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A STUDY OF FACTORS INFLUENCING REPORTS OF LIFE HISTORY EXPERIENCES

by

Elaine Bernice Oxman

A dissertation submitted in partial fulfillment
of the requirements for the degree of
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Committee in charge:

Professor Edward S. Bordin, Chairman
Assistant Professor M. David Galinsky
Assistant Professor Robert A. Hefner
Associate Professor Julius M. Wallner

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Chapter I

Introduction and Background

The ability to work has been considered a significant part of normal adjustment by virtually all those engaged in treating disturbed persons, but there is as yet no widespread and generally accepted theory explaining the meaning of work in adult life or its relationship to the total personality. There has, however, been continued progress since the beginning of the present century toward the completion of such a theory, an achievement which would be of major importance to both occupational and clinical psychology and would doubtless lead to further accomplishments in each of these areas. Progress in the area has been aided by speculations in the literature about work and its dynamics, and has gained momentum from the expanding research on occupational groups.

The present study draws on two previous investigations which found significant differences in family backgrounds and early experiences between persons in training for different professions. Based on these earlier observations, the research presented here has as its main concern the extent to which these differences may be part of a conscious image of a profession held by persons both within and outside the framework of the occupation. In addition, it explores the possibility that the differences found could have resulted from the desire of the S's to give answers which would correspond to their picture of the successful person in their profession and/or would seem in a more general way socially desirable to them.

The findings of this research should then have the effect of either strengthening or calling into question the inferences of the previous studies, by suggesting that the S's were or were not viewing their own backgrounds and experiences in specific and predictable modes. Beyond this, the study is meant to touch upon the perceptions, conscious and unconscious, that a person has of his occupational group and of himself in relation to that group. Thus it bears upon several aspects of the general problem mentioned above -- the meaning a person's occupation may have for him.

Theoretical Approaches to the Meaning of Work

Several viewpoints have been presented in regard to the forces motivating the individual to work. Lantos (1943) distinguishes among work, learning, and play. The basic distinction relates to the use of the occupation as a means for furthering self-preservation. Work "is the active effort of the ego, enriched during the period of learning, to get from the outside world whatever is needed for self-preservation." (Lantos, 1943, p. 117). Play is an occupation done for its own sake, not for anything that can be gained from it, while learning "does not serve self-preservation directly, but is a means of acquiring the ability for it." (Lantos, 1943, p. 118).

Menninger (1942) stresses the aggressive nature of work, regarding it as a sublimation of aggressive impulses. This point of view is also held by Greenacre (1957) in regard to creative work. Hendrick (1943) considers work as a means of controlling the environment, and, as such, an ego function

which gives pleasure.

Work, then, can be regarded as providing some satisfaction to the individual, whether as a means of channeling otherwise unacceptable impulses, as a way of gaining advantages from society, or as a method of using one's intellectual and creative abilities. When these aspects of work are considered, however, it becomes clear that the specific occupation chosen has a direct bearing on what needs may be fulfilled and what pleasures and satisfactions are available. Thus studies of various occupations and of the persons engaged in different types of work are of major importance in augmenting and clarifying theories of work-in-general.

Theoretical Approaches to Vocational Choice

Bordin (1943), in an analysis of vocational interest phenomena as manifested in The Strong Vocational Interest Test, states that there are three main points of view which theories of vocational choice and development can take: the static viewpoint, which considers vocational interests fixed by the time the individual has reached maturity, thus relating these interests to biological traits; the dynamic viewpoint, which "sees vocational interests as the product of a concantenation of psychological influences, and, as such, subject to change with changes in the equilibrium" (Bordin, 1943, p. 50); and the empirical viewpoint, considered to be that of Strong, which claims merely that there are sets of preferences which distinguish successful men in various occupations. Bordin's preference is for the dynamic viewpoint, and his conclusion

is that occupational choice reflects the self concept: "In answering a Strong Vocational Interest Test an individual is expressing his acceptance of a particular view or concept of himself in terms of occupational stereotypes" (Bordin, 1943, p. 53). Occupational choice is thus considered to be an expression of personality. Super, whose book The Psychology of Careers (1957) is a detailed evaluation of the process of vocational development, also stresses the self concept. He asserts that "the choice of an occupation is one of the points in life at which a young person is called upon to state rather explicitly his concept of himself," and adds, "...holding and adjusting to a job is for the typical beginning worker a process of finding out, first, whether that job permits him to play the kind of role he wants to play; secondly, whether the role the job makes him play is compatible with his self-concept... and, finally, it is a process of testing his self-concept against reality, of finding out whether he can actually live up to his picture of himself." (Super, 1957, p. 191).

The view that vocational choice is an expression of the self concept has been examined by Englander (1957) in a recent study of women preparing to become teachers. He used a Q-sort technique with 126 female college students divided into a group preparing to become elementary school teachers, a group being trained for other positions in education, and a group not enrolled in the educational program. Groups I and III were different at the .01 level in congruency with respect to perceived personal characteristics of the self and of elementary school teachers, at the .01 level with respect to per-

ceived occupational features as desired for the self and as perceived in elementary school teaching, at the .05 level for perceived favorable attitudes of respective families toward elementary school teaching, and at the .05 level for perceived favorable attitudes of respective friends toward elementary school teaching. While only the first point differentiated Group I from Group II, this does not appear to be a serious defect, because the education majors probably regarded themselves as potential teachers first and only second as teachers of a particular grade.

Attempts have been made also to relate personality factors to vocational choice by means of psychoanalytic concepts. Segal, who was one of the first to examine occupational selection in this way, discusses three aspects of analytic theory which he considers especially relevant to the problem. These aspects are the process of identification, the development of defense mechanisms, and the theory of sublimation. Identification "appears to have great utility in determining some of the early emotional bases for later vocational choices" (Segal, 1953, p. 24), while sublimation and the various defense mechanisms often find expression in work. A similar viewpoint has been taken by Nachmann, who concludes that "occupational groups do vary significantly from one another in important personality characteristics" and that "the "entire range of occupations can be described in terms of the major personality dimensions" (Nachman, 1957, p. 4).

Research Concerning Personality Factors in Vocational Choice and Development

In the last half-century there has been an increasing

amount of interest in the various professions and occupations and the differences among them. At first these differences were considered mainly in terms of the skills and abilities needed by a practitioner. Then, beginning in the 1920's, the Strong test was used to demonstrate clear variations in interest patterns and attitudes between the members of one occupation and those of another. Around the same time, studies began to be done to examine --and later to predict-- the personality factors to be found in members of various occupational groups. Similar research has continued to be produced since that time.

Although in forty years there have been numerous investigations of personality constructs in a variety of occupations, research in the area up to the present has been more exploratory than conclusive. There are several reasons for the lack of definitive findings; among them methodological flaws, use of tests which were inadequate in general or with regard to the particular problem being explored, haphazard choice of vocations to be contrasted, and insufficiency of the theoretical base. Each of these detriments will be discussed in turn.

The early studies often contained serious weaknesses in their methodology and research design. A prevalent flaw when contrasting occupations was their failure to equate groups for age, experience, intelligence, commitment to a career, and other important matters before concluding that the personality differences found were related to the vocations represented. Freyd (1933), for example, compared industrial and sales students on the Downey Test and on a test based on the

Kent-Rosanoff word list, and found differences between the groups by both methods. The implications of the results were uncertain, however, because of the presence of extraneous factors. The tests used involve speed of writing and of responding to verbal stimuli, and the results are likely to vary in accordance with variations in the age and educational level of the S's. On these factors the groups were markedly different, since the industrial students were in the fourth year of a college program, while the sales students were salesmen already in the field who were attempting to improve their skill by taking an eleven-week course. There is thus not a sufficient basis for relating the differences on the Downey and Kent-Rosanoff protocols to the different occupations.

Schmidt (1951) gave the Rorschach to 24 student nurses and 22 occupational therapy students, and found significant differences between the groups. Occupational therapy students were significantly higher in the amount of popular responses, whole responses, human movement, color, and shading responses given. Differences close to significance were found for several additional factors. Schmidt concluded that the occupational therapists were more productive, better able to generalize, and better able to abstract than were the nurses; that they were closer to reality and conformed more readily to popular thinking, but at the same time were less stereotyped. These interpretations seem to imply marked personality differences closely related to choice of occupation. It should be noted, however, that the groups were not equivalent intelleo-

tually. The occupational therapy students were significantly higher in both their Performance and Full Scale I.Q.'s on the Wechsler, and this difference in itself could be used to account for the distinguishing characteristics of their Rorschach protocols. This is not to say, of course, that Schmidt's interpretations are not valid, but they are much less meaningful than would have been the case if the groups had been matched.[1]

Poor choice of tests has weakened a number of studies. In some cases, the difficulty has been that the test is of questionable validity. Research using the Bernreuter, as Johnson (1942) did in her comparison of salesman with students of religious work, is open to this criticism. In other instances the test may simply be infelicitous. Rubinstein and Lorr (1957) applied the Multidimensional Scale for Rating Psychiatric Patients to 19 psychiatrists, 27 psychologists, and 21 social workers, having each S rated by two of his peers. No significant differences were found among the three groups, but all of them differed significantly from the patient norms. The importance of such conclusions seems limited.

A third difficulty, which often proves a hindrance but which need not contaminate research if its potential effect on the data is considered, is that the sophistication of a

1. If there were a marked difference in intelligence, this should of course be mentioned and the appropriate conclusions drawn as to the intellectual characteristics of each occupation, but matching could have helped to indicate whether there are other characteristics as well distinctive to the occupation, or whether all the differences can be explained by the one factor. The present results are inconclusive.

group may influence its responses. This complicating factor may have been present in the results which Snyder (1955) obtained from a group of clinical psychology students on the Taylor Anxiety Scale and the Winne Neuroticism Scale. On both these tests, although not on the Minnesota Multiphasic Personality Inventory (MMPI) from which they were derived, the clinical students showed less maladjustment than did students with other interests. Kelly (1948), who gave the MMPI to a clinical and a non-clinical group of psychology students, found differences in the same direction, indicating that the clinical group was less disturbed. He noted, however, that the clinical group scored high on the K factor, which because the factor measures control would suggest that these students may have avoided responses indicative of pathology. It is very difficult to circumvent this type of distortion when using psychologists as subjects and a test known to them, and perhaps all that can be done in such cases is to take note of what may be occurring.

Failings in the selection of occupations to be contrasted may lessen the meaningfulness of a study. This weakness occurs often in the published research. There has been an all too frequent tendency to take whatever S's are available and give them some sort of test, without reference to general theory or specific hypotheses. The outcome has been a large number of investigations interesting in themselves but scarcely definitive. A study by Kaback (1946) may be used for illustration. She compared the Rorschach records of accountants

and pharmacists, finding a few differences but not enough to distinguish the two professions. Segal, whose own research will be discussed later, pointed out that both occupations require the practitioner to be careful and accurate, and that similarities in response patterns might thus have been expected.

Insufficiency of the theoretical base is related to each of the difficulties that have been discussed. Of the Kaback study just described, for example, it may be said not only that a greater awareness of theory might have led to a choice of occupations having less resemblance, but that even given the same occupational groups, the theory might have formed a sufficient basis to have enabled the author to describe and predict in advance the obtained similarities. Such predictions would have greatly increased the value of the study and would have provided a more adequate foundation for further research.

In regard to the field of vocational choice and development as a whole, the lack of general theory has had further deleterious effects. It has served to restrict the production of usable hypotheses, a restriction which has proved one of the major reasons for the scarcity of studies containing predictions to be tested. In addition, it has hindered the formulation of any major program of extensive and intensive co-ordinated research, and has occasioned a plethora of studies which are not comparable and which taken together do not combine into a meaningful and inter-related whole. Recent work in the field, however, has served to some extent as a corrective. It has tended more toward the use of theory,

particularly psychoanalytic theory, and furthermore has been more adequate in its design. Research of the past ten years has done much to give firm support to the hypothesis that occupations reflect personality factors, and even has been able to suggest some of the factors involved.

Of the studies of specific vocations, the ones most relevant to the present investigation are those of Roe (1946, 1950, 1951, 1952, 1953, 1956, 1957), Segal (1953), Nachmann (1957), and Galinsky (1961). Roe has made comprehensive studies of several professional groups, including physicists, biologists, psychologists, and anthropologists. Her use of a variety of psychological techniques and her attempt to obtain a fairly complete picture of the persons involved make her work especially important.

Biographical information collected from the subjects was used to determine whether there were consistent differences in the backgrounds and experiences of group members. Her findings, although obtained from a small number of persons, are interesting in the possibilities they suggest for further research. She found, for example, that sixteen of the twenty-two physicists studied were first-born children, while two were the youngest of seven. There was a general pattern of slow psychological development; they were not interested or at ease in sexual activities, and there had been little dating before college. As far as primary family was concerned, they had respect for their fathers, but little closeness. Six indicated open rebelliousness, but the more usual pattern

was concealed rebelliousness. There was somewhat more warmth toward the mother, but a number rather grew away.

On the Rorschach and TAT, the physicists showed much freer aggression than the biologists with whom they were compared. They found it easier to accept the fact of difficulties in life, and were less inclined to gloss over them. There was also a greater acceptance of unresolved tension. They had stronger affects and were more interested in the social environment than were the biologists, but they had less ability to cope with it. Their failures in this area, however, caused them less guilt than corresponding failures did the biologists.

Psychologists showed an earlier pattern of dating and a larger number of friends than either the biologists or the physicists. As children, they were given both over-protection and firm control, to which they reacted with hostility. There was much more rebelliousness and more family difficulty than in the other two groups cited.

The Rorschachs of this group tended to be productive, uncritical, sensitive, and aggressive. Rational controls were haphazard. There were conflicts over dominance and authority. The clinicians showed an intense interest in other people. On the TAT, the social scientists showed a concern with interpersonal relationships, dependence on parental figures, and helplessness in the face of severe conflict.

All of Roe's studies are of importance in the area of personality factors in vocational choice. The fact that she selects persons of proven ability in the occupation makes her

studies particularly valuable, since many investigators test students who may not have come to a lasting decision about their occupational role, or who may find themselves misfits in the occupation of their choice.

Segal's study tested hypotheses based on psychoanalytic concepts. He gave the Rorschach, the Bender-Gestalt, and a concept formation test to 15 creative writing students and 15 accounting students at the University of Michigan, having selected these two groups because of observable differences in their occupations in matters such as freedom, chance for self-expression, and required verbal skills.

Because both of the groups were functioning adequately within limits set by society, Segal expected the tests to show no differences in their general level of adjustment. The Rorschach responses tended to confirm this prediction.

Accounting students were expected to show greater acceptance of social norms. This prediction was only partially bourne out by the tests. The two signs looked for on the Rorschach, number of populars and percentages of animal responses, did not differentiate the two groups. The amount and type of form responses, however, showed that the accounting students were more cautious, constricted, and practical, while the significantly greater use of white space by the creative writers indicated a tendency toward non-conformity.

A third hypothesis was that accounting students would show a greater amount of emotional control, while the creative writing students would show greater awareness of feeling.

This prediction was confirmed by responses on the Bender, and by the use of shading, color, and sexual responses on the Rorschach.

It was predicted that the accounting students would show a greater frequency of compulsive responses. In both groups, however, there was a wide range of scores, and the prediction could not be confirmed.

The next hypothesis was that creative writers would show a greater expression of hostility. The Rorschach responses indicated that the writers did tend to project, and thus express, their hostile feelings.

Creative writers were expected to show greater tolerance for ambiguity and a greater ability to deal with complex emotional situations. The use of blend responses on the Rorschach by the writers, showing their ability to use several aspects of a situation, indicated their ease in dealing with complexity; while the distortions present in the accountants' responses to the first card showed them to be more confused by ambiguity. Both parts of the prediction were thus confirmed.

It was believed that the accounting students would show signs of a more rigid, fearful identification; while the creative writing students were expected to seek the completion of multiple identifications. The greater number of Wheeler signs of homo-sexuality observed in the responses of the writers indicated some confusion of identification, and their human movement responses showed a more differentiated identification. Support for the hypothesis of rigid, constricted

identifications among accountants was not observed.

This study, which formulated and tested predictions rather than simply seeing what variables could be observed, was an important contribution to the theory of vocational choice. The number of factors studied, the comparable age and length of experience of the two groups, and the large number of significant differences found between them give much support to the hypothesis that different occupations satisfy different needs and are chosen in accordance with personality variables.

Studies using only biographical material have been done by Nachmann and Galinsky at the University of Michigan. These studies, on which the present research is based, seem to indicate that significant differences in early family relationships may be predicted on the basis of later professional choice.

Nachmann conducted an examination of 20 law students, 20 dental students, and 20 social work students, all males. The lawyers were the main concern of this study, and the other two groups were chosen to provide a contrast in certain features of their professions. On the basis of the type of work done, a composite picture of the characteristics of each of the three occupations was drawn. From analytic theory, thirteen hypotheses were made about the type of experiences which would have occurred in childhood to those who later chose these occupations. These hypotheses were formulated into subquestions which were asked of the subjects.

Analysis of the type of work done by lawyers showed that they were concerned with human justice, were allowed to be verbally aggressive, and had curiosity about others. Social workers were also concerned with justice and were curious about others, but verbal aggression was prohibited for them. Dentists did not need to be concerned with justice, were allowed to be aggressive in their work, and showed curiosity of a disguised and circumscribed type.

The open aggressiveness and skill with words supposed to be characteristic of the lawyer was hypothesized to spring from a childhood environment in which the subject was stimulated, encouraged, secure with his parents, and allowed to express aggression. His work is considered to be related to superego function, and recognizes the necessity for authority and rules. At the same time there is a need to do something to bring about justice. It was thought that the father may have been distant in some way, but since masculine identification was not lacking, a possible secondary identification figure was postulated. There may have been an early experience of injustice before the subject was old enough to understand. Early curiosities were probably not satisfied but not rebuffed.

The social worker was said to acknowledge hostility but to be forbidden to express it. It was hypothesized that verbal skills had been cultivated early but not as strongly as in the case of the lawyer. The model for the expression of aggression was probably feminine or mild masculine. But the inner strength required of the social worker suggests a determined mother, not a passive one. The social worker is con-

cerned more with ego than with superego. There may have been a basic injustice at an earlier time than the lawyer's, perhaps a deprivation during the first year or two of life. There may also be repressed voyeuristic impulses operating here.

The dentists were hypothesized to have been stimulated in manual skills rather than in speech. It was believed that their families frowned upon discussion and argument, thus forcing the subjects to repress their aggressive impulses. An overpowering father and an environment proper and correct on the surface but lacking real warmth were postulated. The concern with the inner part of the body suggested that the subjects may have witnessed illness in a member of the family.

It was hypothesized that the lawyers and the dentists would describe strong masculine father figures, and the social workers would report either no father or a weak and inadequate one. This hypothesis was confirmed by the data. A second hypothesis was that the lawyer's father would have been more emotionally or geographically remote than the fathers of the other two groups. This hypothesis was also confirmed. It was believed that a strong male figure other than the father would be reported significantly more often by the law students, and this also came out as predicted, as did the prediction that the mother would be described as strong more often by the social workers.

As predicted, the development of intellectual functions and curiosity was stimulated most in the families of the lawyers, while physical activities were encouraged most by

the parents of dentists.

It was predicted that discipline would have been more masculine for the lawyers and dentists, but that among the lawyers a greater emphasis on fairness would be reported, while the families of dentists would stress obedience to authority. Again, this came out as predicted. The hypothesis that aggressive impulses would have been more acceptable to the families of lawyers and social workers was also supported by the data.

The hypotheses concerning early trauma were only partially confirmed. As expected, social workers reported disruption of family during the first two years of the subject's life significantly more often than did the other groups, and the dentists reported no sudden trauma, but the lawyers did not indicate the later trauma which had been predicted.

Three other significant predictions were that the families of social workers would have had more concern for the feelings of others, that the dentists' families were conventional and lacking in warmth, and that dentists had more experience with illness. A final prediction, that sexual curiosity was more harshly rebuffed by dentists' families, was not confirmed.

A study utilizing a similar research design was that of Galinsky, who chose physicists and clinical psychologists as the groups to be investigated. His hypotheses were derived from assumptions about the role of curiosity in these professions; specifically, that the childhood experiences of psychologists allowed them to attempt to satisfy their curiosity

about interpersonal relationships, while the experiences of physicists channeled their curiosity on this subject into other areas.

Of the eleven hypotheses stated for these groups, seven were generally or completely supported by the data. These seven were: that psychologists had closer and warmer relationships with their mothers than did physicists; that physicists received more intellectual stimulation from their families than did clinicians; that the psychologists had more opportunity as children to be curious about interpersonal matters; that the discipline given to the physicists was rigid and stressed obedience, while that given to the clinicians was flexible and stressed appeal to feelings; that physicists had fewer but less stormy relations with peers than did clinical psychologists; that the psychologists manifested greater interest in the opposite sex during adolescence than did physicists; and that psychologists more frequently than physicists had strong but conflictful attachments to their families. Four other hypotheses were proposed but not confirmed: that fathers of physicists were more dominant and more clearly masculine than fathers of clinical psychologists; that mothers of clinical psychologists would be described as the dominant parent more frequently than physicists' mothers; that physicists more than clinical psychologists took their fathers as identity models; and that the home environments of clinical psychologists were less conventional than those of physicists.

Another set of predictions about the effects of early

environment on vocational choice was made by Roe (1957), who hypothesized that a child whose parents were protective would seek a service occupation as an adult, a child whose parents were demanding would turn to business contact or general culture, one whose parents were rejecting would become a scientist, one whose parents were neglectful would choose an outdoor occupation, while one whose parents were casual would go into technology. This series of predictions was tested by Hagen (1960) in a study of the vocational choices of college students. He found a significant relationship only between the casual environment and the choice of technology, and thus concluded that Roe's theory had not been supported.

Consideration of Various Aspects of Occupations Important to a Theory of Work

Until the present, research projects in the area of vocational choice and personality have in general been limited to two kinds: descriptive studies of particular occupations which seek to find out as much as possible about the persons in a given field but do not make any a priori judgments, and comparisons of occupational groups with some stated rationale for expecting differences among them. The first type of study usually results in a general description which is often very detailed but which may be of limited use in distinguishing one group from another; while the second may obtain statistically significant findings, but usually explores a much smaller selection of data. There is today, as has been noted, no

consistent and organized body of knowledge in the area to which either type of study may be related. Instead there is a mass of data collected by means of various tests and techniques from persons preparing for or engaged in a variety of occupations. When several investigations produce similar results, these results are seldom tied together or examined further; when there are discrepancies, they are rarely probed or resolved. This is easily demonstrable by reference to studies involving similar groups. Bergler (1954), for example, on the basis of clinical observations, concluded that writers are oral personalities, while Segal did not find that a noticeable amount of oral material was produced by writers on the Rorschach. Without further investigation, it cannot be known whether this contradiction occurred because the former group (in therapy) was more infantile and less productive than the more typical writers whom Segal studied, or whether it means that writers actually are oral and that those of Segal's group (students) who were not would tend to drop out of the field after completing school. The lack of organization makes probable that each piece of research undertaken will be discrete, with the added corollary that valuable clues will be lost because the individual author, intent upon his own segment of the field, neglects other material which he has or could easily obtain. Becker and Carper (1956), for instance, in their description of the development of physiologists (as part of a study which the present writer considers of great importance for the new directions it explores) state that the S's started graduate work in physiology because they had

failed to gain entrance to medical school, but nowhere give any reasons for their failure to have been admitted, thus passing over whatever factors of personality, intellect, motivation, or background may have been involved.

It is very clear that one result of the present haphazard approach to problems of the meaning of work is that each of the pieces of information that we possess is precluded from making the full contribution to the field of knowledge of which it is capable. This is true despite the fact that many of the studies are meaningful and insightful and that the existing theories have produced important developments in this and other areas. The restriction occurs because none of them, studies or theories, includes all the relevant material. Super deals extensively with phenomenological self but gives little space to subconscious needs; psychoanalytic theory stresses genetic development and personality dynamics but passes over sociological factors. In research work the difficulty is increased because a study as a practical matter cannot examine everything. Yet in order to understand an occupation it is necessary to consider all the factors associated with it. In the following paragraphs mention will be made of some aspects of work which are of importance and which have not always been given adequate consideration.

The motivation for entering a particular career is usually complex. The actual tasks which one performs in an occupation are only part of its totality; there may be other satisfactions in one's employment than those proceeding from the work itself. Thus Ginzberg, Ginsburg, Axelrad, and Herma (1951) include

among the total gratifications those related to the returns of work, such as money and prestige, and those related to the concomitants of work, such as setting and co-workers. Brender (1960), taking a similar view, divides work satisfactions into those intrinsic and those extrinsic to an occupation. In view of the unconscious urges which Nachmann's data suggest are basic to the wish to perform the services of a dentist, it is interesting to note that in a recent study of dentistry students (1960), More and Kohn found that the motive most frequently given for choosing the profession was a desire for autonomy.

The work included under one rubric is not necessarily uniform nor perceived in the same way by all viewers. Different individuals may gain different rewards from the same occupation. Thus Brender: "People work in order to gratify certain needs or motives. Conversely, all work is potentially capable of gratifying certain human needs" (Brender, 1960, p. 96). Nachmann, after making the previously quoted statement about occupational groups differing in personality characteristics, adds that this is true "despite the modifying and perhaps sometimes obliterating circumstances that all men have basically the same impulses and that many occupations can be bent to serve many aims" (Nachmann, 1957, p. 4). Tyler states the viewpoint even more strongly: "The difficulty is, as I see it now, that the <u>individual</u> differences are so large and striking that they outweigh any sort of group differences. Among persons who choose science as a career, for example, there are all kinds of individual in-

terests, attitudes, and values that show up when they are given an opportunity to do so... Those who choose business resemble each other in several ways, but they differ from one another in many more" (Tyler, 1961, pp. 199-200).

Studies of single professions have revealed hitherto unsuspected complexities within supposedly undifferentiated groups. Raylesberg (1949) found that engineering students who held a particular value (as measured by the Allport-Vernon scale) regarded engineering as a profession based on that value. Goldberg (1958) noted significant differences among clinical psychologists working as therapists, academicians, and administrators, even though all the subjects had been considered clinicians during their years in graduate school.

The latter study dramatizes the importance of developments that occur after an individual starts his training or begins his career. The incorporation of a new member into a vocational group and the taking on by an initiate of the attributes and characteristics suitable for the role he is to play are parts of a long-term process. In "What Teaching Does to Teachers" (1960), Waller describes how from reactions to the recurrent situations of the classroom "the qualities considered to be characteristic of the teacher are produced" (Waller, 1960, p. 331). He further states that:

> The understanding of the effects upon the inner man of the impact of the occupation is... an important task of social science. It is a problem almost untouched. We know that some occupations markedly distort the personalities of those who practice them, that there are occupational patterns to which one conforms his personality as to a Procrustean bed by lopping off superflous members. Teaching is by no means the only occupation

> which whittles its followers to convenient size and seasons them to suit its taste. The lawyer and the chorus girl soon come to be recognizable social types. One can tell a politician when one meets him on the street... The doctor is always the doctor, and never quite can quit his role. The salesman lives in a world of selling configurations. And what preaching most accomplishes is upon the preacher himself. Perhaps no occupation that is followed long fails to leave its stamp upon the person (Waller, 1960, pp. 329-330).

Becker and Carper, in the research previously mentioned, contrast the development in graduate school of three professional groups -- engineers, philosophers, and physiologists. Their most surprising findings perhaps concern the physiologists, who usually had no intention when they entered of remaining in the field, but were taking courses relative to medicine before trying again to pursue a medical career. As they learned more about the subject matter of physiology and the number of unsolved problems in the area while at the same time they were becoming part of a functioning group, their outlook changed until finally they were more ambitious to do basic research than to become physicians. Becker and Carper conclude that "our analysis suggests the operation of certain specific mechanisms producing changes in identity. These mechanisms ... consist of ways in which participation in organized groups of various kinds affects experience and, through this, self-image" (Becker and Carper, 1956, p. 296).

There have been only a handful of studies dealing with the influence of the occupation upon the practitioner, and many more are needed. If this process is ignored or overlooked, serious distortions and oversimplifications are the result. Lynd (1958), criticizing the present state of thinking

in psychology, suggests that "our training inclines us to comprehend a ... continuing process of change only after it has first been broken up into items or smaller categories. We give names to forms, structures, and functions rather than to more diffused, changing experiences." But "change in time can never be ignored or forgotten or added on as a relatively extraneous factor; it is always present." (Lynd, 1958, p. 80).

Among the features which distinguish an advanced member of a profession from a beginner is the former's knowledge (and, most usually, acceptance) of the profession's ideology. Watson (1960) describes how law students have to discard previous beliefs about law during their training, and suggests that they be given a more adequate philosophy. Greenwood reports that "the transformation of a neophyte into a professional is essentially an acculturation process wherein he internalizes the social values, the behavior norms, and the symbols of the occupational group" (Greenwood, 1962, p. 216).

Professions, analogous to individuals, tend to develop self-images which are only partly in accord with reality. As Harvey L. Smith puts it, "Every profession operates in terms of a basic set of fictions about itself. These provide the profession with a comforting self-image, some stereotype to help meet and adapt to the varied and often drastic contingencies of everyday operation... In themselves they may be true images, but they are allowed to engulf or obscure contrary truth and images, and so become professional fictions. These fictions help to define immediate functions; they help the

professional person to relate to others in terms of some mutuality of expectancy; they are often primary foci of recruitment" (Smith, 1958, p. 413).

The stereotype which a profession develops about itself is not always equivalent to the one the outside public has of it. According to Greenwood, "the layman's conception and the professional's self-conception diverge widely, because they are fabricated out of very different experiences. The layman's stereotype is frequently...either an idealization or a caricature of the professional type" (Greenwood, 1962, p. 218). The agreement of ersons on what labels describe a particular group may be noteworthy. Walker (1958) asked 68 male and 56 female students at a university in Australia to choose five adjectives from 112 to describe various occupations. He measured the strength of the stereotype by calculating the number of adjectives which would account for 50% of the total vote. If there were complete agreement, the Stereotypy Index thus obtained would be 2.5; if the choice of adjectives were random, the index would be 56. Since the groups tested for the present dissertation included law students, it is interesting to note that the index of agreement on what adjectives describe the lawyer was 11.8, showing a rather high degree of agreement across S's. There were no significant differences between the sexes nor between students planning to enter the occupation and others. As the public image of any profession may be inaccurate, incomplete, or simply at variance with the image the profession has of itself, the development of voca-

tional identity often includes the breaking down of previously held ideas about the group one has entered.

It should be noted in passing that every difference between an advanced and a beginning group in an occupation need not be related to the occupation per se. Characteristics are sometimes considered specific to a profession because all the factors relevant to change have not been taken into account. When Healy and Borg (1951) found that graduate nurses were more conscientious, more over-controlled, and significantly less nervous than nursing school freshmen and a norm group of college women, they interpreted their findings as indicating that emotional stability and a certain amount of over-control are essential for success in nursing; but they did not check to see whether in other professions women of the same age and experience showed the same traits. The results do not necessarily have the meaning attributed to them, nor does Thompson's (1944) finding that dentistry seniors scored significantly higher than dentistry freshmen in Self Adjustment, Social Adjustment, and Total Adjustment on the California Test of Personality necessarily mean that dentists are better adjusted than other professionals. The training experience itself (apart from the particular vocational material imparted) has its effect upon a group. It appears likely that in any occupation requiring extensive training, severely disturbed students will tend to drop out. Thus an advanced group of students would be expected to show better adjustment and maturity than a beginning group, because the students who remain are

those capable of postponing gratification, making long-range plans, and adjusting to stress. Age and the confidence that comes with experience are other factors which may operate to blur the meaning of distinctions which are found between new arrivals in a profession and their seniors.

The impact of change on the meaning of work is not a function solely of the individual undergoing training. The occupation of which he becomes a member is in itself not static. Both internal and external pressures are at work to produce continuous movement. Hirsch, in "The Image of the Scientist in Science Fiction" (1958), points out the ways in which science fiction, in large part written by scientists, has changed its portrayal of the scientist over the years from 1926 to 1950. He relates the changes to environmental happenings such as the Depression and the Second World War. Bucher and Strauss, in a study of the medical profession, discuss the emergence of subgroups having different attitudes and values. These sections "tend to take on the characteristics of social movements. Segments develop distinctive identities and a sense of the past and goals for the future" (Bucher and Strauss, 1961, p. 325). It may be added that, in a circular relationship, as these subgroups become more important, new individuals with the same outlook enter the field, until finally the entire picture of the occupation may be changed.

Background of the Present Study: Research Concerning Recall of Events and Social Desirability

Of the aspects of work discussed in the preceding pages,

the present thesis is concerned foremost with the way in which perceived characteristics of one's self and one's background are related to perceived characteristics of one's occupational group and of other occupational groups. It is based on the work done by Nachmann and Galinsky, whose studies have been described earlier in this report, and represents an attempt to enlarge on the knowledge gained from their findings.

As has been noted, the research carried out by Nachmann and Galinsky at the University of Michigan sought to establish whether specific factors in upbringing and early environment could be predicted for groups of subjects differentiated on the basis of occupational choice. The groups used in the Nachmann study were student lawyers, dentists, and social workers; in the Galinsky study, student physicists and clinical psychologists were used. The role behaviors required in these occupations were examined in terms of analytic theory to see what needs and drives could be satisfied by them, and to determine what type of background would be most likely to produce an individual who would want to relate to the world in the manner required by the occupation. Predictions were then made as to the relative position of father and mother in the family, type of discipline used, presence or absence of traumatic experiences, etc.; and each subject was given an interview in which he was asked general questions about his childhood and primary family. The statements obtained in the interviews were coded to relate to each of the predic-

tions, which were then tested to find whether they could distinguish the occupational groups. Of the predictions made, many proved statistically significant.

In any study, however, which uses recall of an event rather than the event itself as its criterion, the question immediately arises: How valid is the S's statement? Various studies have raised serious doubts about the accuracy of an S in recollecting events or circumstances that occurred several years in the past. Three recent investigations of parental recall of their children's development have focused attention on this problem. Hefner (1962) examined the reliability of mothers' reports when they were re-interviewed after 2½ years and asked again at what age the child had achieved various levels of performance. Estimates differed from those given the first time by as much as six months, a surprisingly large amount considering the short time span within which an event such as starting to walk could have been expected to occur. Haggard, Brekstad, and Skard (1960) included in their research measures of validity as well as of reliability. They interviewed 19 mothers who had been seen before the birth of a child and at successive intervals thereafter as part of a longitudinal study. They questioned the mother when the child was between seven and eight, and compared her report with the earlier data and with her earlier statements. For the 27 areas about which questions were asked, reliability correlations ranged from -.09 to .89, with an average of .47. Reliability was particularly low when the material

involved could be considered to have unpleasant emotional connotations for the S. The validity of the mothers' answers to those questions on which there had been previous observations by outside persons also was variable. The authors conclude that "the findings of this study indicate that, in many respects, the mothers' statements during the anamnestic interview were not particularly accurate as reports of prior events" (Haggard et al., 1960, p. 316). Robbins (1963) found comparable low reliabilities in comparing reports given by the parents of three-year-olds with their earlier accounts, and further suggested that the distortions which occurred were in the direction of agreement with the recommendations given in books on child rearing. The question of the subjects' accuracy in recalling features of their parental homes formed the original basis for the present study, although in the development of the thesis the investigation was broadened to include other matters.

The question as it stood originally could hardly be answered directly except by longitudinal examinations, since there is no way of recreating the S's childhood and comparing it with his present report. Trying to question his relatives and others who were present at the time would simply produce a mass of data which might not be accurate either. The problem became narrowed, however, when it was reformulated in relation to the earlier theses, since mistakes, if scattered randomly, would not have invalidated the statistical significances. The focus, then, was shifted from the matter of simple accuracy

of recall to the possibility of some extraneous factor that could have produced significant variations in statements made by members of different professions.

Several possibilities are apparent. The first is that members of a profession may have some idea of how persons in the profession are supposed to behave. Given this knowledge, they may then distort their memories -- or at least their statements -- so as to bring them in line with the supposed ideal. This would imply that the ideal differs from one profession to another, and that thus the data collected from members of one occupation could be in sharp contrast with data collected from those of another without these data reflecting any actual differences in their backgrounds.

Another possibility that would account for the different environments reported by the S's in different fields, without necessarily involving genuine environmental dissimilarities, is that S's may use their concepts of what they would like to be, or what others would like them to be, as factors influencing their judgments, and that these concepts differ among professions.

It should be emphasized again that what is being looked for here is not merely distortion, but distortion in a particular direction. The attempt was made, then, to see whether S's in various professions have sufficiently clear -- and different -- ideas of what their backgrounds should be to have influenced their statements of what their backgrounds were.[1]

1. It must be noted here that while non-significant results

The question of social desirability becomes relevant here. Observations made by psychologists and non-psychologists alike indicate that any reports given of the self are likely to be influenced by one's percepts of what is a "good" answer. Edwards (1953), who had the social desirability of items judged by 152 S's, and then gave the same items to 140 other S's to be judged on their self-applicability, found a product-moment coefficient of .871. While noting that these results do not prove the items were falsified, he suggests this as a possibility. Hilgard states bluntly that "defense mechanisms and self deception so contaminate self observation that unaided introspection is bound to yield a distorted view of the self" (Hilgard, 1949, p. 377). More relevant to the present investigation is the Robbins study previously described, which indicates that the memory of events may be changed to bring them more in line with some accepted standard.

Whether what is considered desirable differs from one population to another -- as would need to be the case if members of various professional groups were influenced by such considerations to report characteristic home environments without such environments having actually occurred -- has not been the subject of much published research. However, Messick (1960), in reporting on data collected from the use of a

would seem to rule out the possibility that memories were distorted to bring them in line with some ideal, positive results would not prove that such distortion occurred. The subject might have restructured his idea of the profession to bring it in line with his own (accurate) memories of his childhood. This point will be mentioned again later.

questionnaire developed by Edwards, suggests that there may be differences in individual points of view on what is desirable. It seems possible, then, that there may likewise be differences among groups, perhaps among occupational groups.

A basic viewpoint under consideration in this study is that training for a profession involves the acquisition of a general orientation as well as a knowledge of specific tasks to be performed. The orientation is likely to be acquired in part directly from instructors and practicing members of the profession, and in part indirectly, through observation. Direct statements may be limited to the presentation of a group of professional attitudes, but the bases on which these attitudes are founded may include philosophical beliefs about the world, concepts of ethics, ideas of what personality characteristics are desirable, etc.[1] This orientation or outlook enables the student to view the material of his profession (clients, tasks, problems to be solved, fundamental knowledge, etc.) in a consistent way. It is further suggested, although it will not be tested here, that the student in training accepts the orientation, or else drops out of the institution and/or profession. Thus an advanced class would be expected to be more unified in its outlook than would a beginning class.

The questions which Nachmann and Galinsky asked their S's -- questions dealing with early expeiences and parental char-

1. It is not implied that there need be only one outlook per profession. The orientation may differ from institution to institution or (cf. the Bucher and Strauss article previously described) among smaller groups within the same institution or profession.

acteristics -- would not on the surface seem to have much relationship to that "stereotype of the ideal colleague" which Greenwood says every profession maintains (Greenwood, 1962, p. 216). Yet it was not thought to be inconceivable that professional orientation is broad enough to include these matters as well. If, for example, social work teaches a more "liberal" philosophy than does dentistry, the man trained in the former study might find it agreeable to remember his mother as having taken a major role in the family, while the student of the latter might be given support for only those recollections which bolstered the belief that his father had been dominant.

The present study, then, attempted to discover indications of the presence of such a unified outlook with regard to the background experiences that had been examined previously, as well as to inquire into the subjects' identifications with their professions. It was therefore pertinent to ask S's not only what their own environments had been, but what they thought would have been the environment of a successful member of their profession. There was interest in finding out also whether any such concepts had an influence beyond the particular profession involved, and whether persons not in a given profession could perceive that professional group accurately. Accordingly, the S's were asked to judge the environments of successful members of other groups as well as their own.

Since in this case the direct memories and conscious opinions of the S's were to be studied, whereas in the previous

investigations coders had been used to make inferences about the S's backgrounds, it was decided to use a questionnaire rather than an interview to obtain the material. There has been no comparison of the two methods in obtaining information directly comparable with that involved in the present study. However, reports by Metzner and Mann (1952) and by Kahn (1952) suggest the usefulness of questionnaires in gathering various sorts of data. Kahn, in fact, concludes that "under specified conditions, several of the advantages usually claimed for the personal interview are found to be more characteristic of the anonymous questionnaire" (Kahn, 1952, p. 113). (In this study the questionnaire was not anonymous, but since the names of S's had been known to the previous interviewers, it was thought that nonanonymity would not place the present group of S's at a disadvantage in comparison with their predecessors). Englander, while not mentioning specific results, reports that "there have been many questionnaire-type studies which attempted to identify factors which differentiate those persons who select teaching from those persons who do not select teaching as a vocation" and that "some of these studies have been successful in detecting mean differences in such factors as socioeconomic background, size of home towns, and past experience with teachers" (Englander, 1957, p. 6). It was considered useful also to find whether the same material as had been obtained in the interviews could be gathered by the simpler procedure herein employed. The use of a questionnaire was therefore regarded as justified.

Chapter II

Methodology and Hypotheses

The subjects of this study were male graduate students in training for professional roles in law, dentistry, social work, physics, and clinical psychology. (For the sake of brevity, subjects will be called lawyers, dentists, etc., although actual practitioners were not used). The fields chosen for the research were those which had been examined earlier in the research of Nachmann and Galinsky, and the attempt was made to obtain groups corresponding to theirs by using the methods they described for finding, contacting, and choosing S's.

A list of the graduate students in each of the departments to be considered was procured from the department office. Students were then contacted by telephone or in person and asked to participate in a study which would be used as part of the investigator's Ph.D. dissertation. It was explained to them that their part in the procedure would be to fill out a questionnaire that would take them about an hour to complete, and that the study was one of several seeking to find out whether persons in different occupations or professions differed in personality and background.

The majority of persons thus contacted did agree to participate, and were subsequently seen and tested. There were, however, some refusals, as well as a few students who failed to show up for appointments; the latter were called again and in most cases another time for testing could be set. The

percentage of refusals differed among departments; it is not clear what influence, if any, these differences had on the results. All the psychologists and all but one of the social workers who were called were willing to be tested, although in a few cases an appointment time could not be arranged because of the student's schedule. Dentists also gave a high percentage of acceptances. In the other two groups it was somewhat more difficult to get S's. The reason given by the physicists who refused was invariably lack of time, many of them noting that they were occupied with the carrying out of experiments which took up the major portion of their day. Lack of time was the reason most frequently given by lawyers as well, but in this department lack of interest was also mentioned. In addition to the students who refused at the initial contact, three S's - one lawyer and two physicists - dropped out after seeing the material, the lawyer saying he was unwilling to return a signed or identifiable questionnaire, and the physicists giving the reason that the questionnaire was longer than they had expected.

S's were seen either singly or in small groups. A room had been procured for use in testing, and the S's were requested to meet the experimenter there at a specified time. As there seemed no reason to restrict the number of persons present, the number of S's tested at one session varied according to how many had chosen that particular hour for their appointment. When a student found it inconvenient to come at a time when the room was available, the examiner arranged another

time and meeting place for him. Some of the physicists were seen in the physics laboratory, a number of the social workers in one of the lounges reserved for social work students, and a few other S's at various places around the campus and elsewhere.

It had been decided that five groups of students, twenty in each profession, were to be used as S's for the project. The number was chosen to correspond to the number which had been used in the previous studies. Because matched groups were required, however, it was necessary to collect completed questionnaires from more potential S's than were to be studied. The dentists, social workers, and physicists were all obtained by the method just described, as were a number of the lawyers and psychologists. The rest of the lawyers were contacted and tested by one of the members of the committee. It was found necessary to go outside the University of Michigan in order to obtain the additional psychologists, and a number of Wayne State University and Michigan State University students were tested for this purpose, some by the examiner and some by a member of the Michigan State faculty.

The testing procedure was to have the S complete a questionnaire which included a sheet for background information, a section based on the Nachmann and Galinsky interviews, and the Edwards Social Desirability Scale of 39 MMPI items. The questionnaire will be described later in more detail. S's were permitted to ask questions if any part of the procedure were not clear to them, and a small number asked minor techni-

cal questions which usually could be answered by restating the directions. Most of the S's, however, had no difficulty in understanding or completing the task. No time limit was set, and no restrictions were imposed on S's other than asking them not to consult with anyone about what responses to make. The time required for completion ranged from approximately twenty minutes to approximately two hours, with the majority of S's taking about an hour.

The final selection of S's was made in accordance with several criteria. The first was a definite commitment to one's profession, since it was believed that using S's who were not certain about their careers would blur any differences among groups. In the sheet of background information filled out by each S, one of the questions was: If you had it to do over again, would you still make the same vocational choice? Only students who gave an affirmative answer to this question were included in the final sample.[1]

The group of physicists and the group of clinical psychologists were equated for social class of parents and religious backgrounds of parents; the lawyers, dentists, and social workers were likewise chosen so that the three groups would be matched in those aspects. This equating was done so that any differences discovered among occupational groups would not be attributable to extraneous differences in class or religion. As the groups to be compared with each other are

1. One student was included who wrote No but indicated he meant he would have gone into his chosen profession without studying another profession first.

those which were thus compared in the dissertations on which this study is based, it was considered sufficient to have two clusters of equated groups, rather than to attempt to equate all five groups with each other.

Social class of parents was determined by the Allinsmith (1954) method, which uses a weighted combination of father's occupation and education. The distribution of S's with regard to social class and religious backgrounds of parents is recorded below. It is not proposed that either distribution necessarily reflects the distribution in the original populations from which the samples were taken.

Table 1

Distribution of Professional Groups with Regard to Social Class

	Lawyers	Dentists	Social Workers
Middle Class	13	13	13
Lower Class	7	7	7

	Physicists	Clinical Psychologists
Middle Class	15	15
Lower Class	5	5

Table 2

Distribution of Professional Groups with Regard to Religious Background

	Lawyers	Dentists	Social Workers
Protestant	15	15	15
Catholic	3	3	3
Jewish	2	2	2

	Physicists	Clinical Psychologists
Protestant	11	11
Catholic	3	3
Jewish	3	3
None	3	3

The completed answer forms filled out by the S's were the basic material used in this study. As may be seen, the answer form contains two parts, in addition to one page for background information. The first section presents a number of columns, each headed by the designation of one of the categories to be considered, and lists the numbers 1-51 (corresponding to sets of statements in the questionnaire), followed by a blank space under each category.[1] The sets

1. The following terms will be used to refer to categories:
Self - Category headed Yourself
Own Profession - Category headed The Successful ____, where the profession listed is that for which the student is training.
Other Profession(s) - Category (or categories) headed The Successful _____, where the profession listed is not that for which the student is training
Desirable - Category headed What you consider desirable
Others Desirable - Category headed What others consider desirable

of statements, two to a set, had been drawn up to reflect the list of questions used for coding the structured interviews of the previous theses. In the questionnaire, the numbers 1-51 are presented, each number followed by a pair of statements labeled respectively a and b. The S was asked to choose the statement in each set which he thought applicable to the given category, and to place the letter preceding that statement (a or b) in the appropriate space in the column. According to the headings of the columns, he was to respond first in terms of what his own background was like, then in terms of what a successful member of his profession would say, then as a successful member of the other profession(s) would answer (lawyers, dentists, and social workers were each to rate the other two professional groups; physicists and clinical psychologists were each to rate the other), then by choosing the statement that he himself considered the more desirable, and finally by choosing the statement that he thought others would consider the more desirable. The second section of the answer form consists of the 39 items of the Edwards Scale, each followed by the letters T and F, for True and False. The S was asked to circle one letter for each item, depending on whether the item were true or false with regard to himself. The questionnaire and the answer sheets are reproduced in the appendix. The following hypotheses were set up, each to be tested by means of the predictions listed below it: [1]

1. After the data had been collected and partially evaluated, some further questions were formulated in an attempt to aid understanding of the results. These questions have been reproduced in the appropriate places, but have not been stated as predictions.

Hypothesis I. The S will be able to answer questions about his background when these are presented in a questionnaire in the same way that he would answer in an interview.

1. Answers to the structured questionnaire will differentiate members of different professions in the same way that the coding categories did.

Discussion: This prediction was meant to test the subjects' conscious awareness of various aspects of their backgrounds and early environment. The questions used in the present study were drawn up to reflect the previously used coding charts. For example, instead of having a coder judge from the S's statements whether S's father had been strict or lenient, S was asked directly whether his father had been strict or lenient. It was predicted that where the coding categories were able to differentiate between professions, the corresponding question in this study would likewise differentiate. List 1 and List 2, containing the specific predictions, are reproduced in the appendix.

The above hypothesis was based on the apparent fact that the material obtained in the interviews was gathered directly from the subjects and was not re-evaluated before being coded -- the conscious recollections, that is, were used as accurate representations of backgrounds. Since the coding was done on these recollections, it was thought likely that the (coding) categories used would be close enough to conscious awareness to permit the subject to evaluate the material himself if asked to do so.

Significant results in the expected direction would substantiate the findings of the previous studies, suggest that the subjects were at least preconsciously aware of what could be inferred from their revelations, and indicate that it would not be necessary to conduct an interview in order to obtain the material. Lack of significance, however, would be more difficult to interpret. It must be noted that two distinct factors have an influence on the results. The first is the S's conscious awareness, which has just been discussed. The second is the actual difference in backgrounds which is presumed to exist. These factors, intermingled in the obtained results, must both be present in a positive direction if the predicted significance is to be obtained. Lack of significance, on the other hand, could result from deficiency in either aspect -- that is, differences among groups might not be found because no such differences existed, or because the S's could not perceive their environments accurately. The problem of attempting to separate these factors

will be discussed further after the data pertaining to this hypothesis have been presented.

Hypothesis II. The S will be able to make an accurate prediction of the answers given by his own and other professions to the questions used in this study.

1. Where members of two professions show significantly different responses in their answers to a statement as it refers to themselves, they will also show significant differences in their answers to the statement as it refers to their professions.

2. Where significant differences are found between members of two professions in answering a statement as it refers to themselves, these differences will also occur between their statements of how members of the other profession would answer the question.

(3. Do subjects predict that the professionals will answer as was predicted for them in the earlier studies, regardless of whether they actually do answer that way?)

Discussion: The predictions under this hypothesis are based on the assumption that an S being trained for a profession gradually forms an idea of what members of that profession are like and how they differ from members of other professions. It is further assumed that the details of this idea are in general accurate, that is, that they actually reflect the differences that could be found by comparing members of the two professions. The two predictions were designed to investigate whether the S's have conscious and consensually accurate ideas about the backgrounds of members of their own profession and members of another.

It should be noted that here, as in the first hypothesis, two distinct factors are involved. In this case, however, they are measured separately, since the S was asked to judge both his own development and early environment and that of successful members of his professional group. It was therefore possible to view the consensus of opinion about the background of members of the group apart from its correspondence to the reports of background obtained from S's in the profession. Given this information, and finding that the

data relevant to the predictions under this hypothesis could not readily be interpreted (as will be described later), it was thought that further consideration of the problem would be helpful. The question listed as 3 was added to examine the possibility that the S's might have consistent ideas about their own and other professions which would be similar to the ideas proposed by Nachmann and Galinsky, whether these ideas actually matched the statements of the present group or not. In this way provision would be made for the possibility that the present group was itself atypical in background but that the S's were aware of what background could be expected for members of their professional group. There was also interest in seeing whether the S's made the same predictions that Nachmann and Galinsky had proposed -- whether, that is, their own experiences, observations of colleagues, information obtained as part of training, systematic or unsystematic speculations, etc. had led them to a set of opinions similar to those based on psycho-analytic theory.

Hypothesis III. S's in all the groups will identify with members of their own profession.

1. S's in all the groups will show a greater similarity between their answer to a statement as it refers to themselves and their prediction of the answer that would be given by a member of their profession than between their answer as it refers to themselves and their prediction of the answer that would be given by a member of another profession.

Discussion: This is a measure of the S's identification with members of his profession. It is assumed that in preparing for a specific occupation, the individual is under pressure (both internal and external) to fit together his personal and occupational stereotypes. If these are in conflict, and if neither of them can be modified, he would presumably try to leave the occupation or at least would show dissatisfaction with it. Conversely, the individual who remains in his chosen occupation and expresses satisfaction with his choice is likely to perceive a harmony between his self concept and his occupational role, either because this harmony actually exists or because he has been moved to suppose that it does. Taking the argument a step further: he is also likely to see himself as similar to others in the occupation, since they have presumably gone through the same process of vocational choice, development, and identification. Again this assumed similarity may reflect actual conditions or may be an expression of the S's needs. In either case, positive findings under this prediction would demonstrate the subjects' identification with members of their profession, since the only way such findings could be obtained would be for the S's to have rated members of their own profession in the same way they

rated themselves more often than they rated members of other professions in the same way they rated themselves.

Hypothesis IV. Professions may be located on a continuum according to how socially desirable their members judge their own behavior and backgrounds and those of their colleagues to be. Whether an S will consider his answers as socially desirable or not can be predicted, given a knowledge of his occupation.

1. Whether S's answer to a statement as it refers to himself is similar or dissimilar to the answer that he considers desirable can be predicted from his occupation. In the present study, dentists will have the two answers similar, social workers will have them dissimilar.

2. Whether S's answer to a statement as it refers to himself is similar or dissimilar to the answer that he considers desirable can be predicted from his occupation. In the present study, dentists will have the two answers similar, social workers will have them dissimilar.

3. Whether S's answer as it refers to his profession is similar or dissimilar to the answer that he considers desirable can be predicted from his occupation. In the present study, dentists will have the two answers similar, social workers will have them dissimilar.

4. Whether S's answer as it refers to his profession is similar or dissimilar to his judgment of what others would consider desirable can be predicted from his occupation. In the present study, dentists will have the two answers similar, social workers will have them dissimilar.

5. Whether there is more agreement between the answer that S considers desirable and the answer that he considers typical for his profession than there is between the answer that he considers desirable and the answer that he considers typical for another profession can be predicted from his occupation. In the present study, dentists will have more agreement between the first two categories, social workers between the second two.

6. Whether there is more agreement between the answers that S considers typical for his profession and the answers that he thinks others would consider desirable than there is between the answers that he considers typical for another profession and the answers that he thinks others would consider desirable can be predicted from his occupation. In the present study, dentists will have more agreement between the first two categories, social workers between the second two.

7. On the Edwards Scale, dentists will have a significantly higher score than will social workers.

(8. Is there a correlation between score on the Edwards Scale and the scored discrepancy between Self and Desirability ratings?)

(9. Is there a significant difference between the desirability that one perceives in oneself and the amount of desirability that one perceives in one's profession?).

(10. Is there a significant difference between the social desirability one thinks others would accord to oneself and the social desirability score one thinks others would

accord to one's profession?)

Discussion: The characteristics of dentists and social workers as ascertained in the Nachmann study indicate that dentists tend to be conforming and unoriginal, and that social workers tend to be masochistic. The seven predictions under this hypothesis are in accordance with these findings. The purpose of including these predictions in the present study, however, was to attempt to demonstrate that the obtained findings of the previous studies were not the result of the students giving answers about their backgrounds that they considered socially desirable. Significant results to these predictions would indicate that the students did not all respond in the same way to statements that they considered socially desirable.

Question 8 was added to examine further the meaning of the score on the Edwards Scale.

Questions 9 and 10 were included to try to clarify the findings which related to Predictions 1-7. These findings, which will be described later, seemed to indicate the presence of another factor which was confusing the data. Questions 9 and 10 represent attempts to define this factor. They explore the possibility that occupational choice may be part of the striving toward fulfilling one's ego ideal, and thus that the S may rate his profession as being more desirable than he rates himself, irrespective of whether his self rating is high or low.

The statistical tests used in the study were chi-square, the t-test, and (in one instance) a Pearson product-movement correlation coefficient. Chi-square was used whenever the number of subjects in various categories were to be compared; the t-test was used when comparison was to be made between sets of agreement scores obtained by counting the number of times S's response after a given number in one column matched his response after the same number in another column. When the comparison was to be made between the scores of two groups, the form of the t-test appropriate for independent observations was used; when one set of agreement scores was to be compared with another set obtained from the same S's, the form used was that appropriate for correlated observations.

A one-tailed test was used whenever the t-test was employed to analyze data related to the predictions, since only results in the predicted direction were considered significant. When findings related to the questions which had been added later were analyzed, a 2-tailed test was employed.

In all the statistical analyses, a probability value of .05 or beyond was considered significant.

Chapter III

Results

The findings concerning each of the hypotheses discussed in Chapter II will be presented in this chapter in the following manner: The hypothesis itself will be stated first, and after it the related predictions. Under each prediction will be a table summarizing the pertinent findings. Some brief comment on the results will be included also, but the major portion of the discussion is reserved for the next chapter.

Hypothesis I. The S will be able to answer questions about his background when these are presented in a questionnaire in the same way that he would answer in an interview.

1. Answers to the structured questionnaire will differentiate members of different professions in the same way that the coding categories did.

Table 3

Distribution of lawyers, dentists, and social workers on twenty-eight pairs of statements based on the findings of Nachmann (Numbers refer to the number of the item as presented on questionnaire)

3.
a. He learned to read before he started school.
b. He did not learn to read until he was in school.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Law	8	12	
Dentistry	11	9	N.S.
Social Work	9	11	

4.

a. Reading and being read to was a family custom in his childhood home.
b. Reading and being read to was not a family custom in his childhood home.

Occupational Group	Response Category a.	Response Category b.	Level of Significance
Law	15	5	
Dentistry	11	9	N.S.
Social Work	14	6	

5.

a. Tool using was taught to him in his childhood home.
b. Tool using was not taught to him in his childhood home.

Occupational Group	Response Category a.	Response Category b.	Level of Significance
Law	11	9	
Dentistry	14	6	N.S.
Social Work	11	9	

6.

a. His first years at school were pleasant and enjoyable.
b. His first years at school were not particularly pleasant and enjoyable.

Occupational Group	Response Category a.	Response Category b.	Level of Significance
Law	17	3	
Dentistry	17	3	N.S.
Social Work	16	4	

(Expected frequencies were too small to permit actual calculation of chi-square.)

7.

a. School accomplishment was emphasized by his parents.
b. School accomplishment was not emphasized by his parents.

Occupational Group	Response Category a.	Response Category b.	Level of Significance
Law	15	5	
Dentistry	17	3	N.S.
Social Work	20	0	

(Expected frequencies were too small to permit actual calculation of chi-square.)

14.

a. His parents held conventional religious beliefs.
b. His parents were unconventional in their beliefs about religion.

Occupational Group	Response Category a.	Response Category b.	Level of Significance
Law	18	2	
Dentistry	17	3	N.S.
Social Work	17	3	

(Expected frequencies were too small to permit actual calculation of chi-square.)

15.

a. Politically, his parents were liberals.
b. Politically, his parents were conservatives.

Occupational Group	Response Category a.	Response Category b.	Level of Significance
Law	7	13	
Dentistry	6	13 (1 missing)	N.S.
Social Work	9	11	

16.

a. As a child, he was allowed to argue with his parents about rules and regulations.
b. As a child, he was not allowed to argue with his parents about rules and regulations.

Occupational Group	Response Category a.	Response Category b.	Level of Significance
Law	13	7	
Dentistry	12	8	N.S.
Social Work	10	10	

17.

a. He experienced some severely disturbing event or deprivation at some point in his childhood.

b. He did not have any severely disturbing experience or deprivation during his childhood.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Law	8	12	
Dentistry	5	15	N.S.
Social Work	7	13	

21.

a. His mother was ill or absent for some period before he was 2 years old.
b. His mother was not ill or absent for some period before he was two years old.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Law	1	19	
Dentistry	3	17	N.S.
Social Work	1	19	

(Expected frequencies were too small to permit actual calculation of chi-square.)

22.

a. His father was ill for some long period during the son's childhood.
b. His father was not ill for any long period during the son's childhood.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Law	2	18	
Dentistry	2	13	N.S.
Social Work	2	18	

(Expected frequencies were too small to permit actual calculation of chi-square.)

23.

a. His father was absent for some long period before the son was eight years old.
b. His father was not absent for any long period before the son was eight years old.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Law	3	17	
Dentistry	3	17	N.S.
Social Work	2	18	

(Expected frequencies were too small to permit actual calculation of chi-square.)

24.

a. His father was usually the final authority and made policy decisions about major issues involving the family.
b. His mother was usually the final authority and made policy decisions about major issues involving the family.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Law	17	3	
Dentistry	15	4 (1 missing)	N.S.
Social Work	16	4	

(Expected frequencies were too small to permit actual calculation of chi-square.)

25.

a. His father was the principal breadwinner in the family and was an adequate provider of money and material benefits.
b. His father did not provide adequate money and other material benefits to support the family.

Occupational Group	Response category		Level of Significance
	a.	b.	
Law	19	1	
Dentistry	20	0	N.S.
Social Work	18	2	

(Expected frequencies were too small to permit actual calculation of chi-square.)

26.

a. His father was a successful man.
b. His father was an unsuccessful man.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Law	17	3	
Dentistry	20	0	N.S.
Social Work	20	0	

(Expected frequencies were too small to permit actual calculation of chi-square.)

27.

a. His father was usually the chief disciplinarian.
b. His mother was usually the chief disciplinarian.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Law	13	7	
Dentistry	15	4 (1 missing)	N.S.
Social Work	15	5	

29.

a. His father tended to be strict, and was quick to punish every disobedience.
b. His father tended to be lenient, and was not greatly concerned with punishing every disobedience.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Law	8	12	
Dentistry	7	13	N.S.
Social Work	5	15	

30.

a. His father was conventional, without original viewpoints, unwilling to step out of line.
b. His father held original viewpoints, was sometimes unconventional, and was willing to step out of line.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Law	9	11	
Dentistry	4	16	N.S.
Social Work	6	14	

31.

a. In his childhood, his relationship with his father tended to be close.
b. In his childhood, his relationship with his father was not very close.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Law	9	11	
Dentistry	11	9	N.S.
Social Work	9	11	

32.

a. His mother could be adequately described by saying that she was an ordinary housewife.
b. In some ways, his mother did not fit the stereotype of the ordinary housewife.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Law	13	7	
Dentistry	3	17	$P < .01$
Social Work	10	10	

33.

a. His mother was actively interested in community affairs, artistic or intellectual matters, or something else apart from home and family.
b. His mother's interests centered around home and family.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Law	10	10	
Dentistry	9	11	N.S.
Social Work	10	10	

34.

a. His mother worked of necessity to make a contribution to the financial support of the family.
b. His mother either did not work or else worked only to add luxuries to the family's budget.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Law	3	17	
Dentistry	7	13	N.S.
Social Work	4	16	

(Expected frequencies were too small to permit actual calculation of chi-square.)

37.

a. In his childhood, his relationship with his mother tended to be ~~very~~ close.
b. In his childhood, his relationship with his mother was not very close.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Law	17	3	
Dentistry	20	0	N.S.
Social Work	19	1	

(Expected frequencies were too small to permit actual calculation of chi-square.)

38.

a. His mother was strict about keeping the house clean and neat.
b. His mother was relaxed about keeping the house clean and neat.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Law	14	6	
Dentistry	15	5	N.S.
Social Work	9	11	

44.

a. His parents often tried to discipline him by appeal to feelings, such things as saying, "If you do that, it will make me feel bad," or "If you do that, I'll get a headache."
b. His parents did not usually try to discipline him by stressing how bad his behavior was making others feel.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Law	1	19	
Dentistry	7	13	$P < .05$
Social Work	7	13	

45.

a. His parents emphasized that he should discipline himself, and tried to teach him that he had primary responsibility for his own behavior.
b. His parents placed special stress on authority, and tried to make him obedient.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Law	14	6	
Dentistry	16	4	N.S.
Social Work	14	6	

46.

a. His parents showed more than average concern with his physical welfare, in such matters as eating enough and not getting hurt.
b. His parents' concern with his physical welfare was not above average.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Law	14	6	
Dentistry	16	4	$P < .05$
Social Work	8	12	

7.

a. There was a man other than the father who was important in his life and who helped him to choose his occupation.
b. The above description does not fit anyone in his life.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Law	12	8	
Dentistry	10	10	N.S.
Social Work	11	9	

TABLE 4

Distribution of physicists and clinical psychologists on seventeen pairs of statements based on the findings of Galinsky

(Numbers refer to the number of the item as presented on questionnaire.)

8.

a. During childhood and after, he usually had at least an average number of friends.
b. During childhood and after, he often had less than an average number of friends.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Psychology	17	3	N.S.
Physics	16	4	

9.

a. His relationships with his friends were usually smooth-surfaced.
b. His relationship with his friends were often conflictful.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Psychology	15	5	N.S.
Physics	17	3	

10.

a. His relationships with his family were usually smooth-surfaced.

b. His relationships with his family were often conflictful.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Psychology	11	9	N.S.
Physics	14	6	

11.

a. His parents had many intellectual interests.

b. His parents had few or no intellectual interests.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Psychology	13	7	N.S.
Physics	8	12	

12.

a. Family conversation in his childhood home often dealt with impersonal intellectual matters.

b. Family conversation in his childhood home seldom or never dealt with impersonal intellectual matters.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Psychology	6	14	N.S.
Physics	7	13	

13.

a. In his childhood home, there was often gossip about other people.

b. In his childhood home, there was seldom or never gossip about other people.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Psychology	7	13	N.S.
Physics	6	14	

19.

a. After age 5, he had some long periods of isolation from other children.
b. After age 5, there were no long periods of isolation from other children.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Psychology	1	19	N.S.
Physics	2	18	

29.

a. His father tended to be strict, and was quick to punish any disobedience.
b. His father tended to be lenient, and was not greatly concerned with punishing every disobedience.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Psychology	7	13	N.S.
Physics	4	16	

36.

a. His mother had a great deal of affection for her family, whether she showed it openly or not.
b. His mother was a relatively unaffectionate person.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Psychology	19	1	N.S.
Physics	20	0	

37.

a. In his childhood, his relationship with his mother tended to be close.
b. In his childhood, his relationship with his mother was not very close.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Psychology	16	4	N.S.
Physics	16	4	

40.

a. Rules, deviations from which brought punishment, were clearly spelled out in his childhood home.
b. In his childhood home, it was often not clear which infractions of rules would be punished.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Psychology	13	7	N.S.
Physics	12	8	

41.

a. In his childhood home, threats of punishment were usually followed up.
b. In his childhood home, threats of punishment were often not followed up.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Psychology	14	6	N.S.
Physics	13	7	

42.

a. Punishment in his childhood home was consistent, and always followed a predictable pattern.
b. Punishment in his childhood home was often inconsistent, and did not follow a predictable pattern.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Psychology	13	7	N.S.
Physics	13	7	

43.

a. Discipline in his childhood home tended to be firm.
b. Discipline in his childhood home tended to be lenient.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Psychology	13	7	N.S.
Physics	8	12	

45.

a. His parents emphasized that he should discipline himself, and tried to teach him that he had primary responsibility for his own behavior.

b. His parents placed special stress on authority, and tried to make him obedient.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Psychology	15	5	N.S.
Physics	15	5	

50.

a. He had intercourse with a girl before he was 21.

b. He did not have his first intercourse until he was at least 21.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Psychology	14	6	$P < .01$
Physics	3	16 (1 missing)	

51.

a. After college, he still maintained considerable involvement with his family.

b. After college, he had little or no involvement with his family.

Occupational Group	Response Category		Level of Significance
	a.	b.	
Psychology	13	7	N.S.
Physics	10	10	

The results as presented above, it would seem, do not indicate major differences among the groups. Even where significant differences were found, they did not always correspond to expectations. Of the group of 28 items on which the responses of lawyers, dentists, and social workers were compared, the findings on 10 (including one on which the

groups differed significantly) were in the expected direction, those on 12 (including two on which the groups differed significantly) were partially reversed, and those on 6 were completely reversed. Of the 17 items on which the responses of physicists and clinical psychologists were compared, the findings on 9 (including one on which the groups differed significantly) were in the expected direction, and those on 8 were reversed.

Because the differences in direction were often determined by only a few students, sometimes only one or two, there is little basis for definitive conclusions. One point, however, is perhaps worth mentioning. The prediction for each item contrasted one group with the other two -- that is, stated that one of the groups would choose a particular category (a or b) significantly more often than the other two groups would. Five of the predictions involved lawyers as the contrasting group, 13 involved dentists, and 10 involved social workers. Of the 6 items on which the results completely reversed predictions (that is, in which the group that was to choose a category more frequently than would either of the other two groups instead chose it less frequently) one used lawyers as the contrasting group, one used social workers, and four used dentists. Although the numbers are too small to give the finding much meaning, it is consistent with Nachmann's suggestion that dentists use denial and repression as major defenses.

In 32 out of the total of 45 items, the distribution of

S's in each of the groups compared was roughly similar -- if a majority in one profession chose a particular category, the majority in the other group or groups chose the same category; in 16 of the items, at least three-fourths of the S's in each of the groups compared chose the same category.

The homogeneity which seems to obtain both within groups and among groups could be caused, as has been noted before, either by a genuine similarity in the subjects' backgrounds or by their failure to be conscious of pertinent factors in their environments. Which explanation is correct cannot immediately be determined, but, in either case, some further attention should be given to the items under question.

All items used were chosen initially to correspond to the coding categories employed in the Nachmann and Galinsky dissertations. The sets of statements were discussed in detail with the author of one of these dissertations to insure that they reflected the material of the previous studies, and were revised several times before being presented to the S's. Thus the list of statements presumably gave the S's a chance to "code" their own backgrounds, and the results should therefore have approximated at least roughly the earlier findings. Failure to achieve that result implies either that the groups used in this case were strikingly different from those used before, or else that the S's could not use the coding categories as independent coders could use them. As some of the subsequent findings are relevant to this matter, further discussion will be postponed until the other results

have been presented.

Hypothesis II. The S will be able to make an accurate prediction of the answers given by his own and other professions to the questions used in this study.

1. Where members of two professions show significantly different responses in their answers to a statement as it refers to themselves, they will also show significant differences in their answers to the statement as it refers to their professions.

TABLE 5
Distribution of subjects' responses concerning their own profession to items on which the distributions in various groups were significantly different

Law, Dentistry, and Social Work

Item 32

Reference Group	Response Category a.	b.	Level of Significance
Law (predicted by lawyers)	6	14	
Dentistry (predicted by dentists)	5	15	N.S.
Social Work (predicted by social workers)	10	10	

Item 44

Reference Group	Response Category a.	b.	Level of Significance
Law (by lawyers)	4	16	
Dentistry (by dentists)	9	11	N.S.
Social Work (by social workers)	8	12	

Item 46

Reference Group	Response Category a.	b.	Level of Significance
Law (by lawyers)	13	7	
Dentistry (by dentists)	14	6	N.S. ($P < .10$)
Social Work (by social workers)	7	13	

TABLE 6

Distribution of subjects' responses concerning their own profession to items on which the distributions in various groups were significantly different

Psychology and Physics

Item 50

Reference Group	Response Category a.	b.	Level of Significance
Psychology (by psychologists)	13	7	N.S. ($P < .10$)
Physics (by physicists)	6	13 (1 missing)	

The comparisons recorded in the above tables were not found significant, although in two cases they approached significance. In three items (44, 46, 50) out of the four the distributions of subjects' judgments on Own Profession were similar to their judgments for Self: that is, if the majority of the group placed themselves in a given category, a majority also placed their professional group in that category. The one instance where this parallelism did not occur was in the results to Item 32 among the lawyers, dentists, and social workers. Here 13 lawyers, 3 dentists, and 10 social workers

described their own mothers as ordinary housewives, while 6 lawyers, 5 dentists, and 10 social workers thought that the mothers of successful members of their own profession would fall in that category. The initial prediction, based on Nachmann's observations, was that the mothers of dentists and lawyers would be described as ordinary housewives, while those of social workers would not. Lawyers did tend to describe their own mothers in the expected way, but did not include the mothers of successful members of their profession under this description. Their responses to this item thus contradict the results of the other two groups on the present item and of all groups on the other three items, since in all those instances the responses for Self were reflected in the responses for Own Profession. It is not clear why such a notable shift away from consensual validity should have occurred in this case.

2. Where significant differences are found between members of two professions in answering a statement as it refers to themselves, these differences will also occur between their statements of how members of the other profession would answer the question.

TABLE 7

Comparison of subjects' responses concerning other professions to items on which members of different professions gave significantly different responses

Law, Dentistry, and Social Work
(Average rating by members of other two professions)

Item 32

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	7.5	12.5	
Dentistry	12	8	N.S.
Social Work	10	10	

Item 44

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	6	14	
Dentistry	5	15	$P < .05$
Social Work	12	8	

Item 46

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	10	10	
Dentistry	9.5	10.5	N.S.
Social Work	11	9	

TABLE 8

Comparison of subjects' responses concerning other professions to items on which members of different professions gave significantly different responses

Psychology and Physics

Item 50

Reference Group	Response a.	Response b.	Level of Significance
Psychology (by physicists)	10	10	N.S.
Physics (by psychologists)	6	14	

Item 44 is the only one of the four that yields significant differences in the distribution of responses when members of one profession are rated by those outside the profession. It is interesting that in this case the distribution as based on the judgments of other groups is closer to that proposed by Nachmann than is either the distribution based on the subjects' judgments concerning their own profession or the one based on their judgments concerning themselves.

For Item 32, the (averaged) distribution of social workers given by the other two professions is the same as that obtained from social workers judging their own profession, and is also the same as that obtained from social workers reporting on their own backgrounds. The (averaged) distribution given for dentists by the other two professions does not reflect the dentists' own predictions, but does reflect the Nachmann data. The (averaged) distribution given for lawyers by the other two professions falls between the distribution obtained from lawyers reporting on their own backgrounds and that obtained from lawyers predicting for members of their profession.

On Item 46, judgments on each professional group by the others were split in each case almost evenly between the two categories, thus not differentiating at all among groups. This was one of the items in which the distribution based on the judgments of S's concerning Own Profession was similar to that obtained from S's reporting on their own backgrounds. The distribution under Own Profession and that under Self were also more similar to that proposed by Nachmann than was

that proposed by members of other professions. It would seem, then, that in this case the judgments made about one professional group by another were consensually (and perhaps actually) less accurate than those made by the professionals about their own groups.

On Item 50, the physicists' report on themselves, the physicists' judgments on Own Profession, and the psychologists' judgments of physicists were all roughly similar. Psychologists' reports on themselves and judgments of Own Profession were also similar, but physicists' judgments on psychologists resulted in an even distribution between the two categories, thus failing to reflect the differences which actually occurred.

There may be some support for the hypothesis in these findings as well as in those recorded in Tables 5 and 6. As expected, there seems to be less consensual validity in reporting on Other Profession(s) than on Own Profession -- that is, the distributions did not reflect the distributions under Self as consistently as those for Own Profession reflected those for Self. This would be consistent with the viewpoint presented, that training for a profession involves among other things the breaking down of one's preconceived notions about it. However, the number of items which did elicit significant differences under Hypothesis I is too small to permit much testing of either of the predictions under Hypothesis II.

(3. Do S's predict that the professionals will answer as was predicted for them, regardless of whether they actually do answer that way?)

TABLE 9

Distribution of subjects' responses concerning their own profession to items listed in Table 2 (excluding those compared in Table 1)

Item 3.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	11	9	
Dentistry	13	7	N.S.
Social Work	10	10	

Item 4.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	19	1	
Dentistry	17	3	N.S.
Social Work	14	6	

Item 5.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	9	11	
Dentistry	15	5	N.S. ($P < .10$)
Social Work	8	12	

Item 6.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	17	3	
Dentistry	20	0	N.S.
Social Work	18	2	

(Expected frequencies were too small to permit actual calculation of chi-square.)

Item 7.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	19	1	
Dentistry	18	2	N.S.
Social Work	18	2	

(Expected frequencies were too small to permit actual calculation of chi-square.)

Item 14.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	19	1	
Dentistry	18	2	N.S.
Social Work	18	2	

(Expected frequencies were too small to permit actual calculation of chi-square.)

Item 15.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	8	12	
Dentistry	7	12 (1 missing)	N.S.
Social Work	7	13	

Item 16.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	13	7	
Dentistry	14	6	N.S.
Social Work	11	9	

Item 17.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	8	12	
Dentistry	4	16	N.S.
Social Work	6	14	

Item 21.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	1	19	
Dentistry	0	20	N.S.
Social Work	1	19	

(Expected frequencies were too small to permit actual calculation of chi-square.)

Item 22.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	0	20	
Dentistry	0	20	N.S.
Social Work	0	20	

Item 23.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	2	18	
Dentistry	1	19	N.S.
Social Work	1	19	

(Expected frequencies were too small to permit actual calculation of chi-square.)

Item 24.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	20	0	
Dentistry	19	1	N.S.
Social Work	14	6	

(Expected frequencies were too small to permit actual calculation of chi-square.)

Item 25.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	20	0	
Dentistry	20	0	N.S.
Social Work	19	1	

(Expected frequencies were too small to permit actual calculation of chi-square.)

Item 26.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	19	1	
Dentistry	20	0	N.S.
Social Work	18	2	

(Expected frequencies were too small to permit actual calculation of chi-square.)

Item 27.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	19	1	
Dentistry	19	1	N.S.
Social Work	13	7	

(Expected frequencies were too small to permit actual calculation of chi-square.)

Item 29.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	10	10	
Dentistry	9	11	$P < .02$
Social Work	2	18	

Item 30.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	4	16	
Dentistry	3	17	N.S.
Social Work	3	17	

(Expected frequencies were too small to permit actual calculation of chi-square.)

Item 31.

Reference Group	Response Category		Level of Significance
Law	13	7	
Dentistry	17	3	N.S.
Social Work	14	6	

Item 33.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	14	6	
Dentistry	13	7	N.S.
Social Work	9	11	

Item 34.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	1	19	
Dentistry	3	17	N.S.
Social Work	5	15	

(Expected frequencies were too small to permit actual calculation of chi-square.)

Item 37.

Reference Group	Response Category a.	Response Category b.	Level of Significance
Law	14	6	
Dentistry	19	1	N.S.
Social Work	19	1	

(Expected frequencies were too small to permit actual calculation of chi-square.)

Item 38. Reference Group	Response Category a.	b.	Level of Significance
Law	17	3	
Dentistry	18	2	P < .01
Social Work	8	12	

Item 45. Reference Group	Response Category a.	b.	Level of Significance
Law	16	4	
Dentistry	18	2	N.S.
Social Work	14	6	

(Expected frequencies were too small to permit actual calculation of chi-square.)

Item 47. Reference Group	Response Category a.	b.	Level of Significance
Law	11	9	
Dentistry	14	6	N.S.
Social Work	10	10	

TABLE 10

Distribution of subjects' responses concerning their own profession to items listed in Table 4 (excluding those compared in Table 8)

Item 8. Reference Group	Response Category a.	b.	Level of Significance
Psychology	18	2	N.S.
Physics	16	3*	

Item 9. Reference Group	Response Category a.	b.	Level of Significance
Psychology	14	6	N.S.
Physics	15	4	

*One member of the physics group gave an "either-or' response to many items concerning his own profession. For this reason, the total responses for the physicists were often 19.

Item 10. Reference Group	Response Category a.	b.	Level of Significance
Psychology	11	9	N.S.
Physics	14	5	

Item 11. Reference Group	Response Category a.	b.	Level of Significance
Psychology	18	2	N.S.
Physics	18	1	

Item 12. Reference Group	Response Category a.	b.	Level of Significance
Psychology	10	10	$P < .02$
Physics	18	2	

Item 13. Reference Group	Response Category a.	b.	Level of Significance
Psychology	10	10	N.S.
Physics	4	15	

Item 19. Reference Group	Response Category a.	b.	Level of Significance
Psychology	2	18	N.S.
Physics	0	19	

Item 29. Reference Group	Response Category a.	b.	Level of Significance
Psychology	3	17	N.S. ($P < .10$)
Physics	9	10	

Item 36. Reference Group	Response Category a.	b.	Level of Significance
Psychology	19	1	N.S.
Physics	19	0	

Item 37. Reference Group	Response Category a.	b.	Level of Significance
Psychology	17	3	N.S.
Physics	17	2	

Item 40. Reference Group	Response Category a.	b.	Level of Significance
Psychology	15	5	N.S.
Physics	15	4	

Item 41. Reference Group	Response Category a.	b.	Level of Significance
Psychology	11	9	N.S.
Physics	16	3	

Item 42. Reference Group	Response Category a.	b.	Level of Significance
Psychology	13	7	N.S.
Physics	17	2	

Item 43. Reference Group	Response Category a.	b.	Level of Significance
Psychology	7	13	N.S.
Physics	12	7	

Item 45. Reference Group	Response Category a.	b.	Level of Significance
Psychology	16	4	N.S.
Physics	18	1	

Item 51. Reference Group	Response Category a.	b.	Level of Significance
Psychology	15	5	N.S.
Physics	11	8	

Only four of forty-five sets of statements which were based on the predictions made by Nachmann and Galinsky were

judged differently by S's in different professions when they were asked to choose the statement applicable to a successful member of their profession. The findings relevant to this question (Hypothesis II, 3) seem to indicate that the S's do not have a consistent picture of members of their professions with regard to the background differences examined in the Nachmann and Galinsky studies.

Hypothesis III. S's in all the groups will identify with members of their own profession.

1. S's in all the groups will show a greater similarity between their answer to a statement as it refers to themselves and their prediction of the answer that would be given by a member of their profession than between their answer as it refers to themselves and their prediction of the answer that would be given by a member of another profession.

TABLE 11

Comparison of subjects' responses concerning Own Profession and Other Profession with responses concerning Self

Law, Dentistry, Social Work

Occupational Group	Mean Number of Agreements Self-Own Prof.	Self-Other Prof. (Average)	t	Level of Significance (One-tailed test)
Law	40.45	35.80	3.88	$P < .005$
Dentistry	41.70	39.75	2.91	$P < .005$
Social Work	42.30	36.42	4.5	$P < .0005$

TABLE 12

Comparison of subjects' responses concerning Own Profession and Other Profession with responses concerning Self

Psychology and Physics

Occupational Group	Mean Number of Agreements Self-Own Prof.	Self-Other Prof. (Average)	t	Level of Significance (One-tailed test)
Psychology	41.45	34.35	4.03	$P < .0005$
Physics	37.75	36.90	.56	N.S.

Of the five professions, four showed significantly more agreement between their responses for Self and those for Own Profession than between their responses for Self and those for Other Profession. The amount of difference found here is surprising in view of the results relevant to the preceding hypotheses. If there is actually little difference among the ways members of different professional groups view their own backgrounds and those of their colleagues (at least with regard to the categories of the present questionnaire), one would expect that the individuals involved would likewise not distinguish between members of their own profession and those of another with regard to these categories, and thus would be unable to consider themselves as more similar to one group or the other. This was apparently not the case. Instead, it appears that in four of the groups, S's viewed themselves as having backgrounds more like those of their colleagues than like those of other professionals.

It is not clear why the fifth group (physicists) did not make a similar differentiation. One possibility is that the S's in this field were simply not interested in the subject matter, and made their responses more or less at random. It has been noted that physics students often excused themselves from the project because they were involved with their own work. However, it must be remembered that lawyers, another group in which it was difficult to find S's, still made the differentiation that was predicted. The problem cannot be resolved at present, but another possible explanation is suggested by the following data:

TABLE 13

Comparison of Law, Dentistry, and Social Work students' responses concerning Self with responses concerning Own Profession and each of the Other Professions

Occupational Group	Mean Number of Agreements		t	Level of Significance (One-tailed test)
	Self-Own Prof.	Self-Dentistry		
Law	40.45	38.90	2.38	P < .025
	Self-Own Prof. 40.45	Self-Social Work 32.70	4.08	P < .0005
	Self-Own Prof.	Self-Law		
Dentistry	41.7	41.5	.5	N.S.
	Self-Own Prof. 41.7	Self-Social Work 38	3.03	P < .005
	Self-Own Prof.	Self-Law		
Social Work	42.3	34.55	5.54	P < .0005
	Self-Own Prof. 42.3	Self-Dentistry 38.3	2.67	P < .01

Here it is apparent that one may rate members of one profession as having backgrounds distinctly different from one's own, and members of another profession as having backgrounds essentially similar to one's own. The variance in the dentists' responses noted in Table II may be seen to result almost entirely from the extent to which they distinguished themselves from social workers. Furthermore, the ratings need not be reciprocal: dentists regarded themselves as similar to lawyers, but lawyers made a sharp distinction between themselves and dentists. It is possible, then, that psychology is not a profession which physicists regard as sharply contrasted with their own.

Hypothesis IV. Professions may be located on a continuum according to how socially desirable their members judge their own behavior and backgrounds and those of their colleagues to be. Whether an S will consider his answers as socially desirable or not can be predicted, given a knowledge of his occupation.

1. Whether S's answer to a statement as it refers to himself is similar or dissimilar to the answer that he considers desirable can be predicted from his occupation. In the present study, dentists will have the two answers similar, social workers will have them dissimilar.

The following table was derived by counting for each S the number of times the category he placed in the Self column corresponded to the one he placed in the Desirability column.

TABLE 14

Comparison between the Self-Desirable responses of Dentistry and Social Work students

Occupational Group	Mean of Self-Desirable ratings	t	Level of Significance (One-tailed test)
Dentistry	41.65		
Social Work	39.6	1.18	N.S.

The results pertaining to this prediction are in the expected direction, but are not significant. It would seem then that both dentists and social workers tend to regard their own backgrounds as conforming essentially to their judgments of what is desirable.

2. Whether S's answer to a statement as it refers to himself is similar or dissimilar to his judgment of what others would consider desirable can be predicted from his occupation. In the present study, dentists will have the two answers similar, social workers will have them dissimilar.

TABLE 15

Comparison between the Self-What Others Consider Desirable responses of Dentistry and Social Work Students

Occupational Group	Mean of Self-What Others Consider Desirable ratings	t	Level of Significance (one-tailed test)
Dentistry	38.45		
Social Work	38.40	.03	N.S.

The table above was derived by counting for each S the number of times the category he placed in the Self column

corresponded to the one he placed in the Others Desirable column.

There is almost no distinction between the professions on this category. Both dentists and social workers regard their backgrounds as similar to what others consider desirable to about the same extent.

3. Whether S's answer as it refers to his profession is similar or dissimilar to the answer that he considers desirable can be predicted from his occupation. In the present study, dentists will have the two answers similar, social workers will have them dissimilar.

TABLE 16

Comparison between the Own Profession-Desirable responses of Dentistry and Social Work Students

Occupational Group	Mean of Own Prof.-Desirable ratings	t	Level of Significance (one-tailed test)
Dentistry	46.15		
Social Work	42.65	1.98	P < .05
Law	43.3)		

4. Whether S's answer as it refers to his profession is similar or dissimilar to his judgment of what others would consider desirable can be predicted from his occupation. In the present study, dentists will have the two answers similar, social workers will have them dissimilar.

TABLE 17

Comparison between the Own Profession-What Others Consider Desirable responses of Dentistry and Social Work students

Occupational Group	Mean of Own Prof.-Others Desirable ratings	t	Level of Significance (one-tailed test)
Dentistry	43.9		
Social Work	40.0	2.06	P < .025
(Law	41.2)		

In regard to Hypothesis IV, Predictions 3 and 4, a distinct difference occurs between the two groups in the expected direction. Dentists apparently consider their profession as more desirable than social workers consider theirs. Dentists also seem to believe that others will view dentistry more favorably with regard to the given categories than social workers believe others will view social work. It should be noted also that the mean of lawyers' ratings in both instances falls between those of the other two professions, as would be expected on the basis of Nachmann's hypothesis concerning the three groups.

5. Whether there is more agreement between the answer that S considers desirable and the answer that he considers typical for his profession than there is between the answer that he considers desirable and the answer that he considers typical for another profession can be predicted from his occupation. In the present study, dentists will have more agreement between the first two categories, social workers between the second two.

TABLE 18

Comparison of Own Profession and Other Profession with regard to Desirability

Occupational Group	Dentistry and Social Work Mean of agreements Own Prof.- Desir.	Other Prof.- Desir.	t	Level of Significance (one-tailed test)
Dentistry	46.15	40.80	4.21	P < .0005
Social Work	42.65	40.6	2.09	Direction opposite to prediction.

6. Whether there is more agreement between the answers that S considers typical for his profession and the answers that he thinks others would consider desirable than there is between the answers that he considers typical for another profession and the answers that he thinks others would consider desirable can be predicted from his occupation. In the present study, dentists will have more agreement between the first two categories, social workers between the second two.

TABLE 19

Comparison of Own Profession and Other Profession with regard to What Others Consider Desirable

Occupational Group	Dentistry and Social Work Mean of agreements Own Prof.- Others Desirable	Other Prof.- Others Desirable	t	Level of Significance (one-tailed test)
Dentistry	43.9	39.6	3.71	P < .005
Social Work	40.0	41.5	1.85	P < .05

The second of the last two items (Table 19) comes out in the expected direction. Both dentists and social workers apparently believe that others will view dentists in a more

favorable way than they will social workers. In Prediction 5 (Table 18), however, there is a reversal of expected direction. Dentists do respond according to prediction, viewing their colleagues' backgrounds and characteristics as corresponding more closely to their standards of what is desirable than do those of social workers; but social workers, instead of viewing their profession less favorably than they do another, view it more favorably. The difference, in fact, comes close to significance ($P < .10$) even with a two-tailed test. Social workers, it seems, concede that others may down-grade social workers on a desirability scale in comparison with another profession, but they themselves do not downgrade it.

7. On the Edwards Scale, dentists will have a significantly higher score than will social workers.

TABLE 20

Comparison of dentists and social workers with regard to score on the Edwards Scale

Occupational Group	Mean score on Edwards Scale	t	Level of Significance (one-tailed test)
Dentistry	33.15		
Social Work	32.25	.52	N.S.

No significant difference is found between dentists and social workers in their response to the Edwards Scale. It may be, as Crowne and Marlowe (1960) say, that another factor, that of actual incidence of pathology, is present in the Social Desirability scores. The fact that both groups obtain high scores may indicate simply that neither contains a high proportion of seriously maladjusted members.

(8. Is there a correlation between score on the Edwards Scale and the scored discrepancy between Self and Desirability ratings?)

TABLE 21
Correlation between Self-Desirability ratings and score on the Edwards Scale

Dentistry and Social Work

Occupational Group	Correlation between Self-Desirability rating and Edwards score	Level of Significance
Dentistry	r = .29	N.S.
Social Work	r = .72	P < .01

The correlation between scores on the Edwards Scale and the agreement between Self and Desirability ratings is much higher for social workers than for dentists. This difference may reflect the fact that while both groups had similar means and standard deviations on the Edwards Scale (Social Work Mean = 33.15, standard deviation = 5.3; Dentistry Mean = 32.25, standard deviation = 5.5), the dentists had both a higher mean and a much lower standard deviation on their Self-Desirability agreement scores (Social Work Mean = 39.6, standard deviation = 7.1; Dentistry Mean = 41.65, standard deviation = 3.3). Thus dentists were consistently high in the number of agreements between Self and Desirability ratings, while social workers were much more variable. Perhaps the relatively large differences among individuals in social work reflect genuine personality distinctions which are also reflected in the Edwards Scale, while the slight variability that does occur among the dentists might have been primarily the result of chance factors or of conditions irrelevant to

the present problem.

(9. Is there a significant difference between the desirability that one perceives in oneself and the amount of desirability that one perceives in one's profession?)

TABLE 22
Comparison between Self-Desirability and Own Profession-Desirability ratings

Occupational Group	Mean Agreement		t	Level of Significance (two-tailed test)
	Self-Des.	Own Prof.-Des.		
Law	39.1	43.3	3.92	$P < .001$
Dentistry	41.65	46.15	5.4	$P. < .001$
Social Work	39.6	42.65	2.63	$P < .02$
Psychology	38.3	42.2	2.57	$P < .02$
Physics	38.2	44.4	2.05	N.S. ($P < .10$)

All groups but one (physics) regard their professional group as being significantly more desirable in the categories studied than they are themselves, and the physicists' responses are in the same direction and approach significance. It is noteworthy that these findings occur even with the use of a two-tailed test. Thus it would seem that S's in all the professions tested regard their profession (or at least its successful members) as something of an ideal. The alternate possibility, that they are responding only to the word "successful," seems doubtful in view of a comparison made between the two groups initially tested under Hypothesis IV, and summarized in the following table.

TABLE 23

Comparison between Self-Desirability and Other Profession-Desirability ratings of Dentistry and Social Work Students

Occupational Group	Mean Agreement Self-Desir.	Other Prof.-Desir.	t	Level of Significance (two-tailed test)
Dentistry	41.65	40.8	.46	N.S.
Social Work	39.6	40.6	.73	N.S.

It may now be appropriate to reconsider the results recorded in Tables 5, 6, 7, and 8 in relation to the social desirability of the items. The following table lists the social desirability of the four items as considered by the S's in each of the professions involved.

TABLE 24

Distribution of professional groups in rating which response they considered desirable on items on which those groups showed significant differences

Item	Reference Group	Response category considered desirable a.	b.
32.	Law	5	15
	Dentistry	5	15
	Social Work	8	12
44.	Law	4	16
	Dentistry	8	12
	Social Work	5	15
46.	Law	11	9
	Dentistry	15	5
	Social Work	7	13
50.	Psychology	13	7
	Physics	9	11

The following summary is included for reference:

TABLE 25

Distribution of professional groups on various categories

Item 32.

Category	Law a.	Law b.	Dentistry a.	Dentistry b.	Social Work a.	Social Work b.
Self	13	7	3	17	10	10
Desirable	5	15	5	15	8	12
Own Prof.	6	14	5	15	10	10
(Average of judging Groups)	6.5	13.5	6.5	13.5	5	15
Other Prof.	7.5	12.5	12	8	10	10

Item 44.

	Law		Dentistry		Social Work	
Category	a.	b.	a.	b.	a.	b.
Self	1	19	7	13	7	13
Desirable	4	16	8	12	5	15
Own Prof.	4	16	9	11	8	12
(Average of judging groups)	6.5	13.5	4.5	15.5	6	14
Other Prof.	6	14	5	15	12	8

Item 46.

	Law		Dentistry		Social Work	
Category	a.	b.	a.	b.	a.	b.
Self	14	6	16	4	8	12
Desirable	11	9	15	5	7	13
Own Prof.	13	7	14	6	7	13
(Average of judging groups)	10.5	9.5	10	10	13.5	6.5
Other Prof.	10	10	9.5	10.5	11	9

Item 50.

	Psychology		Physics	
Category	a.	b.	a.	b.
Self	14	6	3	16
Desirable	13	7	9	11
Own Prof.	13	7	6	13
(Judges' rating of Desirable)	9	11	13	7
Other Prof.	10	10	6	14

In seeing whether the distribution proposed for one's own and other professions on the four items reflects the perceived desirability of these items, there are two comparisons to be made. Any relation between social desirability and distribution proposed for one's own profession would have to be in terms of one's own judgment of social desirability, whereas the relation between the distribution of a professional group proposed by others and social desirability would have to be in terms of the others' standards of social desirability. For this reason the Desirability distribution made by the groups doing the rating in each instance is included under the group being considered.

The difference between the Desirability distribution and the distribution resulting from the predictions of S's about

their own and other professional groups is summarized below.

TABLE 26

Item	Absolute difference between Desirability distribution and distribution for Own Profession			Sum of Differences
	Law	Dentistry	Social Work	
32.	1	0	2	3
44.	0	1	3	4
46.	2	1	0	3
		Psychology	Physics	
50.		0	2.5	2.5

TABLE 27

Absolute difference between Desirability distribution (of judges) and distribution for Other Profession(s)

	Law	Dentistry	Social Work	
32.	1	5.5	5	11.5
44.	.5	.5	6	7
46.	.5	.5	2.5	3.5
		Psychology	Physics	
50.		1	7	8

In each of the four items the sum of the difference between Desirability and Own Profession is smaller than the sum of the difference between Desirability and Other Profession. This finding is consistent with the results in Table 18, and could probably have been predicted from that table. Note also that the sum of differences between Desirability and Own Profession bears no apparent relationship to the sum of differences between Desirability and Other Profession(s). Thus it may be hypothesized that while one's estimates of Own Profession are more or less in line with one's judgment of what is desirable, one's estimates of other professions do not follow a pattern that can be predicted from desirability ratings.

(10. Is there a significant difference between the social desirability one thinks others would accord to oneself and the social desirability score one thinks others would accord to one's profession?)

TABLE 28

Comparison between Self-Others Desireable and Own Profession-Others Desirability ratings

Occupational Group	Mean Agreement		t	Level of Significance
	Self-Others Des.	Own Prof.-Others Des.		
Law	36.4	41.2	4.8	$P < .001$
Dentistry	38.45	43.9	6.9	$P < .001$
Social Work	38.4	40	1.72	N.S.
Psychology	36.8	38.8	1.89	N.S. ($P < .10$)
Physics	36.9	38.4	.62	N.S.

In judging how others would rate a successful member of one's profession, there is less consistency. Two groups (law and dentistry) have others rating the profession significantly higher than the self, one additional group (psychology) approaches significance, and the other two do not make significant distinctions in their ratings under this category. Messick's suggestion that social desirability may not be a unidimensional continuum appears to have relevance here. At least one group (social workers) seems to make a distinction between how they view things and how they think others will.

Chapter IV
Discussion

The findings presented in the last chapter will be recapitulated below, and will be discussed in connection with each hypothesis.

Hypothesis I, that the S will be able to answer questions about his background when these are presented in a questionnaire in the same way that he would answer in an interview, does not seem to be supported by the data. Only four out of 45 items produced a significantly different distribution of S's in the professions involved, and among these items only two distributions corresponded exactly with the predictions.

An attempt to explain these data involves the reconsideration of previous assumptions. It was thought that the attitude, motivation, and commitment of S's in the questionnaire situation and the interview would not be greatly different. The supposition now seems open to question. Nachmann and Galinsky have reported that their S's showed a high degree of involvement in the process of recollection and seemed positively motivated to respond. This amount of interest was nowhere apparent in the present study. S's did for the most part appear to be giving the questionnaire some thought -- it would not take an hour simply to fill the blank spaces with a's or b's -- but the relatively impersonal situation did not reward the presentation of material and therefore probably did not stimulate the S's to deep thought in making their responses. Thus one reason for the failure of correspondence between the results relating to Hypothesis I in this study and the results of the previous studies could be lack of interest among the S's.

Another possible reason for the failure relates to social desirability. The results in Table 12 suggest that the responses that S's place in the Self category tend to be those that they think are socially desirable. (Of course, no cause and effect relationship is necessarily implied.) If there is [as Edwards (1957) believes] considerable agreement as to what is socially desirable, this would explain the massing of responses on various items in one category or another, which lessened the chance for significant

differentiation among the groups.

A third possibility is that S's were not sufficiently aware of factors in their own backgrounds to enable them to make accurate judgments. It has been noted that in the interview situation the judgments as to whether an S's responses placed him in one category or another were made by coders. These coders may have scored responses differently from the way the S would have scored them, not only because they probably had more knowledge of psychology and of psychoanalytic theory, but also because as objective observers they were not as likely to be influenced by emotional involvement with the material.

The present writer believes that the third possibility mentioned above provides the most adequate explanation. It is generally recognized that people are often unaware of important and meaningful aspects of their personalities and environments, aspects which may be apparent to an independent observer. The perceived desirability of certain responses may also have had some effect on the results, in that the most likely distortions in any case would be in the direction of the S's concept of desirability. (Cf. the study by Robbins described in Chapter I.) Lack of interest per se, this writer thinks, was a factor of much less importance, since it would be expected to have resulted in less differentiation in the responses of the individual S's than actually occurred. (Note the findings under Hypothesis III.) It could, however, have increased the number of socially desirable responses, to the extent that these were deliberate; that is, if the S were not interested enough to be honest, he would seem more likely to present himself in a good light.

It should be noted finally that distortions need not have occurred in all groups in order for the results to have lost potential significance. Since the prediction for each item proposed that one group would be distinguished from the other two, a shift away from the expected direction in the responses of one group would be enough to have reversed the results partially or completely.

The results relevant to Hypothesis II -- that the S will be able to make an accurate prediction of the answers given by his own and other professions to the questions used in this study -- are too meager to lead to definite conclusions. Of the four items which produced significant results under Hypothesis I, none produced a significant difference in responses concerning Own Profession, but two were close to significance ($P < .10$). One produced a significant difference in responses concerning Other Profession, but the difference did not entirely reflect that of the original findings. It is arguable whether these results in any way confirm the hypothesis. This observer thinks that they do provide some support, but that not enough cases are involved to permit much examination of the hypothesis.

Hypothesis III, that S's in all the groups will identify with members of their own profession, is the one most fully supported by the data. Four of the five groups showed significantly more agreement between their responses for Self and those for Own Profession than between their responses for Self and those for Other Profession(s). This would suggest a clear identification of S's with their own professional group. In Chapter II it was pointed out that such an identification might reflect actual conditions or could be an expression of the S's needs. The consideration is interesting in the present instance because actual distinctions between the Self responses of the different groups did not in most cases occur, yet the S's still tended to identify with their own professional group as opposed to others.

Hypothesis IV, that whether an S will consider his answers to be socially desirable can be predicted from his profession, is partly supported by the results. Social workers and dentists, the two groups contrasted, did show significant differences in the expected direction in their ratings of their professional group, but did not show these differences in their ratings of Self. Furthermore, while social workers as a group rated their profession lower on Desirability and Others Desirable than dentists as a group rated theirs, social workers did not judge dentistry to be more desirable than social work, although they did indicate that they thought others would consider dentistry more desirable. It was suggested, and supported by a further

analysis of the data, that members of each of the professional groups tended to consider their own profession as something of an ideal.

The data summarized above, if taken without further interpretation, are puzzling in their inconsistency. The first phase of the results indicates that S's in a given profession cannot be distinguished from those of another by means of the specified categories, and that they do not themselves separate the professions with these categories; the second implies that they portray themselves as more similar to their colleagues than to other professionals and that they see their own group as more desirable than the others, all in terms of the same dimensions which were of no use previously in characterizing the populations. It seems necessary to try to explain the obvious discrepancy.

There are two ways of dividing the data which may be of help in understanding the supposed contradiction. The first is by method of tabulation. In some instances, responses from group members were placed together and the total responses of each group were then compared; in others, the response of an S in one category was compared with his response in another, and group responses were not tabulated until after the initial comparison had been made. The first method was used for the analysis of data related to Hypotheses I and II and Prediction 7 under Hypothesis IV; the second was used with Hypothesis III and with the first six predictions and the questions labeled 9 and 10 under Hypothesis IV. It is immediately apparent that virtually all the significant results were obtained by use of the second method.

Another way of dividing the data is in terms of level of awareness tapped. In tabulating the data used with Hypotheses I and II, subjects' responses were taken directly as given with no further interpretation; thus any material obtained would have had to be present in the S's consciousness. In regard to Hypotheses III and IV, the material was further sorted or analyzed before it was used. S was not asked directly whether he regarded himself as similar to members of different professions, nor to what extent

his own profession was in accord with his standards, nor (on the Edwards) whether he was giving responses that were socially desirable. The information sought in connection with these problems may have been known to the S but need not have been. Again, virtually all the significant results fall under the second classification.

It is not assumed, of course, that these divisions provide an explanation of the results, nor that they are the only ways of grouping the data. They do, however, seem to this writer to be of some aid not only in understanding the discrepancies in the present results, but in attempting to reconcile these results with the findings of earlier studies.

It may as well be said immediately that one of the stated purposes of this report, to confirm or call into question the Nachmann and Galinsky studies, has not been fulfilled. The results, it is true, do suggest that the S's may not have been aware of various factors in their environments. If these factors existed but were not consciously perceived, it could be concluded that only by an interview in depth could they be obtained. But the S's are not separated as groups even in their reports on such factual material as whether they learned to read before starting school, material which the coder of an interview would have had to accept as given. It is possible, of course, to conclude from the data that these five groups are for some reason atypical of their professions. But to make such a conclusion is likewise to assume that the earlier findings did in fact give a valid picture of the professions, exactly the point the present study was designed to test.

It seems to this observer, none the less, more reasonable to suppose that the 100 S's studied by Nachmann and Galinsky and the corresponding 100 examined for this thesis represent comparable populations than to suggest that chance factors operated to cause major dissimilarities between the five groups of the present study and the five which they had been chosen to match. The present writer has stated earlier in this discussion her belief that the discrepancies between the results of this research and the findings of the earlier investigations are a consequence of the subjects' unawareness -- at

least on a conscious level - of important aspects of their early environments. If the assumption is correct, then, a more inclusive picture can be formed of the 200 S's and five occupations by including the material from all three dissertations. Since in Chapter I the writer criticized previous work in the field for limiting itself to a small portion of the whole while ignoring other relevant material, she would seem to be under particular obligation to note findings of the earlier studies which appear to have some bearing on the present dissertation.

Nachmann and Galinsky were able to put together and document a fairly consistent picture of members of each of five professions by studying the work done by the professionals, inferring from psychoanalytic theory what needs such work would satisfy, and hypothesizing what background and experience could have produced such needs. It may be noted in passing that findings relative to Predictions 3 and 4 under Hypothesis IV were found significant in the present case, and that these were in line with Nachmann's findings about dentists and social workers. There is here a definite, although admittedly slight, bolstering of the suggestion that this group and Nachmann's group were in fact similar, and that the discrepancies between Nachmann's and Galinsky's findings and the results under Hypothesis I were a result of the subjects' unawareness of pertinent information. But a consistent picture is not necessarily an all-inclusive one, and there may be other factors which were not examined and which would contribute to a description.

The Nachmann and Galinsky studies, although based on the students' conscious recollections of their childhoods, coded and classified the material and thereby obtained judgments which may not have been shared by their S's; the present study, although it utilizes techniques to get at factors which the S's may not perceive directly, is for the most part dependent upon their cognitions. A good deal of useful material, it would seem, could be gained if at some time the same occupational group were to be examined on both levels, to include in one study the perceptions of its members and the

evaluations of trained researchers.

The fact that the same occupation may serve different needs has been mentioned by various observers (Tyler, Brender, Nachmann, among others); the fact that perceptions of the same work may differ from one individual to another has also been noted. Both these considerations point up the importance of a searching examination of individual S's as part of any study of an occupation before it is concluded that one has exhausted the meaning and function of the occupation in the individual's life.

The profession of dentistry, for example, may for many practitioners involve both the needs postulated by Nachmann and the desire for autonomy postulated by More and Kohn. The latter aspect does not by any means negate the former, but it does add an additional dimension to be comprehended. The complexity of the picture will be increased as relevant problems are answered; e.g., what factors of background or personality explain the need for autonomy and the choice of a work role in which one is neither boss nor subordinate (the family structure would presumably be consistent with the choice of either of the last-named roles), how this withdrawal from others fits in with the aggressive needs earlier postulated and with the close (physical) contact with patients, and what meaning freedom (of time schedules, of number of patients seen, even of salary to the extent that this is dependent on the first two matters) has for a group which seems to want to conform.

The individual's conscious and preconscious perceptions of his occupation must here be considered. It is unlikely that these serve only a masking function, but even if this were the case, a recognition of the different sorts of defenses adopted by persons in the same occupation would help to increase knowledge of the sorts of persons engaged in the occupation. Leaving out the extreme possibility, a greater awareness of how the S views his occupation will help in understanding such matters as how well he performs his role and how over time he integrates what he is doing with his total personality (that is, in what way he accomplishes this integration, not merely what needs, defenses, etc. are involved).

The present study, of course, did not seek to examine the individual's concept of what his occupation meant. The questions which were asked were not necessarily -- or even probably -- ones which the S would have considered relevant to his profession or to others. Furthermore, the professions he was asked to contrast with his own were not necessarily the ones he considered most different. They were chosen because they seemed to sophisticated observers to differ on several dimensions set up on the basis of psychoanalytic theory. But these are not the only dimensions relevant to a profession, nor are they even the only ones which could be drawn from the same theoretical structure. It would be interesting to know what dimensions S considers important, what professions he chooses as contrasts with his own, and where on the dimensions he places his own and the other professions. (It may also be asked whether the group of contrasts is constant throughout life, or whether there is -- as this writer would postulate -- a progressive sharpening of the image of one's profession, until the neophyte who began with only a generalized idea of his occupational group can at last distinguish between that group and related professionals, between specialists in his own branch and those in other branches of the field, and even -- in some instances -- between those in the same specialty who were trained in one or another of various settings.) Not much can be said on any of these matters at present, but it is interesting to recall the results summarized in Table II in the last chapter. Dentists portray themselves as similar to lawyers and very different from social workers, social workers portray themselves as more like dentists than like lawyers, and lawyers see themselves as very different from both the other professions. Perhaps the three groups view different dimensions as important and relevant to their work.

Individual differences in perception of what is socially desirable have been postulated by Messick (1960), who also suggested that social desirability may not be a unidimensional continuum. Certainly some differences in this regard seem to separate at least two groups involved in the present

research: social workers much more than dentists appear to distinguish between what they think desirable and what others think (cf. Tables 18 and 19). This contrast of professions, if it reflect an actual difference between them, may indicate some sort of characteristic independence or rebelliousness on the part of the social worker, a disinclination to accept the viewpoint of the outside world (or at least what he perceives to be the viewpoint of the outside world). If his primary family differed from the conventional family in this country in the way the Nachmann data indicate, perhaps this disagreement with "others" may represent a defense of his family -- including himself as a child -- against public opinion. The statement is speculative, of course; the distinction he makes between himself and others could just as easily represent a breaking away from his family. Looking at the S as a social worker, however, not just as an individual with a certain background, this independence -- whatever its origin -- would appear to be functionally necessary. He is in a profession which is still in the process of becoming established (it is much younger than either law or dentistry) and which is not entirely accepted by the general public [note the stereotype of the naive "do-gooder" still held in some quarters, the frequent hostility toward the giving of welfare payments, and the fact that in the social worker's occupation "even under the most provocative verbal attack retaliation is precluded" (Nachmann, 1957, p. 11) implies that his modes of behavior must differ from those generally accepted by the culture]. It is perhaps worth mentioning in view of the suggestion that social work both attracts and encourages those who have developed this particular nonconformist view, that there seemed (to this observer) to be a somewhat larger proportion of persons of minority racial groups in the social work school than in training for either law or dentistry. (Persons of minority races, it may be added, were not used as S's because of the difficulty of finding matching S's for them.)

The purpose of examining occupations, as has been done in both the Nachmann and Galinsky studies and in this as well, is not merely to obtain

knowledge about a certain group but to contribute something to an understanding of the vocational process. At this point it seems justifiable to re-examine parts of the material given in the first chapter in an attempt to relate the data of the present thesis to them.

Super's suggestion that occupational choice is made in terms of the self-concept is consistent with the findings on Hypothesis III. S's do in general present themselves as similar to their concepts of successful members of their profession and less similar to members of other professions. This conclusion is in agreement also with the results obtained by Englander when he found distinctions between elementary education majors and non-education majors in the congruency of their perceptions of the self and of elementary school teachers. It would be interesting to know whether any or all of his groups presented a consistent picture of the teacher, whether the groups could be differentiated in terms of the material they selected as descriptive of teachers, or whether the statements chosen were for each group essentially a random arrangement; Englander, however, did not examine these aspects of his data, or at least did not report them.

It was proposed in Chapter II that in preparing for an occupation, the individual is under pressure to fit together his personal and occupational stereotypes by modifying either or both. There are a number of ways he can do this; which one he adopts depends on such factors as his emotional stability, rigidity or flexibility, commitment to self concept and to various aspects of the work, as well as on external circumstances. There will be no attempt here to discuss all methods of solving the problem, some of which are maladaptive. However, one or two points touching on the issue will be raised. The individual may modify his self concept so that what he is doing becomes acceptable, or, instead, may alter his perception of the tasks so that they no longer have the meaning they did before. (The individual just out of college or graduate school finds that he can put up with a lower position than he had anticipated as long as he can regard it as preparation for the important work he will do some day.) He may find that the occupation is not

unvaried, and that a subspecialty offers him the opportunity to behave more in accordance with his needs and wishes. Nachmann has pointed out (1957, p. 67) that law offers many different kinds of tasks and opportunities to its practitioners. The Raylesberg study of engineers and the findings of Goldberg concerning clinical psychologists should provide contraindications toward regarding these professions as undifferentiated (a consideration of interest here, since presumably at least some of the clinicians tested for this thesis will eventually take positions as academicians or administrators). External circumstances were mentioned above as important determinants; it is presumed that when jobs are plentiful, the individual who feels out of place in his occupation may simply leave, while during a period of economic depression he would be more likely to remain and modify his percepts.

The implication of the results under Hypothesis IV, 9 (Table 22), that occupational choice calls into play one's concept of the ideal self as well as the perceived self is not tested directly by Englander, but is probably present in his finding that education majors thought their family and friends more favorable to elementary school teaching than non-education majors thought theirs would be. The statement by Super that in adjusting to a job a worker discovers whether he can live up to his picture of himself also implies the presence of an ego ideal. It may be that in making a choice, the S's are in a way balancing the demands of ideal and actual self by trying to select an environment in which the former will be encouraged even while the latter is being utilized.

Ginzberg et al (1951) suggest that the first stage of vocational development is dependent largely upon fantasy. Super, expanding on this concept, adds that fantasy needs are synthesized with other needs throughout the vocational process. But <u>all</u> occupational choice (except that based on actual participation in the occupation) is in a very real sense a fantasy choice. The individual may have knowledge of what tasks he will be called upon to perform; he may have a realistic appraisal of his abilities and interests.

But the "feel" of the occupation, the sense of what it will mean to the total person to be involved in it, can be based only on imagination, on one's fantasied juxtaposition of the self (not always accurately perceived) and the work situation (considered from outside). Anyone who has executed even a simple act after watching someone else complete it can testify that there is a difference between knowing what to do and actually doing it. In the case of work the discrepancy is increased because of the complexity of the pattern and because the outsider's perception, no matter how reality-based, is almost always telescoped in the time dimension -- that is, his viewing of himself in the occupation generally lasts for only a few minutes, whereas the working day is likely to last for eight hours. Needless to say, this discrepancy usually does not cause any difficulty to the person once he is in the occupation, but it is there and it should be considered.

The differences noted above parallel the differences between intellectual and emotional comprehension as those terms are used in therapy, and will probably occur even when there is no distortion in the perception of the occupation, a highly unlikely circumstance. In the more usual case, the work itself is to a certain extent misperceived. Smith (1958) has noted the shock that may occur when the occupation one enters differs markedly from the picture it has presented. This type of misperception or incomplete perception may be more common than is realized, especially in a complex occupation such as a profession. One may know in general what elements are involved without discerning what proportion of each will be used (the doctor has been trained to recognize many diseases but finds that most of his patients have colds and sore throats, the architect discovers that his customers usually want less imaginative designs than won praise from his professors, etc.).

The preceding paragraphs may have seemed to imply that the person who misperceives his occupation before entering it is faced with "reality" at his admission and thereupon cognizes the facts. That is, of course, not necessarily the case. All the needs and defenses which made him choose the

occupation are still operating, and may continue to distort perception. This fact is taken for granted in reports on individuals who discuss their work in therapy, but for some reason it is often overlooked when vocational development is described in general terms. The occurrence of such distortions is one more reason for studying the individual's perceptions of his job in addition to outside evaluations of it from a theoretical viewpoint.

The presence of an ideal self which may gain support through one's occupation offers another causative factor contributing to the choice of occupation. An important premise of psychoanalytic theory, which has not always been considered in discussions of vocational selection, is that of overdetermination. There is, also, a distinction between a necessary cause and a sufficient one. Granted that persons in the same occupation have sometimes been found to have similar personalities or backgrounds, the question still remains as to why they chose that particular occupation -- there are, after all, many persons in the general population with comparable needs or defenses who did not choose it. The individual's ideals are, of course, no more sufficient as an explanation than is any of the other factors taken alone, but they do represent another aspect which should be taken into account.

Whether one can choose a certain occupation at all depends, finally, on whether one knows it exists. Occupations differ in how well they are known to the general public or to various segments of it. Nachmann has noted that law and dentistry are more "visible" professions than social work and tend to be chosen at an earlier age by their practitioners. What this means in terms of personality dynamics is not known. Does the choice of an occupation later in life imply more flexibility, a greater tolerance for ambiguity, more awareness of one's interests and abilities, hence a more mature person? Or does the earlier choice mean that the person has chosen at a time when basic needs were closer to the surface, and that in following his choice and satisfying those needs he is revealing a more integrated personality than is the person who has postponed his decision? There is

almost no material on which to base an answer.

The visibility of an occupation, like other aspects of it, is not constant. Dentistry has been a visible profession for several hundred years and law for several thousand, and changes in public awareness of them over a decade or two are not easy to notice, but in other cases the difference is marked. It seems likely that children are aware of the profession of physics now at a younger age than they were a generation earlier. Social work seems much more visible as a profession for men than it did when Nachmann looked for S's a few years ago, and of course since the beginning of the century various occupations have become more visible as opportunities for women. These examples are mentioned simply to suggest a necessity for considering various aspects of the changing environment when studying the interaction between individual and occupation before and after his vocational choice.

This chapter has represented an attempt to bring together the results of the present thesis and some of the findings and conclusions of other studies in order to make the data obtained here more meaningful and to use them, in turn, as part of an effort to clarify or explore various hypotheses set forth in the literature on vocational development. The importance of integrating and organizing relevant material from diverse sources in order to produce a more adequate background for further investigations has been indicated in Chapter I. It is probably unnecessary to add that the research presented in this report, like that of many projects described in that chapter, has proved exploratory rather than conclusive.

Chapter V
Summary

The basic problem explored in the present study was whether there is a widely accepted and conscious image of the practitioners of particular professions which persons in the professions strive to emulate. Specifically, the research was designed to test the findings of two earlier studies which found significant differences in the family backgrounds and early experiences of lawyers, dentists, and social workers in one case (the Nachmann dissertation) and of psychologists and physicists in the other (the Galinsky dissertation). It was asked whether these findings might have reflected not actual differences but the desire of the S's to give answers which they considered appropriate for their professional group; a related question, whether the answers given by S's might have been the ones they thought were socially desirable, was also investigated. There was in addition interest in finding out whether material comparable to that which had been obtained previously by interviews could be gathered by the use of questionnaires.

The S's studied were 100 male graduate students chosen to represent populations corresponding to those used in the previous studies. These S's included 20 law students, 20 students of dentistry, 20 social work students, 20 students in the graduate program in physics, and 20 students in the graduate program in clinical psychology. Each S was given the Edwards Social Desirability Scale of 39 MMPI items and a questionnaire containing 51 sets of two statements each, based on the material investigated in the earlier dissertations. Instructions for the questionnaire presented a forced choice in which S was asked to indicate which of the two statements was more descriptive of himself, of successful members of his own profession, and of successful members of one or two other professions, as well as which one he considered more desirable and which he thought others would consider more desirable. Comparisons could be made between S's responses in different categories, and his responses could also be judged on whether they corresponded

to the hypotheses of the previous studies.

Hypotheses were developed in regard to the reports which the S's would give of their own backgrounds and early experiences and the backgrounds and early experiences of members of their own and other professions. Other hypotheses dealt with the S's presumed identification with his profession and with the differences between members of different professional groups in their consideration of how desirable they judge themselves and their colleagues to be.

Each hypothesis was tested by means of predictions which were applied to the data. After the data had been partially analyzed, a number of additional questions were examined by further comparisons among different segments of the data.

The following expectations were for the most part supported by the data:

1. S's in all the groups will show a greater similarity between their answer to a statement as it refers to themselves and their prediction of the answer that would be given by a member of their profession than between their answer as it refers to themselves and their prediction of the answer that would be given by a member of another profession.

2. Whether S's answer as it refers to his profession is similar or dissimilar to the answer that he considers desirable can be predicted from his occupation. In the present study, dentists will have the two answers similar, social workers will have them dissimilar.

3. Whether S's answer as it refers to his profession is similar or dissimilar to his judgment of what others would consider desirable can be predicted from his occupation. In the present study, dentists will have the two answers similar, social workers will have them dissimilar.

4. Dentists will have more agreement between the answer that they consider desirable and the answer that they consider typical for their profession than between the answer that they consider desirable and the answer they consider typical for another profession.

5. Whether there is more agreement between the answers that S considers typical for his profession and the answers that he thinks others would consider desirable than there is between the answers that he considers typical for another profession and the answers that he thinks others would consider desirable can be predicted from his occupation. In the present study, dentists will have more agreement between the first two categories, social workers between the second two.

The following expectations were for the most part not supported by the data:

1. Answers to the structured questionnaire will differentiate members of different professions in the same way that the coding categories did.

2. Where members of two professions show significantly different responses in their answers to a statement as it refers to themselves, they will also show significant differences in their answers to the statement as it refers to their professions.

3. Where significant differences are found between members of two professions in answering a statement as it refers to themselves, these differences will also occur between their statements of how members of the other profession would answer the question.

4. Whether S's answer to a statement as it refers to himself is similar or dissimilar to the answer that he considers desirable can be predicted from his occupation. In the present study, dentists will have the two answers similar, social workers will have them dissimilar.

5. Whether S's answer to a statement as it refers to himself is similar or dissimilar to his judgment of what others would consider desirable can be predicted from his occupation. In the present study, dentists will have the two answers similar, social workers will have them dissimilar.

6. Social workers will have more agreement between the answer that they consider desirable and the answer that they consider typical for another profession than between the answer that they consider desirable and the answer

that they consider typical for their own profession.

7. On the Edwards Scale, dentists will have a significantly higher score than will social workers.

Data regarding the following question differentiated between sets of responses to a significant degree:

1. Is there a significant difference between the desirability that one perceives in oneself and the amount of desirability that one perceives in one's profession?

Data regarding the following question did not differentiate among response groups to a significant degree:

1. Do S's predict that the professionals will answer as was predicted for them in the earlier studies, regardless of whether they actually do answer that way?

Data regarding the following questions were mixed in their significance:

1. Is there a correlation between score on the Edwards Scale and the scored discrepancy between Self and Desirability ratings?

2. Is there a significant difference between the social desirability one thinks others would accord to oneself and the social desirability one thinks others would accord to one's profession?

Taken as a whole, the results were judged to indicate that material comparable to that obtained by interviews in the previous studies could not be gathered from the questionnaires of the present research, but that nevertheless the subjects' responses did imply that they were making distinctions between their own and other professional groups. In the discussion, it was suggested that S's have a variety of ideas about the backgrounds and early experiences of members of their own and other professions, but that the individual S in general tends to identify with his own professional group. It was further suggested that the occupational choice made by an individual in these groups tended to reflect his ideal as well as his actual self.

APPENDIX A

SHEET FOR BACKGROUND INFORMATION

Please fill in the following information:

1. In what department of the university are you enrolled?_____

2. What is your present year level in that department?_____

3. What are your vocational plans for the future?_____

_____

4. If you had it to do over again, would you still make the same vocational choice?_____

If not, why not?_____

What work would you choose?_____

5. Your age_____

6. Place of birth_____

7. What type of work did your father do during your childhood? Be specific._____

8. Father's educational background_____

9. Religious preference of your parents_____

Please make sure that you have filled in the above information and that this sheet and your answer sheets are stapled together when you return the material.

APPENDIX B

FACE SHEET FOR PART I FOR LAWYERS, DENTISTS, AND SOCIAL WORKERS

In Part I of this study, you will be asked which of two statements you consider more applicable in a variety of situations. Each statement offers two possible choices, a and b. On your answer sheet, you will notice six columns, with a list of numbers at the left. The numbers correspond to the statements. After each number on your answer sheet, please make a response in each of the six columns. The way to make the response is to place the letter a or the letter b in the column, depending on which statement you feel to be more applicable in each. Please make a response in each column, even if you are uncertain or have no clear preference. Just give the answer you consider preferable or more likely. It is expected that you will have to guess at some of these.

A description of the groups referred to on your answer sheet is given below:

Yourself: In this column, choose the statement that seems to describe you or is more applicable to you. When the statement refers to father or mother, give the answer that describes your father or your mother.

The successful lawyer: Here you are asked to choose the statement which seems to describe the man who is a successful lawyer. What is he like, and what was his family like?

The successful dentist: Here you are asked to choose the statement which seems to describe the man who is a successful dentist. What is he like, and what was his family like?

The successful social worker: Here you are asked to choose the statement which seems to describe the man who is a successful social worker. What is he like, and what was his family like?

What you consider desirable: Here you are asked to give the response which seems to you a good one for a man to give. Which one describes a better state of affairs, or which one would make you think more highly of a man who gave it?

What others consider desirable? Here you are asked to choose the response which most people would consider desirable. What response would most people think described a better state of affairs, or would make them think more highly of a man who gave it?

APPENDIX C

FACE SHEET FOR PART I FOR PHYSICISTS AND CLINICAL PSYCHOLOGISTS

In Part I of this study, you will be asked which of two statements you consider more applicable in a variety of situations. Each statement offers two possible choices, a and b. On your answer sheet, you will notice five columns, with a list of numbers at the left. The numbers correspond to the statements. After each number on your answer sheet, please make a response in each of the five columns. The way to make the response is to place the letter a or the letter b in the column, depending on which statement you feel to be more applicable in each. Please make a response in each column, even if you are uncertain or have no clear preference. Just give the answer you consider preferable or more likely. It is expected that you will have to guess at some of these.

A description of the groups referred to on your answer sheet is given below:

Yourself: In this column, choose the statement that seems to describe you or is more applicable to you. When the statement refers to father or mother, give the answer that describes your father or your mother.

The successful physicist: Here you are asked to choose the statement which seems to describe the man who is a successful physicist. What is he like, and what was his family like?

The successful clinical psychologist: Here you are asked to choose the statement which seems to describe the man who is a successful clinical psychologist. What is he like, and what was his family like?

What you consider desirable: Here you are asked to give the response which seems to you a good one for a man to give. Which one describes a better state of affairs, or which one would make you think more highly of a man who gave it?

What others consider desirable: Here you are asked to choose the response which most people would consider desirable. What response would most people think described a better state of affairs, or would make them think more highly of a man who gave it?

APPENDIX D

SETS OF STATEMENTS FOR QUESTIONNAIRE

PART I

1.
   a. He was the first in his family to practice his particular profession.
   b. He came of a family in which others had practiced the same profession.

2.
   a. He decided on his occupation before he had finished high school.
   b. He did not decide on his occupation until after he had finished high school.

3.
   a. He learned to read before he started school.
   b. He did not learn to read until he was in school.

4.
   a. Reading and being read to was a family custom in his childhood home.
   b. Reading and being read to was not a family custom in his childhood home.

5.
   a. Tool using was taught to him in his childhood home.
   b. Tool using was not taught to him in his childhood home.

6.
   a. His first years at school were pleasant and enjoyable.
   b. His first years at school were not particularly pleasant and enjoyable.

7.
   a. School accomplishment was emphasized by his parents.
   b. School accomplishment was not emphasized by his parents.

8.
   a. During childhood and after, he usually had at least an average number of friends.
   b. During childhood and after, he often had fewer than an average number of friends.

9.
   a. His relationships with his friends were usually smooth-surfaced.
   b. His relationships with his friends were often conflictful.

10.
   a. His relationships with his family were usually smooth-surfaced.
   b. His relationships with his family were often conflictful.

11.
a. His parents had many intellectual interests.
b. His parents had few or no intellectual interests.

12.
a. Family conversation in his childhood home often dealt with impersonal intellectual matters.
b. Family conversation in his childhood home seldom or never dealt with impersonal intellectual matters.

13.
a. In his childhood home, there was often gossip about other people.
b. In his childhood home, there was seldom or never gossip about other people.

14.
a. His parents held conventional religious beliefs.
b. His parents were unconventional in their beliefs about religion.

15.
a. Politically, his parents were liberals.
b. Politically, his parents were conservatives.

16.
a. As a child, he was allowed to argue with his parents about rules and regulations.
b. As a child, he was not allowed to argue with his parents about rules and regulations.

17.
a. He experienced some severely disturbing event or deprivation at some point during his childhood.
b. He did not have any severely disturbing experience or deprivation during his childhood.

18.
a. As a child, there was some serious illness which kept him out of school for some length of time.
b. As a child, there was no serious illness which necessitated his being kept out of school for any long period of time.

19.
a. After age five, he had some long periods of isolation from other children.
b. After age five, there were no long periods of isolation from other children.

20.
a. He had at least one younger brother or sister.
b. He was an only child or the youngest child in the family.

21.
a. His mother was ill or absent for some period before he was two years old.
b. His mother was not ill or absent for some period before he was two years old.

22.
a. His father was ill for some long period during the son's childhood.
b. His father was not ill for any long period during the son's childhood.

23.
a. His father was absent for some long period before the son was eight years old.
b. His father was not absent for any long period before the son was eight years old.

24.
a. His father was usually the final authority and made policy decisions about major issues involving the family.
b. His mother was usually the final authority and made policy decisions about major issues involving the family.
(If one parent was dead or absent, assume that the one actually present was the authority, and answer the question in that way).

25.
a. His father was the principal breadwinner in the family and was an adequate provider of money and material benefits.
b. His father did not provide adequate money and other material benefits to support the family.
(In answering this question, refer to the way things usually were).

26.
a. His father was a successful man.
b. His father was an unsuccessful man.

27.
a. His father was usually the chief disciplinarian.
b. His mother was usually the chief disciplinarian.

28.
a. He tries to emulate his father.
b. He does not want to emulate his father.

29.
a. His father tended to be strict, and was quick to punish any disobedience.
b. His father tended to be lenient, and was not greatly concerned with punishing every disobedience.

30.
a. His father was conventional, without original viewpoints, unwilling to step out of line.
b. His father held original viewpoints, was sometimes unconventional, and was willing to step out of line.

31.
a. In his childhood, his relationship with his father tended to be close.
b. In his childhood, his relationship with his father was not very close.

32.
a. His mother could be adequately described by saying that she was an ordinary housewife.
b. In some ways, his mother did not fit the stereotype of the ordinary housewife.

33.
a. His mother was actively interested in community affairs, artistic or intellectual matters, or something else apart from home and family.
b. His mother's interests centered around home and family.

34.
a. His mother worked <u>of necessity</u> to make a contribution to the financial support of the family.
b. His mother either did not work or else worked only to add luxuries to the family's budget.

35.
a. His mother usually expressed her feelings openly and without any hesitation.
b. His mother usually was reserved or hesitant about expressing her feelings.

36.
a. His mother had a great deal of affection for her family, whether she showed it openly or not.
b. His mother was a relatively unaffectionate person.

37.
a. In his childhood, his relationship with his mother tended to be close.
b. In his childhood, his relationship with his mother was not very close.

38.
a. His mother was strict about keeping the house clean and neat.
b. His mother was relaxed about keeping the house clean and neat.

39.
a. In general, there was much open expression of feeling in his childhood home. No one held back on what he thought or tried to be polite.
b. In his childhood home, there was not much open expression of feeling.

40.
a. Rules, deviations from which brought punishment, were clearly spelled out in his childhood home.
b. In his childhood home, it was often not clear which infractions of rules would be punished.

41.
a. In his childhood home, threats of punishment were usually followed up.
b. In his childhood home, threats of punishment were often not followed up.

42.
a. Punishment in his childhood home was consistent, and always followed a predictable pattern.
b. Punishment in his childhood home was often inconsistent, and did not follow a predictable pattern.

43.
a. Discipline in his childhood home tended to be firm.
b. Discipline in his childhood home tended to be lenient.

44.
a. His parents often tried to discipline him by appeal to feelings, such things as saying, "If you do that, it will make me feel bad," or, "If you do that, I'll get a headache."
b. His parents did not usually try to discipline him by stressing how bad his behavior was making others feel.

45.
a. His parents emphasized that he should discipline himself, and tried to teach him that he had primary responsibility for his own behavior.
b. His parents placed special stress on authority, and tried to make him obedient.

46.
a. His parents showed more than average concern with his physical welfare, in such matters as eating enough and not getting hurt.
b. His parents' concern with his physical welfare was not above average.

47.
a. There was a man other than the father who was important in his life and who helped him to choose his occupation.
b. The above description does not fit anyone in his life.

48.
a. He began dating by the time he had finished high school.
b. He did not begin to date until after he had finished high school.

49.
a. Since he started dating, he usually dated at least once a week.
b. Since he started dating, he usually dated less than once a week.

50.
a. He had intercourse with a girl before he was 21.
b. He did not have his first intercourse until he was at least 21.

51.
a. After college, he still maintained considerable involvement with his family.
b. After college, he had little or no involvement with his family.

APPENDIX E
Answer Sheets for Part I
for Lawyers, Dentists, and Social Workers

PART I

	Yourself	The successful lawyer	The successful dentist	The successful social worker	What you consider desirable	What others consider desirable
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						
16.						
17.						
18.						
19.						
20.						
21.						
22.						
23.						
24.						

	Yourself	The successful lawyer	The successful dentist	The successful social worker	What you consider desirable	What others consider desirable
25.						
26.						
27.						
28.						
29.						
30.						
31.						
32.						
33.						
34.						
35.						
36.						
37.						
38.						
39.						
40.						
41.						
42.						
43.						
44.						
45.						
46.						
47.						
48.						
49.						
50.						
51.						

GO ON TO PART II

APPENDIX F
Answer Sheets for Part I
for Physicists and Clinical Psychologists

PART I

Yourself	The successful physicist	The successful clinical psychologist	What you consider desirable	What others consider desirable
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				

Yourself	The successful physicist	The successful clinical psychologist	What you consider desireble	What others consider desireble
26.				
27.				
28.				
29.				
30.				
31.				
32.				
33.				
34.				
35.				
36.				
37.				
38.				
39.				
40.				
41.				
42.				
43.				
44.				
45.				
46.				
47.				
48.				
49.				
50.				
51.				

GO ON TO PART II

APPENDIX G

LIST 1

Predictions of how lawyers, dentists, and social workers will answer specific questions.

STATEMENT	LAWYER	DENTIST	SOCIAL WORKER
3.	a	b	a
4.	a	b	b
5.	b	a	b
6.	a	b	b
7.	a	b	b
14.	b	a	b
15.	a	b	a
16.	a	b	b
17.	b	b	a
21-22.	b	b	a
23.	a	b	a
24.	a	a	b
25.	a	a	b
26.	a	a	b
27.	a	a	b
29.	b	a	b
30.	b	a	b
31.	b	a	b
32.	a	a	b
33.	a	b	a
34.	b	b	a

STATEMENT	LAWYER	DENTIST	SOCIAL WORKER
37.	a	b	a
38.	b	a	b
44.	b	b	a
45.	a	b	a
46.	b	a	b
47.	a	b	b

APPENDIX H

LIST 2

Predictions of how physicists and clinical psychologists will answer specific questions.

STATEMENT	PHYSICIST	CLINICAL PSYCHOLOGIST
8.	b	a
9.	a	b
10.	a	b
11.	a	b
12.	a	b
13.	b	a
19.	a	b
29.	a	b
36.	b	a
37.	b	a
40.	b	a
41.	a	b
42.	a	b
43.	a	b
45.	b	a
50.	b	a
51.	b	a

APPENDIX I

EDWARDS SOCIAL DESIRABILITY SCALE

PART II

This part consists of 39 numbered statements. Read each statement and decide whether it is true as applied to you or false as applied to you. If the statement is true or mostly true, as applied to you, circle the letter T beside the statement. If it is false or not usually true, as applied to you, circle the letter F. Try to make some answer to every statement. Remember to give your own opinion of yourself.

1. My hands and feet are usually warm enough.	T	F
2. I am very seldom troubled by constipation.	T	F
3. I find it hard to keep my mind on a task or job.	T	F
4. Most any time I would rather sit and daydream than to do anything else.	T	F
5. My family does not like the work I have chosen (or the work I intend to choose for my life work).	T	F
6. My sleep is fitful and disturbed.	T	F
7. I am liked by most people who know me.	T	F
8. I am happy most of the time.	T	F
9. Criticism or scolding hurts me terribly.	T	F
10. It makes me impatient to have people ask my advice or otherwise interrupt me when I am working on something important.	T	F
11. I have had periods in which I carried on activities without knowing later what I had been doing.	T	F
12. I cry easily.	T	F

13. I do not tire quickly. T F

14. I am not afraid to handle money. T F

15. It makes me uncomfortable to put on a stunt at a party even when others are doing the same sort of things. T F

16. I frequently notice my hand shakes when I try to do something. T F

17. It does not bother me particularly to see animals suffer. T F

18. I dream frequently about things that are best kept to myself. T F

19. My parents and family find more fault with me than they should. T F

20. I have reason for feeling jealous of one or more members of my family. T F

21. No one cares much what happens to you. T F

22. I usually expect to succeed in things I do. T F

23. I sweat very easily even on cool days. T F

24. When in a group of people I have trouble thinking of the right things to talk about. T F

25. I can easily make other people afraid of me, and sometimes do for the fun of it. T F

26. I am never happier than when alone. T F

27. Life is a strain for me much of the time. T F

28. I am easily embarrassed. T F

29. I cannot keep my mind on one thing. T F

30. I feel anxiety about something or someone almost all the time. T F

31. I have been afraid of things or people that I knew could not hurt me. T F

32. I am not unusually self-conscious. T F

33. People often disappoint me. T F

34.	I feel hungry almost all the time.	T	F
35.	I worry quite a bit over possible misfortunes.	T	F
36.	It makes me nervous to have to wait.	T	F
37.	I blush no more often than others.	T	F
38.	I shrink from facing a crisis or difficulty.	T	F
39.	I sometimes feel that I am about to go to pieces.	T	F

APPENDIX J

SCORING CODE FOR EDWARDS SOCIAL DESIRABILITY SCALE

Score consists of the number of S's responses that correspond to the list below.

ITEM	RESPONSE SCORED
1.	T
2.	T
3.	F
4.	F
5.	F
6.	F
7.	T
8.	T
9.	F
10.	F
11.	F
12.	F
13.	T
14.	T
15.	F
16.	F
17.	F
18.	F
19.	F
20.	F
21.	F

ITEM	RESPONSE SCORED
22.	T
23.	F
24.	F
25.	F
26.	F
27.	F
28.	F
29.	F
30.	F
31.	F
32.	T
33.	F
34.	F
35.	F
36.	F
37.	T
38.	F
39.	F

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