from improved attitudinal approaches. The converse effects can therefore be expected as well, namely, a decrease in performance can be credited to a negative self feeling towards the job.
 - b. The tendency for eventual attitudes to have any effect

on performance was greater for favourable attitudes. Unfavourable attitudes, being much less affected, had, in fact, a ratio of 1.4 to 11. This, therefore, means that positive self feelings are more potent in producing effects than negative self feelings.

- c. These results further strengthen the propositional statement that positive self feeling revolves around the job and the manner in which it is executed, whereas the negative self feeling revolves around factors extraneous to the contextual components of the job.

It should be noted that a portion of the negative self feelings, in fact, have a bearing on the job as well as that they exert influence on work performance. However, the attitudinal pattern on which the proposition statement is based, is set by the positive self feeling which approximately had a two-to-one numerical majority.

- d. The correlation characteristic of direct relationship between attitude and productivity has been noted in other studies as well¹. The findings of this investigation reinforce the concept that the degree of relationship is more dependent upon that component of attitude related to the positive self feelings of employees than the components related to the formation of negative self feelings of employees. From the data therefore, it would appear that a positive relationship between permanent attitude and productivity will only come from that segment of the attitude facet which stimulates and regulates job "satisfaction indicators" (p.71).
5. In conclusion, the following two postulates can now be framed as they present themselves from the data:
- a. Attitude towards the job is a cardinal factor in any work situation and is functionally related to any adjustments necessary for the execution of that job. It therefore appears that job attitudes directly influence the volume of productivity, and should, if properly applied and maintained, generate a stabilised and contented work force.
 - b. The theory developed in the Introduction (p.13), namely, that the work situation contains "satisfiers" and "dissatisfiers" is now shown to be closely interlocked with and is definitive of both quantitative and qualitative differences in the volume of production.

1 - MAYO, Elton: The Human Problems of an Industrial Civilisation, N.Y.,McMillan,1933.

CHAPTER 6

COMPARISON BETWEEN POSITIVE AND NEGATIVE SELF
FEELINGS AND EVALUATION OF THE DISTRIBUTION
OF EFFECTS IN THE GROUP

It would have been possible to divide the group interviewed along social dimensions as:

- i. occupational status,
- ii. level in promotional hierarchical structure,
- iii. educational level,
- iv. age,

but the numbers in the individual groups would have become progressively smaller and extreme difficulties would have arisen in cross-checking more than one variable at a time. For example: in spite of the fact that underground supervisory personnel could easily have compared with African supervisory personnel, an attempt to compare young shiftbosses with young personnel officers, especially if educational levels had to be introduced as a factor as well, would have reduced numbers in the categories to a statistically unsatisfactory state. The approach, therefore, is channelled so that analysis is confined to the investigation of these variables as single units; this leads to tentative conclusions gleaned from the interviews in which individual characteristics are related to sequences of events.

A. THE EVALUATION OF RESPONSES IN THE
POSITIVE SELF FEELING SEQUENCES

The frequency of primary responses as shown in Table No. 6, page 62, show three characteristic classes:

- a. In the first the elements are interwoven in a pattern, which, partially, agrees with some of the

findings recorded by Herzberg, Mausner, Peterson and Capwell¹. This investigation shows that "acceptance" was cited more frequently by persons with a high education than by those with a lower educational standard.

- b. In addition it was found that interviewees who had achieved a high status in their respective fields cited "acceptance" and "prestige" more frequently than those in lower graded jobs.
- c. Finally, persons who were older cited "prestige" more often than younger interviewees. From this statement it can be deduced that age and attained status may be related; and it is also probable that education and age are inversely related.

The authors of JOB ATTITUDES, REVIEW OF RESEARCH AND OPINION² collated many demographic studies of morale (attitude towards the job, was the phrase used throughout this investigation) and show that the highest morale was found in older age groups, in groups who were high in occupational level, and, to a lesser extent in groups high in education. It is interesting to note that the groups, who were adjudged high in morale in Herzberg's and his co-authors' survey, should coincide with the group in this investigation who attached the most value to job-attitude responses.

The reasons why groups in Investigations I and II however unrelated, reacted identically, may be explained as follows:

- a. the level of the "satisfaction indicators" found by these interviewees may not be more frequent than those experienced by other interviewees who have produced stress in other indicators, but as a result of their higher status react more positively to them;
- b. another explanation may be found in that these interviewees were topographically so placed in the industrial hierarchy that the "satisfaction indicators" were present to a greater extent than those

1- Herzberg, F., Mausner, B., Peterson, R., Capwell, D., Job attitudes, Review of Research and Opinion, Psychological Service of Pittsburgh, 1957.

2- Herzberg, F., Mausner, B., Peterson, R., D. Capwell, op.cit. pp. 34 - 108

experienced by other interviewees. The assumption is that dissatisfaction decreases as one ascends a hierarchy.

- c. The fact that they were in more responsible jobs, thus calling for the exercising of greater skills, afforded better opportunities to render greater accomplishments from which they could extract subjective values of a positive type. The area of possibility is wider. The assumption is that as this widens satisfaction, positive self feeling increases.
- d. The empirical data from this investigation presented thus far indicates that items a, b, and c, although appearing in isolated units here and being thus ungrouped, are, in fact, interrelated and have reciprocal influences on each other in as much as that interview reports show that all three reasons are operative, but also accept the fact that throughout the range of occupations external influences exist to the extent to which satisfying conditions relate to the job.

The interviewees selected for this investigation were all in jobs which by definition showed some possibility for individual initiative in the work situation.

B. EVALUATION OF RESPONSES IN THE NEGATIVE
SELF FEELING SEQUENCE

When the frequency with which any of the primary responses or secondary derivations in terms of their effects on the major demographic variables were compared, the following conditions, which were found in Table 6: page 62, serve as additional explanation:

- a. In the evaluation of negative self feeling conditions consistent differences could be traced¹, and this was found consistently throughout - immaterial of the fact whether the interviewee was an underground supervisor, an engineer or an African in an advanced position (thus also a

1 - By referring to Table No. 6 on page 62 these differences are clearly statistically observable by comparing the averages for both the short and long ranges.

supervisor) or whether he was educated, old or young - in other words, the same kinds of objective situations, irrespective of personalities or job statuses, led to negative self feeling attitudes about the job.

- b. The evaluation of the secondary derivations also exhibited the same trend, though not so pronounced as in the case of primary conditions, leading to the same kinds of effects.

The findings, revealed by the two effects mentioned above, underscore the propositional statement expressed earlier in this investigation, namely, that "dissatisfaction indicators", immaterial of the fact that they appear differently in different job situations, have the same effects and are to be seen as latent components to negative self feelings about the job and to appear with a high probable frequency.

In further evaluation of the responses in the negative self feeling conditions, another aspect is revealed in the causal chain of attitude formations, namely, a consistent feeling of "unfairness" reported by young highly trained interviewees. In their descriptions of the job, or certain characteristic phases of it, they cite this feeling of "unfairness" in relation to being compelled to perform certain menial tasks or to be restricted to unnecessary repetitive trivial chores in training programmes which are incompatible with their academic achievements. To them, their educational standards at present were valueless unless special compensatory measures were introduced in the programme to attract other graduates instead of confining itself to the less educated workmen.

The inference to be drawn from the data in this connection is therefore: if there is a problem related to the job in an industrial concern, this does not mean that this type of problem is connected with a particular type or rank of employee. Nor is it evident of a certain category of workmen to respond negatively to any company policy and thus develop, as a result of this a negative self feeling attitude as a group. For example: according to the data obtained here, it cannot be assumed that, since a certain group of employees, belonging to a specific nationality, and who work together, certain established work rules or methods will, as a result of this specific ethnic or nationality group, be challenged or flouted. There is no specific African, European, English, Afrikaans, etc., group attitude. The attitudes and feeling states are related to the job orientation and not to ethnic or nationality factors.

C. A DETAILED ANALYSIS OF THE GROUPS
OF EMPLOYEES IN THE GROUP

To arrive at valid deductions gleaned from the tables presented to this point, a composite table, embracing all the information was constructed and is set out as Table 15 A, following: in addition, the data is broken down into component sub-groups.

The composite table includes the positive and negative self feelings previously set out separately. This enables us to:

- a. compare the ranking of the individual groups with regard to their positive and negative self feelings;
- b. to establish relationships which may exist between these groups;
- c. to assess, if possible, the roles of the primary sources and secondary derivations in the job situation;
- d. to expose outstanding differences which may exist between the various groups in the investigation.

D. METHODOLOGY EMPLOYED FOR THE
COMPILATION OF TABLE 15A

Since the Chi Square test of significance is only concerned with the "Total Average European" and the "Total Average African" columns (i.e. the four extreme right hand columns of Table 15A) the methodology employed in arriving at the percentages detailed in the Table is for example:

- a. The average European Positive responses for "prestige" were 646 out of a total of 4062¹, which, when converted to a percentage came to 15.9%
- b. The average European Negative responses for "prestige" were 345 out of a total of 4062, which, when converted to a percentage come to 8.5%.
- c. The average African Positive responses for "prestige" were 410 out of a total of 4062, which, when converted to a percentage came to 10.1%.
- d. The average African Negative responses for "prestige" were 138 out of a total of 4062, which, when converted to a percentage came to 3.4%.

The same methodology was employed for the remainder of the table.

1 - Refer to page 41 for the compilation of these statistics.

TABLE NO. 15 A

COMPOSITE TABLE¹ SHOWING POSITIVE AND NEGATIVE
 SELF FEELING RESPONSES OF FIVE GROUPS INTERVIEWED
 FOR THE PURPOSE OF THIS INVESTIGATION

4062 Response Distributions
 (A Percentage Comparison)

	European		European		European		European		European		African	
Number interviewed	N = 30		N = 24		N = 10		N = 14		Total N = 78		Total N = 36	
PRIMARY SOURCE INDICATORS	Undergr. Supervis.		Surface Supervis.		Personnel Officers		Engineers		European Supervis.		African Supervis.	
	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Ave. Pos.	Ave. Neg.	Ave. Pos.	Ave. Neg.
Prestige	14.4	9.4	15.8	7.7	16.8	6.7	16.7	10.1	15.9	8.5	10.1	3.4
Accept	16.8	6.2	14.4	5.7	17.8	5.6	18.2	5.8	16.8	5.8	11.1	11.6
Responsib Job	11.5	2.2	13.8	3.8	8.9	3.3	14.0	4.7	12.3	3.5	5.5	8.9
Promot.	18.4	6.2	16.8	8.6	12.8	8.3	13.1	6.3	15.3	7.4	8.9	2.9
Salary	8.7	4.2	10.9	4.3	13.8	6.7	8.4	3.7	10.5	4.7	18.3	10.4
Satisfact Status	9.6	12.1	10.8	11.5	12.9	12.2	10.7	10.5	11.0	11.6	15.9	6.9
*I.P.R.Sup	3.8	6.7	5.9	7.7	4.5	3.3	4.7	4.2	4.7	5.5	7.7	2.9
*I.P.R.Sub	3.8	2.1	3.0	1.9	4.0	3.9	4.2	3.2	3.7	2.8	6.4	7.9
Co.Policy	2.9	6.2	1.6	7.7	3.5	9.4	1.9	8.4	2.5	7.9	4.8	12.4
Supervis	2.4	0.5	2.0	0.5	1.0	1.1	1.9	2.1	1.8	1.1	1.7	0.4
Cond/work	1.9	21.6	1.5	19.6	1.0	21.1	1.4	18.9	1.4	20.3	1.5	5.8
Pers.Life	1.4	13.5	1.0	10.0	1.0	10.0	1.9	14.7	1.3	12.1	1.7	16.3
Security	1.0	5.2	0.5	7.2	0.5	3.9	1.4	4.2	0.8	5.1	0.9	3.9
Workmates	1.0	2.2	1.0	2.8	0.5	3.9	0.5	2.1	0.7	2.7	1.2	2.4
	1.0	1.1	0.5	0.5	0.5	0.6	0.5	1.1	0.6	0.8	3.6	2.4
	1.4	0.6	0.5	0.5	0.5	0.0	0.5	0.0	0.7	0.2	0.7	1.5
Total	100	100	100	100	100	100	100	100	100	100	100	100
SECONDARY DERIVATION INDICATORS												
Accept	19.9	16.9	18.0	20.9	25.4	17.4	22.7	14.1	21.5	17.3	14.6	9.5
Prestige	20.8	20.0	19.4	17.9	18.6	15.9	19.6	15.6	19.6	17.4	27.7	25.5
Satisfact	15.3	24.6	13.7	23.9	14.6	23.4	12.1	27.3	13.9	24.8	8.6	30.4
Promotion	2.1	0.8	2.9	0.7	2.2	1.5	1.7	1.6	2.3	1.2	5.2	3.7
Responsib	13.4	5.4	15.5	3.8	9.3	3.0	12.0	3.9	12.6	4.0	6.9	1.7
Grp. Feel	1.2	0.8	1.8	0.7	1.5	0.7	0.8	1.6	1.3	0.9	5.5	2.4
Job	14.5	10.0	12.9	8.9	11.2	11.3	14.6	7.8	13.3	9.5	7.9	4.0
Status	7.2	7.7	7.2	8.3	5.6	5.7	6.8	7.0	6.7	7.2	9.5	5.8
Security	1.4	3.1	2.1	6.0	2.7	9.0	3.5	10.2	2.4	7.1	5.0	9.6
Salary	4.2	10.7	6.5	8.9	8.9	12.1	6.2	10.9	6.4	10.6	9.1	7.4
Total	100	100	100	100	100	100	100	100	100	100	100	100

* I.P.R.Sup. = Interpersonal Relations (Superior)
 I.P.R.Sub. = Interpersonal Relations (Subordinate)

¹ - All percentages shown in the last 4 columns are statistically significant at the .01 level of confidence. Cf. p. 87 for Chi Square Test.

TESTING THE DATA PRESENTED IN TABLE 15A

In applying the Null Hypothesis there should be no significant difference between positive European values and positive African values and no significant difference between negative European values and negative African values when these are compared. Any significance would be due to chance. The data presented in Table 15A can now be proven statistically by applying the Chi Square Test of Significance.

The formula is:

$$\chi^2 = \sum \frac{(fo - ft)^2}{ft}$$

where "fo" is observed frequency, "ft" the corresponding theoretical frequency and \sum means the sum of.

POSITIVE VALUES

Indicators	Africans	Europeans			
	fo	ft	fo-ft	(fo-ft) ²	$\frac{(fo-ft)^2}{ft}$
Prestige	10.1	15.9	-5.8	33.6	2.11
Acceptance	11.1	16.8	-5.7	32.5	1.93
Responsibility	5.5	12.3	-6.8	46.2	3.75
Job	8.9	15.3	-6.4	40.1	2.62
Promotion	18.3	10.5	7.8	60.8	5.79
Salary	15.9	11.0	4.9	24.0	2.18
					18.38

NEGATIVE VALUES

Indicators	Africans	Europeans			
	fo	ft	fo-ft	(fo-ft) ²	$\frac{(fo-ft)^2}{ft}$
Prestige	3.4	8.5	-5.1	26.01	3.05
Acceptance	11.6	5.8	5.8	33.6	5.79
Responsibility	8.9	3.5	5.4	29.16	8.33
Job	2.9	7.4	-4.5	20.25	2.73
Promotion	10.4	4.7	5.7	32.5	6.91
Salary	6.9	11.6	4.7	22.1	1.90
					28.71

The degrees of freedom are arrived at by multiplying the number of columns, in this case two (i.e. Europeans and Africans) minus one, by the number of rows, (six), minus one:

$$\begin{aligned} & \text{viz (Number of columns minus one) X (Number of rows minus one)} \\ & = (2 - 1) \times (6 - 1) \\ & = 5 \end{aligned}$$

Therefore, according to the table of Chi Square Values¹ given on p.237 of Mental Testing these amounts for positive values (18.38) and negative values (28.71) are both in excess of 15.086 required to give the .01 level of confidence.

Thus the Null Hypothesis stated above can be rejected at the .01 level of confidence, and it may be stated that there is a significant difference² between the African and the European with reference to prestige, acceptance, responsibility, job, promotion and salary, as shown in Table 15A.

1 - GOODENOUGH, F.L.: Mental Testing, Rinehart & Co., N.Y. 6th printing 1960. Mention should be made regarding the application of the Chi Square to this Table. Goodenough states: "It should be noted that the Chi Square is not a measure of the extent of the difference between two groups but only the degree of assurance with which one may state that some exists." The same principles are also expounded by DIXON and Massey in Introduction to Statistical Analysis, chapter 13 and by Walker & Lev. in Statistical Inference, chapter 4.

2 - The writer gratefully acknowledges assistance he received from Prof. A. Reitsma, University of the Orange Free State. The guidance in the compilation of the Chi Square Test's tables was of great help.

TABLE NO. 15 B (I)

THE RANK ORDER OF POSITIVE SELF FEELING RESPONSES

OVER 10% OF THE FIVE GROUPS INTERVIEWED

	European	European	European	European	European	African
Number interviewed	N = 30	N = 24	N = 10	N = 14	N = 78	N = 36
PRIMARY SOURCE INDICATORS IN RANK ORDER	Under-ground Supervisors	Surface Supervisors	Personnel Officers	Engineer	Average Total	Supervisors
1	Job	Job	Accept.	Accept.	Accept.	Promotion
2	Accept.	Prestige	Prestige	Prestige	Prestige	Salary
3	Prestige	Accept.	Promot.	Responsib	Job	Accept.
4	Respons.	Respons.	Salary	Job	Respons.	Prestige
5	-	Promot.	Job	Salary	Salary	-
6	-	Salary	-	-	Promot.	-
SECONDARY DERIVATION INDICATORS IN RANK ORDER						
1	Prestige	Prestige	Accept.	Accept.	Accept.	Prestige
2	Accept.	Accept.	Prestige	Prestige	Prestige	Accept.
3	Satisf.	Respons.	Satisf.	Job	Satisf.	-
4	Job	Satisf.	Job	Satisf.	Job	-
5	Respons.	Job	-	Respons.	Respons.	-

TABLE NO. 15 B (II)

THE RANK ORDER OF NEGATIVE SELF FEELING RESPONSES

OVER 10% OF THE FIVE GROUPS INTERVIEWED

	European	European	European	European	European	African
Number interviewed	N = 30	N = 24	N = 10	N = 14	N = 78	N = 36
PRIMARY SOURCE INDICATORS IN RANK ORDER	Under-ground Supervisors	Surface Supervisors	Personnel Officers	Engineer	Average Total	Supervisors
1	Co. Pol.*	Co. Pol.	Co. Pol.	Co. Pol.	Co. Pol.	Supervis.
2	Supervis	Salary	Salary	Supervis	Supervis	I.P.R.Sup.**
3	Salary	Supervis	Supervis	Salary	Salary	Accept.
4	-	-	-	Prestige	-	Promotion
SECONDARY DERIVATION INDICATORS IN RANK ORDER						
1	Satisf.	Satisf.	Satisf.	Satisf.	Satisf.	Satisf.
2	Prestige	Accept.	Accept.	Prestige	Prestige	Prestige
3	Accept.	Prestige	Prestige	Accept.	Accept.	-
4	Salary	-	Salary	Salary	Salary	-
5	Job	-	Job	Security	-	-

* Co. Pol. = Company Policy.

** I.P.R.Sup. = Interpersonal Relations (Superior)

COMMENTARY ON TABLES 15A, 15B(I) and 15B(II) PP.86,89,90

1. This composite table is constructed to include the most important data concerning five groups of interviewees, viz., underground supervisors, surface plant supervisors, personnel officers, engineers and African supervisors, the total comprising the 114 persons under analysis and their responses. In returning to one of the most significant terms of reference of this investigation, namely, to ascertain the components of European and African motivational patterns, it is found that the first four groups in this table, who are all Europeans, show only slight differences in the indicator levels for positive or negative self feelings, but that the last group, the African supervisors, show a wider range of difference. This becomes more apparent by taking Table 15B in conjunction with Table 15A where the percentages are now transcribed into "Average Responses".

Here is a typical example of where the internal system, as a result of challenges from segments of the society, is seeking to readjust itself. On the Copperbelt of Zambia, therefore, the stratificatory aspirations sparked off by motivation on the part of the African, have been brought to a successful conclusion save for the fact that the implementation still displays what we choose to term, residual uncertainties due to the status conflict situation of the African in the total system. The position now, as we have endeavoured to show, is that there is a resistance to allow a social system, which is acknowledged and accepted by one segment of the society, to become a permanent readjustment yielding an equilibrium of equality or identity of the two ethnic groups. Resistance from a group losing a privilege is, of course, the reaction to be expected. Giddings¹, commenting on the reactions to restore a pre-existing social equilibrium, states that the most elementary similarities of behaviour are "habits of toleration". This, by implication, can mean, that the African, taken from his customary cultural environment, enters a new social system where motivation and conflict can be predicted. This equilibrium stage, while developing, has not yet been reached and the immediate situation is

1 - BARNES, H. E.: Introduction to the History of Sociology, p. 747

that of cultural-personal strain on both groups, but particularly on the African.

In reviewing Table 15B, which is a summary of all the indicators yielding a frequency of 10% and higher, we find the following manifestations exhibited:

- a. In the Total Average we find in Table 15B, in rank order, that "acceptance" for the Europeans and "promotion" for the Africans, enjoy the top rating, and that "prestige" and "salary" are respectively accorded second place in the positive self feeling responses. The above difference in the preferential rank order weighting can easily be traced in its Copperbelt context: the European Mineworkers' Union had constantly reiterated that it had no objection to the promotion of Africans to European-held jobs provided they receive equal pay and all the conditions of service given the Europeans. Towards the latter part of the discussions on African Advancement this attitude was modified in as much as that the European Union then insisted that there should be no fragmentation of European-held jobs. The African Union, on hearing of the change in the defence, immediately took note of the implications and made it clear that, in the circumstances prevailing at the time, they regarded this reactionary attitude of the European Union as one which effectively maintains a bar to their future progress. In view of these underlying conditions it must therefore be expected that the European industrial worker would weight "acceptance" top-most since his ability is not doubted, while the African, in his struggle for industrial equality, feels that "promotion" is his main motivational objective to prove the ability it is suggested by Europeans he lacks.
- b. "Prestige" (ranked No. 2 in the Total European Average) is ranked fourth by the African. The African's second ranking is "salary". The reason for this differential ranking is closely allied with item No. 1 given above because

since the African's advancement into work done by Europeans inevitably reduces, to the extent of the advancement, the work available to Europeans, and since the European Union has accepted the necessity for some advancement, it must be concluded that the European's ranking relates not to the advance as such, but to the degree of the advancement. The position, in point of fact, is such that vested interests, which originally interpreted the African's motivational urge as an attack against their positions, now accept the urge for advancement as an attack against their social order. The African, in turn, in ranking "salary" as second, interprets industrial advancement to mean that without the European's rates of remuneration there can be little or no advancement at all. To the European this would mean economic gain solely, but the African sees it as a social instrument to achieve status. It is the most objective characteristic of equal statuses.

- c. With regard to the Secondary Derivation Indicators in the positive self feeling responses it is significant that the Europeans ranked "acceptance" topmost while the Africans took "prestige" to be important. The explanation of this must be sought in the social and cultural context in which the mining industry on the Copperbelt has been developed: this has made it inevitable that the leadership group hitherto has been entirely European, and that there has been a rigid horizontal barrier between the grade of work done by the Europeans and the grade done by Africans. With the complete acceptance of the African Advancement programme the African's chief motivational urge has been to gain prestige status not only in the eyes of industrial management but also in the social sphere. This aspect will be dealt with in detail in the following chapters.
- d. The Primary Source Indicators in the negative self feeling responses show that the Europeans

accept "company policy" to be the foremost single dissatisfaction indicator while the African ranks it as "supervision". This can be expected at the logical level. In spite of the fact that varied policies exist in different companies and were not, as such, investigated in this study, we find evidence in the data presented that European employees feel that "hard and fast" rules" made without due consideration for the individual, disrupt harmonious industrial relationships between white workers and management.

With regard to the African's ranking of "supervision" as the biggest dissatisfaction indicator, it is suggested that this appears to be a relic of the past. The African, as an industrial worker is still not yet articulate enough to view discipline and supervision as features of managerial policy but views it rather as a memory of master-and-servant conditions, more so as the senior supervisors were still Europeans at the time of this investigation. The situation was seen symbolically as a historical continuity.

- e. Little need be said about the Secondary Derivation Indicators in the negative self feeling responses which is not logically discernible as nobody, European or African, appears to be prepared to sell his services to employers if he is not "satisfied" with such factors as safe working conditions, enough leisure time, etc.

The aspect that needs stressing here is the fact that both the European and the African groups of interviewees reacted identically in the ranking of the first two indicators in the sub-section "Secondary Derivation Indicators". The social organisation of any society is a functional product of its interests. When interest-groups are few, as in the Copperbelt, organisation is simple in structure. The expansion is a result of industrialisation, the interest-groups became more numerous and their institutions became organised drastically in terms of the attitudes of the dominant group¹. Social

1 - PONSIOEN, J.A.: The Analysis of Social Change Reconsidered, 1962, Chaps. 5 and 6.

organisation, therefore, shows a pattern of compromises which reflects the interplay of integrating elements. Within this broad pattern, mores, relationships and social processes manifest a "strain towards consistency with each other." This produces a range of disorganisation. The developments appear to be following these phases:

1. The breakdown of group institutions
(The African Advancee, who has progressed to the position of supervisor can no longer be described as a member of the group which initially aspired towards industrial advancement; hence the weakening of the original group complex. Functionally, if not culturally, he is identified with and identifies himself with the dominant group.)
2. An increase in impersonal relationships
(The essentials of the job, which has been allocated to the African Advancee, remains identical as far as the management of the mine is concerned. It is a job to be done, immaterial of the fact that it may now be an African doing it. The quantity of work performed remains unchanged. The African wishes for acceptance (and its symbols) and finds impersonal rationalism.)
3. An unbalanced stratification system may result
(The present wage structure accentuates this anomaly. The African Advancee could earn up to £120 per month, including incentive bonuses and overtime; while his crew-members, who are also Africans, and classed as Group 1 labourers, could earn a maximum of £18 per month. This economic factor has an unbalancing effect on the integration of the African group in the mine.)
4. A stratified class system is created
(A new type of African mine employee has emerged. As a result of the economic diversity outlined in paragraph 3 above, he is no longer at home with his fellow Africans except in his own job-group. He does not fit into the European category of labourer due to cultural and social differences. His position is thus marginal viz a viz both groups.)

5. Increased competition leading to further differentiation

(The prevalence of the competitive aspect is natural, but the feeling of the whites persists that the African is "an intruder on the European's domain". The fear of African competition is a continuance of the older pattern of dominance: it has not been successfully institutionalised and thus acts to perpetuate separation.)

6. Related to, and indirectly caused by paragraph 3, an unbalanced organisation may result

(The disturbance of the organisation, is to be found in the fact that this newly stratified group is socially unattached to the past and not yet accepted in the new social structure caused by its removal from the influence of the original common-interest-group, which generated the motivational urge for the stratification, and in not having found clearly defined attachments.)

The security, offered previously by the African "in" group, is vanishing, and in its place is now a feeling of unattached insecurity as a consequence of stratification. It should be added, that the African's new industrial environment, in contrast to his traditional background, not only moulds characteristic traits to suit prevailing conditions in which the individual finds himself, but changes the African group as well. It is therefore to be expected, as evinced by the data contained in Tables 15B (1) and (11) (pp. 89 and 90) that motivation, even if it ends in equality by social accommodation between competing actors, is also the process which changes the African tribal agricultural peasant into an aspiring industrial worker who can, if given sufficient time and training, shed his cultural heritage and develop into an equally capable industrial worker at a new level. We suggest that the present divergent rank order of the indicators as given by the two groups is temporary and rapidly changing under the influence of the interplay of cultural and environmental elements and that the wide gap, which exists between the two groups of industrial workers is in the process of being narrowed, (Vide the results shown in Tables 15A, 15B (1) and (11), particularly in the sub-section "Secondary Derivation Indicators") Thirty years of Zambian industrial enterprise

has broken down racial barriers in spite of the extreme cultural divergencies of the two groups (European and African)

The similarity of the two groups' sub-section's indicators marks the beginning of the aspiring group's (i.e. the African) determination to assert their statuses. It also marks the beginning of social articulation. Thus, in its Copperbelt context, the data suggests that industrial motivation gains its impetus from the influences of industrialisation because of its drastic revision of values. The industrial contribution to this social reorganisation can be gauged by its modification of all institutions to comply with its material needs; by the innovation of a new economic structure; by its influence upon the revaluation, redistribution and reorganisation of its industrial jobs and employees and of rapid and significant changes in the socio-economic standard of living releasing new motivational definitions for redirecting energy to new ends.

In the next chapter a detailed discussion will be developed embracing such aspects as the new evolving forms of sociality within a changing milieu (such as rapid industrialisation), changed personality (the African is now fast becoming a skilled industrial operator), cultural background and motivation of individuality, as well as psychological, biological or physical criteria to which may be ascribed the reasons why the African group in this survey showed distinct differences from their European counterparts. although convergence is occurring. This indicates a more universal characteristic of motivation in its susceptibility to change under changing situations. It is for these reasons that interests in the motivation of conflict are regarded as basic constants in the given situation for which no explanation is required psychologically but only a sociological explanation suffices. Motivation, therefore, stems directly from dynamic structural situations, but appears to exhibit itself differently in different cultural groups and is dependent upon the relative statuses of the symbolic groups as indicated in our postulates¹.

It should be added in this context that there exists reciprocal interrelations between changing values and changing

1 - Cf p.9 et seq: "it is held here that the evidence shown above together with the relevant deductions, shows the validity of postulates developed". These postulates should be read at this stage in the light of the discussions above.

societies¹. The correlations of individual and social facts that are manifested in these changing forms and processes, such as those encountered in Zambia with the advent of African Advancement, are the chief problems in the empirical study of motivation. Organisation evolves from habits developed to satisfy needs, and sets into operation processes which lead away from expedient customs producing a strain toward improved adaptation at a new level and this strain, challenges and becomes the motivational generator, testing the validity of older and existing standards. This happens in the transitional stage where traditional societies proceed to the rational-legal order in Weber's sense.

Differences are also noted in the positive self feeling phases of all five groups, but as has already been pointed out², these differences relate solely to the degree of emphasis placed on the different aspects of "satisfaction indicators" (p. 71) that play a cardinal role in the production of positive job attitudes.

In the case of the African supervisors it was found that they are less verbally articulate³ than the other four groups in defining their likes and dislikes about the job. This characteristic non-participation can be accounted for by their more recent attainment of supervisory responsibilities as a result of the African Advancement Programme in the Zambian Copper Mines whereby Africans can be promoted, if they have the necessary qualifications, to all categories of occupations in the industry.

The pattern of these differences is directly traceable to situational factors to which the African supervisor has not fully adapted himself — these factors will be dealt with in detail in the following chapter.

It should also be noted that among engineers there is a considerable higher frequency of interview reports under "prestige" than that for the underground supervisors; among

1 - Cf. COETZEE, J.A.G. unpublished M.A. dissertation Rhodes Univ. for a full development of the conflict situation in a rapid expanding economy, particularly pp. 29 - 38.

2 - Cf. Commentary on Table No. 14 p. 79.

3 - Articulate in the sense that they are aware of the fact that special qualifications are called for which they, as yet, do not have, and cannot verbalise upon. This is an effect of past historic conditions but, obviously can be corrected in the new egalitarian programme. It is not only equality of opportunity which is important but equality of qualifications.

the personnel officers a significantly higher frequency under "promotion"; and the underground supervisors' assessment of the job situation shows the greater frequency. All are explained by positional-situational analysis.

It must thus be argued that in the hierarchy of personnel work any increase in job responsibility will be accompanied by a change of status. In contrast to this, for example, it is noticed that there is a higher frequency of secondary derivations for "acceptance" among the personnel officers than the other four (excluding the African supervisors).

This difference, which is to be found in the degree of emphasis on the "satisfaction indicators", materially alters the major thesis. With the exception of the personnel officers, the rigidity of the hierarchy is not marked. A large proportion of interviews, in fact, show that individuals were given added responsibility without any formal change in their job status.

Another difference which can be situationally determined is the consistent pattern which underground supervisors give to the job situation. The secondary derivations of "satisfaction" and "the job" also bear the same consistency.

This can be explained by the nature of the jobs done by underground supervisory personnel — their jobs are very seldom constant for prolonged spells. New problems, present themselves daily and issue constant challenges to the creativeness of the individual. This aspect, namely, the interest in the performance of a job, although forming a basic component for all work motivation, is not necessarily the most significant one. The fact, that on overall bases, personnel officers, for instance, with a more stereotype job do not show a negative frequency of intrinsic responses in their positive self feelings, argues that motivation is related to a more psycho-sociological process than that based primarily on the interest of the job in some of the cases. There appears to be variation in the rule hence no satisfactory inference can be drawn. On the strength of the data it is suggested that the quality of the negative self feelings will not change materially within groups at various educational or status levels. In the analysis of the negative self feel-

ings evidence is found for the existence of such feelings concerned with the contextual aspects of the job, and these aspects, as shown in this study, add new knowledge regarding the information of job attitudes in terms of specific factors.

One may therefore, expect workers, who are satisfied with the contextual aspects of their jobs, to be satisfied in spite of the job's low potentiality.

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P A R T III

ATTITUDES, MOTIVATION

AND

VALUES

IN RELATION TO CULTURAL SYSTEMS

CHAPTER 7

A THEORETICAL ANALYSIS OF WORK WITH
SPECIFIC REFERENCE TO CULTURE AND
CULTURE CONCEPTS OF THE TWO GROUPS
IN THIS INVESTIGATION

Before proceeding with a further analysis of the empirical material detailed in the foregoing chapters, it is proposed, since the actors in this survey come from widely diversified cultural backgrounds, to briefly outline the two groups' concepts of work embodied in their respective cultures, i.e. the European's and the African's. This chapter, therefore, is an attempt to analyse the prevailing concepts regarding work within each of the two groups' cultural patterns and since this investigation was conducted in a typically Western-industrial context we will attempt further to show how the virtual "transplanting" of the rural tribal African into Western culture with its specific skills and methodologies led to the formation of new social relationships and a new standard of values

A. HOW FAR IS IDEOLOGY A CULTURAL CONCEPT?

Hughes¹ provides an introduction to this theoretical discussion, "cultures differ in nothing more than in the skills, work habits and goals which they instil into the individual".

While accepting that the labourer may have no defined and explicit philosophy of work, he, nonetheless, thinks and talks about it and it shapes an essential part of his values; in point of fact, these working thoughts become motivations which not only affect his overt work behaviour but also determine the values he attaches to his experiences. Here no special place is reserved for motivation (or attitude formation for that matter) because it is a phase in each of his experiences

1 - HUGHES, EVERETT C.: Queries concerning Industry and Society Growing out of the Study of Ethnic Relations in Industry; Amer. Sociol. Review, Vol. 14, 1949. pp. 211 - 220. See also CAPLOW, T.: The Sociology of Work, McCraw Hill, N.Y., 1954 and the extensive bibliography therein on the theme of work as an aesthetic, physiological and social expenditure of energy. Q.V. VEBLEN, T.: The Instinct of Workmanship, Allen Unwin, London, 1923.

as defined by him in his specific cultural group and it orients, normatively, his actions over a wide range of social behaviour.

Hence, from this generic point of view, motivation (which must always be seen in a relational pattern with attitude formation) may occur in, or be caused by, or even be identified with:

- a. the customs, folkways and mores of the individual as socialised within him from group sources;
- b. cultural, psychological, biological sources of adjustment and maladjustment;
- c. the social processes of association and disassociation (competition, rivalry, etc.);
- d. lack of social control or over-conformity by excessive control.

These categories indicate analytical possibilities not necessarily realisable in the empirical data wherein motivation may arise and which may be used to explain its various manifestations. It should, however, be added that two other necessary considerations are that:

- a. as society develops, motivation may be caused or aroused by one of these components, or even by unequal rates of change between them, and
- b. as society develops, it also involves changing norms and standards and thus changing motivation and attitudes and thus personal reorientation of normative values within the system.

Seen in this context, motivation becomes an inclusive concept by being both an action pattern and a process-hence, a prerequisite of social change towards a new equilibrium of standards of living. It is a dynamic component so far as it directs ends and organises the means in the action system.

In the light of the foregoing, a pattern of social motivation in general, and a nucleus for the individual's attitude formation in particular, may be constructed when attention is given particularly to the social relationships involved and to the opportunities afforded in the industrial field. In distinguishing the evolution of this pattern, the

following factors and transition phases appear more or less in the order of their enumeration:

- a. Motivation is activated and becomes manifest in individual variations, in definitions of opportunity, conduct and behaviour.
- b. Group action becomes more flexible in the continuous re-formation of habits, codes and customs, resulting in the rise of new rules of acceptance of opportunity, conduct or behaviour.
- c. Since changes in mores, customs and relationships occur unevenly, the continuity of social and institutional change and adjustment is retarded or even interrupted by institutional and personal social lags which disorganise both personality systems and social systems;
- d. Furthermore, during these changes, one sphere of the changing culture may either make a relatively static sub-culture unnecessary or absorb a portion of its functions — in either case the outcome is a rejuvenation of motivation by the "feed back" in the system;
- e. Group-action gives meaning to the actors by mores, representing attempts of groups to become adjusted to life conditions, past and present, through the development of norms. There is thus a probability of specific actions recurring and the effects need not be sporadic;
- f. These group-actions form fundamental patterns for action towards satisfying motivational urges in social life (the work situation, political, religious, etc.).

The processes underlying motivation rises from:

- i. individuation(a) above;
- ii. the inefficiencies of group-action,(e) above;
- iii. the inconsistency of group-action, (f) above.

In considering the factors in total, a redefinition of motivation might be that it is the process whereby individual adaptabilities, permitted by social stabilities and the ordering of opportunities, define the adequacy of the

social system¹, and explain the direction of orientation of the actor in an end-means schemata constantly in a condition of dynamic change.

In Zambia, the variety of cultural groups comprising the population is diversified and the meaning of work to members of these groups differ. The three major cultural groups, each with their own concepts of values and culture-linked behaviour patterns, are the Africans, the Indians and the Europeans.

It can be deduced that in societies where tradition-directed personalities are dominant, attention is mainly focussed on securing external behavioural conformity. The actors in this type of society have little in deciding to work or to play since the necessity to work has been concretised as a culture concept. The following deductions, resulting from the foregoing, can be seen in their Zambian context and may be reduced to the following basic propositions:

- a. If there was no absolute trend towards either eradication of conflict or the installation of equality, an unbalanced societal structure usually accompanied by social disorganisation would develop as shown.
- b. A social stability varies in direction; competition is shifted from groups to persons revealing itself in severe tensions.
- c. Economic organisations are of importance in proportion as they are deemed to be essential to the welfare of the society, and of social importance in proportion as they exercise functions of social control in the economic sector.
- d. Similarly, all social processes become modified in so far as they are incorporated within, or arise from the struggle for existence with specific reference to work².

1 - PARSONS, T.: Social System, Tavistock, London, 1952. p.17
"With respect to the relation between culture and the social system ..., the crucial point for the present is that 'learning' and 'living' cannot be understood without the analysis of motivation in relation to concrete situations".

2 - Cf. SOROKIN, P.A.: Social Mobility, Harper, N.Y., 1927, pp.63 - 101, for his development of this thesis.

- e. Also like the process of organisation, motivation to work and the formation of attitudes regarding work is never a simple sequence or trend: it may lead to the exercise of a new sphere of extension which is symbolic of regional social customs,¹ or on the other hand, it may also lead to dissolution or contraction of the society like Sparta, Athens and Rome² where cultures were limited by the specific factors which explain the culture's origin, such as geographical location and the agricultural hinterland. These cultures declined as these factors gradually became inefficient agencies for the maintenance of a balanced community.
- f. And finally, as a pattern of societal organisation or a process in its change the specific motivation to work is the product of the interplay of industrial, political and social forces in a given culture and is thus variable.

On the whole certain readjustments had to take place on the African's entry into the European directed industrial enterprise. In the Zambian social structure the following readaptations appear to be representative of the African's newly acquired-industrial-personality:

- i. a departure from or a modification of excepted tribal standards of social behaviour; (in the tribal village the African is not committed to earning his wages by selling his labour. In the Bemba tribe of North-Eastern Zambia in the Kasama district the bridegroom is forced through traditional tribal custom to work for the bride's father free of charge for a year after the date of marriage.) Most labour activity is non-economic.
- ii. The reshaping or breakdown of social bonds; (the bridegroom in the rural tribal setting is not allowed by customary tradition to converse with

had to - reciprocal
right marriage

1 - Regional social customs are interpreted as the traditional regional tribal rites and ceremonies appertaining to certain festive occasions, such as weddings, funerals, harvest gatherings, etc.

2 - Cf. PIRENNE, H.: Economic and Social History of Medieval Europe, London, Routledge and Kegan Paul, 1949, Chapters 4 and 5 and Religion and Rise of Capitalism, R. TAWNEY, Chapter 8

his wife's senior relatives. Upon entering the European's industrial sphere of activity it frequently happens that the young bridegroom through his academic qualifications rises to a position where he actually has authority over his wife's senior family who are also employed in the industry.)

- iii. The inapplicability of accepted tribal codes; (it is not permissible for the bridegroom to remove the unborn babe from his deceased wife's body in the European industrial area whereas tribal social code demands of him in the tribal rural area to perform this rite.)
- iv. By combining (i), (ii) and (iii) it follows logically that redefinitions had to be formed to be acceptable to the European industrial condition, and, this in turn, led to modified institutions in the tribal structure.
- v. The origin of new concepts regarding culture socialisation and the welfare of the individual; (the writer on more than one occasion heard from African advancees themselves that, in order to be accepted by the crew of men working for him as a fit and proper leader, he had to occupy a certain type of house and own a motorcar.)

These several overlapping varieties of resulting re-adapted traits directly attributable to the changed ^{social} personality of the African employed in the European-controlled industrial complex indicate the extreme manifestations, but they also show the principal channels and trends through which a society becomes affected. Therefore, although this ~~summary~~ summary is indicative of the general structural forms to which rural Africar society must adapt itself for its own efficient organisation in a European industrial enterprise, it implies that social organisation in general, be it African or European, must have motivation as one of its fundamental components to achieve social stability in a new environment¹. This outline, however is neither a description nor an explanation of the historical developments underlying the

1 - Cf. VAN NIEUWENHUIJZE, C.A.: Cross-Cultural Studies, The Hague, Mouton, 1963.

African's determination to readapt.¹

Other aspects where the social forces which affected and continued to modify the traditionally-oriented tribal Africans are comparatively insignificant when compared with the radical and extensive changes in social organisations to which the African is exposed by the economic force. Projected into a technically advanced industrial environment, engineered by and incorporated into Western European values and systems, the African, who is suspended between his tradition-orientation and the yet-not-fully-mastered European industrial-employment-demands, is now confronted with the arduous task of developing a new spectrum for his values based on foreign concepts. Indeed these polar conditions constitute a major problem to the African in his reorientational role to gain firstly social acceptance in a foreign environment and secondly to readapt his traditionally accepted social patterns. Gluckman² sees this dilemma as a social revolution to the African.

The sole difference between the Europeans' and the Africans' interpretation of motivation appears therefore to be sought in the response which each of these groups accords to the complex demands of the wider social environment in which they happen to be. Motivation must thus be seen as the natural reaction of the individual to society's activating forces and the way in which these forces are harnessed.

An examination will now be made on the strength of the empirical data presented in chapters 3 to 6 detailed on pp. 36 - 81 which are likely to shape, affect or even modify work ideology in the two interacting Zambian groups of employees interviewed.

By referring to Tables No. 15A, 15B (I) and 15B(II) on pp. 86, 89 and 90 a detailed study will be made of one of the most significant terms of reference of this investigation, namely, to ascertain the components in European and African motivational patterns in the same industrial complex.

1 - For expansion of the theme cf. BURGESS, E.W.: The Family as a Unity of Interacting Personalities in the Family, Chap. vii, pp. 329. cf. MITCHELL, J.Clyde: Africans in Industrial Towns of Northern Rhodesia, Duke of Edinburgh's Conference, 1956; also of same author African Urbanisation, in Ndola and Luanshya, Rhodes-Livingstone Communication, No. 6, 1954; Urbanisation, Detribalisation and Stabilisation, Unesco Paper, 1954. EPSTEIN, A.L., Politics in an Urban Community, Manchester Univ. Press, 1956. McIVER, R.M.: Society: Its structure and Changes, Farrar and Rinehart, N.Y. 1931, pp. 16, 163 - 164.

2 - GLUCKMAN, M., Analysis of a Social Situation in Modern Zululand, Manchester Univ. Press, 1951.

It is found that the first four groups of interviewees in this table, who are all Europeans, albeit from different cultural backgrounds, show only slight differences in the indicator levels for positive and negative self feelings, but that the last group of interviewees, the African supervisors, show a wider range of difference. This becomes more apparent when taking Table 15B in conjunction with Table 15A where, in the former, the percentages are transcribed into "average responses".

Before detailing and developing the explanations offered by the data the following general observation should be made. This survey was conducted in a rapidly expanding economy resulting from a virile industrialisation programme which not only offered full employment but provided the world at large in a seriously required product — copper. This is a typical example of Wilson's "Analysis of Social Change" where the internal system as it had developed over a prolonged period, was challenged by different segments of the society seeking to readjust themselves. The readjustment that had to take place on the Copperbelt of Zambia was sparked off and given impetus by the African who had, as a result of the accepted African Advancement Programme gained a stratified position in the hierarchical structure of occupations. As for the European group of the Copperbelt social readjustment featured equally prominently as they were called upon to relinquish some of their traditional jobs and to reevaluate the social readjustments due to take place. This not only led to new social relationships but a wider sphere of technological skills had to be opened up to a bigger mass of employees. In other words, this total social reorganisation, which was sparked off by a segment of the society through motivation and which was resisted by the old European-controlled social order, led to a "total social readjustment" of all the participating actors albeit it is not yet complete. Commenting on the restoration of social equilibrium Giddings¹ states that the most elementary similarities of behaviour are "habits of toleration". In its Copperbelt context it meant, that the African, who was a virtual "immigrant" into the Western industrial sphere of activity, had to forsake his customary rural environment with its agricultural characteristic and enter a new social group where other motivations and adaptations were demanded.

1 - BARNES, H.E.: Introduction to the History of Sociology, p. 747.

In returning to Table 15B (I)(p. 89) which gives the indicators in rank order as they were empirically obtained and tabulated in Table 15A (p.86), it is found that the Europeans give priority to "acceptance" and that the Africans rate "promotion" topmost. The following explanations offered in conjunction with historical facts might assist to explain this divergency:

- a. The changes in the social structure of the industrial group with its black and white elements working together compelled social readjustments as we have pointed out in the beginning of this chapter: the degree of readjustment coincided with each group's interests. This argument, by its generic nature, must logically lead on to another, namely, since every organised group also becomes a stratified group with its own attitudes and definition of work, it will display its own motivational urges for the type of work to which it is designated. It was noted during the empirical investigation that the bulk of the African supervisors who were interviewed stated that they were aware "of a changed attitude towards the job" since their upgrading into more responsible jobs. This upgrading, since it was accompanied by substantial economic gains, thus also had influences on individuality and the specialisation of labour. Most of the African interviewees interpreted their own advancement in their industrial occupations as a progressive extension of their communities: this patriotism formed for them the fundamental incentive (thus the motivating force) to specialise in their particular jobs so as to attain maximum status efficiency. The only way in which they could express their top ranking of "promotion" must further be sought in the historical context of African advancement on the Copperbelt: The European Mineworkers' Union had repeatedly reiterated that it had no objection to making available to the African certain European-held jobs provided they receive equal pay and all the conditions of service applicable to the European. This attitude, however, caused some concern to The European Mineworkers' Union when it was confirmed that Africans would be

trained for these European-held jobs and they (the Union) modified their resistance by insisting that fragmentation of European-held jobs would not be acceptable to them. The implications thus arising made it clear that, in the circumstances prevailing at the time, that the African Union regarded this contradictory attitude on the part of the European Union, as one which would nullify any African's promotion into European-held jobs. Since this bar to the African's future promotions was eliminated by subsequent negotiations¹ it can logically be deduced that his breakthrough into all occupations in the industrial sphere was esteemed as an allround "promotion for the African in industry". The African's struggle, over a prolonged period to gain industrial equality was thus won, and hence his ranking of "promotion" as his main motivational object.

In contrast to the African's aspirations which formed the generating forces for his motivational pattern, the European industrial worker weighs "acceptance" topmost since his motivational elements were mostly confined to the socio-psychological aspects of his status. In giving preference to "acceptance" the European, in fact, shows that his ability to do the job is not challenged but rather his relationships with those working under and over him. In contrasting the two groups' motivational patterns we find that the African's assessments are chiefly governed by reasons with an economic base reinforced by a psychological element of achievement, whereas the European's assessment is chiefly based on a social relationship, i.e. whether he will be accepted and esteemed in his social execution of his job by management and his fellow workers.

- b. In referring to Table 3 (p.57) it is found that "line of responsibility", the "job situation" and "promotion" are virtually always associated with long term changes in job attitudes, and that "prestige" and "acceptance" occur in short term sequences. It can therefore be deduced that since long range attitude changes are almost always

¹ - Cf. COETZEE, J.A.G., op.cit. where this specific aspect of the African's advancement in Industry in Zambia was dealt with in great detail.

associated with greater performance effects (as was shown in Chapter 5, p. 73), the first three reactions, viz. "prestige", "acceptance" and "line of responsibility", are active components in maintaining and improving attitudes regarding the job. Our empirical data suggests further that in the case of the European employee he sees his job as executed in a "spirit of psychological circumstances" governed by his own attitudes towards the job, these being undetermined by race or institutionalised differences of status, since the above responses definitely categorise themselves in the psychological realm. If the European is subjective, the African is objective. In the case of the African interviewees these above-mentioned three responses occupied no place of prominence and in their ranking, in fact, as is shown in Table 15B(I) "acceptance" was rated only third. The African advancement programme, with its historical vicissitudes and the conflict issues which had to be solved, may be indirectly held as responsible for this divergent reaction of the two groups. The Chamber of Mines Handbook for Zambia (1961) shows the following ratio of European and African labour turnover to be:

European per 1000 employees	= 14.2
African per 1000 employees	= 36.8

These statistics are significant and, in fact, bear on the results obtained in this investigation. It is suggested by taking these statistics in combination with the explanation advanced thus far, that the African's advent into industry is controlled by different sets of motivational urges than those controlling the European. The explanation for this phenomenon cannot be explained in isolated units and must be seen in its historical-cultural context. The social structure of the tribal society with which the African positively strives to maintain a constant link, remains a social regulating force, as the present generation of industrial worker was not born and brought up in an urban area with its industrial character. It suffices to reiterate that the African, in giving "promotion" the top ranking, underscores the fact that his motivational pattern stems from an economic base initially.

- c. Table 15B (I) further reveals that "prestige" (ranked No. 2 in the Total European Average) is ranked fourth by the Africans. The African's second ranking response is "salary". The reason for this differential ranking is closely allied with the explanation detailed in (b) above, because since the African's advancement into work now done by Europeans inevitably reduces to the extent of the advancement, and since the European Union has accepted the necessity for some African advancement, it must be concluded that the European's ranking related not to the advancement as such, but to the degree of advancement. The position, in point of fact, is such that vested interests which were ~~solely~~ in the hands of European entrepreneurs originally interpreted the African's motivational urge as an attack against their economic interests, came to accept that the urge for advancement was, in reality, an attack against the existing social order. The African, in turn, in giving "salary" second place in the ranking scale, interpreted industrial advancement to mean that: without the European's rates of remuneration there can be little or no advancement. Hence the reason why "promotion" to the African is in fact inseparably allied with "salary". To the European this would mean an economic gain solely. Seen in its historical context, therefore, "promotion" coupled with an increase in "salary" are instruments to the African with which he may stake his claim to status in the new social environment in which he now finds himself.
- d. By superimposing the empirical data obtained in Table 1 (p. 53) on Table 15B (I), the effectiveness of "acceptance" for producing positive job attitudes further underscores the divergency which exists between the African and European motivational ~~urges~~ urges. This divergency which has been established thus far must be seen as subjective-objective interpretations of the European's and African's culturally based motivational urges. This cultural divergence is accentuated by the data of Table 1 because as was shown in the discussion on p. 55 only the first five responses contribute towards increas-

ing job satisfaction and employee stability — these responses, viz. "prestige", "acceptance", "line of responsibility", "the job situation" and "promotion" which cover 75% of the total responses are classified as the psychological realm in which jobs are executed. The remaining eleven responses, which only cover 25% of the total responses are solely concerned with the job itself in various degrees, and these responses were given greater prominence by the Africans in their definitions of "attitudes towards the job". It must therefore be recognised that the responses, which were chiefly recognised by the African as being important, are rarely instrumental in bringing about positive feelings regarding the job. These responses, therefore, do not form job attitudes but rather accentuate the characteristics and the context in which the job is done.

An important fact obtrudes from the foregoing data: only a third of the responses, i.e. five out of a possible 16 responses which have significance in defining the components of job satisfaction were given prominence by the European interviewees. The African interviewees cited responses chiefly concerned with the job situation (see Table 15B (I), p.89). The explanation for this divergence cannot be isolated nor can any one reason be advanced for this but must be seen against the historical background of the African's struggle to gain full admission into all industrial occupations. As we have shown in Table 9 (p. 70) and in the subsequent commentary "the responses with the greatest frequency in the positive sequences which are 'prestige', 'acceptance', 'line of responsibility', 'the job' and 'promotion' are termed basic job satisfaction indicators." In the light of the empirical data, therefore, job satisfaction indicators revolve around the performance of the job which, in the case of the European, is the job itself, with its psychological connotations, and in the case of the African it is the job situation with its related practical problems and implications. That this is so must be sought in the cultural background of the groups

interviewed and is not definitive of any good or bad qualities in either group. It merely shows up the divergence in job attitude formation.

- e. In further evaluating Table 15B (I)'s empirical data we find that "the job" is rated third by the European group and not at all by the Africans. The Africans, in turn, however, rank "acceptance" as third while "responsibility" is given fourth place by the Europeans as against the Africans' "prestige".

As we have endeavoured to show that a testing takes place when cultural readaptations are introduced, the principal characteristics of this specific social reorganisation which took place on the Zambian Copperbelt show that motivation, however differently defined by the two groups in this survey, is structured by its function. Reference might in this context be made to Chapin's analysis of social patterns where he finds that institutions arise from the "continuous association of individuals in response to definite needs, such as hunger, fear, sex, etc.¹". This investigation's results largely corroborate Chapin's findings, although on totally different grounds and by different means. From this interaction four typical social patterns emerged, namely:

- i. common patterns of behaviour which in turn lead to a new formation of attitudes.
(During this investigation the writer discerned a changed attitude in the European when he described the African workman, for example, such words as "boy" — denoting the African workman, a term which was previously in constant use; "kaffir", "savage" were never used. The African, in turn, exhibited similar changes towards a better relationship.)
- ii. The development of respect for and an appreciation of cultural objects symbolic of newly acquired needs and channeling of new behaviour patterns; (all African Advancees without a single exception,

1 - Cf. CHAPIN, F.A.: Contemporary American Institutions, N.Y. Harper, 1935, pp. 14 - 15.

acquired shortly after their promotion expensive radio and television sets, automobiles and European-styled furniture. Whereas previously the African workman would arrive on the job in his working clothes he now also changed into his working clothes on the job like his European counterparts.)

- iii. The development of codes to describe or even regulate this social evolution and the operation of these new sets of interrelationships; (an adult education programme, which previously was attended by a small percentage of a total work force, became very popular as it was expected of each advancee to be able to speak English and write his own reports. In 1951 only 34 Africans attended adult education classes whereas subsequently to the Advancement programme, some 472 were in regular attendance¹.)

These three social patterns concerning the new African industrial worker are different both in type and degree to those which would, and usually do, affect the European from the point of view of their social conformity. The European worker is already committed to a well developed sense of social conformity since no major deviations are present in the structuring of his conformity within the new social environment. As we have shown the African's readaptational role, on the other hand is indeed one of a much more complex "administrative mechanism"² in so far as it includes the introduction of more rigid rules or codes, investing him with authority, hitherto unknown to him. To individual Africans interviewed this social readaptation involving new cultural concepts and reevaluation of values³, it meant increasing difficulty in social adjustment, as they find themselves between two polar conditions, that of tradition-orientation and modern Western industrial development. Both Sir Ronald Morison⁴

1 - Vide Rhokana's Adult Education Officer's report in Jan.1961.

2 - Appendix 10 of "Commission appointed to inquire into the Mining Industry in Northern Rhodesia" in terms of Government notice No. 97 of 1962.

3 - Cf. SCHAPER, I.: Migrant Labour and Tribal Life, 1947, Oxford Univ. Press, London, pp. 116 - 121.

4 - MORISON, SIR RONALD, op. cit.

(during a commission of enquiry in Zambia) and Schapera¹ find that very little in the African tribal life provides any conditioning to prepare a man leaving his tribal environment to accept the demands of his new industrial working conditions².

In concluding the discussions on the rank order of the positive self feeling responses (the primary source indicators of Table No. 15B (I) we have attempted to illustrate that a discernible pattern of responses in each group was shown up, viz. in rank order the European group gave: acceptance, prestige, the job, responsibility, salary and promotion; while the African group cited: promotion, salary, acceptance and prestige. As we have shown in (d) these sets of responses stem from differential effects in determining job attitudes — as we have also shown, these divergent sets of responses' origins must be sought firstly, in the socio-cultural background of each group, and secondly, it may be inferred on the strength of empirical evidence that the economic evolution to which the affluent Copperbelt Industrial Society was exposed, proved to be a major agent in the restructuring of the "new" society which evolved as a direct result of the African Advancement Programme.

1 - SCAPERA, I.: op cit.

2 - In tribal conditions it is found that work in general is dictated by the rhythm of the seasons and duties are allocated according to sex and age. These duties are rarely carried out alone, and nothing in the cadence of the tribesman's life prepares him for the metronomic rhythm of organised industrial work as the European knows it (ROBERTSON, MAXWELL: Travels in Northern Rhodesia, Oxford Univ. Press, 1953. See also MITCHELL, CLYDE'S interesting development of the same theme in Africans in Industrial Towns of Northern Rhodesia, H.R.H. The Duke of Edinburgh's STUDY CONFERENCE. In this discussion, emphasis is placed upon the structural, rather than the functional aspects of the African's involvement.) These authorities are in concert that further difficulties arise as well from the fact that work, in the tribal setting, requires neither foresight nor planning nor does it require initiative. All jobs are done without any time limit set and there is no specialisation in its execution — the job is done at the speed dictated by itself and in a manner which the worker decides by himself.

f. With regard to the Secondary Derivation Indicators in the positive self feeling responses (Table 15B(I) p.89) it is significant that the Europeans ranked "acceptance" first, while the Africans took "prestige" to be the most important response; for the second rankings the Europeans placed "prestige" and the Africans "acceptance". By referring to p.49 we find that the definition for Secondary Derivations is: "they are secondary to the source from which they emerge," which directly reinforces the divergent patterns¹ which we have detailed in (d). It is further significant to note that the European group ranked the secondary derivation indicators, in order of priority, as follows: "acceptance", "prestige", "satisfaction", "the job" and "responsibility" while

1 - In relation to the Copperbelt situation the following can be added from data compiled by the writer: of the Africans employed at Nkana only 2.4% were born at Nkana, a further 3.4% were born in other urban areas. The remaining 94.2% of the other employees are still more or less closely tied to their traditional rural environment. In their villages Africans have lived a way of life which, although being affected by internal social changes, remained largely undisturbed and were obviously not initiated into the complex Western "industrial" way of life. This, in point of fact, means that $\frac{19}{20}$ ths of all the African employees have come from an environment which has very little in common with their newly "adopted" environment. As they come from a traditionally-ordered society there is, as we have said, no room for individualism or innovation or for the exercise of intelligence and the cultivation of responsibility.

In their new industrial environment Africans must learn to work to a time schedule in which the dictates of the seasons play no part; they have to perform more strenuous and exacting physical tasks (of which a large proportion is done on night shift); and if they have the ability and intellectual prowess to rise to a position demanding skill or display a keen sense of responsibility, they will have to readjust a major portion of their traditional culture patterns tremendously to cope with the calculated economical demands of the Europeans' industrial world.

the African group only cited "prestige" and "acceptance". By logically continuing the argument which was detailed in (d) we find that the Secondary Derivations, as they originated from the primary source indicators, not only reinforce the findings given in (d) but that they, in point of fact, validate these findings as they are the basic job satisfaction indicators which were detailed on p.71. In other words, therefore, our empirical data suggests that the European group is solely concerned with "the job itself" and with the socio-psychological benefits that might accrue by performing it. In an endeavour to arrive at greater clarifying detail, it is necessary to return to the phrase previously used, namely, "motivation as a process" since the discussion thus far was aimed at tracing the influence of culture in this "process", and culture being "an abstraction from behaviour(the normative aspect)" it is suggested that both groups interviewed in this investigation, regardless of their reactions, may be described in terms of one or more of the following transitional phases¹:

- i. the breakdown of locality groups;
- ii. the formation of new institutions;
- iii. an increase in impersonal relationships;
- iv. an unbalanced population;
- v. the origination of a stratified and mobile social class;
- vi. decreasing ritual and constraint;
- vii. increasing competition and differentiation;
- viii. an awareness of and a striving for enhanced statuses.

As a "process", therefore, motivation grants as elements in its composition, a place to physical,

1 - Cf. MITCHELL, CLYDE'S interesting development of the same theme in Africans in Industrial Towns of Northern Rhodesia (1956). See also VAN NIEUWENHUYJZE, C.: CROSS-CULTURAL STUDIES, Mouton, The Hague, 1963, chapters 3 and 5.

biological and sociological foundations, as well as to the cultural accommodation of individuality within a changing societal milieu. For these reasons, motivation assumes the characteristic of being an action pattern in a social process.

The empirical data which was presented suggests, that the African, contrary to popular belief, is not passive and therefore disinterested in the face of the order (or the disorder) of the society in which he finds himself. As we have attempted to show by our empirical results the Africans' behaviour and attitude formation — thus his moral code in action — compared with the Europeans', is governed by an equally valid behaviour pattern but it is founded on different codes of social readjustment and behaviour.

The reason for this divergence in assessing the essential requirements of life and man's part in it, which does not in any way denote superiority or inferiority in establishing cultural levels or ethics in any one of the groups interviewed, should therefore be sought in the socio-cultural interpretation¹ accorded by the group to complex demands² made by the society³ in which it finds itself.

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1 - Vide DAVIS, K.: Human Society, N.Y., McMillan 1959.

2 - In Mannheim's sense, namely, the "totality of demands" in Ideology and Utopia, Barnes and Noble, N.Y., 1940.

3 - According to McIver's generic interpretation in Society, Its Structure and changes.

P A R T IV

EVALUATION OF THE RESULTS OBTAINED
IN INVESTIGATION III

CHAPTER 8

REVIEWING OF THE THEORY OF MOTIVATION IN THE
LIGHT OF RESULTS OBTAINED IN INVESTIGATION III
AND GENERAL APPLICATION IN INDUSTRY

In their publication, JOB ATTITUDES: Review of Research and Opinion, Herzberg and co-authors, state that they have uncovered 155 studies, published between the years 1920 and 1954, which purported to present data in answer to the question "what do people want from their jobs?" If we add to this large total the ever-increasing number of exhortative writings on this subject, we must conclude that the answer to this question is presently conceived as the crucial source to the successful motivation of the worker.

In the field of industrial relations it has virtually become axiomatic that a knowledge of what the worker wants from his job is essential to sound personnel administration. C. Wright Mills¹ equally axiomatically points out, on the other hand, that sound personnel management must be based on factors other than those that supposedly satisfy workers' needs because "men live in immediate acts of experience and their attentions are directed outside themselves until acts are in some way frustrated"....(and)"it is then that awareness of self and of motive occur." This open field of speculation can support any choice of personnel philosophy. However, all investigations on this subject demonstrate that the basic need of the worker appears to be rooted in Mannheim's² original theory on motivation stating that "it keeps clearly in mind that both motives and actions very often originate not from within but from the situation in which they find themselves". The substantiating evidence which bears on the validity of this statement³ and corroborates the findings of this investigation, is discussed in the conclusion to this study.

1 - MILLS, C WRIGHT: Power, Politics and People, Ballantine Books, N.Y. 1960, p. 440.

2 - MANNHEIM, K.: Man and Society, London, 1940, p. 249.

3 - Cf. Chaps. 7 and 8 of this investigation in which Weber's definition of motive "as a complex of meaning, which appears to the actor himself or to the observer to be an adequate ground for his conduct" (Wirtschaft und Gesellschaft, p.5, Tubingen, 1922) channelled the discussion.

In the two preceding chapters an attempt was made to illustrate the cultural implications which beset the modern industrial scene with its multi-racial work force. Different cultural backgrounds act as motivators in different directions when actors drawn from different ethnical groups are placed in the identical environments. This viewpoint is adopted and derived from the results obtained in this study and together with the elements of the preceding discussions will assist towards formulating hypotheses¹.

While accepting C.Wright Mills' view that "motives are common grounds for mediated behaviors" ... (and) ... "that the motives are actually used in justifying or criticizing an act" ... (and) ... "definitely link it to situations " which "integrate one man's action with another's"², it appears that other observers of employee motivation have felt that some order may be detected in employee wants and have adopted from a theory of motivation by Maslow³ the concept of a "need hierarchy" in which the various needs of an individual can be categorised, in spite of the fact that the components given above are never completely separable. On the whole, motivation in industry, as shown by the results of this study, is evidence of a departure from or redefinition of accepted standards of social behaviour brought about by the diffusion and dissolution of established culture concepts. Similarly, motivation may include conflicts between cultural standards and the efforts towards reorganisation based upon the recognition of unusual social relationships and changing values, none of which is necessarily a social problem. Before examining Maslow's⁴ "hierarchy of needs" and testing its applicability to this study, we must cite its similarity to Max Weber's hierarchical structure on the same theme. The answer

1 - Refer to the "conclusion" of this study.

2 - MILLS, C.WRIGHT, op cit. p. 245.

3 - MASLOW, A. H.: Motivation and Personality, N.Y. Harper, 1954 and also A Theory of Motivation, same author, Psych. Review, 1943, No. 50, pp. 370 - 396.

4 - We are taking some liberties with Maslow's nomenclature and general classification. We are putting into the one category of "subsistence needs", two needs which he treats separately, namely, physiological and safety needs. This is done for reasons of simplification.

to the question on motivation was sought by Weber¹ along stratified or occupational lines, suggesting "that in a free society the motives which induce people to work vary with ... different social classes" and "there is normally a graduated scale of motives by which men from different social classes are driven to work", thus "when a man changes ranks, he switches from one set of motives to another."

Upon closer examination Weber's "stratified motivational goals" reveal, by inference, that society constrains, selects, adjusts and controls the social forms found in individual motivational patterns. In each of these societal processes, motivational impetus may occur actually or potentially. From this approach, also in Weber's sense, motivation consists of those social readjustments to which any society is exposed because it is based upon flexible and dynamic standards — as a societal pattern, consequently, motivation in industry is a co-ordination of individual and group character traits and becomes a significant process in the modification of socialisation.

For purposes of further clarification in investigating this Zambian study we are quoting the Maslow Hierarchy of Needs. In Maslow's system the hierarchy begins with the basic physiological needs which may be set out as follows:

- a. Not until the lower order needs are stratified will the next higher order needs become activated.
- b. Once the first two orders of needs, i.e. subsistence and social, are satisfied they cease to be active motivators. Once man has broken through this level, this property no longer applies. Once his needs for status, knowledge and self-fulfilment have become activated, he becomes greedy, and due to the fact that insufficient satisfaction is provided, he seeks at great cost, even to the extent of damaging subsistence and social needs, for more and more satisfaction.
- c. But in fulfilling his wants at each level, the struggle goes on — there is cost attached, i.e. the principle "that you cannot have something for nothing" still operates. Each reward has its corresponding cost and the higher the reward the greater the cost.

1 - Paraphrased by K. Mannheim, op. cit. pp. 316 - 317.

- d. Thus in this struggle for satisfaction of their increasingly complicated wants, many men fall by the wayside due to:
- i. they are unwilling to pay the costs required for the satisfaction of the higher wants;
 - ii. their situations offer little or no opportunity for their satisfaction and have the results that many of man's wants remain thwarted.
- e. Thwarted needs, however, do not remain dormant and they flourish at the level at which the upward movement stops or at levels lower to it. This lower level, however, should not be compared with growth; it is symptomatic of the "frozen state" resulting in an endless pursuit of certain need-satisfactions, for example, the endless pursuit of friends for the emotional support they provide.

In the Maslow-hierarchy of needs, quoted above, it appears that the motivational patterns detected in this study could be phased as follows:

- i. it accentuates the problems encountered in the restructuring of society;
- ii. it is connected with efforts to discover ways and means of developing a reasonably secure social organisation for the individual actors as well as for their groups;
- iii. it is associated with social change from the standpoint of the recognition of its desirability, if the risks (which may result in social disorganisation) involved are not too great.

Since a complete consideration of these hierarchical aims is co-extensive with social organisation, a review of social disorganisation is always an important corrective to any theory of socialisation as its main concern is with the instabilities of changing relationships.

In view of all that has been said, it is apparent that the crucial question for industry to answer is : how does it motivate its workers who have a constantly changing set of needs? This question becomes more urgent whenever cultures are discordant or societies have developed conflict-

ing systems¹ in endeavouring to establish the components of motivation — these norms or standards determine not only the obvious social problems and needs for social readjustment but also the fundamental philosophies of the actors' mores. Resulting from the findings of this study (detailed in the Conclusion) it is suggested that motivation in the work situation is ultimately defined by mores, in precisely the same manner that mores have defined and determined the evolution of other patterns of human behaviour. Values, norms and standards enter into a pattern of social organisation. Similarly, when a relationship rather than the person is considered, there are norms of association (to insure the necessary social contact), of institutions (with respect to their efficient operation) and of technology so that the proper material and structural bases of a society may be maintained.

It has always been accepted that steady employment prospects and good pay rates were industrial management's tools to satisfy workers' needs, but, as we have noted, once these needs have been satisfied they become less and less important and are replaced by higher needs. Industry is therefore faced with the problem that these higher needs cannot be satisfied in the same direct way as the lower needs were satisfied, which means that workers, whose subsistence needs are satisfied, can no longer be motivated by the traditional methods. No amount of good wages, ideal working conditions or bonuses will now induce workers to give more than minimum effort.

Since this concept of "satisfaction levels" complicates the range of motivation, they must be synthesised in a pattern of changing mores (cultural readaptation). It has now advanced beyond the limits that problems arising from cultural differences are consequences of a moving societal equilibrium.

The problem of modern industry, with regard to the motivation of its diversified labour force comprising different culture groups, is simplified when it is associated in the broadest conceivable manner with cultural changes and with specific individual handicaps that arise therewith. This view is based on the hypotheses that mores and culture patterns undergo a constant process of modification which is

1 - Vide the present theories evolved to satisfy man and supply in his needs, eg. Socialism, Fascism, Naziism, Nationalism, etc.

activated by social selection. By accepting this hypothesis, modern industry can see itself as the "provider"¹ of its workers' subsistence needs only. It fails as the "provider" when it comes to the fulfilment of the higher needs, because these higher needs, by their very nature, are "developmental needs". For example: industry cannot provide its workers (as directly as it gives employment) with friends, or respect from their workmates, or with self-confidence, or even a feeling of self-respect. It may provide the conditions which allow these needs to be satisfied in relation to the goals of the industry itself, but it cannot direct the workers towards attaining these needs.

In distinguishing the evolution of industrial problems and its impact on modern industrial philosophy, the following two parallel conditions prevail set out diagrammatically below:

CONDITION NO. 1

Industry's Aim	Methods employed to achieve aim	Results obtained
1. To establish a contented labour force	1. Ideal working conditions 2. To acknowledge the existence of human dignity and individual rights of all employees	1. Satisfaction of need for status, self-development and sense of achievement. 2. Fragmentation of traditionally organised jobs
2. To satisfy participating actors' requirements (workers and owners)	3. Fringe benefits 4. Incentive bonuses 5. Welfare aids (sick benefit, pension, etc)	3. Less challenge to initiative 4. Minimum effort to maintain steady output
3. To maintain or increase profit areas	6. To increase and maintain standard of living of employees 7. Inductional and readaptational training 8. Subsidised housing 9. Recreation facilities	5. Automation 6. Mechanisation 7. Traditional rewards fail to satisfy 8. Militant Trade Unionism

1 -Vide some American Sociologists' perception of industry as an agent in social mobility. To them mobility derives partially from the non-acceptance by the workers themselves of industry's offering of social security in all its forms. Refer to HERZBERG, F.: Job Attitudes; also FRIEDMANN: Work and Retirement.

CONDITION NO. 2

The Problem	The Corrective
1.The worker is incapable of identifying himself with and directing himself to the industry's goals	1. Scientific analysis of output per worker by means of time and motion studies,multiple management/worker study courses, job enlargement programmes to permit better earnings
2.No relationship exists between the needs of the worker and the goals of industry	2. Joint consultation to involve all workers; profit-sharing programmes; counselling programmes to improve human relations; setting realistic production goals to increase bonuses
3.Reasonable profits have to be maintained	3. Fragmenting of jobs into elementary components by work method studies;timing of each job(time and motion studies);rating of jobs(by job evaluation) and costing each operation(by cost control)
4.Managerial succession programmes	4. Recruitment of suitable candidates for promotion

As is shown by the two summaries the lack of motivation in industry is explained by the disharmonies arising between social evolution and human readjustment. Two alternative supplementary explanations for this disharmony are derived from the same source. One locates the origin of it in biological or social adjustment in too rapidly changing standards; the assumption here being that in spite of the influences of industry in particular upon human nature man is still largely too inflexible to readapt. The other point of view isolates the characteristic nature of social selection in social control. This dual origin is responsible for its inconsistencies and its indefiniteness.

Upon returning to some of the findings obtained in this investigation, at least a systematic set of relationships did emerge from our study of the literature and our own findings¹. It was noted in our review of literature on the subject that different results were obtained when the study was concerned with "what made workers contented with their jobs" as opposed to studies directed to "discovering the factors that led to

1 - Cf. chapter 4 of this study.

disssatisfaction" with their jobs. Our study reveals that the factors or components that make people contented with their jobs are different from those that make them unhappy.

The significance of this finding could best be described by discussing its implications further. One of the basic methodologies of scientific analysis is to conceive variables as operating as a continuum. Therefore, a factor that influences job attitudes should influence them in such a manner that the positive or negative impact of the same factor should lead to a corresponding increase or decrease in morale. It is our view that some confusion arises as to what workers want from their jobs and that it stems from the approach (in thinking) that factors influencing job attitudes operate along such a continuum. But how are they explained if they do not? And furthermore what would the explanation be if some factors affect job attitudes positively only?

If this is the case, then the presence of these factors will act to increase the worker's job satisfaction and their absence will not necessarily give rise to job dissatisfaction. Theoretically, therefore, any individual operating from a neutral point with neither positive nor negative self feelings towards his job, will have, as a result of satisfaction-factors, his job satisfaction increased beyond the neutral point; and the absence of satisfaction-factors will again allow him to drop back to his neutral level, but will not turn him into a dissatisfied worker. By the same logic, the converse also holds validity: the existence of negative self feelings will lead to a dissatisfied employee, and immaterial of the quantity of satisfying-factors, will not make the worker happy. Although it is impossible to generalise as to the specific relationship which exists between "job satisfiers" and "employee motivation", the connection has occurred with sufficient regularity to give it the qualifications of a sociological postulate. Studies of relatively static societies, contrasted with rapidly industrial developing societies¹, confirm this conclusion and indicate that the same conditions making for active social participation (motivated in other words) in one society and "Frozen activity" in the other are also causes of the industrial problems² described earlier. The different manifestations of these factors are determined by

1 - Sorokin, P.A.: Social Mobility, N.Y. Harper, 1927, contains a full development on a parallel theme in Chap.3 & 4

2 - Refer to page 71 of this investigation.

the combination of personal and cultural traits in a process of selection.

The results of this investigation show, as was pointed out earlier that the factors or components causing dissatisfaction have a greater potency than the factors which satisfy workers. Since motivation has a characteristic of energising and maintaining enduring enthusiasm for the job, it constitutes a major component in social change and hence features in social selection. The interpretations of the results gained from this investigation indicate the varieties of motivational patterns to which industry with a varied labour force, comprising different cultural groups, is exposed and hence the desirability of interpreting motivation as a pattern and a process¹.

In an endeavour to trace the motivational pattern in industry, we now recapitulate the salient aspects of our research's results.

It was noted during the interviews that when our interviewees had positive self feelings about their jobs, they frequently described factors or methods of execution related to their tasks and events that served as an indication that they were experiencing professional growth or maturing which will lead to promotion. It was also noted, on the other hand, when situations were described in which negative self feelings were uppermost, they were not concerned with the job itself as such but rather with conditions in the execution of the job. These conditions were described by the interviewee as either "unfair" or "unsatisfactory" and they have an adverse effect not only on the interviewee's work in its total complex but on his feeling towards the specific task designated to him.

These externally-created conditions of reaction, due to the fact that they are analogous to the work-principles, are termed "elements of stability". These elements of stability tend to neutralize the sense of insecurity. It is not curative, but rather preventative in nature. Similarly, the harmful elements contained in the context in which a job is performed serve to originate negative self feelings about the job. By removing these harmful impediments such as job security, company policies, supervision and inter-personal relations² positive self feelings about the job may be cultivated. If and when these "harmful elements" deteriorate to a

1 - Cf. pp.123/4 for Weber's interpretation of this pattern.

2 - Cf. chapter 4 where these components were empirically isolated.

level below that which is acceptable by the worker, then, as a result of his negative self feelings, poor jobs attitudes are formed. We have already pointed out in this chapter, that the reverse does not hold true — when the job, at a certain phase or stage, can be taken as neutral — there will be neither satisfaction nor dissatisfaction. The explanation is found in the fact that the factors or components which lead to positive self feelings do so because they satisfy the workers' need for self-realisation in the job situation. The supreme goal of man, according to personality theorists Jung, Adler, Sullivan and Rogers, is the "realisation of man" as a creative being within the limits of reality. When man is deterred from achieving his goal he becomes, according to Douglas McGregor, "a wanting animal". The conditions which encompass the job cannot give man this basic satisfaction — it is only to be found in the performance of the job itself that he gets rewards which will reinforce his positive self feelings.

It is, therefore, noteworthy that although the factors or components relating to the performance of the job and the factors defining the context under which the job is done serve as goals for the worker, the motivating qualities of these two types of components are essentially different. In other words, components in the job context assist the worker in avoiding unpleasant situations and the motivation to supply this avoidance is found in the job factors or components which we term "motivators". Extraneous job factors or components, which, no doubt, assert an equal amount of influence, were termed "elements of stability". Both types of components are necessary and present in all jobs, but it is basically "the motivators" that bring about the desired kind of job satisfaction which make for worker-satisfaction. By induction, we are now led to deal more concretely as well as positively, with the question of job attitudes¹.

In the group investigated it was found that the wants of employees can be divided into two basic groups:

1 - Job attitudes, in this sense, are taken to mean the relative value rating attached to the occupation by the actor himself.

GROUP NO. 1

This group's "wants" revolve around the need to develop one's occupation as a source of personal growth which will ultimately serve as a stepping stone towards self-establishment and self-realisation and thereby gaining

- a. personal acceptance in a new environment;
- b. social stability;
- c. advancement on the hierarchical ladder of management control;
- d. economic independence.

This attitude was most prevalent among the African supervisors in the experimental group.

GROUP NO. 2

This group, while essentially based on the elements contained in Group No.1, progressed further in its concept of working conditions, supervision and fair treatment on the job.

The fulfilment of this group's needs does not challenge the actor to achieve high levels of job satisfaction¹. It is obvious, therefore, to satisfy the needs of stability with this group that one may (or may not)

- a. just succeed in preventing dissatisfaction;
- b. poor job attitudes.

As a result of these two clear distinctions, facts can now be presented which will account for the lack of success which industry has had in its attempts to motivate employees. We need only to briefly examine two of industry's attempts to motivate its employees to evaluate the failure, namely, the incentive bonus scheme and the human relations training for supervisors of all ranks.

When an incentive bonus scheme does not permit any of the "motivators" to come into operation, then any increase in performance is misleading, because in the removal of a decrement in performance by the elimination of job satisfaction is often mistakenly referred as a positive gain in per-

1 - Fully detailed in chapter 4 of this investigation.

formance. The existence of such a standard as "a fair day's work"¹ has been well documented in various systematic studies by industrial sociologists. Are good job attitudes and loyalty towards the company engendered by incentives and bonuses? The immediate answer is often given in the affirmative, especially when employees state that they like to work for their companies, but upon closer investigation it is often found that the "liking" seems to be little more than the absence of "disliking" — their satisfaction offers little more than the absence of dissatisfaction².

Supervisory training directed towards the improvement of inter-personal relationships between the supervisor and his subordinates has been incorporated into virtually all industrial relations programmes. The expectancy, quite naturally, was that these programmes would influence employees towards a more positive job attitude and would have as a consequence, increased productivity. This study's results show³ that only a negligible minority cited inter-personal relationships with superiors as the reason for poor job attitudes. While not disputing that supervisory training is probably essential to the maintenance of good relationships in the job situation, we also know that modern industry offers little opportunity for the operation of "motivators" from managerial level down to the rank and file. Jobs hardly offer any opportunity to exercise the employee's sense of responsibility, nor do they create opportunities for achievements. In short, self-realisation is at a premium. Any man who finds his job exciting, satisfying and challenging will tolerate the "difficult" supervisor but to expect such training programmes to pay dividends beyond effects which "stability"⁴ provides is going contrary to the established characteristics of motivation. To illustrate: a more creative and initiative-challenging construction will not emerge from an engineer as a result of "fair supervisory treatment", however, to achieve the more creative design, "motivators" have to be present; his interest will have to be aroused, his talents challenged and he must feel a real sense of responsibility. In this in-

1 - HUGHES, E.C.:The Knitting of Racial Groups in Industry, Americ. Soc. Review, 1946, No.11, pp. 512-519 and WHYTE, W.F. in Money and Motivation, N.Y.1957, Harper.

2 - BLUM, T.A.:Toward a Democratic Work Process, N.Y.Harper, '53

3 - Cf. Table No 6 p.62

4 - Cf. p.129 of this investigation.

stance, the degree of creativity is in direct relationship to the degree of motivation felt.

In order to get a clearer perspective of the empirical data presented in this investigation it is suggested that Weber's definition of motive "as a complex of meaning, which appears to the actor himself or to the observer to be an adequate ground for this conduct¹" be taken as the guide for further discussion. As we have attempted to show, industry with its Western managerial methodology, largely shaped and framed in terms of Western philosophy and accepting the cultural origin of its values, constantly implemented the required modifications which were incorporated from time to time. This process of structural readaptation continued for so long that industry does doubt the validity of its standards any more. Doubts appear to arise now in a different sphere of managerial policy — the maintenance of production levels². In continuing evaluation of the empirical material as it illustrates Jewkes' summary of the problem, note must be taken of the Africans' new role in the Zambian industrial complex, since industry's standards can no longer be accepted unchallenged as the sole determinants in assessing the quality and quantity of work performed. (In all cases in the mining industry where Europeans were replaced by African Advancers the production output remained unchanged³.)

By further analysing the Africans' involvement in the Zambian industrial complex which is essentially structured upon Western philosophy, they appear to be confronted by the fundamental problems facing newly stratified groups in a society, namely, to gain full recognition as a group belonging to a different socio-cultural heritage and who in spite of the processes of acculturation and social readaptation, react differently than the Europeans to the social stimuli which are predominantly Western in character. As suggested by the

1 - "Wirtschaft und Gesellschaft", p.5

2 - JEWKES, Prof.J.: The Perils of Planning, South African Journal of Economics, Vol. 33, No.4, p.341

3 - Refer to the Zambian Chamber of Mines' Yearbook 1961 showing that production levels were maintained, albeit that mechanisation was increased which, undoubtedly, must have played its part as well.

empirical data obtained from this investigation, since a definite pattern of attitude formation has been established for both the European and the African groups employed in this study, industry, while not necessarily introducing differential treatment for its culturally-diversified workmen, will, as another alternative, have to arrive at new bases and formulae to re-evaluate the statuses it accords to both its new and traditional occupations, so as to harness the vast sources of available but hitherto untapped and thus untrained labour¹. If the diversified reaction patterns, detailed in this investigation, are accepted and scientific validity accorded to them, then it can be explained why the social structuring of industrial development, in ignoring these divergencies, will in the not too distant future progressively experience pressure from its own internal forces, which aim at retaining its place in an already-strained economic structure where labour, in all quarters demand higher wages for less time worked.

To conclude, it is suggested there ~~are~~ two general approaches to a societal pattern of industrial motivation. One is engrossed with particularistic theories whereby motivation may be explained through the dominant influence of a major social force. The other approach is analogical. Motivation is explained by the similarities that are apparent between its life-history and that of the individual. In this analogy, challenge and adaptation, maturity and development, conflict and culture concepts are interpreted as inevitable processes in the growth of society and its individuals.

Motivation to work, especially in the industrial context, is more understandable in its multiple forms when it is described as a pattern of personal and group adaptations. It is never more of one than of the other. Since it is a product of reciprocal personal and social interaction, motivation may emerge from any individual, personal or social stimulant which operates cumulatively towards an increasing of individual self-esteem¹. Either as a pattern or a process, motivation may therefore be interpreted to be the result of the functional interplay between personality and opportunity within a process of socialisation.

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¹ -This total reevaluation further implies that occupations belonging to the skilled crafts such as fitting, turning, welding, etc., will, except fragmentation of the traditional job, also have to be reorganised with regard to the training period and the definition of the ultimate job content.

P A R T V

C O N C L U S I O N

CONCLUSION AND SUMMARY OF THE
NATURE OF MOTIVATION IN THE MODEL
AND ITS RELATION TO THE HYPOTHESES

The logical inferences drawn from the various tabulated results obtained from the empirical data presented in Chapter 4 and the theoretical discussions contained in Chapters 6, 7 and 8 lead us to test the validity of the propositional statements suggested in the Introduction to this investigation on page 9.

A. ESTABLISHING THE VALIDITY OF THE PROPOSITIONAL
STATEMENTS

In the light of the discussions in Chapters 7 and 8 these propositional statements or postulates can now be termed hypotheses on the strength of the sociological orientation found in the writings of Dollard and less systematically in the work of Fromm, Kardiner and Laswell.

The position taken here has been perceptively described by Professor James Irving¹ that every statement of behaviour which throws the emphasis, explicitly or implicitly, on the actual integral experiences of defined personalities is a datum of psychology or psychiatry rather than of social science. However, every statement about behaviour or about the expected behaviour of a physically and psychologically defined type of individual, but which abstracts from such behaviour in order to bring out in clear relief certain expectancies with regard to those aspects of individual behaviour which various people share, derived from an interpersonal or social pattern, is a datum of social science².

1 - This conception of our field has been brought into our own sociological thought most clearly by Prof. James Irving of Rhodes University. It has long been adopted by social scientists overseas but has yet to obtain wide acceptance here. Since Prof. Irving has not published on this theme, the author welcomes the opportunity of recording his great intellectual debt to him here.

2 - Cf. EDWIN SAPIR's Why Cultural Anthropology needs the Psychiatrist.

B. ESTABLISHING THE STATUSES OF THE HYPOTHESES

Before detailing the hypotheses it is, first of all, necessary briefly to discuss their statuses in terms of the differences observed with regard to "cultural divergencies" which contained the elements of motivation that lead on to social inertia¹. This investigation's empirical data presented in Chapters 4 to 8 ultimately culminating into the composite tables 15A, 15B (I) and 15B (II) on pp. 86, 89 and 90 respectively allow the following introductory observations:

- a. Social systems have dominant divergences into different types of groups which permeate through all social relationships within the system even though the system maintains itself as a whole. In the Zambian Copperbelt the dominant divergence is into European and African racial groups. It follows that the dominant divergence within a changing system will inevitably produce parallel structural changes in all segments of the system, even if the cultural forms of the participating groups are different. It follows as a fundamental corollary of social and cultural readaptation, that social change is governed increasingly as change proceeds by the interacting group interests. This means that the control of social change is shifted from the primary to the secondary groups with their more varied structural patterns. Upon entering the industrial sphere the rural agricultural African was absorbed into the ranks of industrially organised Trade Unionism where his interests were guarded by the secondary group which, as a unified body, made concerted efforts, in spite of the dominant racial divergence, to achieve improved conditions of service for the one sector of the society. The primary bodies — family, kin, etc., — have no determinative bearing on his position as an industrial "workman".

¹ - Inertia is "that property of matter by which it tends when at rest to remain so, and when in motion to continue in motion, and in the same straight lines or direction, unless acted on by some external force". (Oxford Concise Dictionary). Social inertia, on the other hand, must be visualised as continual development in a certain direction, possibly accompanied by social change. In its social form it is tradition-oriented and thus conservative.

- b. A changing social system tends to continue development, as a result of the principle of social divergence, along the lines of its dominant divergency agent until this is radically altered by motivation and is wholly resolved in the pattern of the new system. This is, according to Bateman's Schismogenesis¹, "the principle of social inertia". In Zambia the dominant divergency agent, in this case the Europeans with their Western industrial and managerial structures, developed a social system which was ultimately challenged by the opposing group when it became sufficiently articulate to formulate its aims. In terms of the principle of social inertia the dominant divergency agent's position was successfully challenged and the resulting social change, restructured in terms of the other group's ideals, resulting in the formulation and the implementation of the African Advancement Programmes as they were subsequently known.
- c. The principle of social enertia is further complicated where the dominant divergence in a changing system is divided into two culture groups, such as was studied in this investigation. The minor group will be strengthened in its following by its emphasis on the major group's culture, for this emphasises the dominant divergence against the major group. This reaction must be logically anticipated because in Zambia, the variety of cultural groups comprising the population is diversified and the meaning of "work" to members of these groups differ. Unfortunately, as no previous empirical studies have been made, the writer is not in a position to state how each of these groups' traditional value systems have been modified by the rapid industrial and technological structure changes of Zambian society. These values, having served as models for the acculturation of the African, will for some time to come still form the fundamentals which traditionally form the major elements of both the Europeans' and Africans' action pattern. However, basic concepts in the technological and economic realm of the Copperbelt industrial structure, such

1 - Cf. GLUCKMAN, M: Analysis of a Social Situation in Modern Zululand, 1958, pp. 58 - 64 for a comprehensive treatment of this theme.

as the maintenance of scientific production methods, marketing and economic deployment of labour, it is felt, will continue to form the basis for new structural changes which will, in future, modify the existing pattern.

- d. Every group, immaterial of the specific social system, sets a value on its own predominant-divergence contact. This enables us to infer that where in a changing society the dominant divergence is into two culture groups each group will tend to idealise the values of its own culture, since it forms the essence of the divergence which sparks off motivation on social, cultural and economic levels. In its socio-historical context, both interacting groups, in the face of the society's structural changes taking place and the formation of new interrelationships leading to diffusion on the part of the dominant group and acculturation on the part of the minor group, each group will resist with equal determination this progressive extension of community which abolishes differences. Evidence of this determination is found in the stand taken by the European Mineworkers' Union on the retention of clause 42 in the "Agreement with the Companies" which made provision for "equal pay for equal work and responsibility". The majority of Africans, on the other hand, as detailed by Maxwell Robertson¹, showed no inclination to sever, at any time, their tribal relationships to conform uniformly to urban (industrial) social patterns where inter-tribal marriages were enacted and various ceremonies and rites neglected as if they had ceased to regard the tribal systems with a continuing regard.

By superimposing these introductory observations on the empirical material, we find that we are now in a position, having taken due cognizance of the existing cultural divergence and its influence on attitude formation due to socio-cultural patterns which was established in the two groups interviewed, to proceed with the testing of the hypotheses.

1 - ROBERTSON, M.: Travels in Northern Rhodesia, Oxford Univ. Press, 1953, Chapters 4, 5 and 7.

C. TESTING OF THE HYPOTHESES

HYPOTHESIS 1

It was postulated in Proposition 1 of the propositional system on page 9 that where differences are found in motivation in individuals in a common group framework, these differences imply differences in position in the social strata even where the individuals bear the same occupational title, receive the same salary, accorded the same promotional possibilities, etc. By taking the statistics of the composite tables Nos. 15A, 15B (I) and 15B (II), pages 86, 89 and 90 respectively, where 114 interviewees and their 4062 responses are contrasted and analysed, we find that the following observations may be made in sequential order:

- a. It is found that the first four groups in these Tables, who are all Europeans, show slight differences in the negative self feeling responses, but that the last group, the African Supervisors, show an increase and the level, as evinced by the percentages, is higher under most indicators. The reason for these differences is accounted for by
 - i. the birth of new forms of social interaction within a changing milieu. (On the Copperbelt of Zambia, the stratificatory aspirations sparked off by motivation on the part of the African, have been brought to a successful conclusion save for the fact that the implementation still displays residual uncertainties due to the status conflict situation of the African in the total system);
 - ii. readaptation of personality. (The position now is that there is a resistance to allow the social system, which is acknowledged and accepted by one segment of the society, to become a permanent readjustment yielding an equilibrium of equality or identity of the two ethnic groups. This, by implication, means that the African, taken from his customary cultural-pastoral environment, enters a new social system where motivation and conflict can be predicted. This equilibrium

stage, while developing, has not yet been reached and the immediate situation is that of cultural-personal strain on both groups, but particularly on the Africans'. Within this broad pattern, mores, interpersonal relationships and social processes manifest a "strain towards consistency with each other") ;

iii. cultural background and motivation felt by the individual actor. (These produce a range of disorganisation which develops along the following phases:

- the breakdown of group institutions: the African Advancee, who has progressed to the position of supervisor can no longer be described as being a member of the group which initially aspires towards industrial "advancement", hence the weakening of the original tribal-group-complex. Functionally, although not culturally, he is now identified with and he himself identifies himself with the dominant group.
- an increase in impersonal relationships: the essentials of the job, which has been allocated to the African Advancee remain identical as far as the management of the mine is concerned. The African who wishes to gain admission into the managerial structure of the industry is now being challenged to constantly perform set tasks with the sole criterion being skilled workmanship.
- an unbalanced stratificatory system may result: the present wage structure accentuates this anomaly. The African Advancee could earn up to £120 per month, including incentive bonuses and overtime, while his crew members, who are also Africans, and classed as Group 1 labourers, could earn a maximum of £18 per month. This economic factor

has an unbalancing effect on the integration of the African group.

- A stratified class system is created: as a result of the economic diversity outlined in the paragraph above, a new type of African mine employee has emerged as he is no longer at home with either his tribal or kin members belonging to the labour classes. He does not fit into the European category of labourer due to cultural and social differences. His position is thus marginal vis-a-vis both groups. The security, offered previously by the African "in-group", is vanishing, and in its place is now a feeling of unattached insecurity as a consequence of this stratification.

- b. As evinced by the statistical data given in Table 15A it is deduced further that the correlations of individual and social facts which are manifested in social change and its related processes (such as those encountered in Zambia with the advent of African Advancement), are the chief problems in the empirical study of motivation. Organisation, resulting from social change, evolves from habits developed to satisfy needs, and sets into operation processes which lead away from traditionally oriented customs, which energises the adaptational process. This process, in turn, becomes the active generator of motivation. It is therefore to be expected, as evinced by the data presented in Table 15A that motivation, even if it ends in equality by social accommodation of the aspiring actors, that it is also the process which changes the African tribal agricultural peasant into a motivated industrial worker who can, if given sufficient time and training, shed his cultural heritage and develop into an equally capable industrial worker at a new level of efficiency.
- c. In returning to the statistical data presented in Table 15A it is suggested, by contrasting the African and European supervisors that none may have a defined and explicit philosophy of work, but that both

think and talk about it and it shapes as an essential part of his values. These working thoughts become motivational patterns which not only affect his overt work behaviour but also determine the values he attaches to his professional growth and promotional possibilities. We suggest on the strength of the data presented, that here is no special place reserved for motivation, or attitude formation for that matter, because as it emerged from the data we find it to be a phase (as defined by him in his own culture group) which orients normatively his behaviour and value concepts. The following explanations are offered in conjunction with historical facts which might assist to explain this divergency:

- the changes in the social structure of this particular industrial group with its black and white elements working together demanded social readjustments as we have pointed out: the degree of readjustment coincided with each group's interests. This argument, by its generic nature, must logically lead on to another, namely, since every organised group, also becomes a stratified group with its own attitudes towards and definitions of work, it will display its own motivational pattern for the type of work to which it is designated. It was noted during the empirical investigation that the bulk of the African supervisors who were interviewed stated that they themselves noted their "changed attitude towards the job" since their promotion into more responsible jobs. Most of the African interviewees interpreted their promotion in their industrial occupations as a progressive "extension of their communities". This patriotism formed for them the fundamental incentive (thus the motivating force) to specialise in their particular jobs so as to attain maximum status efficiency. The only way in which they could express their ranking of "promotion" as being the most important (Table 15B (I) and Table 15B (II) must further be sought

in the historical context of African Advancement on the Copperbelt: The European Mineworkers' Union had repeatedly reiterated that it had no objection to making available to the African certain European-held jobs provided they receive equal pay and all the conditions of service applicable to the European. The implications thus arising made it clear that, in the circumstances prevailing at the time, that the African regarded this contradictory and reactionary attitude on the part of the European Union, as one which would nullify any African's entry into European-held jobs. By subsequent negotiations this bar to the African's future promotions was eliminated and hence his ranking of "promotion" during this survey must be accepted as his main motivational force.

- In contrast to the African's aspirations which formed the generating forces for his motivational pattern, the European industrial worker weights "acceptance" topmost (Table 15B (I)) since his motivational elements are mostly confined to the socio-psychological realms of his status. In giving preference to "acceptance" the European, in fact, asserts that his ability to do the job is not challenged but rather his relationships with those working over and under him. Therefore, in contrasting the two groups' motivational spectra we find that the African's assessments are chiefly governed by reasons with an economic base reinforced by a psychological element of achievement, whereas the European's assessment is chiefly based on a social relationship, i.e. whether he will be accepted and esteemed in his social execution of the job by management and by his fellow workers. In referring to Table No. 3 (p.57) it is found that "line of responsibility", the "job situation" and "promotion" are virtually always associated with long term changes in job attitudes, and that "prestige" and "acceptance" occur in

short term sequences. It can therefore be deduced that since long range attitude changes are almost always associated with greater performance effects (detailed in Chapter 5) the first three reactions, viz. "prestige", "acceptance" and "line of responsibility", are active components in maintaining and improving attitudes towards the job. The empirical data further suggests that in the case of the European employee he sees his job as being executed in a spirit of psychological circumstances governed by his own attitudes towards the job, these being undetermined by race or institutionalised differences of status. These responses categorise themselves in the psychological realm. In the case of the African interviewees these above mentioned three responses occupied no place of prominence and in their ranking, they in fact, rate "acceptance" only third in Table 15B (I).

- It suffices to reiterate that the African in giving "promotion" the top ranking, underscores the fact that his motivational pattern stems from an economic base initially.

d. By superimposing the empirical data obtained in Table 1 on Table 15B (I), the effectiveness of "acceptance" for producing positive job attitudes further underscores the divergency which exists between the African and European motivational patterns. This divergency, which has been established thus far, must be seen as subjective-objective interpretations of the Europeans' and Africans' culturally based motivational urges. This cultural divergence is accentuated by the data of Table 1 because as was shown in the commentary on the Table, only the first five responses contribute towards increasing job satisfaction and employee stability. These responses, viz. prestige, acceptance, line of responsibility, the job situation and promotion

which covers 75% of the total responses are classified as the psychological realm in which jobs are executed. The remaining 11 responses, which cover only 25% of the total responses are solely concerned with the job itself and these responses were singled out for prominence by the Africans in their definitions of "attitudes towards the job". It must therefore be recognised that the responses, which were chiefly cited by the African as being important, are rarely instrumental in bringing about positive feelings toward the job. These responses, therefore, do not form job attitudes nor do they assist in doing so but rather accentuate the characteristics and the context in which a job is done.

- e. An important fact obtrudes from the foregoing data: only a third of the responses (five out of a possible sixteen) which have significance in defining the components of job satisfaction were given prominence by the European interviewees. The Africans, on the other hand, cited responses primarily concerned with the job situation (refer Table 15B (I).) The explanation for this divergence cannot be isolated nor can any one reason be given for this but it must be sought in the historical vicissitudes of the Africans' struggle to gain full admission into all industrial occupations. As was shown in Table 9 and in its commentary, "the responses with the greatest frequency in the positive sequences which are prestige, acceptance, line of responsibility, the job and promotion are termed basic job satisfaction indicators". On the strength of the empirical data therefore, job satisfaction indicators revolve around the performance of the job, in the case of the Europeans, is the job itself with its psychological connotations, and in the case of the Africans it is the job situation with its related practical problems and implications. That this is so we suggest that the divergency be sought in the cultural backgrounds of the groups interviewed and is not definitive of any good or bad qualities in either group. It merely shows up the divergence in job attitude formation.

- f. The relational pattern, given in (d) and the motivational patterned cultural divergencies, outlined in (e), combine therefore to make motivation an inclusive concept by being both a component of an action pattern and a social process. Motivation is therefore a dynamic component, so far as it directs, ends and organises means in the action system, which determines the velocity and the depth to which the social restructuring of a society can be subjected.

The differences which are thus found in the motivational patterns in individuals in a common group framework are therefore due to differences which have a cultural base and is not affected by the social strata of the actor even if they bear the same occupational title.

HYPOTHESIS 2

It was postulated here that where differences are found in the social strata of one individual or group from the other individuals or groups bearing the same occupational title, such differences may induce tension expressed by lack of satisfaction in the job role in the individuals or groups placed lower in the hierarchy of grading in factors other than occupation.

We believe this hypothesis to have been crucial in forcing a redefined role of the African industrial worker in Zambia, more so as it involves a radical change in the internal value system of the industrial society and the European group's agreement to redefine inter-group relationships at a new level distinct from that of times before the advent of African Advancement. By returning to the statistics of Table No. 15A, we find that the African supervisors (as the last group listed) show an increase in all the indicators and the level, as evinced by the percentages, and also in the rank order tables (15B (I) and 15B (II)), is very much higher than that for the four European groups. If we are to combine the results of this table with the theoretical argument contained in Chapter 7 et seq. we are, in fact, contrasting two cultures in the same societal and occupational structures. In $\frac{19}{20}$ ths of the Rhokana African labour force we have tradition-oriented personalities exposed to modern industrial enterprise and require them to exclusively focus attention on securing external behavioural conformity. Furthermore the

African in this industrial society is not left with the choice of working or not working as he is traditionally accustomed to do it. By his entry into the industrial society he is placed in the influence sphere of the European personality who is usually of a responsible nature, ambitious and who strives to obtain money or fame or some lasting achievement in the field of his job activity.

However, in the period following the African Advancement Programme, when Africans achieved equality status in obtaining and performing all jobs (some of which were previously exclusively done by Europeans), the Zambian societal and occupational structures changed. The following changes are representative:

- a. departures from or modifications of accepted standards of social behaviour (as a result of the Africans' promotions into higher graded jobs they qualify for accommodation in European housing areas which in turn, demanded a complete break from traditional modes of behaviour);
- b. the reshaping of social and kinship bonds (Africans who had advanced into higher graded jobs were detached from their old acquaintances and not fully accepted by the Europeans);
- c. the inapplicability of accepted traditional social codes (the African "advancee" had to reshape and readapt himself not only in his new job structure but also in his new social environment);
- d. the origination of new concepts regarding culture, socialisation and the welfare of the individual (advanced Africans purchased expensive radio and television sets, European-type furniture, motor vehicles and clothes in efforts to conform. Tribal dancing to the rhythm of tom-toms is fast becoming a relic of the past and hardly exercised in the industrial complex.)

As a result of these structural changes in the Zambian industrial society we find that the general pattern of motivation is being affected in the following ways :

- a. as work motivations are to a very large extent interlocked with and determined by prevailing cultural concepts, the African cannot accept and partake

- in his job as the European¹;
- b. the Africans' culture concepts still form an integral part of a complex set of beliefs which are traditionally based² ;
 - c. in the case of the African values and practices are still largely determined by the social group³;
 - d. work motivations with the African, in common with other cultural attitudes and beliefs are in the process of being modified as a result of changes in the institutional and technological structure of the industrial society⁴.

Cognizance of this transitional phase through which the African is passing must be taken. The principles involved in African Advancement was met by European resistance which resulted in individual and group tensions. A new equilibrium had to be established to produce a patterned interrelationship of a new type distinct from previous times. This interaction stimulated motivation along four different fronts:

- i. new patterns of behaviour leading to reciprocating attitude formations (we have endeavoured to show that a testing process takes place when cultural readaptations are introduced: the principal characteristics of this specific social reorganisation which took place on the Copperbelt show that motivation, however differently defined by the two groups in this investigation, is structured by its function.)
- ii. the acquisition of material cultural objects, previously unknown to the tradition-directed individual, to satisfy newly acquired needs;
- iii. the development of new behaviour codes to regulate the operations of these new sets of interrelationships (the African advancee who was promoted from the ranks of general labourer, in many cases found the promotion to supervisor exposing his limitations.)
- iv. the development of respect for and an appreciation of new behaviour patterns.

1 - Vide Tables No. 15A, 15B (I) and 15B (II).
2 - Vide Chapter 8 of this investigation.
3 - Vide Chapter 7 of this investigation.
4 - Vide Tables 15A, 15B (I) and 15B (II).

HYPOTHESIS 3

The postulate in this instance was that any tension arising out of real or imagined disadvantageous social positioning would be resisted by the group or the individuals not disadvantaged.

African labour in Zambia is largely drawn by the migratory process from a peasant population with a subsistence economy which allowed industry to operate on a low wages system — indeed nonrational in Weber's sense, so far as wages were only part subsistence with the remainder being derived from agriculture. As industry developed and the African industrial worker became more articulate in restructuring his newly-acquired social environment, a wholly rational wage system emerged and the migratory system virtually ceased. The African industrial worker became wholly dependent on wages alone. The consolidation of a living wage **could** be attained only by increased organisation and a new basis of cohesion of which the model was taken from the European Trade Union. With the full acceptance of African Advancement the matter ceased to be a question of subsistence wages, but was transformed into rigid demands for the upgrading of labour's status. This posited a direct challenge to the dominant group who was the European on the one hand and to industry on the other¹.

It is clear that the balance of power had now shifted and all parties (i.e. industry, the dominant European group and the government) were forced to accommodate the new balance of power. By 1963 when this investigation neared its end the economic and political balance of power were in African hands.

HYPOTHESIS 4

It was postulated that the social stratificational position of newcomers to the occupational stratum is at a disadvantage relative to those who were historically located earlier in the group in time. As a group (apart from race altogether) Europeans precede Africans in the industrial sphere of Zambia and are thus dominant or deemed to be so.

Differential results may also be expected within the groups thus stratifying it and yielding tension as in Hypothesis 1.

1 - This aspect was discussed by the writer in his M.A. Dissertation (unpublished), Chapters 11 - 14 pp. 92-114.

This hypothesis has already been covered partially in Hypothesis 3 and more fully in Hypothesis 1 where it was shown that the mode of adaptation by the participants is culturally based and can be increased by active leadership. This resulted in the development of codes to describe or even to regulate this new social restructuring .

HYPOTHESIS 5

It was postulated that the position of newcomers is different from, and independent of, the social position of those who are earlier entrants into the occupational level. In the second part of this postulate it was asserted that identity of occupational levels does not, necessarily, mean identity of social levels and thus exhibit the same motivational trends.

This postulate is covered in full in Postulate 4, but it must however, be added that since all social processes are modified in so far as they are incorporated within, or arise from, the struggle for existence of all newcomers' positions immaterial of race and colour, into any industrial sphere are different from those who have already gained admission. By referring to the Secondary Derivation Indicators in the positive self feeling responses given in Table 15B (I) it is significant that the Europeans ranked "acceptance" first, while the Africans ranked "prestige" the most important. In this investigation we have defined Secondary Derivations to be "secondary to the source from which they emerge", which directly reinforces the divergent patterns detailed in Hypothesis 1. By logically continuing the argument given in Hypothesis 1 we find that the Secondary Derivations, since they originate from a primary source that they, in fact, validate the hypothesis as being the basic defining indicators demarcating the European and African workers' motivational patterns...

The second part of this hypothesis, namely that the identity of occupational levels is not necessarily the same as that of social levels, has been fully discussed in Hypothesis 1.

HYPOTHESIS 6

Finally, it was postulated that as groups increase in knowledge and skills, if still separated by other attributes, they will become more separated if stress is placed on the separated attributes but will be assimilated if skill iden-

tity is attached and less stress is placed on the separative attributes. The motivational situation is thus dynamic, positively or negatively and can be increased or diminished in speed and direction by changes in attitudes.

By referring to Table 15A's commentary and superimposing it on the argument employed for the proving of Hypothesis 1 we find that this hypothesis is proven at the logical level. The technological skills exercised in the industrial society therefore accelerates the shift from tradition-orient- edness to external-directedness. As was shown by Table 15A and by the discussion contained in Hypothesis 1 no changes of function can occur without changes in the structure as well. In the Zambian industrial complex this transition from primary to secondary groups and to their more varied structural pat- terns, is yet another proof of the basic sociological postu- late that individuation and socialisation are aspects of the same moving societal pattern of both attitude formation and the motivation to work. For these reasons, motivation assumes the characteristic of being an action pattern in a social pro- cess and our empirical data further suggests that the Africans' behaviour and attitude formation — thus their moral code in action — compared with the Europeans', is governed by an equally valid behaviour pattern which is founded on differ- ent culture codes of social readjustment and behaviour.

This social restructuring and personal readaptation- al programme, in spite of the fact that it is true that growing up within a specific cultural system remains important, calls to attention the fact that in the moulding of personality, a societal pattern of social organisation is more extensive than its material foundations which is not inclusive of all the interests of the individual. For these reasons, we find that motivation is, and will remain as long as there is inter- action between groups, an action pattern in a social process which should be interpreted as the result of the functional interplay between personality and opportunity within a process of socialisation.

* * * * *

In summary, we began this investigation by detail- ing the preparations and the results obtained from the two preliminary investigations. From the experience gained we

formulated a six point propositional statement contained in the Introduction, and then proceeded to offer empirical data cognate to this statement which we condensed into statistical tables, which were tested by the Chi Square Test for levels of confidence. We, thirdly, analysed the empirical data in the form of comments given immediately after each table, and, fourthly we have attempted to crystallise the empirical data by testing it against our theory of motivation which was progressively developed in Chapters 6, 7 and 8.

* * * * *

To conclude, therefore, we find that to change poorly defined company policies to well defined policies or to change poor supervision to closer supervision, or even by establishing near perfect working conditions that these
WILL NOT LEAD TO POSITIVE WORK ATTITUDES.

The empirical data suggest that the solution be sought where the problems in reality exist, i.e. to develop and sustain those elements in job attitudes which have the potential of promoting worker stability and satisfaction and which were found to be

PRESTIGE

ACCEPTANCE

LINE of RESPONSIBILITY

THE JOB ITSELF

and

PROVIDE A REASONABLE OPPORTUNITY FOR PROMOTION.

* * * * *

A positively motivated worker should emerge, who will not only appreciate the enrichment of human dignity which in itself positively contributes towards the establishment of industrial harmony but also allows for the development of a feeling of pride in the execution of his tasks.

-----ooOoo-----

END

APPENDIX I

QUESTIONNAIRE

AS I HAVE TOLD YOU, I WANT YOU TO TELL ME ABOUT A PERIOD IN YOUR LIFE WHEN YOU FELT PARTICULARLY GOOD/BAD ABOUT YOUR JOB. THIS INCIDENT MAY BE EITHER A LONG RANGE OR A SHORT RANGE SITUATION AND IT NEED NOT BE IN YOUR PRESENT JOB.

1. How many months or years ago did you experience this situation?
2. How long were you in this situation?
3. Tell me exactly how the situation arose?
4. How did it end?
5. Were you the only person affected at the time?
6. Why did you feel the way you did?
7. Did this situation have any effect on you?
8. Would you say that it also affected your job?
9. In what way?
10. Could you say how long this was noticed by you?
11. Did it change the way you got on with your fellow workmen?
12. Were there any changes in your home life as a result of this?
13. Did this situation have any effect on your feeling towards the Company or did you look upon the incident as an isolated occurrence?
14. Do you think that this period affected your career?
15. Do you think that a similar situation could again crop up in your career?
16. If yes, why and what would the effect be this time?
17. If no, why not?
18. Did this situation (which you have described), affect you in any way which we did not mention?
19. Upon reflecting now, how could this situation have been avoided or enhanced?

20. What are your views to the situation you have just described?
-

FOR THE ALTERNATE DESCRIPTION

21. Could you now describe another situation where you felt particularly good/bad about your job, preferably a short range/long range sequence?

APPENDIX II

Complete breakdown of Primary Responses

1. Prestige
 - a. Not related during interview.
 - b. Satisfactory execution of the job.
 - c. Suggesting something about the job (solution of problem).
 - d. Saved the company money.
 - e. Failure in the job.
 - f. Satisfied with the results obtained.
2. Acceptance or rejection
 - a. Not related during interview.
 - b. Work praised (with or without reward given).
 - c. Work accepted.
 - d. Sound suggestions not accepted.
 - e. Bad work criticised (with or without punishment).
 - f. Good work criticised (with or without punishment).
 - g. Suggestions accepted by line management.
3. Line of Responsibility
 - a. Not related during interview.
 - b. Always worked without direct supervision.
 - c. Responsible for own efforts and job targets.
 - d. Responsible for efforts of others.
 - e. Lack of responsibility.
 - f. Added responsibilities without formal advancement.
4. Job situation
 - a. Not related during interview.
 - b. Routine and/or repetitive.
 - c. Varied and/or interesting varieties.
 - d. Challenging and/or creative.
 - e. Too difficult.
 - f. Too easy.
 - g. Only doing part of the entire job.
 - h. Doing the whole job.
5. Promotion
 - a. Not related during the interview.
 - b. Received advancement (expected).
 - c. Received advancement (not expected).

- d. Did not receive advancement.
 - e. Demotion.
6. Salary/wages
- a. Not related during the interview.
 - b. Received unexpected increase.
 - c. Did not receive expected increase.
 - d. Amount of salary.
 - e. Favourable/unfavourable comparison with others doing same job.
7. Satisfaction
- a. Not related during interview.
 - b. Objective evidence to show growth in the job.
 - c. Objective evidence to show advancement in the job.
8. Job Status
- a. Not related during interview.
 - b. Having a given and accepted status.
 - c. Not having a given and by others accepted status.
9. Interpersonal Relations (with superiors)
- a. Not related during interview.
 - b. Enjoying friendly relationships.
 - c. Having unfriendly/strained relationships.
 - d. Has a healthy respect for his supervisor.
 - e. Does not respect his supervisor.
 - f. Has full support/cooperation of supervisor.
 - g. Supervisor does not support or cooperate.
 - h. Trustworthy supervisor.
 - i. Dishonest supervisor.
 - j. Supervisor discusses the job.
 - k. Supervisor does not discuss the job.
10. Interpersonal Relations (with subordinates)
- a. Not related during interview.
 - b. Sound relationships exist.
 - c. Poor relationships exist.
 - d. Sound personal relationship exists with subordinates.
 - e. Poor personal relationship exists with subordinates.
 - f. Is popular with his men.
 - g. Is unpopular with his men.
11. Company Policy
- a. Not related during interview.

- b. Efficient organisation.
- c. Harmful/ineffective organisation.
- d. Sound personnel policies.
- e. Harmful personnel policies.
- f. Identification with company ideals and aims.
- g. Disagreement with company ideals and aims.
- h. A company with status and respect.
- i. A company without status and respect.

12. Supervision

- a. Not related during interview.
- b. Efficient and competent.
- c. Inefficient and incompetent.
- d. Delegation of responsibility usually done.
- e. Delegation of responsibility never done.
- f. Critical.
- g. Unfair.

13. Conditions of work

- a. Not related during interview.
- b. Isolated.
- c. In social surroundings.
- d. Good/healthy physical conditions.
- e. Poor/unhealthy physical conditions.
- f. Sufficient tools and/or instruments.
- g. Insufficient tools and/or instruments.
- h. Too much work.
- i. Too little work.
- j. Wrong type of work.

14. Personal Life

- a. Not related during interview.
- b. Domestic problems.
- c. Community and/or outside work problems.
- d. Domestic needs.

15. Security

- a. Not related during interview.
- b. Feels that he is in a good job.
- c. Feels that he might lose his job.
- d. Insufficient job security (company instability, etc.).
- e. Sufficient job security.

16. Work mates

- a. Respected by his friends on the job.

- b. Not respected by his friends on the job.
- c. Enjoys working with the present group of work mates.
- d. Does not enjoy working with the present group.
- e. Strained relationships exist with the present group.
- f. Friendly relationships exist with the present group.

APPENDIX III

Complete breakdown of the Secondary Derivations

1. Acceptance
 - a. Not related during interview.
 - b. Primary sources perceived as source of feelings (leading to the interviewee's feeling of acceptance).
 - c. Primary sources perceived as source of failure to obtain acceptance.
 - d. Primary sources perceived as source of rejection.
2. Prestige
 - a. Not related during interview.
 - b. Primary sources perceived as source of achievement.
 - c. Primary sources perceived as source of failure.
3. Satisfaction
 - a. Not related during interview.
 - b. Primary sources perceived as leading to enhanced status.
 - c. Primary sources perceived as factors blocking growth.
 - d. Primary sources perceived as steps leading upwards in advancement.
4. Promotion
 - a. Not related during interview.
 - b. Feelings of advancement derived from changes in the job.
 - c. Feelings of retardation derived from changes in the job.
5. Responsibility
 - a. Not related during interview.
 - b. Primary sources leading to feelings of responsibility.
 - c. Primary sources leading to diminished responsibility.
6. Group feeling
 - a. Not related during interview.
 - b. Feelings of belonging socially.
 - c. Feelings of rejection socially.
 - d. Feelings of belonging sociotechnically (i.e. the job).

- e. Feelings of rejection sociotechnically.
- f. Definite negative feelings toward the working group.
- g. Definite positive feelings toward the working group.

7. The Job

- a. Not related during interview.
- b. Primary sources leading to feelings of pride in performing the job or task.
- c. Primary sources leading to lack of interest in performing the job or task.

8. Status

- a. Not related during interview.
- b. Primary sources leading to feelings of increased status.
- c. Primary sources leading to feelings of diminished status.

9. Security

- a. Not related during interview.
- b. Primary sources leading to feelings of security.
- c. Primary sources leading to feelings of insecurity.

10. Salary/wages

- a. Not related during interview.
- b. Primary sources perceived as factors leading to increased income.
- c. Primary sources perceived as factors not providing the opportunity to improve income.
- d. Primary sources perceived as source of increased earning.
- e. Primary sources perceived as source hampering the earning of more money.

APPENDIX IV

Complete breakdown of Effects resulting from the Primary Sources and their Secondary Derivations:

1. Interpersonal Relations effects

- a. Not related during interview.
- b. General statements confirming positive effects.
- c. General statements confirming negative effects.
- d. Distinguishable positive effects on domestic life.
- e. Distinguishable negative effects on domestic life.
- f. Distinguishable positive effects on friends (socially).
- g. Distinguishable negative effects on friends (socially).
- h. Distinguishable positive effects on work mates.
- i. Distinguishable negative effects on work mates.
- j. Strained interpersonal relationships all-round.
- k. Easy interpersonal relationships all-round.

2. Attitudinal effects

- a. Not related during interview.
- b. Positive feelings toward supervisor.
- c. Negative feelings toward supervisor.
- d. Positive feelings toward company.
- e. Negative feelings toward company.
- f. Positive feelings toward job.
- g. Negative feelings toward job.
- h. Positive feelings about security.
- i. Negative feelings about security.
- j. Full of confidence generally.
- k. Without any confidence generally.

3. Performance effects

- a. Not related during interview.
- b. General statements regarding positive change in quality of work.
- c. General statements regarding negative changes in quality of work.
- d. General statements regarding positive increased volume of work.
- e. General statements regarding negative decrease in volume of work.

- f. Positive changes in rate or amount of time spent on job.
- g. Negative changes in rate or amount of time spent on job.
- h. Specific reports of positive changes in the nature of the job.
- i. Specific reports of negative changes in the nature of the job.
- j. Reports of positive changes in both rate and quality of work.
- k. Reports of negative changes in both rate and quality of work.
- l. Statements affirming lack of change in amount and quality of work.

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