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# RELATIONSHIPS OF BIRTH ORDER, DOGMATISM AND ACHIEVEMENT MOTIVATION

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The research on birth order and its relationship with other personality variables has increased in the past several years. Miley (1969) reported that between 1963 and 1967 there were at least 119 entries under the heading of "Birth Order" in the psychological literature. Despite this upsurge of interest, the findings of relationship between birth order and other personality variables are inconclusive and at times contradictory to the extent that at least one researcher (Rubin 1970) suspected that the contradictory results of birth order studies might be due to the "experiment" effects, i.e., the birth order of the birth order researchers. This hypothesis was not supported.

Two of the personality variables which have been studied in conjunction with the ordinal position of birth are dogmatism and achievement motivation. According to Adler (1956, pp. 377-379), the birth order is an important determinant in personality development. The first borns are more directed toward the past than toward the future, they are more authority oriented, and they exaggerate the importance of power, rules and laws. These influences have led the investigators to study the relationships between birth order, authoritarianism and conservatism. Contrary to this, Eisenman and Cherry (1970) found that at least for males the first borns were significantly less likely to be authoritarian than later borns. Boshier and Walkey (1971) could not support the notion that first borns were more conservative than later borns. On the other hand, the literature on birth order suggests that first borns have more achievement than later borns, presumably due to the early differential treatment by the parents (Bartlett 1966, Rothbarth 1971). The present study is an attempt to further explore the relationship between the ordinal position of birth and the two personality variables dogmatism and achievement motivation.

## METHOD

### *Subjects*

Subjects were 122 graduate students in six sections of philosophy of education courses at Indiana State University. There were 55

males (20 first borns, 35 later borns) and 67 females (33 first borns and 34 later borns); none of the subjects was the "only child."

The following measures were taken:

1. Rokeach's (1960) Dogmatism Scale was administered to the subjects. In order to facilitate statistical treatment of the scores, a constant number of 240 was added to each D. S. score.

2. The Achievement Imagery Scale of Iowa Picture Interpretation Test (IPIT) was administered at the start of the semester. This test consists of 25 slides of TAT cards. Each slide was projected on the screen for 60 seconds and subjects were asked to rank the statements for each slide according to their perception of the events and how well the statement described the picture. The Achievement Imagery score for each subject was obtained by adding the ranks for the statements containing achievement themes. This test, according to Hurley (1955), integrates the objective and quantitative aspects of paper and pencil tests with the "depth" of projective techniques. The unweighted means method for treating a 2 x 2 analysis of variance design with unequal cell frequencies was performed for D. S. scores and Achievement Imagery scores of IPIT (Winer 1971, pp. 402-404).

TABLE 1. MEAN DOGMATISM SCORES  
FOR FIRST AND LATER BORN MALE AND FEMALE SUBJECTS

	<i>Male</i>	<i>Female</i>	<i>Total</i>
First Born	219.75	214.82	217.29
Later Born	235.71	223.32	229.52
Total	227.73	219.07	

Table 1 shows the mean D. S. scores for male and female, first born and later born subjects. The analysis of variance of D. S. scores are presented in Table 2.

TABLE 2. SUMMARY OF ANALYSIS OF VARIANCE FOR D. S. SCORES

Sources	D.F.	M.S.	F
A. Sex	1	1084.442	.832
B. Birth Order	1	2162.840	1.66
AB. Interaction	1	.578	.0004
Error	118	1302.417	

As the data in Table 1 indicate, the first borns within each sex and as a group have a smaller mean D. S. score than the later borns. But, as Table 2 shows, this trend in none of the instances reaches the statistically significant level.

The means of Achievement Imagery scores of IPIT are presented in Table 3.

TABLE 3. MEAN ACHIEVEMENT IMAGERY SCORES  
FOR FIRST AND LATER BORN MALE AND FEMALE SUBJECTS

	<i>Male</i>	<i>Female</i>	<i>Total</i>
First Born	52.95	54.45	53.60
Later Born	58.66	57.12	57.89
Total	56.58	55.80	

Due to the scoring system of IPIT, one who scores high is considered to have low achievement imagery and, conversely, one who scores low on that test is considered to have high achievement imagery. As Table 3 shows, the order of achievement imagery scores from low to high are in first born males, first born females, later born females and later born male subjects. However, the differences between the means are not statistically significant. The results of analysis of variance of IPIT are presented in Table 4.

TABLE 4. SUMMARY OF FACTORIAL ANALYSIS  
OF VARIANCE OF ACHIEVEMENT IMAGERY SCORES OF IPIT

	<i>Sources</i>	<i>d.f.</i>	<i>m.s.</i>	<i>F.</i>
A.	Sex	1	.011	n.s.
B.	Birth Order	1	253.885	4.136*
	AB. Interaction	1	66.834	1.088
	Error	118	61.376	

\* $P < .05$

Table 4 shows that the main effect of birth order is significant; first borns (male & female) have statistically higher Achievement Imagery scores than later borns. ( $F = 4.136$ ,  $d.f. 1/118$ ,  $p < .05$ )

#### DISCUSSION

The relationships of birth order and two personality variables, dogmatism and achievement motivation, were studied. Although the

mean dogmatism was lower for first born than later borns (both males and females), it did not reach a statistically significant level. Greenberg et al (1953) also found no difference in authoritarianism (as measured by California F-Scale) between first borns and later borns. In a study by McDonald (1971) no significant relationship between birth order and dogmatism was found. However, Eisenman and Cherry (1970) have found that first born males were less likely to be authoritarian than later born males. It seems that the literature on the relationship between birth order and authoritarianism/dogmatism is inconclusive.

As for the sex difference, Table 1 shows that mean dogmatism scores are larger for males than females (not statistically significant). Kilpatrick and Cauthen (1969) also reported that males as a group in their study were more dogmatic than females.

In light of the inconsistencies of the findings of research between birth order and dogmatism/authoritarianism in the literature and lack of any relationship between these two variables in the present study, it may be concluded that dogmatism and authoritarianism are not related to the ordinal position of birth.

On the other hand, the findings of achievement motivation and birth order studies in the literature, though not always conclusive, are more consistent (at least in American culture) in reporting higher achievement motivation for first borns than later borns (Sampson 1962 and Bartlett and Smith 1966).

The theoretical explanation which has been provided most frequently is the positive relationship of early training for independence and higher need for achievement (Winterbottom 1968). Giving the first born children more responsibility at an earlier age, and also high parental expectation, and particularly the quality of parental interaction with the first born children as compared to later born (Rothbarth 1971) is a very plausible explanation for higher achievement motivation in first born than later born subjects.

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