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Birth Order and Its Relationship to Dogmatism

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BIRTH ORDER AND ITS RELATIONSHIP TO DOGMATISM

A Thesis
Presented to
the Graduate Faculty
Central Washington State College

In Partial Fulfillment
of the Requirements for the Degree
Master of Education

by
John Richard Downs
June, 1969

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CHAPTER I
INTRODUCTION

Classification of human beings for the purpose of establishing typologies began before the time of Plato. The inquiry has always been motivated by the hopes that by placing man in some kind of classification, he could predict or anticipate his behavior. Greenberg (1963) tells us that most of these attempts have been based on physical typology; for example, Kretschmer, Sheldon, and others. Order of birth was used by Alfred Adler as a basis of predicting characteristic behavior of individuals falling into one or another of these ordinal birth categories. It was Adler's contention (1931) that the ordinal position among siblings provides a sound method of classification. Each classification, according to Adler, is able to yield definable and predictable personality patterns.

Statement of Purpose

The purpose of this study was to take one definable personality pattern, open and closed mindedness, and to see if this dimension is reflected in ordinal birth position, specifically first- and later-born. The literature reviewed in this study appears to describe the first-born very much

like Rokeach (1960) describes his closed-minded person. Further, the description of the later-born is very much in line with Rokeach's description of the open-minded person.

Review of Literature

Rokeach (1960) said that every person must possess the ability to adequately evaluate and discriminate both the relevant and irrelevant information he receives from every situation.

. . . there is an underlying characteristic in one's belief system that defines the limits of a system that is either open or closed; namely, the extent to which the person is able to receive, evaluate, and act on relevant information received from the outside on its own intrinsic merits, unencumbered by irrelevant factors in the situation arising from within the person or from the outside (1960:57).

Unrelated habits, beliefs, irrational ego motives, power needs, or the need to allay anxiety would be examples of irrelevant internal pressures that would obscure the accurate reception of the information. Reward and punishment as exerted by parents, peers, other figures of authority, reference groups, social and cultural norms would be examples of irrelevant external pressures.

Acceptance of a particular belief is assumed by Rokeach to depend on irrelevant internal drives and/or arbitrary reinforcements from external authority. The closed-minded individual, according to Rokeach, lives in a threatening world which necessitates a belief in absolute authority and

an acceptance of only those persons who represent or are in line with perceived authority.

Open-mindedness generally describes a person acting on information independently, on its own intrinsic value (relevant information), without being contaminated by irrational inner forces. The power of authority still exists, but its identity depends more upon the authority's cognitive correctness, accuracy, and consistency with other information the open-minded person has about the world around him. The open belief system modifies behavior by self-initiated forces and resists pressures exerted by external sources to evaluate and to act in accord with their wishes.

Rokeach (1954) pointed out that reliance on authority, yielding, conformance, and resistance to acculturation all may have a common cognitive basis, namely, the ability (or inability) to discriminate substantive information from information about the source, and to assess the two separately.

The following four studies lend support to the definable characteristics of open- and closed-minded persons as described by Rokeach.

Smith (1958) selected, from middle-class, young adult, college sample of 193 men and women, the 20 Ss with the highest score and the 20 Ss with the lowest score on the Worldmindedness (W) scale for a test of twelve variables derived from The Authoritarian Personality (Adorno, 1950). Several studies, Campbell (1951), Lentz (1950), MacKinnon

(1956), and Smith (1955), have shown a strong negative relationship between attitudes designated as internationalist or worldmindedness and attributes of authoritarianism. Using this W-scale designed to measure the value orientation of "worldmindedness" apart from topical knowledge about or interest in international relations, Smith (1955) found attitude and personality differences between the two extreme groups that closely resembled the high and low Fascism (F) syndrome reported by Adorno et al. (1950). Adorno describes his authoritarian personality as:

. . . he seems to combine the ideas and skills which are typical of a highly industrialized society with irrational or anti-rational beliefs. He is at the same time enlightened and superstitious, proud to be an individualist and in constant fear of not being like all the others, jealous of his independence and inclined to submit blindly to power and authority (1950, p. 456).

Thus the question was raised as to the extent to which the personality attributes of the "nationalist" coincide with the portrait the Adorno investigators have given of the authoritarian personality.

Psychological variables measured were self-expansiveness, love orientation, equalitarianism, stereotype, internalization-externalization, independence-compliance, optimism-pessimism, security-insecurity, ego-ideals, criticism of parents, parental discipline, and reaction to discipline. All differences between High W-Low F and Low W-High F were in the predicted direction. The W-scale and the F-scale appeared to be tapping the same psychological dimensions.

Rokeach (1960) asked psychology students in a graduate seminar at Michigan State University to select from among their personal friends and acquaintances students who by their behavior seemed to manifest open and closed belief systems (low and high dogmatic persons). The high dogmatic Ss scored significantly higher than the low dogmatic Ss on the Rokeach Dogmatism Scale (hereinafter referred to as the D-scale).

Rebhun (1967) administered the Rokeach Dogmatism Scale and 8 scales of the father's form of the Parent Attitude Response Inventory (PARI) to 108 male undergraduates in a highly selective college during the fall semester, another group of 78 male undergraduates in the same college during the spring semester, and a third group of 125 male undergraduates in a much less selective college. The scales used were Fostering Dependency, Seclusiveness, Breaking the Will, Harsh Punishment, Demanding Activity, Deification of Parent, Ascendancy of Husband, and Suppression of Affection. Twenty-three of the 24 comparisons between the D-scale and the 8 PARI scales showed positive correlation beyond the .01 level. The results are interpreted as supporting the hypothesis that closed-minded people tend to hold parental attitudes which encourage their offspring not to intrude upon their belief-disbelief system and thus promote a similar dogmatic approach in these children.

Plant (1965), in using the D-scale, California Psychological Inventory (CPI), Allport, Vernon and Lindzey Study of

Values (AVL), and the School and College Ability Test (SCAT), found that compared to highly dogmatic subjects, non-dogmatic subjects would be described as being outgoing and enterprising, calm and patient, mature and forceful, efficient and clear-thinking, planful and responsible, and more likely to succeed in an academic setting than would the highly dogmatic subjects. Highly dogmatic subjects were psychologically immature and could be characterized as being impulsive, defensive, and conventional and stereotyped in their thinking.

Studies dealing with ordinal birth position point out many of the same characteristics that are found with the classifications of open- and closed-belief systems proposed by Rokeach. Dean (1947) investigated the personality characteristics of twenty pairs of children by having the mother make paired comparisons of her two children on a large number of items. The mothers, in judging children in the first ordinal birth position, said they were more dependent, spent more time just thinking, more worried. These differences suggested to Dean that the two ordinal positions in the family were in all likelihood accompanied by certain uniformities of experience that molded the personalities into what might be called "first ordinal position role type" and "second type". He added that second and later children are somewhat less dependent than the first.

Evidence indicates that first-borns are consistently more dependent than are later-borns. Their childhood

experiences have been interfered with more, they have been reacted to more extremely, and their treatment, in general, has been more inconsistent. This excessive interference, under the guise of parental concern and high expectations, creates for the child standards he must fulfill. He is, therefore, not the author of his own goals, but achieves the ones set for him by his new and anxious parents. This interference and inconsistency may undermine the child's opportunities to develop reference points for internal evaluation. Festinger (1954) has pointed out that when there are no objective or internal standards to use as reference points, one is more likely to be influenced by the attitudes of others. Deutsch (1955) says that because of his greater dependence on others for emotional support, the first-born should be more amenable to "normative" influence. That is, he should have a greater need to meet the expectations of others.

First-borns become adult-oriented and are under the pressure of parental expectations. According to Lasko (1954), parent behavior toward the first-born as contrasted to the later-born is on the average less warm emotionally and more restrictive and coercive. As a result they become serious, sensitive, conforming, anxious, dependent, and withdrawn. Because they find it difficult to fulfill their parents' aspirations for them, they often develop feelings of personal inadequacy. Becker, Lerner, and Carroll (1964) introduced

to 36 fifteen and sixteen year old high school students a small or large "payoff" for each correct judgement. He found that first-borns are more dependent on others for social support whereas later-borns rely more on others for validation of their beliefs. The authors reflect upon what Schachter said (1959) in reference to more anxious first-borns. They say that the child may have learned to seek out others for support; but it is also reasonable to assume that the later-born child may have had more experience in turning to others in validation and reinforcement of his belief-system, especially to peers acting as reliable sources of information about the environment. Thus, it follows that the later-born child, having the presence of an older child as a major agent of his socialization, has characteristically relied upon a comparative peer as a source of validation concerning his beliefs and ideas.

Staples (1961) found that in presuggestion trials first-borns responded more rapidly than later-borns to a suggestion that the light would move. On the post-suggestion trials first-borns under the anxiety condition were more suggestible than first-borns under the nonanxiety conditions. There was no significant difference between later-borns under the anxiety conditions and the later-borns under the nonanxiety conditions. The finding just cited was discussed in reference to hypotheses advanced by Rosnow and White (1931) replicated and confirmed by Schachter (1959) who claimed that the

first-born children are subjected to more inconsistent nurturance than are later-born children and, consequently, show more dependency behavior in the form of affiliative responses.

Greenberg (1963) said that because the "psychological position" of later-borns is different from that of first-borns, they will develop different self-concepts. In describing these self concepts, Hall and Willerman (1963), assuming that the later-born is more peer than adult-oriented, found that they were less anxious, more cheerful, friendly, competitive, more empathetic and sympathetic in their relationships with others; they have more initiative and self-confidence; and that they (later-borns) are more overt and aggressive in their behavior. They tend also to be more popular with their peers. According to Crutchfield (1956) the conforming individual tends to manifest anxiety and that his conforming behavior provides a means of defending against anxiety and feelings of insecurity. By relying on the authority and the paternalism of the group he feels that he is closer to the group and harbors an illusion of strength. For him, conformity is a means of avoiding unpopularity and he will, therefore, not threaten the group with any alien behaviors or beliefs.

Rokeach (1960) extends the idea of over-identification with absolute authority and a cause writing:

. . . (in) succumbing to . . . arbitrary reinforcements . . . an attempt is made to defend the self against feelings of aloneness and isolation, self-hate and misanthropy. At the same time something positive may be gained: closed belief-disbelief systems provide a systematic cognitive framework for rationalizing and justifying ego-centric self-righteousness and the moral condemnation of others. Thus, the more closed the belief-disbelief system, the more do we conceive it to represent, in its totality, a tightly woven network of cognitive defenses against anxiety. In the extreme the closed system is nothing more than the total network of psychoanalytic defense mechanisms organized together to form a cognitive system and designed to shield a vulnerable mind. Those with relatively closed systems should manifest more anxiety than those with relatively open systems (1960, p. 69).

The individual who has to conform, more typically the first-born as the literature thus far cited has indicated, tends to manifest anxiety. His conformity is a defense against his anxiety and feelings of insecurity.

Schaster (1964) hypothesized that sociometric choice was, in part, affected by social factors. Fifteen fraternities and sororities were tested in a sociometric study with the assumption that first-borns, who were characterized as dependent, would be more influenced by such social determinants of sociometric choice than would be later-borns. First-borns chose more popular persons and exhibited greater similarity of sociometric choice than did later-borns. In addition, the data showed first-borns to be considerably less popular. Asch (1956) found that many subjects gave incorrect answers to which of his three lines was the longest in order to make them correspond to the answers of the other participants. This, we saw earlier, was more typical of the first-borns

than it was for the later-borns. Millon (1958) investigated the comparative strength of a set identified with the ingroup of superior status to one lacking such identification. While both authoritarian and equalitarian subjects were generally more susceptible to the set identified with the ingroup status, this tendency was appreciably greater in the case of the authoritarians. Authoritarians also transferred this set when ingroup identification no longer existed, equalitarians relinquished it.

Consistency, like individuality, is a matter of degree. Ainsworth (1958) said that when consistency is pronounced, the personality pattern is said to be rigid. A rigid person shows a tendency to resist conceptual change, to acquire a new pattern of behavior, or to relinquish old and established patterns. This, according to Rehfisch (1958) leads to social introversion, feelings of anxiety and guilt, and intolerance.

Several studies (Lanzetta, 1954 and 1955; Pepitone, 1957; and Schaster, 1959) have suggested that anxiety is reduced when one is in the company of others and that anxious individuals perceive others as a source of security. Wrightsman (1960) demonstrated that being with others mitigates anxiety--but just for first-borns and only subjects. It thus seems thoroughly plausible to say that one source of attraction to groups, supported by Cartwright (1960), is the

extent to which security needs are met and affiliative needs are satisfied. According to Becker and Carroll (1962) first-borns were considered the high need affiliation group, the later-borns the low need affiliation group. The hypothesis that high need affiliation and aspiration to group membership would be associated with greater conformity was supported.

Dember (1964) used a projective measure of need Affiliation (n Aff) on 22 first-borns and 22 later-borns to determine whether previously observed relations between birth order and affiliative tendencies were motivationally based, or simply reflected differences in kinds of strengths of instrumental behavior acquired to satisfy equally strong affiliation needs. By a median test, first-borns were significantly and markedly higher in average n Aff scores, thus supporting the generally accepted, though tacit and hitherto untested, motivational interpretation of previous findings. Schachter (1959) has said:

It will be recalled that the diverse data on the effects of birth order have all been interpreted in terms of a common notion-dependence or the degree to which the individual relies on others as sources of approval, support, help, and references. . . . Designating this dimension of reliance on others as dependence, it should be anticipated that first-born and only persons would place more reliance on social means of evaluation than would later-borns. . . . When placed in a situation some aspect of which requires evaluation, early-born individuals are more likely than later-born persons to seek out others as a means of evaluation; when together with others in such a situation, early-born are more likely than later-born individuals to rely on others in evaluating their own opinions and emotional states (1959, p. 123).

From these theoretical statements, Smith and Goodchilds (1963) postulated that the first-born place greater reliance on interaction with others as a means of solving their problems than they do on their own actions. They expected to find the first-born conforming more in groups, and also anticipated the first-born to score lower on measures of self-reliance or self-confidence. In addition to this they hypothesized that the greater affiliative tendencies, in time of need, of first-borns would lead to more interactions with others, followed by the feedback inherent in most social interaction situations, e.g., the first-born would be more interested in and experienced with social interaction, and therefore would be more successful at such interactions. The data confirmed both hypotheses.

Smart (1965) found that first-borns (males) more often than later-born males are social group members. This adds further support to the proposition that first-borns have greater affiliative needs than later-borns and supports Sampson's findings (1963) and Becker and Carroll's expectations (1962). These studies suggest that social groups contain a preponderance of relatively dependent persons who are sensitive to social influence.

Summary

In order to bring together the literature reviewed concerning open- and closed-minded belief systems and the

literature concerning ordinal birth positions, the following is an attempt to clarify and summarize some of the commonalities between them. Rokeach spoke of unrelated habits, beliefs, irrational ego motives, power needs, the need to allay anxiety, etc., and we have seen that the first-born is more dependent, their childhood experiences have been interfered with more, they have been reacted to more extremely while their treatment has been more inconsistent than with the later-born. The first-born does not set his own standards and feels the pressures of meeting the expectations set for him by his parents. This interference and inconsistency undermine his opportunity to develop reference points for internal evaluation; as a result he becomes influenced by the attitudes of others (irrelevant external pressures). The first-born is more dependent on others for social support whereas the later-born relies more on others for validation of their beliefs (irrelevant external pressures). Due to their inconsistent nurturance, the first-born shows more dependency behavior in the form of affiliative responses. His conforming behavior provides a means of defending against anxiety and feelings of insecurity along with membership in social groups. First-borns also exhibit greater reliance on interaction with others as a means for solving their problems (irrelevant external pressure).

The later-born is not as dependent on others to allay anxiety; they have not felt the parental pressures in the

same manner the first-born has since there is more emotional warmth from a now relaxed parent who, as a veteran, is less restrictive and coercive. Having the presence of an older sibling as a major agent of his socialization, the later-born has characteristically relied upon a comparative peer as a source of validation of his beliefs. Later-borns are less anxious, more cheerful, friendly, competitive, overt and aggressive in their behavior, and generally more popular. They are less likely to be influenced by the social pressures and the expectations of a conforming society, and thus adhere more to what Rokeach describes when he speaks of "relevant internal and external pressures". Later-born are more self-expansive, less stereotype in their thinking, more secure, and, most important, the author (or at least co-author) of their own belief-disbelief systems. Consequently, later-borns are more integrated in what they believe and reserve an open mind for that which is new and daring.

Hypotheses

The literature cited suggests that the first-born may be more nearly identical with the closed-minded person (as defined by Rokeach) than the later-born. The literature presented further suggests that the Rokeach Dogmatism (D) Scale identifies the closed-minded person. The present study was developed to explore the difference between first- and later-born among a sample of undergraduate college students

according to scores obtained on Rokeach's D-scale. Specifically, it is hypothesized that there will be a significant difference between first-born and later-born scores as measured by the Rokeach Dogmatism Scale with the first-born indicating more closed-minded tendencies than the later-born.

Adorno et al. (1950) report no consistent sex differences in performance on scales designed to measure aspects of authoritarianism, a finding replicated by Strotzky (1955) using the California F Scale. Since many of the personality characteristics in Adorno's authoritarian personality are the same as those described in Rokeach's dogmatic personality, the California F Scale and the D-scale correlate extremely highly. Plant (1960) showed that the D-scale is less loaded with prejudice than is the California F Scale and is a better measure of general authoritarianism. To test this effect in the present population, it is hypothesized that there will be no significant difference in scores on the D-scale between males and females.

CHAPTER II

METHOD

Subjects

Three-hundred eighty-nine volunteer undergraduate students, 210 boys and 179 girls, served as Ss. All were dormitory residents of Central Washington State College between the ages of 18 and 20. All Ss had lived with their real parents at least the first twelve years of their life. Each had at least one other sibling.

Instrument

The primary purpose of the D-scale is to measure individual differences in openness and closedness of belief systems. The manner in which Rokeach has defined open and closed belief systems suggests that the instrument should measure general authoritarianism, and general intolerance. Plant et al. (1965) demonstrated that the D-scale is less loaded with a left-right or liberal-conservative political dimension than is the familiar California F Scale, and it contains less avowed prejudice content than does the California Ethnocentrism Scale (or E-scale). The samples from which reliability data were initially obtained on the D-scale came from areas differing in social climate: the Midwest, New York,

and England. Reliabilities ranged from .70 to .91. The final revised 40-item scale, Form E, was found to have a corrected reliability of .81, using odd-even reliabilities, corrected by the Spearman-Brown formula, for the English College sample (N=80), and .78 for the English Worker sample (N=60).

Plant (in press) has reported odd-even split-half reliability coefficients of .84 for a sample of 400 male college freshmen and .85 for a sample of 400 female college freshmen. The scale is sufficiently reliable for use in research dealing with group differences.

Procedure

The experimenter (E) visited the dormitories on campus and met, either individually or in small groups, with the subjects. Seven men's dormitories and six women's dormitories were involved in the study. The visits were repeated until the sample quota was reached; the quota was arbitrarily set at at least 175 Ss from each sex. Instructions were simply to indicate ordinal birth position and sex, and to indicate their extent of agreement or disagreement to the items on the D-scale by circling the respective number value. Following the instructions, the Ss were asked to return to their rooms to do the scale without any discussion or collaboration with their colleagues. The tests, upon their completion, were turned into the head resident of the respective dorms and picked up by the E the same night.

The distribution of D-scale scores was studied according to birth position and sex. The significance of differences between means, first and later born, male and female, were determined by t tests for uncorrelated measures (Guilford, 1965). Significance at the .05 level was established. This required t value to be equal to 1.967 to indicate a significant difference between means of the given distributions.

The t test for uncorrelated measures was felt to be appropriate since the sample was large and there was no reason to suspect that the D-scale scores for each group would not be normally distributed. Further, the samples of students being compared were not related to each other in any factors intrinsic to the study, but were independent. Kerlinger (1967) says that unless there is good evidence to believe that populations are rather seriously non-normal and that variances are heterogeneous, it is usually unwise to use a nonparametric statistical test in place of a parametric one.

CHAPTER III

RESULTS

Tests of significance between all possible combinations of ordinal birth position and sex yielded no significant differences. Table 1 indicates no significant difference of scores grouped according to ordinal birth position. Table 2 indicates no significant difference of scores grouped according to the sex variable.

TABLE 1

Values of t in Comparison of Distribution of Scores
on the D-scale Between First-borns and Later-borns

Group	N	Standard Deviation	Mean	Diff. ^a
First-borns	143	23.877	149.342	.4224
Later-borns	246	23.823	150.402	

^a The significance levels are determined by t tests for uncorrelated measures. This applies to all of the tables.

TABLE 2

Values of t in Comparison of Distribution of Scores
on the D-scale Between Males and Females

Group	N	Standard Deviation	Mean	Diff. ^a
Males	210	24.026	151.776	1.5876
Females	179	23.468	147.944	

Tests of significance between both variables of ordinal birth position and sex combined (all combinations) yielded no significant differences (refer to Tables 3 through 8).

TABLE 3

Values of t in Comparison of Distribution of Scores
on the D-scale Between First-born Boys and First-born Girls

Group	N	Standard Deviation	Mean	Diff. ^a
First-born Boys	74	22.509	152.527	1.6557
First-born Girls	69	24.975	145.927	

TABLE 4

Values of t in Comparison of Distribution of Scores on the
D-scale Between Later-born Boys and Later-born Girls

Group	N	Standard Deviation	Mean	Diff. ^a
Later-born Boys	136	24.884	151.367	.7134
Later-born Girls	110	22.496	149.209	

TABLE 5

Values of t in Comparison of Distribution of Scores on the
D-scale Between First-born Boys and Later-born Boys

Group	N	Standard Deviation	Mean	Diff. ^a
First-born Boys	74	22.509	152.527	.3433
Later-born Boys	136	24.884	151.367	

TABLE 6

Values of t in Comparison of Distribution of Scores on the
D-scale Between First-born Girls and Later-born Girls

Group	N	Standard Deviation	Mean	Diff. ^a
First-born Girls	69	24.975	145.927	.8884
Later-born Girls	110	22.496	149.209	

TABLE 7

Values of t in Comparison of Distribution of Scores on the D-scale Between First-born Boys and Later-born Girls

Group	N	Standard Deviation	Mean	Diff. ^a
First-born Boys	74	22.509	152.527	.9806
Later-born Girls	110	22.496	149.209	

TABLE 8

Values of t in Comparison of Distribution of Scores on the D-scale Between First-born Girls and Later-born Boys

Group	N	Standard Deviation	Mean	Diff. ^a
First-born Girls	69	24.975	145.927	1.4755
Later-born Boys	136	24.884	151.367	

There was a trend in the data for males to score higher on the D-scale than the women. This trend was also indicative of all the possible ordinal birth position combinations. Though none of the single classifications were significant, the trend was consistent.

CHAPTER IV

DISCUSSION

The data indicate, for this particular sample, that the ordinal birth categories of first-born and later-born failed to reveal any significant differences in the definable personality dimension of open- and closed-mindedness as reflected by the D-scale scores. The results of this study may be attributed to several factors. The sampling procedure was not a truly randomized selection. Subjects were called down to their respective dormitory lounges and asked to participate on a strictly volunteer basis. Following the instructions, the Ss returned to their rooms to complete the test. Therefore, there were no controls over the testing environment other than those attempted through the instructions.

Another contributing factor could be the peculiar make up and orientation of today's college student. Relatively little attention to developmental changes occurring at the ages of seventeen to twenty-one has been given. Psychologists generally agree that one's personality is well formed by the time he reaches late adolescence and that what happens after this is merely an expression, or an unfolding, of what

has previously been established (Sanford, 1956). If it is true that ordinal birth position affects developing personality, then the single instrument used in this study may not possess sufficient discriminatory power to distinguish first-borns from later-borns, or it simply may not apply to this personality dimension with a college sample.

The complex nature of the individual himself and the multiple ways in which his social environment intervenes are other factors which were not controlled. There were no controls over such variables as sex of the older sibling (or the younger siblings), age span between siblings, the absent father or mother, the personalities and social adjustments of the parents, social status of the family, residence, early nutrition, peer group experience, or of other possible factors.

Generalizations concerning personality characteristics of certain ordinal birth positions may be measurable and distinguishable under other experimental conditions, but the D-scale used on this college sample did not discriminate the first-born from the later-borns on this particular personality dimension. Since the D-scale was used alone, the study may have lacked sufficient subtlety to prevent the Ss from falsifying the results in the direction of expectancies and desirable responses as coming from the influence of the college peer group culture. In analyzing the changes in responses of students of Dogmatism and World-Mindedness scales

over an interval of 18 months, Katz (1967) found that students had developed a new response set. There was a tendency to become more "disagreeable". This increased tendency to disagree appeared to occur regardless of the content or direction of the items of the attitude scale.

Another contributing factor to the results may also have been the democratizing effect of the college environment. Williams (1963) found that individuals in his college sample displayed significantly less authoritarianism than their parents. The author believes that the student today is a product of a much richer, more stimulating environment; he is more open and tolerant, more complex and aware of things around him. Blind patriotism is a phenomenon of the past; for ideals, mores, and cultural standards and beliefs are continuously being challenged and modified in search of truth and the betterment of man in the social order.

Prothro and Melikian (1953) report a significantly higher level of authoritarianism in college students from various Arabian cultures than is found among a comparable student group in the United States. Meade and Whittaker (1967) found that authoritarian tendencies of American groups were significantly lower in comparison to those of six culturally disparate groups of college students. Measured groups were Americans, Arabs, Rhodesian Africans, Chinese, Indians, and Brazilians.

Plant (1966) found that both sorority and nonsorority samples changed significantly in measured dogmatism, ethnocentrism, and authoritarianism over a two-year period of college enrollment. Without exception, the changes were in the direction of decreased intolerance and authoritarianism.

The restrictive environment of childhood is broadened even before the adolescent arrives at college; and maybe this very point should be emphasized in the light of the study's results. Pannes (1963) found the junior and senior high school years very important in the formation of the open-mindedness and the self-acceptance of the students in one high school at a given point in time. Important changes both in degree of dogmatism and level of self-acceptance do take place during the adolescent years.

Today, all belief and disbelief systems, philosophies, and various types of authority are being challenged, evaluated, and modified to meet the needs of today's student. Nowhere is this more evident than on the college campuses of America. Nevitt Sanford said:

In the minds of many citizens, "getting an education" seems to be a matter of acquiring units of information, measured mainly by the number of hours spent in the classroom. There is seldom a suggestion that college might help to change the individual himself, to broaden his horizons, to liberate him from dogma and prejudice, or to give him a new sense of identity (1967, Introduction).

Bushnell (1962) said that what students learn in college is determined in large measure by their fellow students or, more

precisely, by the norms of behavior, attitudes, and values that dominate in the peer groups to which they belong. Most entering freshmen, conscious of their need to be accepted, seek attention of their friends and are more than willing to assimilate the prevailing student culture. Sanford goes on to say:

Conformity is a disposition to believe and behave as prestigious others do, regardless of the real merit of those beliefs and behavior patterns and regardless of the integrity of one's self. We oppose this kind of conformity not because we want people to share our opposition to particular beliefs but because we want them to develop as individuals. We want them to be aware of sources of bias within themselves, to arrive at opinions through their own thought processes, and to integrate their rational beliefs with their personalities so that their convictions can stand against the crowd. In short, we want them to become differentiated, complex, and autonomous. Happily, the college that mobilizes its various academic resources in the interest of a liberal, developmental education for its students is already on the road toward freeing them of conformity for conformity's sake (1967, p. 153).

What is being suggested here is the difficulty of making categorical statements about personality characteristics. The initial stages of life might accommodate predictable behavior, but the influence of early life is lost in the complexity of personality and how it reacts to the social unrest one finds as the person progresses through adolescence and comes to a college campus. It may well be that Adler is correct, birth position does determine definable and predictable personality patterns. However, it is apparent from this study that the D-scale either does not measure a predicted pattern, or that the pattern is so subtly interwoven with total personality that it still lacks adequate definition and therefore adequate measure.

CHAPTER V

SUMMARY

The present study has dealt with ordinal birth position and its relationship to the personality dimension of open- and closed-mindedness as described by Rokeach. Much of what has been written concerning the first-born appears to coincide very closely with that which has been written about the closed-minded individual; and that which is written about the later-born follows closely with that of the open-minded individual.

The rationale behind the study was to utilize the Rokeach Dogmatism (D) Scale on a large college sample to see if, by this scale, the first-borns would be distinguished from the later-borns. The hypothesis, therefore, indicated that, in view of the reviewed literature of the study, first-borns should score higher on the D-scale than the later-borns, thus showing that they are typically more dogmatic than their siblings. A further inquiry dealt with the sex variable to see if one or the other (males or females) would score significantly higher on the D-scale.

Scores were grouped according to ordinal birth position (first-born vs. later-born) and according to sex. The significance levels were determined by t tests for uncorrelated

measures. The total sample consisted of 389 undergraduate students of Central Washington State College (143 first-borns and 246 later-borns). The results indicated no significant differences among the variables of ordinal birth position and sex taken separately, nor in any of all possible combinations of the variables taken together. There was a tendency in the data for males to score higher than females in every category. The limitations of the study were discussed in terms of the sampling procedure, the inadequacy of a single instrument to measure such a personality dimension, and the lack of controls over the testing environment and the multiple variables of birth position.

Further factors that may have affected the results were discussed such as the democratizing effect of the college peer group and the lack of supporting research to make categorical statements about the behavior of late adolescents.

The lack of any significant differences of scores on the D-scale indicates either a strong case against the Adlerian hypothesis as related to this particular personality dimension of open- and closed-mindedness, or is a direct challenge to the discriminatory power of the D-scale when used with a college sample. Adler has contended that ordinal birth positions yield definable personality dimensions, and Rokeach contends that his scale can discriminate the open- from the closed-minded individual. If both are true, then

let this study read as an endorsement for further research under more controlled experimentation.

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APPENDIX A

THE ROKEACH D-SCALE

This is a scale of personal beliefs on a number of topics. For each item below indicate to what extent you agree or disagree. Write all responses on the separate answer sheet as directed on that sheet.

1. The United States and Russia have just about nothing in common.
2. The highest form of government is a democracy and the highest form of a democracy is a government run by those who are most intelligent.
3. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.
4. The worst crime a person could commit is to attack publicly the people who believe in the same thing he does.
5. In times like these it is often necessary to be more on guard against ideas put out by people or groups in one's own camp than by those in the opposing camp.
6. A group which tolerates too much differences of opinion among its own members cannot exist for long.
7. It is only natural that a person would have a much better acquaintance with ideas he believes in than with ideas he opposes.
8. In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.
9. It is often desirable to reserve judgement about what's going on until one has had a chance to hear the opinion of those one respects.

10. In the long run the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.
11. The present is all too often full of unhappiness. It is only the future that counts.
12. If a man is to accomplish his mission in life it is sometimes necessary to gamble "all or nothing at all."
13. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what's going on.
14. Most people just don't know what's good for them.
15. In the history of mankind there have probably been just a handful of really great thinkers.
16. There are a number of people I have come to hate because of the things they stand for.
17. A man who does not believe in some great cause has not really lived.
18. It is only when a person devotes himself to an ideal or cause that life becomes meaningful.
19. Of all the different philosophies which exist in this world, there is probably only one which is correct.
20. A person who gets enthusiastic about too many causes is likely to be a pretty "wishy-washy" sort of person.
21. To compromise without political opponents is dangerous because it usually leads to the betrayal of our own side.
22. When it comes to differences of opinion in religion, we must be careful not to compromise with those who believe differently from the way we do.
23. In times like these, a person must be pretty selfish if he considers primarily his own happiness.
24. There are two kinds of people in this world: those who are for the truth and those who are against the truth.
25. My blood boils whenever a person stubbornly refuses to admit he's wrong.

26. A person who thinks primarily of his own happiness is beneath contempt.
27. Most of the ideas which get printed nowadays aren't worth the paper they are printed on.
28. Man on his own is a helpless and miserable creature.
29. Fundamentally, the world we live in is a pretty lonesome place.
30. Most people just don't give a "damn" for others.
31. I'd like it if I could find someone who would tell me how to solve my personal problems.
32. It is only natural for a person to be rather fearful of the future.
33. There is so much to be done and so little time to do it in.
34. Once I get wound up in a heated discussion, I just can't stop.
35. In a discussion I often find it necessary to repeat myself several times to make sure I am being understood.
36. In a heated discussion I generally become so absorbed in what I am going to say that I forget to listen to what the others are saying.
37. It is better to be a dead hero than to be a live coward.
38. While I don't like to admit this even to myself, my secret ambition is to become a great man, like Einstein or Beethoven, or Shakespeare.
39. The main thing in life is for a person to want to do something important.
40. If given the chance I would do something of great benefit to the world.

APPENDIX B

ANSWER SHEET FOR THE ROKEACH D-SCALE

Name _____ Sex ___ Age ___ Class _____ Date _____

Directions for rating items: Indicate extent of agreement or disagreement by circling the respective number value.

D 1/40 = _____/40 = D = _____

Item No.	Disagreement			Agreement		
	Strong	Moderate	Slight	Slight	Moderate	Strong
(1)	1	2	3	5	6	7
(2)	1	2	3	5	6	7
(3)	1	2	3	5	6	7
(4)	1	2	3	5	6	7
(5)	1	2	3	5	6	7
(6)	1	2	3	5	6	7
(7)	1	2	3	5	6	7
(8)	1	2	3	5	6	7
(9)	1	2	3	5	6	7
(10)	1	2	3	5	6	7
(11)	1	2	3	5	6	7
(12)	1	2	3	5	6	7
(13)	1	2	3	5	6	7
(14)	1	2	3	5	6	7
(15)	1	2	3	5	6	7
(16)	1	2	3	5	6	7
(17)	1	2	3	5	6	7
(18)	1	2	3	5	6	7
(19)	1	2	3	5	6	7
(20)	1	2	3	5	6	7
(21)	1	2	3	5	6	7
(22)	1	2	3	5	6	7
(23)	1	2	3	5	6	7
(24)	1	2	3	5	6	7
(25)	1	2	3	5	6	7
(26)	1	2	3	5	6	7
(27)	1	2	3	5	6	7
(28)	1	2	3	5	6	7
(29)	1	2	3	5	6	7
(30)	1	2	3	5	6	7

Item No.	Disagreement			Agreement		
	Strong	Moderate	Slight	Slight	Moderate	Strong
(31)	1	2	3	5	6	7
(32)	1	2	3	5	6	7
(33)	1	2	3	5	6	7
(34)	1	2	3	5	6	7
(35)	1	2	3	5	6	7
(36)	1	2	3	5	6	7
(37)	1	2	3	5	6	7
(38)	1	2	3	5	6	7
(39)	1	2	3	5	6	7
(40)	1	2	3	5	6	7

Sums : ___+ ___+ ___+ ___+ ___+ ___+

= _____ = D