

PERSONAL CONSEQUENCES OF THE
STRESS ON ACHIEVEMENT IN
AMERICAN SOCIETY

Thesis for the Degree of Ph. D.
MICHIGAN STATE UNIVERSITY

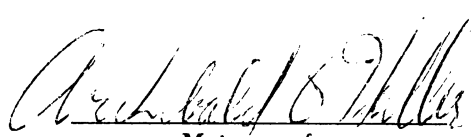
William H. Jarrett

1961

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PERSONAL CONSEQUENCES OF THE STRESS
ON ACHIEVEMENT IN AMERICAN SOCIETY

By

William H. Jarrett

AN ABSTRACT OF A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
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ABSTRACT

PERSONAL CONSEQUENCES OF THE STRESS ON ACHIEVEMENT IN AMERICAN SOCIETY

By William H. Jarrett

The problem concerns the personal effects of the pervasive emphasis on achievement in American society. The subjects are 368 seventeen-year-old high school boys living in Lenawee County, Michigan. Conceptually, the thesis builds on Merton's (1957) essay on social structure and anomie wherein variant role responses are posited as results of a scarcity of means relative to highly stressed cultural goals.

A review of the literature shows that four variables, social status, parental stress on achievement, independence, and ability, are associated with high educational aspirations, a measure of life-goals. All of these, except independence, are explicitly included in Sewell and Haller's (1959) post hoc explanation of an observed negative relationship between social status and personality adjustment. These five variables, called antecedent variables, are shown to be major sources of means-scarcity relative to future achievement. The linkage of the literature on anomie and achievement furnishes the basis for predictions about the effects of lack of means in individual cases.

Two possible effects of this means-scarcity, localized alienation and nervous tension, are discussed. The former is interpreted as (objective) powerlessness relative to possible achievement. Both theoretical and

empirical justification is presented for reinterpreting the results of Sewell and Haller to conform to this view of alienation. Predictions are made that both alienation and nervous tension will vary inversely with availability of means.

Fritz Heider's (1958) theorem that imbalance leads to stress is applied to the problem. Situational balance is shown to be a function of the degree to which a person's life-goals, environmental facilitation and personal power are compatible with the requirements of the social order with respect to achievement. In this framework, alienation and nervous tension are hypothesized to be effects of imbalance.

Methodologically, the five antecedents are used to characterize each subject in terms of a five-dimensional attribute-space. Functional and pragmatic reduction of the attribute-space yields five achievement-types and the hypotheses predict the rank-orders of these types on the indices of alienation and nervous tension.

The hypotheses correctly predicted the rank-orders of the types on the index of alienation; however, the results suggested that the hypotheses were somewhat insensitive to particular interaction-effects of independence and ability. The hypotheses failed to accurately predict the rank-order of the types on the index of nervous tension, although the results confirmed previous findings that nervous tension tends to vary inversely with social status. It follows that localized alienation may, but nervous tension may not, be interpreted as a personal consequence of imbalance among the success goals of youth and certain specific means available for their achievement.

Suggestions for future research focus on the ways in which stress may be reduced. One possibility is avoiding those persons and situations that actively contribute to stress (Festinger, 1957); thus, persons high on alienation might seek out social relationships that did not involve achievement-oriented activity, giving rise to differences in social participation between persons high and low in alienation. Two personal consequences follow, viz., redefined value-attachments and differences in personality organization. The major contribution of the study lies in the linkage of localized alienation in adolescents to the considerable literature on anomia in adults.

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Writing a thesis requires the marshalling of all the resources at one's command. I would like to take this opportunity to publicly acknowledge the resources which I have been fortunate enough to have at my disposal. A. O. Haller made his Lenawee County data available to me and for this, and for his continued insistence on high standards of craftsmanship, I am most grateful. Whatever excellence I have achieved in this work has been largely due to his instruction and encouragement. I am indebted to the members of my committee, particularly Jay Artis and Charles Wrigley, for their advice and comments on my work. I have spent numerous hours in conversation with Eugene Erickson and his constructive criticism has been most helpful. I. W. Miller patiently guided me through the initial intricacies of the Lenawee County data and to him, and to Shailer Thomas, who contributed to my understanding of the Cattell test, I am grateful. Finally, I would like to acknowledge the assistance of the staffs of the Tabulating Service and Computer Laboratory of Michigan State University for their aid in tabulating the data used in this thesis. Throughout the past eighteen months, my wife has willingly stopped her work and looked and listened to my problems and to her, and our children, who refused to pay any attention to anyone's problems, I owe a substantial debt of gratitude.

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CHAPTER I

INTRODUCTION

Purpose of the thesis

The purpose of this thesis is to develop and test hypotheses about the personal effects of the emphasis on success in American society.

The Problem

The problem concerns the impact of this emphasis on seventeen-year-old boys in terms of (a) their own commitments to the success goal and (b) the interaction of their commitments with given expectations of others. Predictions are made with respect to two consequences of (a) and (b), viz., localized alienation¹ and nervous tension.

Contributions of the thesis

The contributions of this study lie in several spheres. First, a possible link with "anomie" is forged through the isolation of certain situational correlates of localized alienation, which correlates have previously been found to precipitate anomie. These situational factors, when combined with specified personal orientations, are shown to place the person in an imbalanced situation for which only a limited number of resolutions are possible. One solution is "anomia" or anomie as subjectively experienced; another solution is localized alienation which may be the temporal antecedent to anomia in adults.

¹This concept is fully discussed in Chapter II. Basically, alienation (as used here) refers to a condition of "self-to-others" distance (Nettler, 1957) or estrangement. Two particular "others" are specified, the family and the school, hence the affixing of the adjective, localized, to distinguish this usage from the more pervasive sense of estrangement that is generally indicated by the term in current literature.

Second, this study illustrates how the careful application of the logic of investigation helps in separating antecedent from consequent variables. Using the organism-environment framework, certain variables are extracted from the relevant literature, then placed into a theoretical relationship with each other through use of Heider's theorem of cognitive balance. Use of this model facilitates prediction since it demands a precise statement of a delimited set of variables. Once this has been done, the various combinations of variables can be considered and hypotheses for each combination derived. Then and only then are the data categorized. Given this procedure, the so-called "blinding" effect of theory is minimized. A specific result of this procedure being employed is the derivation of a set of attributes which are said to "maximize" commitment to the success-goal and "minimize" the effects of imbalance. The effects of imbalance are cast in the form of predictions about localized alienation and nervous tension.

Scope of the thesis

Inferentially, the study is limited to 368 seventeen-year-old boys living in Lenawee County, Michigan in the spring of 1957. Substantively, generalizations are restricted to similar samples in highly industrialized, open-class societies, though the parameters of these societies cannot be specified on the basis of present information. Finally, certain assumptions are made to facilitate analysis and the scope of the study is limited by the degree to which the assumptions are valid.



Organization of the thesis

Following this introductory chapter, a conceptual statement of the hypotheses is made in Chapter II. There the relevant literature is reviewed, the antecedent and consequent variables extracted and placed in a context which permits deduction, and the final section contains a derivation of the conceptual hypotheses for each combination of the antecedents as it bears on localized alienation and nervous tension. Chapter III presents the description and evaluation of the various measurement techniques used in the study, and contains a rather extended description of the selection of items used to measure alienation and nervous tension. Chapter IV begins with an operational statement of the hypotheses, then presents the results and analyses of the hypotheses in terms of their predictive ability. Chapter V summarizes the study and contains a discussion of the findings viewed in their capacity to generate further research.

CHAPTER II

CONCEPTUAL BACKGROUND OF THE HYPOTHESES

INTRODUCTION

Purpose of the chapter

This chapter lays the groundwork for the hypotheses. Immediately below there is a brief statement on nomenclature, followed by an enlarged statement of the problem. This statement leads into a review of the relevant literature, the result of which is the extraction of the antecedent variables. Then the cognitive balance model is introduced to link the antecedents with the consequents. The literature on certain consequences of imbalance is then summarized and the chapter concludes with a derivation of hypotheses which are applicable to all combinations of the antecedents.

Nomenclature

Science deals with reality in terms of metaphors or models. The model employed here is that of organism interacting with environment. The term actor is used to denote the abstraction from the organism, and object denotes the abstraction from the environment. Here, actor denotes a person, while objects are of two kinds, social and nonsocial. It is important to note that interaction occurs only with social objects (other persons or collectivities) while nonsocial objects may be either physical or cultural entities. Characteristics predicated of the actor alone are called person-attributes; all others are termed situational or environmental. The term orientation links persons to relevant objects in their environments; if one wishes, "attitude" may be substi-

tuted for orientation without any meaning being lost. Finally, frequent references will be made to cultural systems, which have three important aspects for this study; (1) they are objects of orientation (nonsocial things that can be cognized by persons), (2) they are institutionalized in social systems, and (3) after learning occurs, they may be said to have been internalized.

THE PROBLEM

Background

The empirical concern of this thesis is the area of "social structure and anomie." Conceived by Durkheim and placed into the main stream of interest by Merton (1957), the issue involves a situation in which persons are required to strive for a goal without adequate means to attain it. In American society anomie is said to stem from the discrepancy between the pervasive emphasis on success and the fact of socially structured obstacles to success (Merton, 1957, p. 184). The result is a stress which impinges upon nearly every member of the society, with varying effects. Although the term "anomie" has been used to denote normlessness, as well as ambiguous norms, in this study it denotes an ambivalence toward norms, such that both conformity and deviation are accompanied by misgivings (Johnson, 1960, pp. 557-558). When anomie is predicated of persons rather than social systems it is called "anomia" (Srole, 1956).



The Problem

Given anomie as one effect of what might be called a "means-end" disjunction, considerable attention has been given to other effects of the same condition. Recently, two papers have appeared that address themselves to the personal effects of the disjunction in a parallel manner. One of these, Cohen's Delinquent Boys: The Culture of the Gang (1955), proceeds from a speculative position and attempts to account for the development and maintenance of a delinquent sub-culture among adolescents in terms of psychological mechanisms. The basis of these mechanisms is a reaction-formation engendered by the discrepancy between the success-goal and the available means. The other paper (Sewell and Haller, 1959) begins from an empirical base and presents an inductive explanation of an observed negative relationship between socio-economic status and personality adjustment, independently arriving at the same set of antecedent conditions as was posited by Cohen. Sewell and Haller's paper furnishes the point of departure for the present analysis, an inquiry into the differential personal effects of status-induced stress on success and achievement in American society. Since their post-factum explanation summarizes most of the theory implicit in the literature on anomie, their digest is quoted below:

1. The early socialization of the lower-status child results in the internalization of values and the development of behaviors characteristic of the lower-status family and neighborhood in which he is reared.
2. When the lower-status child extends his activities into the larger social environment of the school and the community, he encounters many values and behavior expectations that are quite different from those of his family and neighborhood.

3. He is made to feel that some of these values and behaviors are superior to those of his own family and neighborhood, so he tries to adopt them.
4. Since these values and behaviors are in conflict with those of his family and neighborhood and since the low status position of his family in many ways inhibits the behavior dictated by them, he experiences tension states which may be manifested in (a) concern over the social status of his family, (b) concern over his ability to perform up to expected levels, especially in school, (c) rejection of his family since its members are perceived by him as responsible for his inability to behave according to his higher status values; and finally, (d) a syndrome of nervous behavior indicative of general anxiety (p. 519).

This digest contains, implicitly and explicitly, the variables to be utilized in this thesis. Taken from their context, these are (1) status, (2) parental cultural standards as presented to their children for adoption, (3) the offspring's life-goals, (4) relevant means for goal-attainment and (5) a set of reactions on the part of the persons involved. Methodologically, (1), (2), (3) and (4) will be treated here as "antecedent variables," while (5) will furnish the basis for the "consequent variables," localized alienation and nervous tension.² The next three sections of this chapter develop these concepts more fully so that hypotheses can be derived to predict the occurrence of (5).

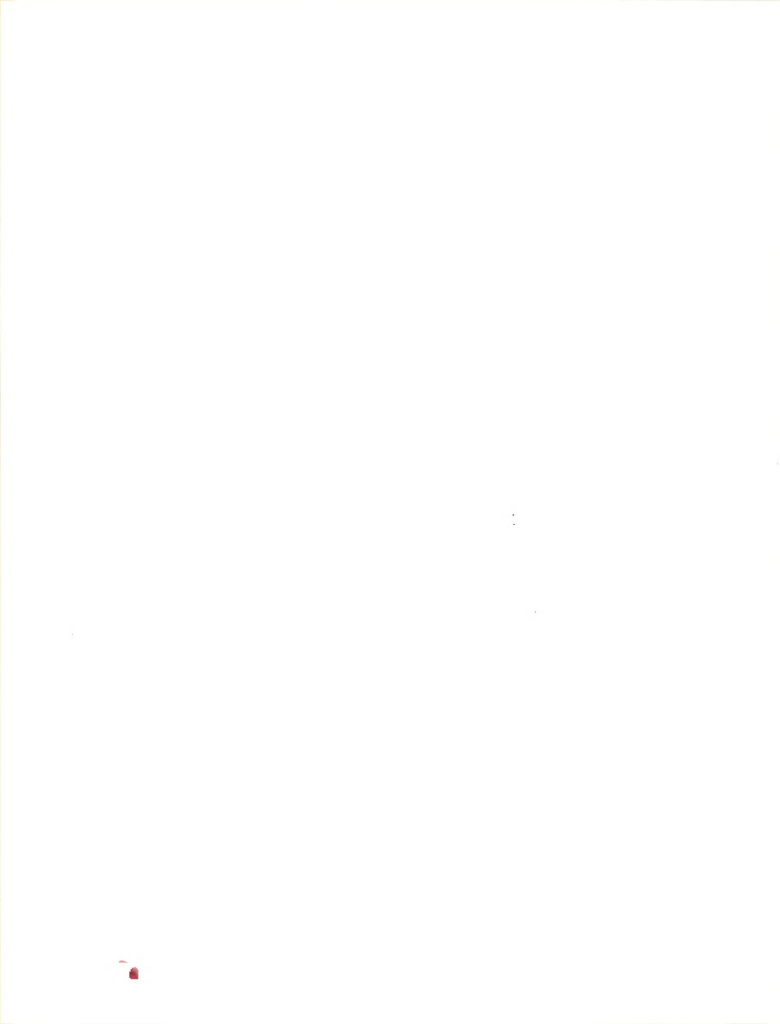
²The terms "antecedent" and "consequent" are used in preference to the traditional usage, independent and dependent variables, because we wish to speak of interaction among the antecedents and it seems illogical to speak of interaction among independent variables (Wrigley, 1959). Further, in this thesis, the terms "variable" and "attribute" are used as synonyms, recognizing that at times the former refers to a continuous characteristic and the latter to a dichotomous characteristic, as the terms are used in other works.



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THE ANTECEDENT VARIABLES

Introduction

The first part of this section develops the concept of life-goals, the fulcrum of the thesis. The second part discusses the situational variables, socio-economic status and parental expectations; they are called "situational" because they are "givens" to the person and constitute conditions of his action. The third part is concerned with the person variables, ability and independence, so-called because they are predicated of the person alone. Throughout this section the focus is on the empirical relationships among the antecedents, particularly as they cluster around life-goals. The remaining sections of this chapter focus on the effects of this clustering on individuals.

Life-goals

Literature on social mobility and social stratification commonly points to education as one of the chief mechanisms of upward movement in the status hierarchy. Regardless of why this is the case, the choice of the person with respect to education carries with it a commitment to one of several life-styles, at least in American society. Given the societal emphasis on elementary and secondary education for all new members, it is not until late high school that the person must make this commitment for himself. Regardless of what thoughts he might have earlier, at this point he must declare himself with respect to future education. Depending on the choice, he either signifies his intention to enter the occupational world immediately at a rather low level or indicates his desire to enter it at a higher level at a later date, using post-high school training as a vehicle. For this reason,



social scientists tend to accept educational aspirations as a crude indication of the strength of a person's commitment to the success-goal, recognizing that the indicator itself explains little of the dynamics of the commitment-process.

The elements of this commitment have been discussed under the rubric of the "achievement-syndrome" (McClelland, 1953). Rosen (1956) summarizes much of the literature and suggests that there is indeed a "dissimilar concern with achievement" (p. 204) in the various social classes, which concern involves two elements; (1) a psychological factor called "achievement-motivation" and (2) a cultural factor, "value-orientations" which are seen as "defining and implementing" achievement-motivated behavior. Rosen's data offer evidence of the imperfection of educational aspirations as an indicator of achievement-motivation since ability and aspiration do not go hand in hand with motivation and value orientations (p. 209):

Value scores . . . proved not to be related to academic achievement, although they are associated with a kind of behavior that is, if not in itself an act of achievement, at least a factor in social mobility It was found that an individual's value score, but not his motivation score, is related to educational aspirations.

This thesis focuses on one aspect of commitment, choice with respect to college training. Rosen's paper provides evidence that this choice is (1) empirically relevant to commitment to life-goals and (2) somewhat delimited in its scope, viz., it is related to value-orientations but unrelated to motivational components.

Turning from the elements of commitment, it is important to ascertain the extent to which this commitment is expected of actors in the social system. Johnson, (1960, p. 558) maintains that the



commitment is preferred for all but not expected of all. Merton (1957) posits anomie as a product of a society in which all are required to strive for a goal but at least some lack sufficient means. The difference in their respective positions is whether or not the commitment is institutionalized, i.e., expected of all persons occupying given positions. Empirically, the extent of commitment to success (measured by educational aspirations) is found to be confounded by other factors, viz., status, parental stress, ability, and indirectly, independence. The extent and nature of this cluster will become apparent as this section progresses, but for the moment it is necessary to decide as to the degree to which the commitment is expected of actors in the society. Sewell and Haller (1959) handle the issue by a series of assumptions which should be made explicit.

First they assume that the cultural standards (hence value-orientations with respect to life-goals) of lower-status families differ from those of middle-status families, and second that the school transmits values coincident with those of the middle-class. Third they assume that the boys involved at least partially internalize both parental and school expectations, which in the case of lower-status boys produces a conflict which somehow must be resolved. An unstated corollary of this third assumption is that middle-status boys should manifest an absence of this conflict, if assumptions one and two are valid. Since the available evidence (to be explored momentarily) suggests the possibility of a confounded set of relationships, it is difficult to draw a clear-cut conclusion as to the nature of the expectations involved. Therefore, the position taken here is that commitment is required (institutionalized) for high or middle-status persons but not of those of lower-status. However,

it is important to remember that societal rewards are conferred only if a commitment is made, is carried through, and is successful. The issue of societal expectations is important because violation of institutionalized expectations is generally held to constitute deviance from the point of view of the society (Cohen, 1959, p. 463) and the problem of the thesis is to inquire into the effects of the stress on success, including strains toward deviance.

The Situational Variables

Every beginning student in sociology is told that status effects are manifested in the actions of some persons toward other persons. The "others" in this analysis are high school boys; the agents of influence are their parents. It is via the parents that socio-economic status first enters the lifespace of the subjects and for this reason status and parental expectations are often discussed together as though they were one and the same. When Merton (1957, p. 158) speaks of the family as being the "major transmission belt for the diffusion of cultural standards to the oncoming generation" he is pin-pointing the element of the parental status-role of concern here. Further, the assumptions of Sewell and Haller focus on the interaction of parent-child as one of the possible sources of conflicting values.

Status and family. Until recently, research into the influences on educational aspirations have tended to be of a bivariate nature. Those studies which focused on status-induced effects have assumed that, given status, parental stress, or the lack of it, followed. Hyman (1953) reports that while middle-class adults consider post-high school training necessary for success, lower-class respondents do not and argues that

commitment to the success-goal is largely a "fiction" in the lower-classes (p. 403). Hollingshead (1949) supports this view with his investigation of the effects of the class structure in a small midwestern community. A recent paper by Bordua (1960) takes as its focus the influence of parental stress on college aspirations and offers an opportunity to test the wisdom of treating status and parental expectations as one and the same (empirically). Bordua considers the influence of status and parental stress separately, commencing with a bivariate relationship between status and college plans, then introduces parental expectations to see if the original relationship was spurious and confounded by parental effects. His findings show that "social status differences are considerably but not completely accounted for by differences in parental stress" (p. 268). In fact, more variance is accounted for with the parental variable than with status; thus the relationship is multivariate, rather than bivariate. Given this data, plus the known influence of status on educational plans (Sewell, Haller and Strauss, 1957), it follows that an inquiry into differential commitment to success should incorporate both status and parental expectations into the research design.

Family and school. Earlier (pp. 10-11) the assumptions of Sewell and Haller were shown to involve the influences of both family and school on the value-orientations of the subjects. Bordua's paper attests to the empirical validity of their assumptions concerning the family, leaving the influences of the school to be explored. Since the school, with the family, is charged with the socialization function in American society, any inquiry into the effects of socialization should pay some attention to the school's contribution to the problem. Fortunately,



two sources are available for examination; a recent paper by Wilson (1959) suggests that school systems exert influences on educational aspirations which are independent of family effects and a speculative paper by Parsons (1959) integrates the role of the school system into literature concerning achievement and life-goals. In the following analysis, the assumptions made by Sewell and Haller are shown to have partial, but not complete, theoretical validity.

First, a major difference between the family and the school is that the latter is an achieved status system whereas the former is not. Given this, the emphasis on achievement (thought to be a reflection of middle-class standards) becomes understandable, since the positive valuation of achievement is a requisite for successful learning in the class per se. Second, given the positive commitment to achievement, the lesson learned in school can and must be generalized to higher-order social systems in which the members of the school class will be involved later. Thus the emphasis on achievement is necessary at both the school and societal level and for obvious reasons (the family cannot emphasize achievement) the school is the major collectivity in which this lesson must be learned if it is learned at all. Parsons (1959 p. 309) stresses the role of the family as one of "cooperation" with the school in transmitting this "shared valuation of achievement" which places value both on initial equality and on differential achievement.

Taking society as the point of reference, the primary function of the school is that of "selective allocation of contingents to future roles" (Parsons, 1959, p. 311), the result of which is to differentiate the members of the school class along the axis of achievement. Considering



the problem of the thesis, it is here that the lower-status youth encounters a means-scarcity in two spheres; ability, which is known to be distributed along status lines (Sewell, Haller and Strauss, 1957) and value-orientations, where the middle-class family's standards more nearly mirror those presented in the school. The latter statement follows from the evidence that achievement-orientation is higher in the middle than lower-class. If it is granted that middle-class youth are likely to evidence more complete socialization for achievement in terms of ability and values, then it follows that to the extent their lower-status counterparts seek to compete, they encounter a means-scarcity. And since the reward-system of the society must logically exclude those who do not compete, the degree of means-scarcity is for that reason highest in the lower-classes. It is this state of affairs that Merton and others have cited as contributing to the occurrence of anomie and as constituting a strain toward deviance.

Unfortunately the influence of the school system cannot be incorporated into the research design of the thesis because of a lack of data. For this reason the results of the investigation will possibly be confounded by school differences such as those reported by Wilson (1959). Lack of knowledge of school differences is perhaps the main empirical lacunae in the present study.

Summary. Evidence has been presented linking socio-economic status and parental expectations to the differential commitment of youth to life-goals. The influence of a third factor, the school, has been incorporated into the conceptual scope of the thesis. Whereas status and parental stress are situational factors, the following portion of this section turns to a consideration of attributes predicated of the youth alone, independence and ability.



The Person Variables

Independence. Thus far three attributes have been shown to be contained in the inductive explanation of Sewell and Haller. Rosen's paper on the achievement-syndrome suggests that another variable, independence, be added to the research design. Drawing upon previous research he reports that independent behavior is a demand made by mothers of children with high achievement-motivation (1956, p. 211); and Parsons (1959, p. 300) maintains that the level of independence is "the most important single predispositional factor with which the child enters school." By independence is meant "his level of self-sufficiency relative to guidance from adults, his capacity to take responsibility and to make his own decisions in coping with new and varying situations" (Parsons, 1959, p. 300). Douvan and Adelson (1958, p. 38) report that the upwardly mobile boys in their sample "manifest a drive toward independence and responsibility whereas the downwardly mobile do not." The relevance of this factor to the present problem lies in the fact that the capacity for independent behavior seems to be one of the requisites for successful competition in achieved status systems. Although it emerges from parent-child interaction, once gained it provides a basis for generalization to autonomy from reliance on authority figures generally (Douvan and Adelson, 1958, p. 38). It is important to note that this attribute designates a capacity of which the possessor may be only dimly aware; youths with high independence will "feel comfortable" in achieved status systems, whereas their low independence counterparts will not.



Ability. The final attribute classified as an antecedent variable comes to the problem from several sources. Sewell and Haller speculate that concern over ability leads certain persons to manifest tension-states, Parsons (1959) feels that ability is the key to the "differentiation of the school-class along the achievement-axis" and several studies have established the empirical association of ability with other factors in achievement-orientation (Sewell, Haller and Strauss, 1957), (Rosen, 1956) and (Douvan and Adelson, 1958). Put succinctly, ability is the answer to the question "can the person do so-and-so?"

In this thesis ability is seen as a means to achieving success. Low ability constitutes a means-scarcity to the youths involved since the known association of ability and success leads one to label the former as a requisite for the latter. Given the assumption that high commitment to the success-goal is expected of middle and upper-status persons, the lack of ability for such actors becomes a critical problem, considerably more so than for their lower-status counterparts for whom the expectation of commitment is weaker. On the other hand, in view of the positive association between the situational variables and high life-goals, the low-status youth of high-ability also encounters a means-scarcity in competing with his higher-status competitors who are more likely to have undergone socialization of a type emphasizing acquisition of the attitudes and behaviors associated with success.

Summary

This rather lengthy section has isolated the antecedent variables from their theoretical and empirical context and indicated the relevance of the set for the problem of the thesis. This task was accomplished by

showing that, with the exception of independence, all of the antecedents were included in Sewell and Haller's discussion of the negative association between status and personality adjustment. Independence was shown to be one of the variables typically associated with anticipatory socialization for successful achievement. Given the competitive nature of success, the necessity of each of the antecedents for attaining success is suggested by the tendency of the antecedents to occur together. Hence, the lack of one or more of these can be said to constitute a means-scarcity of varying dimensions. The delineation of the concept of means-scarcity illuminates what Merton refers to as an anomic situation, whereby means are insufficient to preferred goals. From this scarcity comes an ambivalence toward the normative structure of the society on the part of the persons involved. Finally, the extent of the "requiredness" of a positive commitment to success was said to vary with the social-status of the person.

THE CONSEQUENT VARIABLES

Introduction

The purpose of this section is the delineation of the consequent variables, alienation and nervous tension. Whereas the previous section was concerned with the sources of strain, this section focuses on the possible effects of strain. Following the procedure used earlier, the paper of Sewell and Haller furnishes the point of departure, but more literature is reviewed to develop the concepts. For reasons which become apparent later, alienation is treated more adequately than is nervous tension.



Alienation

To develop this concept, it is necessary to go back to the paper of Sewell and Haller and examine the procedure by which the four tension-states resulted from their analysis. These "tension-states" are actually four factors derived from a factor analysis of thirty items taken from the California Test of Personality - Elementary Form A. These items were selected from the total inventory of test items because they were found to be more highly associated with social status than any other items. The factor analysis yielded nine orthogonal factors; however, only the first four were judged to have "any meaningful content" (p. 513). Consequently the tension-states which they posit as effects of the structural strain are actually hypothetical constructs, composed of a number of personality test items which statistically constitute separate dimensions and substantively are interpreted as separate effects.

Given the nature of a factor as a hypothetical construct, there is not a priori guarantee that its substantive content will be homogeneous. Of their four factors, only one (nervous tension) is clearly homogeneous substantively. Another factor (concern over ability) manifests homogeneity but may be interpreted differently, and will be so interpreted below. The remaining factors (status concern and rejection of family³) are interpreted as substantively separate only because of the factor analysis. When the loadings of these two factors are examined, two things are apparent; first the manifest content of the loadings of both factors have in common some kind of a reference to the family (generally conditions which are derivative of the family's status) and second, one item appears on both factors ("I try to keep boys and girls away from my home because it isn't as nice

³Haller has agreed that this factor might more accurately be called alienation from family.



as theirs"). There is no reason why both of these features should not result, given the nature of factor analysis; rather the point is that they do result. Finally, when the original matrix of Sewell and Haller is analyzed by another technique, the result is a mixture of the items from all of the factors except nervous tension.⁴ It should be clear that, thus far, it is simply a matter of different techniques yielding different results.

The position taken here is that the three item areas may legitimately be subsumed under one rubric, alienation. Leaving the title to be discussed below, empirical evidence may be adduced to support this position. Douvan and Adelson (1958) inquired into the behavior patterns of three "mobility-categories" of adolescent boys, and report that statistically significant differences were found among the three groups with respect to a number of variables (p. 43). Among these variables were "achievement-mode" or, criteria for choosing jobs, "autonomy" or extent of reliance on authority-figures, and "family-milieu," the subject's relationship with their parents. Empey (1956, p. 707) presents findings which link the item areas of "status concern" and "alienation from family"⁵

The item-areas, alienation and powerlessness. Given empirical grounds for questioning the substantive separation of the three areas, the question becomes why they are said to reflect alienation. Seeman

⁴The matrix of Sewell and Haller, the factor loadings and the results of the alternative technique are found in Appendix (1).

⁵Empey reports that "lower-class seniors were significantly more inclined than upper-class seniors to want a job that had a higher social standing . . . than the one their father had, to rate their family income as insufficient for family needs, to think it important that they have a better income than their father." (p. 707).



(1959) reviews the literature on the concept of alienation and discusses five different usages of the term; powerlessness, meaninglessness, normlessness, isolation and self-estrangement. Concerning powerlessness, he casts alienation in an expectancy framework, the feeling held by an individual that his own behavior cannot determine the outcome of events which he seeks (p. 784). In this thesis, alienation is interpreted as powerlessness, not in an expectancy framework, but rather objectively, or from the standpoint of the conditions in the society, particularly those determining who succeeds and who does not. This conception is similar to that of Nettler (1957) who defines an alienated person as "one who has been estranged from, made unfriendly toward, his society and the culture it carries" (p. 672). The present conception differs from Nettler's in that the concern is not with the larger social order but with a delimited portion of the total society, the relevant objects in the youth's environment which bear on his chances for success. Interpreted in this sense, not only are ability and independence elements of power (means for successful competition) but also status and parental expectations may be similarly interpreted. All of the antecedents constitute means which are either present or lacking with respect to achievement, and the lack of any one or combination of them constitutes a condition of powerlessness (objectively) for that particular person relative to societal stress on achievement. Consequently, it is appropriate to modify the label of the item-areas to conform to the empirical limits of the analysis and call it "localized or situational alienation." Hereafter, when the term alienation is used it should be understood in this restricted sense. If this

usage is granted as legitimate, then it follows that one who lacks any or all of the means or elements of power is a likely candidate for alienation from his immediate environment.⁶

Alienation as chronologically prior to anomie. Earlier anomie was defined as involving an ambivalence toward the normative structure and the suggestion made that alienation might be an earlier state of ambivalence. Why this should be is relatively simple to explain. Anomie (or more accurately, anomia) is said by Srole (1956, p. 711) to refer to the individual's "generalized, pervasive sense of 'self-to-other' distance, or 'self-to-other alienation'" and the locus of the difficulty is specified as the result of three sets of forces:

- . . . (1) Reference groups beyond his immediate field of action, within which acceptance and ultimate integration are sought.
- (2) Generalized qualities of the molar society penetrating his contemporary action field as those affect, (a) his life-goals, (b) his selection of means toward these goals and (c) his success or failure in achieving these goals.
- (3) The socialization processes of his interpersonal relationships during childhood and adolescence, as these have conditioned the interpersonal expectations, value orientations and behavioral tendencies of his current personality structure.

⁶No useful purpose would be served by an extended discussion of why status and parental expectations constitute elements of power. However, this much may be said: First, there is required the assumption that all boys would strive for success given the proper set of conditions; the antecedents are the important conditions. Second, if any boy desires success, his status (derivative of his family's status) either introduces him to the appropriate learning and opportunity structures for fulfillment of his goal or to some extent obstructs his access to these structures. Third, parental stress is generally accompanied by an emphasis on those behaviors which are perceived by the parents as implementing successful achievement; independence is only one of these. However, the lower their status, the less likely they are to perceive what is necessary due to a diminishing acquaintance with success; and, to this extent, the boy is handicapped in his own competition.

Cloward (1959) presents a discussion of learning and opportunity structures and Rosen (1956) furnishes some references to parental aspirations. Stroback (1958) discusses the dynamics of the parent-child interaction stemming from stress on achievement.



Given the ages of the subjects in this inquiry it is not reasonable to ask into their reactions to goal-achievement when in some cases they are just finishing their preparation for commencing goal-attainment, and in other cases, they are making plans to further prepare themselves for this quest. However, given the restricted scope of the concept, it seems legitimate to speculate that a general sense of powerlessness with respect to norms and goals is precipitated by an early unsuccessful learning experience as this is reinforced by the spiraling of adult experience. The adult reactions to this state of affairs is then called anomia.

Nervous Tension

Whereas the inquiry into the occurrence of alienation can be said to follow from numerous sources in the literature, the conceptual background of nervous tension as an effect of a cultural discontinuity is not nearly as rich. The inclusion of this variable in the investigation is frankly exploratory. From the results of Sewell and Haller (1959) the linkage of a nervous syndrome with the broad effects of strain is established and the inquiry is continued in this thesis.

It is assumed that nervous tension is somehow a result of the same set of circumstances that produces alienation and it is further hypothesized that nervous tension varies in the same way and under the same circumstances as alienation. It should be made clear ab initio that the actual cause-effect relationship will be only slightly advanced in the predictions that will be made are found to obtain. Whatever the causal matrix involves, its relationship to social structural influence is extremely complex and this analysis will, if successful, do little to advance knowledge concerning the causality; rather the contribution will be to supporting empirical



generalizations as to its occurrence. Thus the relationship between the cultural stress and the effect should be construed as an association in the strictest sense of the word.

Summary

This section has isolated the effects of socially induced strain. The study of Sewell and Haller furnishes data which is reinterpreted to form two consequences of strain, alienation and nervous tension, which in turn, are translated into hypotheses below.

THE MODEL OF BALANCE AND IMBALANCE

Introduction

The purpose of this section is to order the antecedents and consequences, using a parsimonious but general model to do so. No additional material is introduced in this section, other than units of the model.

One methodological point will facilitate understanding. Reference will be made to two kinds of imbalance, cognitive and situational. Any condition perceived by a person can be termed cognitive; if perceived it must somehow be represented in the person's situation, hence may also be termed situational. Heider speaks of cognitive imbalance because of his interest in person perception; yet he also considers situations because of the influence of other persons or nonsocial objects on the person's behavior. This analysis treats the person and his environment under the general rubric of "situation," including inferred states of cognitive balance or imbalance, characterizing the youths who are the subjects of this thesis.



Finally, Heider has developed a shorthand system of representing conditions of balance and imbalance and the elements thereof. The use of the shorthand system implements the rule of parsimony and for that reason it will be utilized in this and pertinent sections below.

Balance and Imbalance

The issue of cognitive balance or imbalance arises when the fact of the emphasis on success is viewed phenomenally, i.e., from the person's perspective. The condition may be called situational if viewed objectively or causally (Heider, 1958, p. 166). Given a person, p, and a situation composed of other persons, o, and nonsocial objects x and y, p may be said to be in a state of balance if the situation is relatively favorable to him or characterized as in a state of imbalance if the situation is relatively unfavorable to him. Heider (p. 166) pinpoints the logic of situational analysis using Murray's concept of the "stimulus-situation":

. . . it is convenient to classify the SS (stimulus-situation) according to the kind of effect - facilitating or obstructing - it is exerting or could exert upon the organism By 'effect' here we do not mean the response that is aroused in the subject . . . rather we mean what is done to the subject before he responds.

To Heider, balance is "a situation in which the relations among entities fit together harmoniously" (p. 201). The entities are p, o, and the like, and the relations may be of two kinds; sentiment relations and unit relations. The former is equivalent to an attitude toward something or somebody, an "orientation" in other words. Following Heider, the generic symbols to be used in representing positive and negative sentiments are L (like) and DL (dislike). Unit relations refer to the fact that certain things tend to be perceived as belonging together; a "person and his deeds" are an example.



The symbol U denotes the cognitive unit between two entities and not-U the fact that the two entities are segregated (Heider, p. 201). For example, p may be in the same family as o (pUo) or may dislike o (pDLo). Or, p may dislike an x (a nonsocial object) that he perceives o to like (pDLx and oUX). Given this, and assuming that p likes o in other respects, there is imbalance because the two sentiment relations (pLo and pDLx) are not harmonious with the unit relation (oUX). The imbalance can be resolved in three ways:

1. a change in sentiment relations wherein p decides he really doesn't like o after all;
2. a change in the unit relation wherein p decides that o doesn't really like x; or
3. p decides that either o or x is not important to him after all, in which case either the relation pLo or pDLx is said to "leave the cognitive field."

In the event of any of these three changes, the balanced state is re-established. If, for whatever reason, the imbalance persists, stress results. If the imbalance persists over time, the stress produced originally is "multiplied" by the secondary effects of enduring it.

Imbalance and the problem of the thesis

Sewell and Haller's explanation may be reinterpreted in terms of the model in the following manner: Imbalance exists because the lower-status boy "likes" the values and behaviors promulgated by the school, which conflict with those held by his parents whom he also likes. The tension-states found to exist can be said to represent the effects of imbalance.

Summary

This brief section has introduced the model of imbalance and explained its effects. The theory holds that given imbalance, some change will occur so that the balanced state will be restored; however this latter theorem is not applied in this thesis since the concern is with the effects only (alienation and nervous tension). The model is introduced so that the relations between the antecedent and consequent variables might be ordered and thus clarified.

One point remains to be made. Given the nature of the problem facing p, he cannot dissociate himself from the imbalance in which he is said to be involved. In the case which concerned Sewell and Haller, he has to decide either in favor of the family or in favor of the school if a rational plan for his future is to develop. If he does not dissociate himself from one or the other, the tension-states will continue and presumably increase over time. This latter point is, of course, beyond the scope of the thesis. However, in the final chapter, some suggestions will be made as to what future states of affairs might come of this unresolved imbalance.

STATEMENT OF THE PROBLEM

Introduction

The purpose of this section is to state the problem succinctly; this is accomplished by setting it into the framework of Heider's model. No additional material is introduced; rather the emphasis is on clarification.



The Problem

In the terms of Heider's model, the concern is with a person p in a situation composed of other persons o and certain nonsocial objects, w, x, y, z . A basic (ascribed) attribute of p is social status, x , (pUx) which is properly predicated of his parents (oUx) but because of his relationship with them, is also predicated of him.

Depending on the value of x (whether it is high or low) high commitment to achievement, y , is either expected of p or preferred but not expected of him. That is, if x is high, p ought to like y ; if x is low, p may like y but y is not an ought for him.

Furthermore, if x is high, then o should want y for p and if x is low, o may want y for p . If we assume that in all cases pUo , (p and o are a unit, which they are) then given oLy and oUx_+ (high) there is imbalance if $pDLy$. If oLy and oUx_- (low) there is still imbalance if $pDLy$ but the magnitude of the imbalance is mitigated since y is not an ought (institutionalized) for any pUx_- . Yet, even if oLy and pLy where x is low, there is still some imbalance because only a high x is said to maximize the probability of achievement and conversely, minimize imbalance. Thus for all pUx_- the situation is still relatively disadvantageous compared to all pUx_+ .

Now there are two person-attributes (elements of personal power) which either mitigate or accentuate imbalance, depending on whether they are available to p , viz., w (independence) and z (ability). From previous research we know that given pLy , both pUw_+ and pUz_+ can be expected because w and z have been found to be positively associated with y . Thus, for all pLy , the lack of w_+ and/or z_+ and/or z_+ precipitates imbalance since these are elements of the modal pLy and a given p will be competing with more fortunate counterparts.

Summary

Use of Heider's theoretical model facilitates statement of the problem of the thesis, particularly with respect to identifying degrees of imbalance and balance. Balance is shown to be a function of the degree to which p's preferences (p:y), his environmental facilitation (p:x, o:y) and personal power (p:w, p:z) are in accord with the requirements of the objective order with respect to achievement.

THE HYPOTHESES

Introduction

There are three parts to this section. The first part states the general hypothesis and specifies the elements of the hypothesis when it is applied to the problem of the thesis. The second part derives hypotheses for all combinations of the antecedents; this is done by means of a multivariate equation for identifying the relative degrees of balance or imbalance. The final part of the section predicts the effects of imbalance as these are manifested in the ranks of the combinations on indexes of alienation and nervous tension.

The general hypothesis and the problem

The basic hypothesis is, given imbalance, stress results. The elements of imbalance in the problem are low values on any of the antecedents. The varieties of stress in the problem are (1) alienation and (2) nervous tension. Specifically, if it is assumed that all actors would strive for success given the proper conditions, then the general hypothesis follows, that to the extent that one or any combination of two or more of the antecedents take low values, to that extent imbalance exists, which imbalance is manifested in high scores on alienation and nervous tension.



The combinations of antecedents

A review of the literature suggests that certain combinations of the antecedents had received considerable attention while others had been ignored. For example, Merton's classic paper (1957) is primarily concerned with the combination pUx_pLy wherein imbalance results from a means-scarcity; Merton suggests that innovation stems from this condition. Sewell and Haller (1959) are also intrigued with this particular situation and Douvan and Adelson (1958) go further and consider several others.

The possibilities of any one combination notwithstanding, consideration of all possible combinations of the antecedents has considerable merit in itself as Dubin (1959) shows with his extension of Merton's typology. Consideration of all possibilities forces one to isolate all the implications of a theory, and in so doing, minimizes the blinding effect of any particular combination.

Table 1 presents all possible combinations of the antecedents, each of which is labelled a "type." The types are formed on the basis of the two situational variables, plus life-goals. The procedure to be followed in deriving the hypotheses will be to consider the implications of the general hypothesis for each type, then consider what should be said about conditions within each type. Thus two sets of hypotheses will be derived predicting values on the consequents; one set which predicts the ranks of the types, and another which predicts the ranks of the combinations within types.

Table 1. Logical combinations of the antecedents.

Type	Status	Parental Expectation	Life Goals
I	Low	Low	Low
II	Low	Low	High
III	Low	High	Low
IV	Low	High	High
V	High	Low	Low
VI	High	Low	High
VII	High	High	Low
VIII	High	High	High

Inspection of the table reveals several obvious parallels. For example, I and V are similar except for differences in status, as are II and VI, III and VII, and IV and VIII. Consequently, if the effect of status differences is specified first, then hypotheses can be derived for four combinations rather than eight. Similarly if the effect of parental expectations and life-goals can be specified in like manner, one statement will suffice rather than four. This can be accomplished with the construction of what might be called a "logical" equation for identifying imbalance. Given such identification, predictions about effects can be made.

The equation for identifying between-type imbalance is,

$$\bar{B}_b = 4 - \sum [(x + o:y) + p:y + p:o]$$

where, \bar{B}_b denotes imbalance between types
 x " status
 $o:y$ " o's expectations for p's life-goals
 $p:y$ " p's own expectations for his life-goals
 $p:o$ " balance or imbalance between p and o over y



Since each of the antecedents is dichotomized, the identification of imbalance will be facilitated by letting any high score take the value of "1" and any low score the value of "0". Thus the total imbalance in the ith type is the sum of the values of the individual variables subtracted from 4. (The rationale for subtracting the sum from a constant will be explained momentarily.)

The discussion of the antecedents in the earlier parts of this chapter has presented the rationale for the inclusion of these variables, the lack of which is said to constitute imbalance. The only additional variable introduced above is the balance or imbalance between p and o, discussed when the imbalance model was explained.

One methodological point remains to be clarified. Derivation of total imbalance in this manner assumes that each of the antecedents makes (1) an independent and (2) an equal contribution to the total. This is assumed in absence of information indicating the proper weights for each variable. The validity of the assumption is examined when the hypotheses are tested and data analyzed.

Effects of imbalance between types

When imbalance is derived in the manner described above, the eight types are found to be distributed in the following rank-order of amount of imbalance:

Table 2. Rank-order of types by amount of imbalance.

Type:	I	II	III	V	VI	VII	IV	VIII
Am't:	3	3	3	2	2	2	1	0



Consequently, if each of the types is measured for the effects of imbalance, the following relations should be found to obtain as the measured effects of imbalance:

$$H_y: [\sum_I = \sum_{II} = \sum_{III}] > [\sum_V = \sum_{VI} = \sum_{VII}] > \sum_{IV} > \sum_{VIII}$$

where \sum denotes the effects of imbalance in the ith type.

Effects of imbalance within types

The equation for identifying within-type imbalance is,

$$\bar{B}_w = 3 - \sum [(p:y)(p:w + p:z)]$$

where \bar{B}_w denotes within-type imbalance
 $p:y$ " p's life-goals
 $p:w$ " p's independence
 $p:z$ " p's ability

Here, as above, high scores are given the value of "1" and low scores "0". The only departure from the previous procedure is the multiplication of the sum of $p:w$ and $p:z$ by the value of $p:y$. This is done to cancel the contribution of ability and independence if p has a negative sentiment toward achievement. That is, ability and independence are only elements of power for those persons who intend to make use of them; if a given p has low life-goals, he precludes the possibility of rewards attendant upon high achievement and thus renders himself powerless in this respect.⁷ Given pDly, the sum of independence and ability are zero since they were multiplied by zero. In both equations, the use of the constant transforms what would otherwise have been a "balance" score into an "imbalance" score, facilitating discussion of the effects of imbalance.

⁷Postulation of the environmental effects as additive and the personal elements in a multiplicative relationship follows the conception of Heider (1958, p. 82) in his discussion of the "effective forces of the person and environment in the action outcome."

When the within-type effects of imbalance are derived in this manner, the following distribution of effects results:

Table 3. Rank-Order of combinations within the types.

Sentiment	Combinations			
	W_+Z_+	W_+Z_-	W_-Z_+	W_-Z_-
if pLy	2	1	1	0
if pDLy	0	0	0	0

Given this distribution, if each of the combinations within-types is measured for the effects of imbalance, the effects should be found to obtain as follows:

if pLy, then $pUw_{+z_+} < pUw_{+z_-} = pUw_{-z_+} < pUw_{-z_-}$

if pDLy, then $pUw_{+z_+} = pUw_{+z_-} = pUw_{-z_+} = pUw_{-z_-}$

Summary

Building on the general hypothesis that stress results from imbalance, the hypothesis for between-type imbalance states that the effects will follow from the additive nature of each of the environmental variables, whereas the hypothesis for with-types is formulated on the basis that given high goals, effects will appear as a function of low scores on independence and ability, but if low-goals are considered, there is no difference among the various combinations of personal attributes.



CONCLUSION

Four things have been accomplished in this chapter. After an enlarged statement of the problem was presented, the first major section of the chapter contained a discussion of the antecedent variables. These were first taken from Sewell and Haller's inductive explanation of a bivariate relationship between status and personality adjustment, then shown to be part of the literature on social structure and anomie. Then the antecedents, which together were shown to be the sources of strain, were discussed in three groups: (1) Life-goals, the fulcrum of the thesis; (2) The situational variables, status and parental stress, were reviewed for their relevance to the problem; and (3) The two person variables, independence and ability, were considered in the same manner. The isolation of these five variables as major sources of potential strain with respect to achievement constitutes a step beyond the present state of knowledge.

The second section discussed the effects of strain, alienation and nervous tension. The former was said to stem from powerlessness relative to the stress on achievement, and both were shown to have been contained in the tension-states discussed by Sewell and Haller. Concerning alienation, both theoretical and empirical justification was presented for treating Sewell and Haller's tension-states differently than they were originally formulated. Finally, the relationship of the concept of alienation to the concept of anomie (or anomia) was considered, and through an examination of these concepts, it was concluded that alienation might well be considered as the chronological antecedent of anomie and further that consideration of it as (1) stemming from the

same set of conditions as anomie and (2) causally prior to anomie, offered heuristic possibilities for future research.

The third major section introduced Heider's model of imbalance, explained its elements and considered its application to the problem. Through utilization of the basic theorem that imbalance leads to stress, it was suggested that implicit in the literature is a particular statement of this hypothesis, viz., lack of one or all of the antecedents constitutes states of imbalance of varying degrees.

The final section of the chapter stated the conceptual hypotheses to be tested. These are derived in such a manner that predictions can be made with respect to the relative effects of imbalance in eight types of persons, which types exhaust the possible combinations of the antecedents. Given the exhaustive extension of the combinations of antecedents, the possibility of ignoring implications of the general hypothesis is minimized.

The general theme of this thesis is that all persons in American society would strive for success, given proper conditions or power. The antecedents constitute these conditions, and the consequents are said to result from the differential distribution of power throughout the social system.

CHAPTER III

MEASUREMENT

INTRODUCTION

The purpose of this chapter is three fold: The first part describes the sample and discusses the site of the original study from which the present data were obtained. The second part presents a description of the ways in which the antecedents and consequent variables were measured. The third part links the hypotheses developed in the last chapter with the results of classifying the sample according to the empirical distribution of the antecedents.

Specifically, the antecedents can be construed as characterizing the subjects in terms of a five dimensional attribute space, which is empirically reduced to a typology of "achievement-types." The result of this reduction is the five types on which the two sets of hypotheses are tested.

THE SITE AND THE SAMPLE

The data used to test the hypotheses were collected as part of a larger investigation into the occupational aspirations of rural and rurban youth under the general direction of A. O. Haller. The subjects for the study are 368 seventeen-year-old boys of Lenawee County, Michigan, who were born between July 1, 1939 and June 30, 1940, and who were in school during the testing period in the spring of 1957. Ideally, all of the age group in the county would have been tested; however, about twelve per cent who were no longer in school were omitted. Follow-up studies showed that

about five out of six of the latter were sons of farmers. A consequence of this omission of "drop-outs" is that the group most likely to manifest alienation are not included in the sample studied.

The original sample of Haller included 442 boys. Of this group, forty-three were excluded because of missing data, nine were excluded because of a perceived disagreement between the parents with respect to their son's life-goals, and twenty-two were dropped because they were located in types with small "n's". The extent to which the exclusion of about one-sixth of the total sample introduces a bias into the results is not known. Consequently, the results of the analysis, as descriptive of boys in Lenawee County, are prejudiced by two sets of factors; (1) the drop-outs are not described at all, and (2) about one-sixth of the total sample is not included. Concerning (2), it should be noted that this exclusion probably introduces little actual bias, since the probability of their being a homogeneous group with respect to alienation is slight.

Lenawee County was chosen as the site for the original study for three reasons: (1) It approaches the sociologist's ideal type of rurban community, having a medium sized city - Adrian, population about 20,000 - as the geographical, economic and administrative center, having satellite villages and towns, and an agricultural hinterland. (2) It has an evenly divided farm, rural nonfarm, and urban population. (3) Because the county is near the Detroit industrial area and has a fairly well-developed light industry itself, its youth are provided with a fairly broad occupational structure to which to orient themselves. Finally, there is a small college in Adrian, a university in nearby Toledo, a few colleges and universities in and around Detroit. This affords the youth of the county the possibility of a high degree of exposure to knowledge about advanced education.



MEASUREMENT OF THE ANTECEDENT VARIABLES

Life-Goals

The operational definition of this concept is the educational plan of the youth with respect to college training. Obviously, educational aspirations are not the same as the so-called "achievement syndrome" (Rosen, 1956), yet the measure employed here inferentially reflects a commitment to the dominant values of the society to the extent that a person with plans for more education has at least indicated his intention to qualify himself for competition for the rewards of the larger society. Similarly, plans for no more schooling reflects a disqualification, by and large, from reward-competition.

The specific items by which educational aspirations were measured are,

- "REGARDING MY PLANS FOR EDUCATION AFTER I LEAVE HIGH SCHOOL
() I plan to get more education after high school
() I do not plan to get more education after high school

IF PLANNING TO GET MORE EDUCATION

THE NUMBER OF YEARS OF FURTHER EDUCATION I PLAN TO GET IS:

- () two years or less
() three or four years
() five or six years
() seven or eight years"

These questions were followed by others which asked the subjects to specify the names of the schools they planned to attend, the type of curriculum they planned to take, and the name of the degrees (if any) they intended to work toward. Only those whose responses indicated that they planned to enroll in a program leading to at least a regular four-year college or university degree were classified as having "high life goals," regardless of the number of years specified. (Essentially, the youth cannot



realistically indicate the extent of the education he will actually receive since that factor is determined at least in part by factors over which he has little control, viz., family finances, academic requirements and his own ability.) All others were classified as having "low life-goals." As measured here, life-goals indicates the level at which the person intends to enter the occupational system. If he chooses not to acquire a college education, it is assumed that he commits himself to an unspecified but delimited range of jobs for which higher education is not a requisite, and in so doing largely shuts off the opportunity for the prestige allocated as a reward for high achievement.

Socio-economic status

Kahl and Davis (1955, p. 323) present an analysis of nineteen status indices and suggest that two factors contribute most heavily to indices commonly in use. The two factors are (1) education and occupation, and (2) a factor which reflects consumption behavior such as home quality and residential area. The measure used here, a modified version of the Sewell Socio-Economic Status Scale, loads heavily on the consumption behavior of the subjects parents, e.g., home facilities and communication facilities, as well as their educational backgrounds. The North-Hatt occupational ratings were also available, but experience has shown that the North-Hatt ratings of the occupation "farmer" are not accurate. To drop all youths whose fathers were farmers would have resulted in reducing the total "n" by about twenty per cent. Because the Sewell scale resulted in a larger "n", it was used as a measure.

Ratings on the Sewell scale were standardized into T-score form (based on an "n" of 433), the result of which is a distribution of



equivalent scores having a mean of 50 and a standard deviation of 10.⁸

The T-score distribution was dichotomized at the mean, with those observations lying on the mean randomized into the upper and lower portions of the sample. Thus status can take one of two values, high and low.

Parental stress on life-goals

The operational definition of this variable is "Parental Desire for Future Education." Since the concern is with the effects of imbalance on the person, the proper measurement is of his perception of what his parent's wish, rather than with their actual desire. The specific items used to measure this variable are,

"AS TO CONTINUING MY EDUCATION BEYOND HIGH SCHOOL MY FATHER:

- () has strongly encouraged me to continue
- () has given me some encouragement to continue
- () has never said much about it
- () feels that I would be better off going to work after high school
- () feels that I should quit high school and go to work"

The subjects filled in the same item regarding the mother's wishes. The responses were dichotomized into two classes, "high" and "low" parental stress. Unless both parents were seen as either "strongly encouraging" or "encouraging" more schooling, they were classified as placing low stress on achievement. The only exception to this rule was in the case where one parent was thought to have "never said much about it;" here, that parent was given the same classification as the other parent who was perceived as having a definite wish one way or the other. (There were no "pairs" who

⁸ Both the raw and T-score distributions are included in the report, A. O. Haller, Basic Data for the Lenawee County Study of Social Structure and Personality (n.d.) deposited with the Michigan State University Library. The report contains this information for all variables used here as well as considerable additional information on the larger study.

"never said much about it.") If the parents were perceived as "split," one encouraging and the other discouraging, the subject was dropped from the sample. Although the number so excluded was small (nine), this practice rules out a confounding effect of parental imbalance on the son's reactions.

Independence

The considerable evidence pertaining to class differences in independent behavior has focused almost entirely on what parents have done, rather than on results found among their offspring. The study of Douvan and Adelson (1958) is one important exception to this rule. In their study, subjects who were classified as "high" on autonomy were more likely to interject their own opinions when asked whether they would follow family or peer advice on a range of subjects and were more likely to prefer an adult club leader who remained in the background and gives advice only when necessary, (p. 39). This seems essentially the same phenomenon as that to which Parsons (1959, p. 22) refers when he speaks of necessary conditions for successful accomplishment in an achieved-status system.

The present analysis visualizes independence not in a behavioral or overt context, but rather as a rather basic, nonspecific tendency toward self dependency as opposed to dependency on others in the case of low independence. Independence was measured by a summation of high and low scores on three factors of the Sixteen Personality Factor Test of Raymond Cattell (1950). The factors are (1) Factor E - Dominance vs. Submission, (2) Factor G - Superego Strength, and (3) Factor Q₂ - Independent Self-Sufficiency. These were selected from the total inventory on the basis of item-loadings and descriptions of items in the Handbook for the 16 PF Test (no date). The Cattell test is designed to "give the maximum information

in the shortest time about the dimensions of personality" (Handbook, p. 1). It differs from most such tests in that it was developed and standardized empirically and is based primarily on normal rather than clinical populations. The selection of the three factors was intuitive and based on the criterion of mirroring the ability to make decisions using one's own resources, relatively independent of passing interpersonal influences.

Since the selection was judgmental, descriptions of the three factors and the behaviors which constitute the factors are included in Appendix (2) so that the interested reader may assess the adequacy of this measure. The index of independence was constructed by dichotomizing each factor at the mean of the T-score distribution, characterizing each person as high or low on each factor, then summing the "highs" and "lows." The intercorrelations of the three factors are presented below.⁹

Ability

The measure of ability used here is the grade point average of the subjects for the school year 1956-57, taken from school records. As such, it measures ability from the standpoint of performance; applied to the problem it answers the question "Can the person do so-and-so?" by taking school performance as an indication. Again the T-score distribution was dichotomized at the mean, then each person assigned a "high" or "low" score. It should be noted here that a "low" ability score is a "below C" average in school. Generally it would be desirable to trichotomize the distribution; this was not done in order to keep each sub-"n" as large as possible. Inferentially, ability may be regarded as reflecting in part, motivational components as was noted in Rosen (1956).

⁹For a complete summary of the relationships of all 16 factors to social status, see Thomas (1960).



Relationships among antecedents

The correlations of the antecedents, suggested by the review of the literature, are found to hold in the sample on which this study is based. The following matrix, based on the normalized T-scores of Miller (1960) shows the intercorrelations of the antecedents:

Table 4. Intercorrelations of Antecedents

	SES	EdAsp	Parental Stress	Independence			GPA
				E	G	Q ₂	
SES	-	41	39	05	12	06	22
EdAsp		-	48	11	24	15	53
PS			-	07	25	08	28
E				-	-03	-02	-02
G					-	10	26
Q ₂						-	14
GPA							-

n = 442

decimals are omitted

This matrix is based on the total sample, whereas the thesis is based on an "n" of 368. The extent to which the omission of about one-fifth of the sample biases these relationships is unknown; however, since most were excluded because of incomplete data, the probability of a consistent bias in one direction is fairly slight.

There is another way in which the relations among the antecedents can be demonstrated. McQuitty (1957) has developed a "rapid and objective method for clustering variables into types." This method is an attempt to provide an alternative to simple structure factor analysis. The principal difference is that McQuitty's technique results in what are called "typal



structures" or categories of items "of such a nature that every item in the category is more like another item in the category" than it is like any other item not in the category (McQuitty, 1957, p. 227).

A version of typal analysis, "elementary linkage analysis" was performed on the matrix of Lenawee data of Miller (1960). Of the thirty-four variables in the original matrix of Miller, five of the seven items which comprise the antecedents were found to be members of the same type with educational aspirations as the "center" of the clustered items. Only socio-economic status and Factor G were in other types, the former constituting a separate type with the Occupational Aspiration Scale score (Haller, 1957) while Factor G, Superego Strength, attached itself to the total score of the California Test of Personality. It should be emphasized that the variables were selected on the basis of their theoretical relevance, then the empirical relations were investigated.

Summary

Previous research suggested that positive associations among the antecedents should be found in the present study. Two techniques have established the relations of the antecedents to each other. There is both theoretical and empirical support for the contention that the antecedents form a cluster.

MEASUREMENT OF THE CONSEQUENT VARIABLES

Introduction

This section introduces the instruments measuring the effects of imbalance, stress. Two kinds of stress are measured, localized alienation and nervous tension. The procedure by which alienation is measured is



somewhat complex and described in detail, and the index of nervous tension differs from the one used by Sewell and Haller (1959) for reasons which are discussed below.

Localized alienation

The incorporation of this variable into the research design furthers the investigation of Sewell and Haller (1959) to a considerable extent. Because this thesis builds on the empirical base of their study, the procedure by which individual items were selected parallels their method insofar as possible.

The items which constitute the index were taken from the California Test of Personality (1953, Secondary Form AA)¹⁰ a paper and pencil test consisting of 180 questions requiring a "yes" or "no" answer, the scope of which covers a broad range of behaviors. The test is divided into two main sections, personal adjustment and social adjustment, and each main section is again subdivided into parts dealing with self-reliance, feeling of belonging, social standards and skills, family, school and community relations and the like. The test is primarily designed for guidance and counselling activities. Essentially it provides a rather superficial measure of the extent to which a person's orientation to selected objects in his environment is compatible with the social definitions of these orientations. It is not exceedingly overgeneral to say that the test provides a crude measure of "person-situation" balance and imbalance.

In the original study of Sewell and Haller in Richland County, Wisconsin, the thirty California test items having the highest association

¹⁰Two items in the final index actually come from "Elementary Form A," the version used by Sewell and Haller in Wisconsin. These items were incorporated by Haller into the material administered to the Lenawee County subjects and, in this thesis, combined with the other Form AA items to form the index of localized alienation.

with social status were selected from the total inventory and interrelated using phi-coefficients. The resulting matrix was then factor-analyzed and the four factors described above were derived. Insofar as was feasible, the selection of items for the alienation index followed this procedure. The steps by which the items used in this study were selected is as follows:

1. Thirty-three California¹¹ test items were selected on the basis of similarity in substantive content to the loadings on the four factors of the Wisconsin study, then correlated with status using the Pearsonian Product Moment technique; the items were also intercorrelated with each other. The result was a matrix of thirty-three items and one status measure.
2. Using the .05 level of significance as a cutting point, it was found that (a) eight of the nine items measuring status concern were significantly related to status, (b) as were six of the seven items that measured concern over ability. Four of the nine items¹² pertaining to family alienation were significantly related to status as was one of eight nervous symptoms items.
3. While nineteen of the thirty-three items showed significant association with status¹³, the disproportionate distribution of these suggested that factors other than chance had governed selection of items for status concern and concern over ability only. The other two item-areas did not appear to be of the same magnitude of importance as did the first two.

At this point situational analysis was invoked to explain the apparent differences in importance of the item-areas, as this importance was indicated by correlation with social status. The reasoning here is

¹¹MISTIC (Michigan State ILLIAC Computer) has a capacity of only thirty-four items for this type of analysis; hence the restriction of the number.

¹²Three of the four yielded correlations just exceeding the .05 level.

¹³The significance level was taken from Table XI (Walker and Lev, 1953, p. 470) "Percentile values of r for n df. when ρ is zero." Table entered with 388 degrees of freedom; $r_{.05}$ is .090.

as follows: Since status is presumed to first enter the person's life-space in the person of his family, might not status concern and alienation have as their referents the same events, viz., family relations? Empirical evidence for this view was furnished by the study of Douvan and Adelson (1958, p. 40) who found differences in family relations among the three mobility-categories. However, this finding of theirs could furnish only tentative confirmation; what was needed was direct evidence from the Richland and Lenawee data to confirm the hypothesis that both item-areas were aspects of the same series of events.

4. Elementary linkage analyses of both the Richland and Lenawee matrices provided a confirmation for the hypothesis. The Richland matrix items measuring nervous symptoms were found to cluster in homogeneous types, while items from the other three factors were intermixed. One type contained nine items, seven of which were either status concern or alienation items. Given this result, there was good reason to treat the three item-areas as substantively referring to aspects of one, rather than three, series of events.
5. The elementary linkage analysis of the Lenawee matrix yielded the same picture, viz., the items which were originally expected to measure three item-areas actually were mixed in the same types; only the items measuring nervous symptoms clustered in homogeneous types.¹⁴

Since status, family relations and ability are all part of the person's situation with respect to achievement, and since a linkage analysis of the Richland and Lenawee matrices yielded types containing three item-areas mixed together, both theoretical and empirical evidence justified treating the three as one area, alienation. Therefore, the fourteen items most highly associated with status were selected to make up the index of localized alienation. These fourteen items and their correlations with status are shown in Table 5.

¹⁴See Appendix (A) for results of the linear analysis on the Lenawee matrix.



Table 5. Index of alienation and correlations with status

Items	"r"
Are things difficult for you because your folks are usually short of money?	244
Are you troubled because your folks differ from you regarding the things you like?	223
Do you often wish your father (mother or guardian) had a better job in the community?	210
Do some of those at home seem to feel that they are better than you?	183
Do people seem to think well of your family's social standing?	180
Do your folks appear to doubt whether you will be successful?	180
Do you often wish your father was a more important man in the community?	172
Do you avoid inviting others to your home because it is not as nice as theirs?	168
Do your folks seem to think that you are going to amount to something?	125
Are you considered a failure in many of the things you do?	108
Do your friends and acquaintances seem to have a better time at home than you do?	099
Do you usually like to be somewhere else than at home?	096
Are you often discouraged because people fail to recognize your worth?	096
Have you often wished you had different parents than you have?	091



The intercorrelations of the fourteen items are found in Appendix (3). Inspection of the matrix suggests that each item makes a unique contribution to the index, yet also possesses a common element with the others. Given this picture of a low but positive intercorrelation among the fourteen items, it may be concluded that the index reflects internal homogeneity.

Nervous tension

The relevance of this variable to the general problem was established by Sewell and Haller (1959). In their factor analysis, the nervous symptoms factor had the highest loadings of any of the factors. However, when the California Test items pertaining to nervous symptoms were correlated with social status in the Lenawee study, only one of nine items was significant in its association. This was interpreted as suggesting that if there existed any relationship between the two variables, the chances of it appearing were small if these items were used. Examination of the items, pertaining to stuttering, dizzy spells, somnambulism, insomnia due to worry, fatigue and nightmares, suggested that phenotypic complaints such as these might be less frequent among adolescents than in grade-school subjects (used by Sewell and Haller). Also the Richland study included both males and females, while the present sample covers males only. The exact relevance of this is not clear, but in addition to differences in age, the sex differences might have some part in precipitating the discrepancy between the Richland and Lenawee findings.

Another measure of this general dimension was available, Factor Q_4 - Nervous Tension - one of the battery of items in the Cattell test. Cattell (Handbook, p. 11) describes this factor as indicating,



. . . nervousness, nervous anxiety and instability, and sleep difficulties The general picture is that of a person who is tense, excited, restless, fretful and impatient. The person gets overfatigued but is unable to remain inactive.

The highest correlation of Q_4 with any of the antecedents is minus .24, with Grade Point Average. Because the California test items failed to reveal the expected pattern of association with status, and since the general dimension was felt to be important, the alternative measure, Factor Q_4 was chosen to measure this variable; its association with status in the total sample is low and negative but nevertheless significant ($r = .12$).

It is important to clarify two points. First this is not a *prima facie* instance of hunting and picking for significant relationships. Rather it is an effort to find the measure which will maximize the probability of revealing relations within and between the achievement-types to be described in the next section. Factor Q_4 is used because it appears to be the more sensitive instrument. The second point concerns the general lack of knowledge about the causal matrix underlying nervous tension. The predictions that will be made are highly tentative because little is known as to the cause-effect sequence by which status-induced effects are translated into nervous tension, if in fact they do so at all. The unexplained but predicted relationship is mediated by an extremely complex sequence of events, the nature of which is perhaps better explained by psychiatric and biochemical concepts. This variable is included in the research design because two previous studies, Sewell and Haller, and Douvan and Adelson, have found it to be involved in the state of affairs which the concepts of social structure and anomie describes.

REDUCTION OF THE ATTRIBUTE-SPACE

Introduction

Chapter II presented hypotheses which could be applied to the eight types, which types exhaust all possible combinations of the antecedents. This section discusses the actual distribution of high and low values of the antecedents. Two general trends are evident: high status is accompanied by high values on the other variables, and the same trend applies to low status. The operation of these two trends dictate an exclusion of three of the eight types because each of the types is characterized by an "n" too small to permit further analysis.

Classification by the antecedents

Table 6 contains a classification of the sample by high and low values of the antecedents. Inspection of the table reveals several instances in which this sample is characterized by trends contrary to presumptions found in the literature. These are as follows:

1. There is the suggestion that most parents, regardless of status, desire more education for their sons. The influence of status is to accentuate this trend. Almost all high status youth perceive their parents as desiring more education for them, whereas about two-thirds of the low-status youth see their parents as desiring them to continue in school.
2. The effect of status is more direct on the youths themselves with respect to life-goals. Seventy per cent of the youths with high status want more education compared to thirty-seven per cent of the low status subjects. Although ability introduces a confounding effect, previous studies report a residual status effect independent of ability.
3. Intuitively, the effect of independence is to accentuate the trend toward a syndrome of high achievement-orientation, which syndrome is composed of high values on each of the antecedents.

Table 6. The classification of sample by the antecedent variables.

Socio-Economic Status	Parental Stress	Life-Goals	Ability	Independence	
				Low	High
Low 191	Low 59	Low 49 I	Low 37	25	12
			High 12	8	4
		High 10 II	Low 5	3	2
			High 5	2	3
	High 132	Low 71 III	Low 47	29	18
			High 24	14	10
		High 61 IV	Low 15	9	6
			High 46	20	26
High 199	Low 12	Low 8 V	Low 3	1	2
			High 5	3	2
		High 4 VI	Low 1	1	0
			High 3	1	2
	High 187	Low 48 VII	Low 38	23	15
			High 10	4	6
		High 139 VIII	Low 40	19	21
			High 99	38	61

n = 390

Table 7 presents the results of the reduction of the original attribute-space of eight types. In Table 7, three types, II, V and VI have been excluded from further consideration.¹⁵ By "reduction" is meant "any classification as a result of which different combinations fall into one class" (Lazarsfeld and Barton, 1951, p. 173). There are three kinds of reduction; functional, arbitrary, and pragmatic. The operation performed here utilized functional reduction wherein:

. . . there must exist an actual relationship between two of the attributes which reduces the number of combinations. The elimination of certain combinations can either be a complete one, or these combinations may occur so infrequently that no special class need be established for them.

The reduction in Table 7 is based on the apparent positive association between the antecedents whereby a high value on status tends to be accompanied by high values on the other antecedents.

The excluded types

The only difference between Tables 6 and 7 is the exclusion of types II, V and VI in the latter. Type II is defined by the combination pUx_, oDly, pLy. This was the combination on which Sewell and Haller based their explanation; it is also the one which occupies the central focus of Merton's essay. As to why only three per cent of the sample should lie in this type, it is difficult to say. One explanation is that low parental stress results in low-life-goals to a greater degree than high stress by parents produces high life-goals. This is ostensibly borne out in types VI and V, although the small number of cases defined by high status-low stress suggests caution in drawing conclusions. Caution notwithstanding, one can speculate that high parental stress is a necessary

¹⁵In Table 7 the types have been renumbered so that future discussion refers to the types numbered in Table 7.

Table 7. The numerical composition of five achievement-types.

Type	Parental Stress	Life-Goals	Ability	Independence	
				Low	High
LOW SOCIO-ECONOMIC STATUS	I Low 49	Low 49	Low 37	25	12
			High 12	8	4
	II High 71	Low 71	Low 47	29	18
			High 24	14	10
	III High 61	High 61	Low 15	9	6
			High 46	20	26
HIGH SOCIO-ECONOMIC STATUS	IV High 48	Low 48	Low 38	23	15
			High 10	4	6
	V High 139	High 139	Low 40	19	21
			High 99	38	61

n = 368

condition for high life-goals, but that high ability must be had before the necessary and sufficient conditions obtain. Unfortunately this relationship cannot be confirmed by previous research since the only study which includes parental-offspring expectations does not control for ability (Bordua, 1960). It would seem that high life-goals require additional environmental facilitation in the form of encouragement by significant others in the school system, though evidence to support this contention is not available.

Considering types V and VI briefly, the presence of only a few cases of low parental stress among high status families is certainly to be expected. Here parental expectations tend to be institutionalized to an even greater degree than is the subject's choice. It is intriguing to speculate as to the effects of high status and parental stress on the subjects involved, but the small "n" in each type precludes further analysis.

Summary

Heretofore the effects of imbalance have been considered for all the possibilities which could result. This section has concentrated on the results of the classification of the sample by the eight major categories of antecedents. The classification produced three types in which only a few observations were found. These types included (1) low status boys whose parents disagreed with their plans for more education, and (2) two categories of high status boys whose parents did not wish them to secure more schooling. All three types were dropped from further consideration because of the small number of cases.

CONCLUSION

Essential to scientific inquiry is the step between the formulation of hypotheses and their confirmation, i.e., measurement of the concepts contained in the hypotheses. This chapter has been devoted to a description of the necessary ingredients of measurement, the site, the sample, the techniques by which each of the antecedents and consequents are to be recognized concretely. The operationalization of the antecedents follows standard sociological and social psychological practice. However, the measurement of the consequents, particularly alienation, departs somewhat from traditional practice. The steps by which the index of localized alienation was constructed was explained in detail, beginning with a partial replication of Sewell and Haller's procedure, departing from their method when unexpected results were obtained, and concluding with a justification on both conceptual and empirical levels for this study's reformulation of their tension-states under the generic rubric of alienation.

The measurement of nervous tension was shown to be suggested by their results, and its inclusion in the research design was designated as exploratory. That is, this study seeks to provide further support for Sewell and Haller's empirical generalization that differences in personal conditions that are found to be related to social status are also associated with differences in nervous symptoms. Whatever the results of the study, the causal process by which nervous tension is linked to status differentials will still remain to be investigated.



CHAPTER IV

RESULTS

INTRODUCTION

The model employed in this thesis is that of an organism interacting with its environment. Each of the five types represents a person in situations (or environments) which are either favorable or unfavorable with respect to his possibilities for achievement. The types are classified on the basis of situational balance or imbalance. Type V maximizes p_i 's probability of achievement and Type I minimizes the same probability. The other types constitute situations which vary between I and V with respect to the probability of achievement. Thus, a person in type V may be said to be "relatively gratified" compared to other p_i , while a person in I is "relatively deprived." Localized alienation has been said to be positively associated with increasing means-end disjunctions. Another way of saying this is that environments vary in the extent to which cultural values are implemented by socially structured means. Given a high correspondence between values and means there is balance in the sense that the environment is favorable for goal-attainment implied by the values; given low correspondence, there is imbalance.

Besides the "ascribed attributes," status and parental stress, there are person-attributes which either implement or impede goal-attainment. At least some of these are socially derived but are theoretically predicated of the person. For predictive purposes, the most important feature of this study's focus is the relation between the nature of the person's life-goals and the condition of his environment relative to achievement.



Prior to stating the hypotheses, one reservation should be made. In two types (III and V) the relation is described as pLy where y is high life-goals. In the other three types (I, II and IV) the relation is stated as pDLy. This formulation of the relation may or may not be in accord with the facts. Actually, the relation is p doesnotL y, not pDLy.¹⁶ The point has both theoretical and methodological implications. In III and V, the measurement is of a positive choice; there is goal-commitment or positive cathexis of a goal. In I, II and IV, the measurement captures a logical negation of a positive goal-commitment, but not necessarily a positive "dislike" for y. A positive dislike is assumed, not empirically demonstrated. To the extent that this assumption is in error, the results of the study with respect to types I, II and IV are cast into question.

THE HYPOTHESES

The hypotheses are derived from Heider's theorem that imbalance leads to stress. Imbalance is defined by low values on the antecedents. Stress is of two kinds; localized alienation and nervous tension. To formulate the hypotheses it is necessary to assume that each of the antecedents makes an independent and equal contribution to imbalance; if this is so, then the types will be differentiated on any measure of stress according to their constituents of antecedents.

¹⁶This is the problem of a "zero-point" in attitudes. Saying that "'pDLy' is the same thing as 'p doesnotL' y" is saying that a zero-point is impossible. Saying that the two may not be the same admits the possibility of a zero-point. We admit the possibility but assume its improbability.

Hypotheses for relations between types

If imbalance (specified by the \bar{B}_p equation on page 30)
leads to stress,
then the following relationships will exist among the
means of the five types on the indexes of alienation
and nervous tension:

$$\mu_I = \mu_{II} > \mu_{IV} > \mu_{III} > \mu_V$$

Hypotheses for relations within types

If imbalance (specified by the \bar{B}_w equation on page 33)
leads to stress,
then the following relationships will exist among the
means of the combinations of person-attributes within
each of the five types:

$$\text{if pLy, then } \mu_{w+z+} < \mu_{w+z-} = \mu_{w-z+} \leq \mu_{w-z-}$$

$$\text{if pDLy, then } \mu_{w+z+} = \mu_{w+z-} = \mu_{w-z+} = \mu_{w-z-}$$

Discussion

The first set of hypotheses concerns the effects of interaction between certain life-goals and the situational variables, social status and parental stress. Given the assumption that all boys would strive for success given the proper conditions, the hypotheses state that varying states of environmental forces will lead to degrees of imbalance. If each of the situational variables makes an independent and equal contribution to imbalance, the hypotheses should be correct as stated. The research design facilitates the assessment of the contributions of each

of the antecedents. The logic behind this set of hypotheses is simple; type V represents a minimum of environmental difficulty relative to success as it is now experienced by the person, while type I represents the maximum environmental difficulty. The hypotheses ask whether alienation and nervous tension are related to varying degrees of this difficulty which stems from the cultural emphasis on success.

The second set of hypotheses are concerned with the effects of imbalance due to lack of necessary personal power. One's success or failure in an effort is a function both of environmental and personal conditions, and this thesis has isolated two of the latter, ability and independence to be set into hypotheses and tested for their effects. It is argued that, to the person involved, lack of ability and/or independence constitutes imbalance only if he desires to commit himself to high achievement; if he does not so strive, the presence or lack of personal power should not contribute to alienation or nervous tension. The multiplicative relation is incorporated into the derivation of the hypotheses to take account of the relevance of choice to the problem.

Criteria for rejection and their consequences

An essential attribute of a scientific theory is refutability. Similarly, the hypotheses deduced from a theory must be stated in such a manner that they can be disproved. The hypotheses on page 60 do not meet this requirement because a clear-cut set of alternative hypotheses cannot be formulated (at least in some cases). The lack of alternatives precludes a decision as to whether a particular hypothesis is to be accepted or rejected. To obviate this deficiency it is necessary to consider each pair of means as a separate problem and formulate alternatives on this

basis. Since the purpose of the hypotheses is to facilitate the assessment of the effects of each of the antecedents, comparison of the results of the statistical tests of the various pairs of means will provide an adequate method of weighing the accuracy of the predictions.

TESTS OF THE HYPOTHESES

ALIENATION

Situational attributes

Table 8. Means and variances of five "types" on Index of Alienation*

Type	Mean	Variance	"n"
I	6.000	1.575	49
II	4.845	2.287	71
III	3.803	2.284	61
IV	4.167	2.261	48
V	3.518	1.537	139
Total sample	4.231	2.186	368

*In calculating the means on alienation, the scores were reflected so that high alienation takes a low score and low alienation takes a high score. This must be taken into account when interpreting the computations. However, to make the directions of the scores consistent with the alienation terminology, all means were subtracted from fourteen, the highest possible score, for presentation in the text.

Table 8 presents the basic data utilized in testing the hypotheses concerning the "alienation" effects of situational imbalance. Inspection of the table reveals that (a) differences in stress (alienation) are apparent between the five types and (b) the relative ranks of the five types are generally as predicted. Table 9 contains a comparison between the predicted relations to be found among the types and the actual relations found to obtain through statistical tests.¹⁷

Table 9. Predicted and actual relations among alienation means of five types.

Predicted	Actual	"t"	df	Pr<
$\mu_I = \mu_{II}$	$\mu_I \neq \mu_{II}$	4.947	118	.05*
$\mu_{II} > \mu_{IV}$	$\mu_{II} > \mu_{IV}$	1.917	117	.05
$\mu_{IV} > \mu_{III}$	$\mu_{IV} \leq \mu_{III}$	1.249	107	ns**
$\mu_{III} > \mu_V$	$\mu_{III} > \mu_V$	1.300	198	.10
$\mu_{IV} > \mu_V$	$\mu_{IV} > \mu_V$	2.690	185	.05

*Two-tailed test. The remainder are one-tailed tests.

**Accepting the null hypothesis here necessitated the test of IV against V to ascertain the extent of the equality.

The equation for identifying the degrees of imbalance is based on the assumption that each of the antecedents makes an independent and equal contribution to stress. If imbalance produces stress (of which localized alienation is one type) and if the independent and equal assumption is well

¹⁷Students "t" was employed in all comparisons of means. Unless otherwise noted, the assumptions for the test were felt to have been adequately met.

founded, then each of the tests of differences between means should provide a basis for rejecting the null hypothesis in favor of the predicted alternative.¹⁸ An inspection of Table 9 reveals that in general the null hypotheses can be rejected and the predicted alternatives accepted. In only one case (I and II) is the prediction clearly in error and in the other contrary case (IV and III) the difference is in the predicted direction and approaches the rejection region.

The one case in which a predictive error is apodictic (I and II) involves the issue of whether or not the positive advantage of high parental stress on more education offsets what is assumed to be stress resulting from disagreement between parents and son with respect to more training. Since social status and life-goals are controlled in this comparison, the difference in means suggests that the imbalance between parents and sons does not result in stress sufficiently great to overcome or counter-balance the advantage of parental desires for more schooling. The effect of parental stress is apparent in the differences in means, and it bears reiteration that this variable is conceived as a predictor of a rather extended attempt on the part of the parents to inculcate the cultural value of success into the child's goal-system.

The remaining instance in which the predicted difference approaches but does not attain statistical significance (IV and III) suggests that in at least one instance a personal attribute (life-goals) exerts a stronger influence than does a situational variable (social status). If the status effect (stress from lack of means) equalled the personal effect then a basis for accepting the null hypothesis should be present; such a basis

¹⁸The adjective "null" is sometimes erroneously understood to denote a hypothesis of no difference. Correctly used, the null hypothesis is the hypothesis one desires to reject in favor of an alternative which has been demonstrated to follow logically from a larger context of theory.



is present but the fact that the directional prediction was sound and that the difference approaches statistical significance lends support albeit tentative to the belief that personal variables exert a stronger effect. Additional support for this view may be adduced from the comparison of the means of types IV and V, wherein the types are differentiated on the basis of different life-goals. In this latter case, the effects of stress stemming from low life-goals is clearly evident and a solid basis for rejecting the null hypothesis is available.

In the remaining comparisons, the effects of social status are manifested in the predicted differences between the means of types II and IV on the one hand, and between III and V on the other. In this thesis, status is construed as limiting the portion of the stratification hierarchy (and its attendant value-orientations) to which the person is exposed. From this, one may reason that different learning structures are available to persons in different statuses. These learning structures take the form of non-family role models, (family friends or occupational cohorts of the father with which the person comes into contact) as well as a more amorphous but nonetheless effective environmental milieu which is typified in contact with neighbors, tradesmen and so forth.

Summary

In general, social status and parental expectations, as well as life-goals, exert independent effects which are manifested in stress stemming from situational imbalance with respect to the emphasis on success. Whatever its effect, imbalance between parents and son over life-goals does not appear to exert an alienation effect of the same magnitude as that of the social status and parental stress.

Person attributes

Whereas the first set of hypotheses was concerned with the between-type variation, the second set are focused on variation within the individual types. Two sets of hypotheses were formulated, one applying to those who planned more schooling. In the former case, the prediction was that no differences in alienation would result under the four conditions of power because ability and independence (elements of power) only produced imbalance if the lack of them coincided with a need for them, viz., high educational aspirations. Where more training was planned, the hypotheses predicted least alienation where power was greatest (high values on both elements) and highest alienation where minimal power was evident. The third case, where power was "medium" was said to result in no differences between the two combinations.

The major conclusion to be drawn from an inspection of Table 10 is that the effects of differences in individual power are greatest among those boys to whom college training is most important, either because of their individual choice (III and V) or because such training is part of the institutionalized expectation derivative of high status (type IV). Considering types I and II in Table 11A, there is only one instance in which the predicted relations are not found to exist; that is, in type II the difference between youth with high and low independence (under conditions of low ability) is statistically significant. Since independence training is stressed predominantly by middle class mothers, the possibility is apparent that mothers of high independence-low ability youth were successful in teaching autonomy, which, when coupled with varying conceptions

Table 10. Means and variances* of five types on Index of Alienation under four conditions of power.

Type	Condition of Power				
	1	2	3	4	
	Hi GPA Hi Ind	Hi GPA Lo Ind	Lo GPA Hi Ind	Lo GPA Lo Ind	
I	5.250 (6.250) n = 4	4.500 (7.143) 8	6.334 (10.606) 12	6.040 (7.363) 25	
II	4.100 (8.456) 10	4.144 (7.363) 14	5.778 (5.742) 18	4.825 (5.584) 29	
III	2.847 (8.846) 26	3.300 (8.537) 20	5.000 (7.600) 6	5.556 (8.538) 9	
IV	3.000 (0.800) 6	2.250 (0.917) 4	4.400 (21.209) 15	4.610 (6.567) 23	
V	3.246 (2.955) 61	3.447 (3.659) 38	3.400 (5.002) 21	4.474 (5.596) 19	
Total	Mean	3.688	3.529	4.982	5.100
Sample:	Variance	(5.455)	(5.649)	(9.714)	(6.440)
	n	107	84	72	105

*Variances are enclosed in parenthesis.

Table 11A. Predicted and actual relations among Alienation means of types I, II, & III under four conditions of power.

Type	Predicted	Actual	"t"	df	Pr<
I	$\mu_1 = \mu_2$	$\mu_1 = \mu_2$	0.479	12	ns
	$\mu_2 = \mu_3$	$\mu_2 = \mu_3$	1.374	20	ns
	$\mu_3 = \mu_4$	$\mu_3 = \mu_4$	0.232	37	ns
II	$\mu_1 = \mu_2$	$\mu_1 = \mu_2$	0.026	24	ns
	$\mu_2 = \mu_3$	$\mu_2 = \mu_3$	1.459	32	ns
	$\mu_3 = \mu_4$	$\mu_3 \neq \mu_4$	3.704*	47	.05
	$\mu_1 = \mu_3$	$\mu_1 = \mu_3$	1.342	28	ns
III	$\mu_1 < \mu_2$	$\mu_1 < \mu_2$	1.794	46	.05
	$\mu_2 = \mu_3$	$\mu_2 = \mu_3$	1.308	6**	ns
	$\mu_3 < \mu_4$	$\mu_3 \geq \mu_4$	0.381*	15	ns
	$\mu_2 < \mu_4$	$\mu_2 \geq \mu_4$	1.407	11	ns
	$\mu_1 < \mu_3$	$\mu_1 < \mu_3$	2.488	8**	.05
	$\mu_1 < \mu_4$	$\mu_1 < \mu_4$	1.903	12	.05

*Indicates that failure to predict correct relation necessitated testing the hypotheses below it (within the type) to ascertain the extent of the error in prediction.

**Indicates that the degrees of freedom were calculated according to the method suggested by Walker and Lev (1953, p. 157) for use where samples are small and unequal in size with variances unknown but presumed unequal. See Appendix (5).

Table 11B. Predicted and actual relations among Alienation means of types IV and V under four conditions of power.

Type	Predicted	Actual	"t"	df	Pr<
IV	$\mu_1 = \mu_2$	$\mu_1 \neq \mu_2$	3.939*	4**	.05
	$\mu_2 = \mu_3$	$\mu_2 = \mu_3$	1.433	5**	ns
	$\mu_3 = \mu_4$	$\mu_3 = \mu_4$	0.729	38	ns
	$\mu_1 = \mu_3$	$\mu_1 \neq \mu_3$	* 5.431	9**	.01
	$\mu_1 = \mu_4$	$\mu_1 \neq \mu_4$	* 2.488	10**	.05
V	$\mu_1 < \mu_2$	$\mu_1 \geq \mu_2$	0.527*	99	ns
	$\mu_2 = \mu_3$	$\mu_2 = \mu_3$	0.081	59	ns
	$\mu_3 < \mu_4$	$\mu_3 < \mu_4$	4.647*	40	.05
	$\mu_1 < \mu_4$	$\mu_1 < \mu_4$	* 6.331	80	.05
	$\mu_2 < \mu_4$	$\mu_2 < \mu_4$	* 1.617	47	.10

*Indicates that failure to predict correct relation necessitated testing the hypotheses below it (indicated by * before the "t") to ascertain the extent of the error in prediction.

**Degrees of freedom calculated according to method suggested by Walker and Lev (1953, p. 157)

of life-goals, results in higher scores for their sons on the alienation index. Since no differences appear between high and low ability (with high independence controlled) it appears that differences in independence are the major factor in the differential occurrence of alienation, at least in this type.

The results of the comparisons within type III bear special consideration. Since the members of this group are atypical in lower-class goal structures (post-high school training is typical in the middle, not lower class) it is here that effects of power-differences should be most apparent. In the first comparison (1 and 2)¹⁹ the predicted relation is accurate and differences in alienation obtain between high and low independence youth under conditions of high ability. The predicted relation between 2 and 3 obtains, although the difference approaches the rejection region. A predictive error is evident in the relation between 3 and 4 since the difference in alienation, while directionally accurate, is not sufficiently large to exceed chance limits. Given the differences between 1 and 2, and the lack of differences between 3 and 4, it was necessary to formulate and test subsidiary hypotheses to locate the extent of the differences. Of these (all of which involve differences in ability under varying conditions of independence) two are sufficiently great to indicate nonrandom variation and the third difference approaches statistical significance. The importance of the variation within this type should not be overlooked. First, the groups which possess several elements of power should, *ceteris paribus*, enjoy considerably better relationships with their environment

¹⁹ To simplify presentation, the various conditions will be designated as "1", "2", etc.; the reference in each case is to "Condition 1" as noted in Table 10.

than their cohorts who lack one or both of the elements under discussion. The analysis of the data bears out this position. Second, it was this group to which Merton (1957) referred in speaking of the effects of lack of means commensurate with the cultural goals and it is this group who presumably were in the minds of Sewell and Haller when they formed their explanation of the relationship between tension-states and social status. Finally, given the distinct possibility of a beta error when working with small n's such as these, there is reason to conclude that members of this group exhibit considerable differences in localized alienation according to intra-type differences in power. This conclusion adds support to the general view that power differences are most critical when lack of power endangers goal-achievement.

The general lack of differences between the means in types I and II was explained by the multiplicative relation between a positive choice of high life-goals and the individual elements of power. Since the numerical value of life-goals in I and II is zero, no differences were expected. Similarly, no differences were expected in type IV for this reason. However, Table 11B reveals that the hypothesis of no difference does not adequately describe the reactions of high status youth who desire no more training contra their parent's wishes; further it should be recalled that they are engaging in deviant behavior (using society as the point of reference) because they are violating what have been posited as institutionalized expectations. However, it is important to note that in the comparison of the means of youths with high and low independence (given high ability) it is low independence youth who manifest least alienation of any of the groups in the sample. Were the observed frequencies in these

two cells larger, there would be reason for questioning the general hypothesis that power and alienation are inversely related. However, in view of the small n's involved (six and four respectively) a more cautious interpretation seems advisable, viz., that the observed results are either (1) chance results or (2) that the interaction of high ability and low independence is of a different order in high status families than in low status groups. In type I, a similar result is observed (2 is less than 1) but the differences are not statistically significant and in type II there is virtually no difference between the two means under consideration.

The rejection of the null hypothesis between 1 and 2 necessitated testing two subsidiary hypotheses to ascertain the extent of the within-type differences. The results of these two subsidiary comparisons lend support to the hypothesis that alienation is inversely related to power but do not explain why the scores of low independence-high ability youth should be lower than the other three scores in the type. It should be added that in comparing the means of 1 and 3 there exist large differences in the variances and for this reason there is some reason to question not the significance of the difference but rather the exact level of significance (Cochran and Cox, 1950, pp. 83-84).

Generally type IV represents a serendipitous pattern since one would not expect that about one-seventh of the sample could be defined as institutionally deviant. The pattern of results within the type suggest that the hypotheses do not adequately explain the variation between condition-means, and that in all probability, the interaction of the variables is considerably more complex than is specified in the hypotheses.

The final set of comparisons within Table 11B generally support the hypothesis that alienation as a function of differences in power is most likely to occur when a clear choice of goals is evident. In type V, as in III, there are differences between youth with differing degrees of power. In the first comparison with type V (1 and 2) the prediction of differences is in error, suggesting that a difference in independence (given high ability) coupled with high status is not as disturbing as it is when coupled with low status. Colloquially, the low status youth "needs everything he can lay his hands on," while the situation of the upper status youth is less precarious. However, the observed difference between 3 and 4 suggest that lack of individual power contributes substantially to alienation as predicted. Furthermore, the fact that 4 is statistically different from all other means within the type is indicative of the somewhat precarious situation of high goals and little power.

Summary

This section has examined the validity of the hypothesis that imbalance leads to alienation, one variety of stress. Two kinds of imbalance were incorporated into the testing of the general hypothesis; situational and individual imbalance. Concerning the former, the analysis of data shows that differences in alienation exist between each of the five types, which types are defined by different combinations of the situational variables. The differences either exceed or approach statistical significance. When individual imbalance is examined, the data show that (1) alienation is inversely related to individual power and that this relation is most apparent when a positive goal-choice is available, and (2) while the hypotheses generally predict differences correctly, they are lacking in sensitivity to



particular interaction effects within some of the types. This lack of sensitivity is especially apparent with type IV, the serendipitous pattern, wherein a choice of low goals involves institutionally defined deviance for the youth with high status.

Therefore, considering alienation as a variety of stress, it may be said that it is a function of the types of imbalance induced by the cultural emphasis on success. The imbalance is precipitated by the disjunction between the cultural goals and a differential supply of means which vary with social status and related factors.

NERVOUS TENSION

Introduction

In this section, the exploratory nature of the hypotheses should be kept in mind. It is worth repeating again that the dynamics of nervous tension as a variety of stress are not clear to the degree that are the factors underlying alienation. Lack of clarity notwithstanding, the findings of Sewell and Haller (1959) as well as those of Douvan and Adelson (1958) furnish a substantial if non-specific base for predictions and the purpose of this section is to analyze the results of the tests of the hypothesis that imbalance leads to nervous tension as one kind of stress.

Situational attributes

Table 12 presents the basic data utilized in testing the hypothesis that nervous tension is a function of situational imbalance. Inspection of the data reveals that the differences between type means on the alienation index are somewhat larger than on the index of nervous tension. The largest

Table 12. Means and variances of five types on Index of Nervous Tension.

Type	Mean	Variance	"n"
I	10.506	6.924	49
II	11.387	7.275	71
III	10.221	8.024	61
IV	9.792	7.099	48
V	9.543	8.634	139
Sample	10.190	7.205	368

difference among alienation means was 2.482, whereas the largest difference between any two means in Table 12 is 1.844, types II and V. The significance of this smaller range is apparent in Table 13 which presents the results of the tests of hypotheses concerning situationally-induced nervous tension. Because of the exploratory nature of these hypotheses, the rejection region has been increased from .05 to .10 to permit smaller differences between means to appear. Despite the larger rejection region the differences between means were too small to justify rejection of the null hypothesis in two of the four predictions.

The major conclusion to be drawn from Table 13 is the general lack of influence of life-goals on differences in nervous tension. Rather, social status seems to exert the major effect. In only one instance (III and IV) can the hypothesis of no difference be accepted when comparing low and high status types, whereas the only instance of a statistically significant difference between means within the same status is the large difference between II and I. With low status types the only factor exerting appreciable

Table 13. Predicted and actual relations among Nervous Tension means of five types.

Predicted	Actual	"t"	df	Pr
$\mu_1 = \mu_{11}$	$\mu_1 \neq \mu_{11}$	1.784*	120	.10
$\mu_{11} > \mu_{1v}$	$\mu_{11} > \mu_{1v}$	3.192	110	.05
$\mu_{1v} > \mu_{111}$	$\mu_{1v} \leq \mu_{111}$	0.811*	117	ns
$\mu_{111} > \mu_{1v}$	$\mu_{111} > \mu_{1v}$	1.541	200	.075
$\mu_1 > \mu_{111}$	$\mu_1 \leq \mu_{111}$	*0.545	110	ns
$\mu_1 > \mu_{1v}$	$\mu_1 > \mu_{1v}$	1.322	97	.10
$\mu_{1v} > \mu_{1v}$	$\mu_{1v} \leq \mu_{1v}$	*0.543	187	ns

*Indicates that failure to predict correct relation necessitated testing the hypotheses below it (indicated by *before the "t") to ascertain the extent of the error in prediction.

influence is imbalance between parents and sons, which is responsible for the high nervous tension score of persons in type II; however in high status types, parent-son imbalance exerts no evident effect (IV and V are about equal in nervous tension). It is important to note that the high score in II, apparently a function of parent-son imbalance among low status persons, lends considerable support to the explanation of Sewell and Haller who posited these factors as contributing to their observed differences in tension-states. However, the general lack of influence of life-goals upon nervous tension suggests that the dynamics within type II are an exception rather than a general tendency characterizing each of the types in one way or another.²⁰

²⁰There is a very real possibility that at least some of the antecedents are not unidimensional. For example, is independent behavior of the same kind in low and high status families? The existence of what we have called "exceptions" characterizing particular types leads one to at least suspect multidimensionality as one explanation for these exceptions.



Summary: In general it may be said that the original relationship reported by Sewell and Haller between social status and nervous tension is not significantly altered by the introduction of life-goals and parental stress as intervening variables. The only factor responsible for statistically significant differences between means on the index of nervous tension (besides status) is parent-son imbalance among low status youth. Considering situational attributes, there is considerable reason to doubt that nervous tension and alienation vary in the same manner as separate varieties of stress produced by imbalance.

Person attributes

Table 14. Means and variances* of five types on Index of Nervous Tension under four conditions of power.

Type	Condition of Power			
	1	2	3	4
	Hi GPA Hi Ind	Hi GPA Lo Ind	Lo GPA Hi Ind	Lo GPA Lo Ind
I	8.500 (46.667) 4	8.750 (12.500) 8	10.000 (18.394) 12	11.600 (18.347) 25
II	10.700 (22.400) 10	10.893 (28.418) 14	11.944 (24.261) 18	11.493 (17.232) 29
III	10.038 (32.599) 26	9.000 (23.105) 20	15.167 (23.067) 6	10.351 (14.000) 9
IV	6.250 (9.200) 6	9.500 (24.000) 4	9.900 (21.966) 15	10.717 (18.937) 23
V	9.100 (24.097) 61	9.816 (18.813) 38	9.700 (21.975) 21	10.616 (19.918) 19
Total	Mean 9.317	9.678	10.625	10.667
Sample:	Variance (16.648)	(21.081)	(21.649)	(18.078)
	n 107	84	72	105

*Variances are enclosed in parenthesis.

Table 14 presents the basic data for testing the hypotheses concerning the effects of imbalance in producing nervous tension under varying conditions of individual power. The major tendency of scores on the index of nervous tension is that of considerable differences in the variances within each type. Further, the tendency toward wide variation does not exist among the individual means, which, with two exceptions, exhibit only small differences.

Tables 15A and 15B present the results of the tests of hypotheses concerning the differences within-types on the index of nervous tension. Where the prediction was one of no difference between means under various conditions of power, the predictions were accurate; in no instance in types I, II and IV was a difference of sufficient magnitude as to justify rejecting the hypothesis of no difference. However, in types III and V, where directional predictions were made, the tests of the hypotheses indicate that in only one of four cases was the prediction correct; in type V the mean of condition 1 is less than that of condition 2, indicating that at least in one instance, less power is accompanied by higher nervous tension. In type III the prediction that nervous tension among high-independence youth would be lower than nervous tension among low-independence youth (controlling ability) was in error in both cases; actually youth with high independence scored higher on nervous tension measures than did those with low independence. These two deviant cases occurred only in type III and in view of the inordinate high tension score of high independence-low ability youth, there are some grounds for concluding that the occurrence of nervous tension is, on the whole, not related to imbalance resulting from differences in individual power with respect to life-goals.

1000

1000

Table 15A. Predicted and actual relations among Nervous Tension means of types I, II & III under four conditions of power.

Type	Predicted	Actual	"t"	df	Pr<
I	$\mu_1 = \mu_2$	--	a	--	--
	$\mu_2 = \mu_3$	$\mu_2 = \mu_3$	0.711	9	ns
	$\mu_3 = \mu_4$	$\mu_3 = \mu_4$	1.063	14	ns
II	$\mu_1 = \mu_2$	$\mu_1 = \mu_2$	0.093	12	ns
	$\mu_2 = \mu_3$	$\mu_2 = \mu_3$	0.570	27	ns
	$\mu_3 = \mu_4$	$\mu_3 = \mu_4$	0.327	37	ns
III	$\mu_1 = \mu_2$	$\mu_1 = \mu_2$	^b 0.674	46	ns
	$\mu_2 = \mu_3$	$\mu_2 \neq \mu_3$	2.764*	6**	.05
	$\mu_3 = \mu_4$	$\mu_3 \neq \mu_4$	^b 2.092*	6**	.10
	$\mu_2 = \mu_4$	$\mu_2 = \mu_4$	*0.823	11	ns
	$\mu_1 = \mu_3$	$\mu_1 \neq \mu_3$	*2.270	7*	.075

^aIndicates no test of significance because of extreme differences in variances.

^bIndicates change from one to two tailed test because of obvious failure to predict directional difference.

*Indicates that failure to predict correct relation necessitated testing the hypotheses below it (indicated by * before the "t") to ascertain the extent of the error in prediction.

**Degrees of freedom calculated according to method suggested by Walker and Lev (1953, p. 157).

Table 15B. Predicted and actual relations among Nervous Tension means of types IV and V under four conditions of power.

Type	Predicted	Actual	"t"	df	Pr<
IV	$\mu_1 = \mu_2$	$\mu_1 = \mu_2$	1.174	5**	ns
	$\mu_2 = \mu_3$	$\mu_2 = \mu_3$	0.016	5**	ns
	$\mu_3 = \mu_4$	$\mu_3 = \mu_4$	0.537	34	ns
V	$\mu_1 < \mu_2$	$\mu_1 < \mu_2$	2.395*	97	.05
	$\mu_2 = \mu_3$	$\mu_2 = \mu_3$	0.093	59	ns
	$\mu_3 < \mu_4$	$\mu_3 \geq \mu_4$	0.288	40	ns
	$\mu_1 < \mu_3$	$\mu_1 \geq \mu_3$	*0.499	82	ns

*Indicates that failure to predict correct relation necessitated testing the hypotheses below it (indicated by * before "t") to ascertain the extent of the error in prediction.

**Degrees of freedom calculated according to method suggested by Walker and Lev (1953, p. 157).

The rationale for this conclusion is evident when it is realized that the validity of the hypothesis of no difference is only confirmed when the predicted, directional differences do in fact result, as was generally the case on the index of alienation. Where the directional hypotheses are in error, little credit can be laid to the theorem which predicts no differences in other cases, even if the latter can be confirmed.

Summary: As a general rule, the hypotheses calling for a multiplicative relationship between life-goals and the two elements of individual power (ability and independence) were found to be in error when called upon to predict differences among means on the index of nervous tension. Whatever the cause of differential nervous tension within each type, differences in power with respect to life-goals does not appear to be a valid explanation. Where high life-goals led to a prediction of differences according to individual power, the prediction was correct in only one of four cases. In another case, the observed difference was in the opposite direction than was predicted. Finally, the striking heterogeneity of variances among the individual condition-means lends support to the conclusion that knowledge concerning the differential occurrence of nervous tension is advanced but little through an investigation of the effects of differences in individual power.

CONCLUSION

This chapter has presented the results of the tests of hypotheses concerning two effects of imbalance, alienation and nervous tension. The particular hypotheses tested were derived from Heider's theorem that imbalance leads to stress. Imbalance was defined in terms of combinations of situational and person variables as these combinations occurred with instances

of high and low life-goals, measured by desire for college training. Since imbalance was said to exist to the extent that environmental and personal forces were not compatible with the objective requirement of striving for success, it was expected that the effects of imbalance would be demonstrated in differences in scores on the indexes of alienation and nervous tension, according to the particular combinations of the antecedents.

When stress was viewed in terms of localized alienation, the hypotheses generally mirrored the facts. The environmental forces, social status and parental expectations, were shown to contribute to alienation as did life-goals. The only factor which did not contribute substantially to alienation was imbalance due to parent-son disagreement over life-goals. When individual imbalance was taken as a predictor of alienation, the results were again generally in accord with the hypotheses, although lack of statistical significance in some comparisons suggested that the simple multiplicative relation on which the hypotheses were based was somewhat insensitive to the interaction of factors within the individual types.

When stress was viewed in terms of nervous tension, the hypotheses generally failed to predict differences. When the impact of environmental forces was examined in terms of their capacity to generate nervous tension, the analysis confirmed the original relationship between status and nervous tension posited by Sewell and Haller, and, in the case of lower status boys, showed that parent-son imbalance did in fact accentuate nervous tension. However, the effects of life-goals, apparent when alienation was examined, were wholly lacking on scores on the index of nervous tension. Furthermore, when the effects of individual imbalance due to lack of power were examined, the hypotheses gave little indication of explaining what differences were found to exist.

Viewed together, the disparate results demonstrate the general utility of theory. Where considerable theory was available to generate predictions, and this theory was buttressed by relevant research, the predictions were accurate. Where little theory was available to aid in interpreting relevant research, the hypotheses were generally inaccurate.

CHAPTER V

CONCLUSION

INTRODUCTION

This final chapter contains three main actions. Following this brief introduction there is a discussion of the contributions of this study to knowledge about alienation and anomia. The second section considers the implications of Heider's theorem that the stress induced by imbalance leads to "stress-reducing" behavior and speculates on both social and personal consequences of alienation as a form of stress. Also, this section considers the implications of the findings about nervous tension. The final section broadens the perspective in which the results are viewed and makes a number of suggestions about future research in this general area.

One parenthetical comment is appropriate at this point. Thus far, the interpretation of the results have been cast into what might be called a "cautious" mold. In this chapter, the results are viewed somewhat more optimistically and the emphasis is on the positive contributions of the thesis to the literature of sociology and social psychology. Thus, should the reader detect a change in "moods," he will have been forewarned and hopefully will be forearmed.

LOCALIZED ALIENATION AND ANOMIA

Throughout this thesis the focus has been on the latent functions of the pervasive emphasis on success in American society. The major consequence of this emphasis is called anomie when predicated of a societal

condition and anomia when applied to a psychological state. Whatever the object-referrent the concept refers to a lack of "self-to-other-belongingness," either perceived or real. The major consequence of interest in this study is called localized alienation, which has been shown to be differentially distributed according to combinations of variables which cluster around the individual's life-goals. Depending on whether or not the particular combinations were favorable or unfavorable to achievement, alienation has been shown to occur. The consequent variable has been called "localized" alienation to emphasize that it was measured in terms of the person's attachment to objects predicated of him or immediately proximal to him. Thus the sense in which alienation is used here should be considered as distinct from the more general environmental scope generally indicated by the concept. From the point of view of the person involved, the lack of each of the antecedents was seen as a lack of power relative to environmental stresses on success.

The classic statement about the latent functions of the cultural stress on success is contained in Merton's typology of role-responses (1957). If the responses of the high-alienation subjects in this study are considered as preliminary to a more pervasive disenchantment with American society as adults, then the results discussed in the preceding chapter support Merton's contentions that a differential availability of means precipitates variant responses, only a few of which bode well for social integration. This study, along with the findings of Douvan and Adelson (1958) on the psychodynamics of social mobility, provides considerable support for Merton's thesis that the genesis of at least some deviant tendencies lies in the means-end scarcity.

The major contribution of this study lies in the linkage of localized alienation in adolescents to the considerable literature on anomia in adults. The conditions which have been shown to be associated with the occurrence of anomia by Bell and others, have, in this study, been shown to be associated with localized alienation. Thus, a diachronic approach to the problem of anomia has been made, one which, by its nature, offers a possibility of a more complete explanation of the problem. And, insofar as localized alienation is a precondition to anomia, the empirical vacuum which previously underlay Merton's thesis is now removed to some small extent. Therefore, this study adds knowledge of an earlier age group to the literature on social structure and anomie and offers a basis on which prediction about anomia in adults may be based.

CONSEQUENCES OF LOCALIZED ALIENATION

Heider's theorem holds that imbalance leads to stress which in turn is motivating toward activities calculated to reduce the stress. One means of stress-reduction consists in redefining one's object-attachments in such a manner that the new object-attachment (or expectation) either leads to gratification (balance) or at least minimizes the imbalance. For example, there is less deprivation attendant upon failure if one believes that "in spite of what some people say, the lot of the average man is getting worse,"²¹ than if one believes that others generally prosper. The contention in this study is that the measurement captures a stage in the development of what Srole calls "self-to-other-alienation" in adults. If in fact localized alienation is a manifestation of situational imbalance, what are its consequences? That is, how is stress reduced?

²¹One item in Srole's "anomia" scale (1957).

Social consequences

One strong possibility, suggested but not clearly supported in current literature is social isolation. Festinger (1957) suggests that one way in which cognitive dissonance (or imbalance) is reduced is by actively avoiding situations and information that increases dissonance. Bell (1957) and Srole (1956) provide support for this proposition, reporting positive associations between anomia and social isolation, although Roberts and Rokeach (1956) report negative results in replicating Srole's study. Two recent papers, Meier and Bell (1959) and Mizruchi (1960) lend considerable support to Srole's original findings and it is on this basis that the possibility of social isolation as a consequence of localized alienation is suggested. The probability of this consequence is further increased by the findings of both Bell (1957) and Mizruchi (1960) that when social integration is measured in terms of formal participation, the inverse relationship with anomia is particularly strong. If isolation is seen as stress-reducing, it is apparent that withdrawal from formal obligations is considerably easier than is withdrawal from informal social participation. Mizruchi reports that the latter, while associated with anomia in low income groups, is not as strongly related in high status groups (1960, p. 649). If participation in formal associations is viewed as more likely to involve commitment to community norms and sentiments, then the relationship of low formal participation and anomia becomes readily understandable since alienation or anomia among adults is generally construed as having the community as a general object-referrent. Furthermore, the adult is more likely to find

informal groups which support his disenchantment than is the youth whose choice of reference and membership groups is considerably limited by the role-commitments exacted of him.

Finally, this study suggests that the occurrence of alienation, traditionally thought to be characteristic of urban environments, is considerably more widespread, extending to rural atmospheres as well. Mizruchi (1960) and the present study draw upon data gathered in rural and small urban locales, and in the light of the results of the two sets of data, there seems sufficient grounds for concluding that the assumed differences in social integration between rural and urban populations have been considerably exaggerated.

Personal consequences

Investigation in the area of social structure and personality is based on the premise that personal correlates of situational differences are the rule rather than the exception. Had the hypotheses concerning nervous tension been substantiated rather than rejected, one would be considerably more inclined to postulate disorganizing personal tendencies as the result of the kinds of imbalance with which the study is concerned. However, the failure of the hypotheses to predict differences in nervous tension can be viewed as partially supporting Merton's contentions that deviant role responses (defined in societal terms) should not ipso facto imply personal deviance or as it is sometimes called, personal disorganization. The point should be made clear that, in view of the supposed tendency of the self to organize behavior so as to avoid undue anxiety (Sullivan, 1953, p. 169), a variety of personal adaptations are possible as correlates of imbalance, not all of which would either be socially visible or

clinically defined as "disorganizing." Consequently, although typical modes of personality disorganization remain a provocative hypothesis as correlates of revised social object-attachments (of which social isolation is one important variety), a firm brake should be applied to tendencies to assume personal disorganization from instances of imbalance such as those isolated in the present study.

SUGGESTIONS FOR FUTURE RESEARCH

There are at least several directions in which future research in this area might profitably be conducted. Building on the topic of interest immediately above, an obvious step is an exploratory investigation into possible differences in personality syndromes between youths classified into the various types. Hence the question would become, given these situational differences, what if any differences in personality organizations may be correlates? If it could be demonstrated that different trait-syndromes characterize the members of the respective types, the state of substantive knowledge as well as the logic of investigation in the area of social structure and personality would be advanced. Such an approach as described here is suggested by Inkeles (1959) who comments on the paucity of such parallel inquiries, the existence of which are presumably the rationale for interest in social structure and personality. To the writer's knowledge, only Spindler (1955) has carried through such an investigation. Hypotheses could be formulated on an exploratory basis, asking only as to whether demonstrable personality differences could be found as correlates of situational differences.

Perhaps a desirable preliminary step to the above is an inquiry into differences in the value-orientations of the subjects of this study. Rosen (1956) reports differences in value-orientations related to different achievement-motivation structures but does not systematically probe into associated structural differences as does this thesis. Knowledge of such value-differentials would considerably facilitate prediction of personality-differences in the sense that value-commitments may be said to influence the "organization" of the object-attachments constitutive of personality (Parsons, 1958).

Two related aspects of this general problem could be profitably investigated. First, data on social participation, coupled with knowledge of personality and value differentials would conceivably advance knowledge concerning the relative primacy of social and cultural factors in anomia, while providing a full description of the variant modes of adaptation which are so important in Merton's germinal paper. Second, knowledge of commitment to life-goals would be considerably advanced were it known "how" some persons choose to continue their education. That is, what are the steps of the decision-making process and who are the influential "others" in the decision-sequence? The fact that knowledge of parental stress is but a partial aid in exploring educational aspirations suggests that other, unexplored groups, play a major role. Parsons (1959) lays the principal emphasis on the school system but data supporting this position is yet to be published, if in fact such has been gathered. Inquiries into the decision-making process would also shed light on the factors which lead other youths to decide not to seek more training. Kahl (1953) suggests that parental stress among lower class families manifests itself only upon indication of probable success, e.g., scholastic achievement, yet the sizable population of type II casts some

doubt upon the efficacy of this explanation, at least among suburban families, since most of the youths in type II are found to be characterized by low ability.

The most important single direction in which future research efforts might be directed is a follow-up study of the subjects on whom the present data were gathered. Given the positive results of predictions about alienation, there exists now a detailed and carefully analyzed body of data upon which to base hypotheses as to (1) anomia and (2) social participation in both formal and informal groups. The five types analyzed in this thesis could be utilized much in the same manner as they have been here, as "situational" bases, from which to predict the occurrence of anomia. Also, knowledge of the success of individual members of types III and V in their quest for further training would furnish a "proving grounds" for the necessity of the elements of power (ability and independence) in striving for success, even in such a limited context as successful acquisition of post-high school training. Presumably ability would be crucial in such contexts, while independence may well manifest its effects in differences in social participation after high school. Considering the obvious advantages of longitudinal studies, there seems no more fruitful way in which to definitively isolate the underlying and precipitating factors contributing to anomia and its social correlate, anomie, both of which are said to be the latent functions of the pervasive emphasis on success in American society.

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APPENDIX 1

RICHLAND COUNTY MATRIX OF CALIFORNIA TEST OF PERSONALITY
ITEMS, FACTOR LOADINGS, AND LINKAGE-ANALYSIS

INTERCORRELATIONS OF RICHLAND COUNTY CALIFORNIA TEST OF PERSONALITY
ITEMS ASSOCIATED WITH STATUS

Item No.	14	16	21	25	30	39	45	46	47	48	57	61	62	63	66	68
14	-															
16	14.0	-														
21	233	093	-													
25	113	072	117	-												
30	14.1	192	106	052	-											
39	24.7	167	229	068	164	-										
45	166	14.0	14.0	104	177	254	-									
46	037	04.9	127	058	077	075	051	-								
47	127	193	120	057	167	170	181	182	-							
48	197	214	156	100	242	212	195	190	216	-						
57	225	191	098	060	166	221	229	078	154	24.9	-					
61	082	109	032	066	118	097	04.7	105	063	187	202	-				
62	14.2	063	04.6	031	108	097	128	068	053	165	259	34.2	-			
63	092	072	050	036	097	054	093	028	053	097	127	127	131	-		
66	14.0	085	051	026	072	094	077	062	078	128	179	210	258	112	-	
68	094	165	062	016	068	14.8	096	062	069	201	206	255	254	121	257	-
70	139	127	070	065	120	128	112	059	116	183	267	284	325	129	257	337
71	082	116	059	035	053	152	04.6	114	14.1	150	199	177	270	093	171	214
72	084	126	093	066	050	119	092	094	115	14.6	125	162	156	105	171	184
88	105	084	114	074	055	118	114	112	092	154	113	085	076	053	060	126
93	176	114	123	101	107	14.6	079	089	082	183	211	199	231	139	166	196
104	177	159	112	052	106	175	179	077	100	213	235	114	161	128	114	155
109	163	303	125	082	254	14.7	107	135	181	319	226	115	113	04.6	055	134
111	156	191	14.9	088	135	162	137	14.9	144	272	182	134	128	050	136	175
114	093	083	14.5	102	033	120	064	133	138	124	096	062	037	020	009	110
115	162	119	123	069	135	14.6	150	075	127	214	257	216	197	127	152	221
117	085	113	122	099	108	166	119	098	318	181	100	090	072	070	059	114
120	131	123	208	156	14.5	177	118	152	130	273	153	153	14.1	04.7	096	150
124	253	164	227	094	097	206	172	113	131	252	186	180	215	111	14.0	216
144	100	095	111	027	088	199	111	095	135	156	095	062	069	04.0	078	095
Status	125	210	118	089	155	170	099	063	111	115	126	122	130	079	107	14.9

Decimals are omitted.

70	71	72	88	93	104	109	111	114	115	117	120	124	144	Item No.
														14
														16
														21
														25
														30
														39
														45
														46
														47
														48
														57
														61
														62
														63
														66
														66
														68
														70
294	-													71
252	244	-												72
134	063	096	-											88
190	172	107	112	-										93
144	122	074	169	186	-									104
136	090	101	125	136	188	-								109
172	179	138	132	127	244	271	-							111
052	081	104	138	061	085	115	170	-						114
208	176	164	181	214	231	227	233	115	-					115
089	082	088	091	075	117	241	170	217	110	-				117
144	133	083	105	128	171	160	260	102	211	152	-			120
189	129	146	160	161	193	172	203	083	226	113	224	-		124
075	102	101	105	113	095	050	152	117	110	127	084	134	-	144
143	113	118	091	148	142	168	107	100	107	109	122	155	104	Status

FACTOR LOADINGS

Factor 1 - Status Concern. The six items which comprise the first factor in order of magnitude of the loadings are:

<u>Content</u>	<u>Loading</u>	<u>Item No.</u> ¹
I often have a hard time because it seems that my folks hardly ever have enough money.	.445	109
I wish my father (or mother) had a better job.	.388	16
I don't have a chance to see many new things.	.365	30
I am sorry I live in the place I do.	.264	47
My friends have better times at home than I do.	.255	48
I try to keep boys and girls away from my home because it isn't as nice as theirs.	.229	117

Factor 2 - Achievement Concern.

Most of my friends and classmates do not think I'm bright.	.373	14
My folks do not seem to think I'm doing well.	.331	21
My classmates think I cannot do well in school.	.297	39
School work is so hard I am afraid I will fail.	.284	124
I have just a few friends.	.273	45
It is hard to make people remember how well I can do things.	.223	104

¹Indicates item number on matrix, enclosed in this appendix.

Factor 3 - Rejection of family.

<u>Content</u>	<u>Loading</u>	<u>Item No.</u>
I try to keep boys and girls away from my home because it is not as nice as theirs.	.395	117
I like one of my parents more than the other.	.380	114
I am sorry I live in the place I do.	.346	47
I often wish I had some other parents.	.295	46
I dislike many of the people near my home.	.235	144
I am unhappy because my folks do not care about the things I like.	.213	111
My folks do not seem to think I am doing well.	.212	21
My eyes hurt me often.	.208	72

Factor 4 - Nervous Symptoms.

I often feel sick at my stomach.	.506	70
I often have bad dreams.	.504	62
I often have sneezing spells.	.481	61
I often feel tired in the forenoon.	.459	68
I often have dizzy spells.	.422	71
I often find I am not hungry at meal time.	.410	66
My eyes hurt me often.	.327	72
I usually forget the names of people I meet.	.257	93
Someone at home picks on me much of the time.	.234	115
People often try to cheat me or do mean things to me.	.232	57
I bite my fingernails often.	.221	63

LINKAGE ANALYSIS

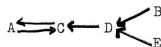
An elementary linkage analysis, as developed by McQuitty (1957), yields "typal structures," a cluster of items in which "each member of the type is more like some other members of that type (with respect to the data being analyzed) than he is like any member of any other type" (p. 209). For example, if a matrix of inter-correlations is being examined, every person in a type would "have a higher correlation with some other person in the type than he would with anyone not in the type" (p. 213).

To illustrate the development of a typal structure, assume the following matrix of correlation coefficients is to be analyzed:

	A	B	C	D	E
A	-	647	<u>862</u>	629	118
B	647	-	299	721	292
C	<u>862</u>	299	-	<u>727</u>	643
D	629	<u>721</u>	727	-	<u>657</u>
E	118	292	643	657	-

The first step is to pick out the highest entry in each column; in the illustration these are underlined. Second, find the highest entry in the matrix and identify the two elements involved; above, these are A and C. Following McQuitty's technique, these are indicated by reciprocal arrows ($A \rightleftarrows C$). Third, entering row C, find those elements which are "high" with C, i.e., finding the underlined entries in row C. In this case, D is high with C; this is indicated as follows ($C \leftarrow D$); indicating that D is high with C but not vice versa.

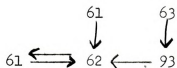
Next repeat the procedure for A; in this case, no element is "high" with A, except C which is already noted. Then, entering row D, the task is to find the elements which are "high" with D, in this case, B and E. This relation is indicated by a single arrow from B to D, and E to D, as was the case with D and C. The procedure is repeated until every element in the matrix is a member of one type. The results of this analysis may be indicated as follows:



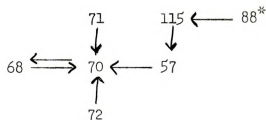
Where \longleftrightarrow means a reciprocal pair of variables, and

\longrightarrow means that the variable at the tail of the arrow is highest with the one at the head, but the one at the head is not highest with the one at the tail.

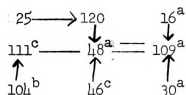
When a linkage-analysis is performed on the Richland County matrix (enclosed) of Sewell and Haller, the following typal structures result:



Type I
(All Factor 4)



Type II
*(All Factor 4 except 88)

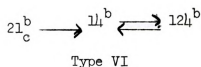
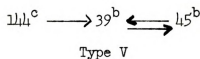
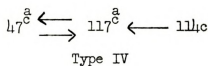


Type III

where a = status concern

b = achievement concern

c = rejection of family



When the four factors of Sewell and Haller are analyzed in terms of typical structures, the conclusion follows that with the exception of Factor 4 - Nervous Symptoms, the remainder of the factors are found to be intermixed throughout the types.² This was the conclusion which furnished a substantial basis for reinterpreting their results.

<u>Status concern</u>		<u>Achievement Concern</u>		<u>Rejection of family</u>	
<u>Item No.</u>	<u>Type</u>	<u>Item No.</u>	<u>Type</u>	<u>Item No.</u>	<u>Type</u>
109	III	14	VI	117	IV
16	III	21	VI	114	IV
30	III	39	V	47	IV
47	IV	124	VI	46	III
48	III	45	V	144	V
117	IV	104	III	111	III
				21	VI
				72	II

²The term "types" here refers to the typical structures, not to the types discussed in the body of the thesis.

APPENDIX 2

DESCRIPTION AND LOADINGS OF THE 16 PF TEST
FACTORS USED TO MEASURE INDEPENDENCE

The primary consideration to be borne in mind when evaluating the adequacy of these factors is that the 16 PF Test factors are composed of items taken from (a) ratings in real-life behavior situations, (b) objective tests and (c) clinical and social performances.¹ Consequently, the three factors used to measure independence are, themselves, based on past behavior and behavior-ratings; as such they furnish an adequate basis for prediction of the kind of behavior which has been called self-as opposed to other-determination. The adequacy of the 16 PF Test is not at issue here; rather the question is whether the factors adequately capture the dimension which has been shown to be part of the "achievement-syndrome."

Factor E - Dominance of Ascendancy versus Submission

Generally, dominance tends to be correlated with status and is somewhat higher in established leaders than in followers. It is not substantially correlated with obtaining leadership. Groups averaging high on this tend to show more effective role interaction and democratic procedure. Among occupations it is most associated with those requiring boldness and courage. The behaviors with which this factor is most associated are:

Assertive, Self-Assured vs. Submissive
Independent Minded vs. Dependent
Hard, Stern vs. Kindly, Soft-Hearted
Solemn vs. Expressive
Unconventional vs. Conventional
Tough vs. Easily Upset
Attention Getting vs. Self-Sufficient

¹A complete discussion of this test is found in Thomas (1960).

Factor G - Character or Super-Ego Strength versus Lack of Internal Standards.

This factor, indicative of self-controlled rather than emotional behavior and is characterized by energy and persistence. Cattell (Handbook, p. 8) hypothesizes that this factor corresponds to the super-ego in psychoanalysis. Several objective tests² indicate that this factor involves success in a variety of performances which require persistence and organization of thinking. The behaviors with which this factor is associated are:

Persevering, Determined vs. Quitting, Fickle
Responsible vs. Frivolous
Emotionally Mature vs. Demanding, Impatient
Consistently Ordered vs. Relaxed, Indolent
Conscientious vs. Undependable
Attentive to People vs. Obstructive

Factor Q₂ - Independent Self-Sufficiency vs. Lack of Resolution.

This is one of the four factors in the 16 PF Test which are still in stage of development; consequently Cattell does not list a set of correlated behaviors. However, positive loadings on this factor are indicative of a person who is "accustomed to going his own way, but is not necessarily dominant in his relation to other people" (Handbook, p. 11). The person low on this factor prefers to work and make decisions in company with other people, likes social approval and is conventional and fashionable.³

²See R. B. Cattell, (1951) A Factorization of Tests of Personality Source-Traits, British Journal of Psychology, pp. 165-178.

³All of the descriptions of items in this appendix are taken from Handbook for the Sixteen Personality Factor Questionnaire, (no date).

APPENDIX 3

INTERCORRELATIONS OF LENAWEE COUNTY CALIFORNIA TEST
OF PERSONALITY ITEMS USED IN INDEX OF ALIENATION

INTERCORRELATIONS OF LENAWEE COUNTY CALIFORNIA TEST OF PERSONALITY
ITEMS USED IN INDEX OF ALIENATION

Col. ¹	2	4	5	11	12	22	24	25	27	28	29	30	33	34
2	-	331	088	199	200	234	232	156	321	165	167	151	136	050
4	331	-	191	265	306	139	214	188	262	086	095	173	144	121
5	088	191	-	137	145	091	207	295	156	087	148	146	173	136
11	199	265	137	-	362	101	253	270	379	143	290	285	086	139
12	200	306	145	362	-	099	300	282	328	254	248	245	180	234
22	234	139	091	101	099	-	140	146	028	036	068	028	078	025
24	232	214	207	253	300	140	-	285	333	188	406	225	208	186
25	156	188	295	270	282	146	285	-	301	309	274	308	169	186
27	321	262	156	379	328	028	333	301	-	212	279	286	165	071
28	165	086	087	143	254	036	188	309	212	-	185	194	163	192
29	167	095	148	290	248	068	406	274	279	185	-	217	155	223
30	151	173	146	285	245	028	225	308	286	194	217	-	109	103
33	136	144	173	086	180	078	208	169	165	163	155	109	-	408
34	050	121	136	139	234	025	186	186	071	192	223	103	408	-

Based on n = 390

¹Indicates column number on original matrix of thirty-three California Test of Personality items. The complete matrix is on file with the Laboratory of Social Research, Department of Sociology and Anthropology, Michigan State University.

APPENDIX 4

LINKAGE-ANALYSIS OF LENAWEE COUNTY MATRIX
OF CALIFORNIA TEST OF PERSONALITY ITEMS

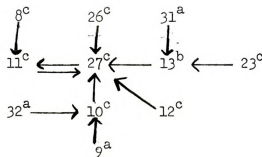
The "typal structures" found below are the results of an elementary linkage-analysis of the thirty-three California Test of Personality items (Form AA) originally selected by the writer to measure the four item-areas of status concern, achievement concern, alienation from family and nervous tension. In the typal structures, the "area" of each item is indicated by superscripts "a", "b", "c" and "d", respectively, following the system used in Appendix 1. Thus, an item which was selected to measure status concern will be designated by the superscript "a". The item numbers refer to the columns on the original matrix.

$$33^a \longleftrightarrow 34^a$$

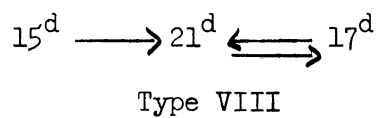
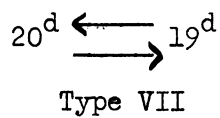
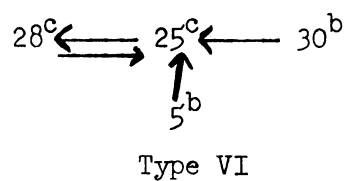
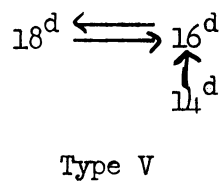
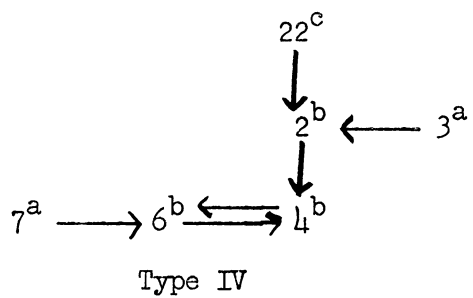
Type I

$$24^a \longleftrightarrow 29^a$$

Type II



Type III



APPENDIX 5

MEANS AND STANDARD DEVIATIONS OF VARIABLES IN
RAW SCORE FORM AND FORMULAS USED IN COMPUTATIONS

Means and standard deviations of variables in raw score form

	Social Status	Independence Factors		
		E	G	Q ₂
Means	85.081	10.509	12.495	9.429
Standard Deviation	6.592	4.137	3.193	3.052
Range	62-99	0-22	0-18	0-18

Formulas used in computations

The formula used in conjunction with the "t" test of significance of difference between means, taken from Walker and Lev (1953, p. 156), is intended for use in those instances where the standard deviations of the two populations are unknown but presumed unequal:

$$t = \frac{\bar{X}_1 - \bar{X}_2 - (\mu_1 - \mu_2)}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}} \quad \text{with } N_1 + N_2 - 2 \text{ df}$$

The formula used for calculating the degrees of freedom when the samples are small (in this case, arbitrarily set by the standard of one sample n being less than 10) is taken from Walker and Lev (1953, p. 157):

$$n = \frac{\left(\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2} \right)}{\left(\frac{S_1^2}{n_1} \right) \frac{1}{n_1 + 1} + \left(\frac{S_2^2}{n_2} \right) \frac{1}{n_2 + 1}} - 2$$



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