

## ATTITUDINAL STRUCTURES OF OLDER AND YOUNGER SIBLINGS

EVERETTE HALL AND BEN BARGER<sup>1</sup>

*University of Florida*

Alfred Adler formulated, as part of his personality theory, a position psychology (1, pp. 191, 321-323) That is, every person is born into a given situation, and has a status, or position, as a result of that situation. The situation is the family constellation, and the position can be described in terms of birth order, family size, sex of siblings, etc. Treating these as antecedent variables, and observing consequent behavior, we can determine what relationships exist between the two.

This study has investigated the relationship between attitudes and interests of college students and their position in the family constellation during childhood. While there are many attitudes acquired in the family that are not specific to family position, it was felt that there must also be attitudes which are acquired as a direct function of specific positions. These are the role-associated attitudes that were studied.

Previous studies have shown that certain patterns of behavior in childhood correlate with family position. A few investigators have studied adolescents and adults in order to show that modes of reaction originally learned as a function of family position continue in appropriate form into adulthood. These have been largely descriptions of ratings, by the subjects or observers, which have been used to identify "qualities" of being an oldest son, youngest daughter, etc.

The present study has tried to determine if these apparent differences in "qualities" stand up when the reference is to reactions in specific situations, as reflected in questionnaires. On the basis of relevant theoretical formulations, primarily derived from Adler, and empirical studies, notably those of Koch (2, 3, 4, 5, 6) and McArthur (7), six areas of preferences or interests were hypothesized to differentiate the older from the younger sibs in a two-child family. These areas can be described as follows:

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*Areas More Important for the Older Child*

1. *Organizing, authoritarian.* Desire for authority, often found in the officer of a formal organization; general interest in administrative, managerial, and supervisory responsibilities.
2. *Serious, dependable.* Conscientiousness in getting a job done, concern over quality of school work, dependability in completing an assignment.
3. *Conservative, resistant to change.* Tendency to value the following of rules, and little inclination to help effect a change in unjust laws; valuing position or status and the accompanying rights and privileges.

*Areas More Important for the Younger Child*

4. *Active, taking risks.* Preference for sports, especially the group competitive sports, less concern about bodily injury.
5. *Gregarious, extrovert.* Preference for being with people, tendency to participate in group activities.
6. *Confident, easygoing.* Spontaneity in dealing with a situation, rather than a great deal of previous planning; ability to improvise and to utilize situational cues.

## METHOD

*Sample.* The sample was selected from the 1961 entering class of lower-division students at the University of Florida. To hold other major family variables constant the sample was selected from intact, Protestant, two-child families with male sibs. It consisted of 52 first-born and 52 second-born males who were single at the beginning of the study. The two groups were approximately matched on age, income of parents, spacing between self and sib, and age of parents, allowing for the age difference between older and younger sibs. Sixty younger and 120 older sibs met these criteria, and 60 of the older were matched with the younger group. Fifty-two of the 60 in each group agreed to participate in the study.

*Instruments.* Three instruments were constructed on the basis of the hypothesized interest areas discussed above: (a) Interests and Activities, consisting of 28 questions to be answered on a Likert-type scale, and covering sports, organizations, campus activities, friends, and social life. (b) Family Interests, listing 15 items of interests and preferences, where *S* is asked to rank his family members, including himself, on each item. (c) Sentence Completion form, consisting of 7 sentence roots to be completed.

*Procedure.* The above three schedules were administered to small groups or individually. The subjects were also asked for early memories and what they considered "the most important thing in life."

A complete centroid factor analysis with quartimax rotation was done on the first schedule mentioned above, for the older and younger sibs separately. In addi-

tion, each of the 28 questions was compared for the two groups, and a *t* test used to test the significance of differences between the means.

The overall ranking of self in relation to the other members of the family was computed for the two groups on the Family Interests form, and the means were compared for individual items.

A categorical analysis was used for the Sentence Completion form. Responses to each sentence root were categorized. The relative proportions for each response category were compared for the two positions by  $\chi^2$ .

## RESULTS

### *Factor Analysis of Interests and Activities*

*Older sibs.* The factor analysis of the Interests and Activities questionnaire for the older sibs resulted in five factors which account for 35% of the total variance. See Table 1.

For Factor I, which accounts for 28% of the common variance, the item with the highest loading is "Like to lead a very active life." The other items with high loadings of this factor seem to give an indication where this preference for activity is focused, i.e., in the direction of organizing and controlling. This is in line with the organizing, authoritarian interests postulated in Area 1.

Items with high loadings on Factor II, which accounts for 20% of the common variance, refer primarily to existing organizations or institutions, not in terms of the act of organizing, but in terms of preserving the structure which already exists. We can meaningfully refer here to a tendency to maintain the status quo, a conservatism and resistance to change, which is what was postulated for Area 3.

The items with the highest loadings on Factor III, which accounts for 17% of the common variance, can be described in a framework of inner-directedness of striving. This factor was not anticipated as a separate area of interest in the general hypothesis.

Factor IV, accounting for 22% of the common variance, seems to indicate a preference for activities such as sports, and for those areas of interest emphasizing relationships with people. This corresponds to what was postulated under Areas 4 and 5 as important for the younger sibs, but not for the older sibs.

Factor V only accounts for 13% of the common variance. It seems to indicate a tendency toward seriousness, and an interest in scholarly pursuits, as postulated under Area 2.

*Younger sibs.* The factor analysis for the younger sibs resulted in three factors which account for 30% of the total variance. See Table 2.

TABLE I. ROTATED ORTHOGONAL FACTOR MATRIX: INTERESTS AND ACTIVITIES QUESTIONNAIRE, OLDER SIBS

Factor	Item	Factor loadings				
		I	II	III	IV	V
I. Organizing tendency 28%*	19. Like to lead very active life	.73	.19	-.04	.10	.16
	2. Like to organize group activities	.65	-.05	-.07	.09	.11
	20. Like to go to parties and meet a lot of people	.60	.18	.24	.12	-.24
	3. Like to be president of fraternity	.52	.00	.29	-.10	.06
	1. Number offices in organizations past three years	.37	-.03	.00	.23	.02
II. Conservatism 20%	8. Important to have strong religious beliefs	.35	-.03	.08	-.01	.11
	17. Like to be a test pilot	.32	-.18	.03	.03	.11
	14. Respect honor system at University of Florida	.14	.69	.23	.03	.20
	4. Importance of student government officer on campus	.33	.54	-.14	.13	-.05
	13. Like to preserve present university system	.19	.49	-.07	.24	-.02
	22. Important to make new friends in college	.35	.44	.11	.23	-.17
	24. Confident in present choice of career	.05	-.38	.23	.23	.28
III. Inner-directedness 17%	26. Likely to take job without formal training	.00	-.36	.20	.00	-.08
	27. Likely to take course without prerequisite	.04	-.22	-.05	.14	.15
	10. Actively work to change unfair rule or law	.19	.02	.64	.14	-.06
	11. Important to have high status in society	.24	.03	.43	.16	.11
	9. How much do you enjoy reading poetry	.11	.08	-.35	-.04	.28
IV. Activity, gregariousness 22%	12. Special privileges, student government officer	.33	.13	.33	-.10	.23
	7. Enjoy listening to classical music	.11	-.14	-.31	-.26	.18
	23. Number close friends of opposite sex	.08	.04	.19	.72	.02
	15. Number sports participated in regularly	.00	.19	-.26	.61	.26
	21. Number close friends of same sex	.02	.22	.27	.49	-.08
	18. Like to be government agent in foreign country	.37	.03	.10	.48	-.09
V. Seriousness, studiousness 13%	16. Time spent in playing sports	.01	.21	-.35	.40	.02
	5. To how many organizations do you now belong	.19	-.25	-.18	.32	.14
	25. How confident that you will do well in college	.00	-.06	-.17	.21	.59
	6. How much time do you study each week	-.16	.21	.01	.00	.57
	28. Confident of a good job without college degree	-.10	-.09	-.13	-.04	-.16
	Sum h <sup>2</sup>	2.7	1.9	1.7	2.1	1.3

\*Percentages refer to percentage of the common variance for which factor accounts. Total variance, 35%.

TABLE 2. ROTATED ORTHOGONAL FACTOR MATRIX: INTERESTS AND ACTIVITIES QUESTIONNAIRE, YOUNGER SIBS

Factor	Item	Factor loadings		
		I	II	III
I. Self-confidence 34%*	16. Time spent in playing sports	.62	.20	-.09
	17. Like to be a test pilot	.59	.06	-.02
	18. Like to be government agent in foreign country	.59	-.04	.20
	5. To how many organizations do you now belong	.52	-.02	-.19
	28. Confident of a good job without college degree	.45	-.08	-.12
	7. Enjoy listening to classical music	.42	-.07	-.03
	8. Important to have strong religious beliefs	.41	.08	-.13
	6. How much time do you study each week	.30	.16	-.12
II. Activity, gregariousness 40%	20. Like to go to parties and meet a lot of people	-.03	.67	-.09
	21. Number close friends of same sex	.03	.62	.00
	23. Number close friends of opposite sex	-.13	.61	-.15
	22. Important to make new friends in college	.31	.58	.22
	11. Important to have status in society	-.17	.57	-.13
	15. Number sports participated in regularly	.39	.53	.07
	19. Like to lead very active life	.33	.53	.33
	9. How much do you enjoy reading poetry	.29	-.33	.13
	26. Likely to take job without formal training	.05	-.30	.10
	4. Importance of student government officer on campus	-.01	.27	-.09
	12. Special privileges, student government officer	.01	.25	-.18
III. Flexibility 26%	3. Like to be president of fraternity	.05	.47	-.58
	10. Actively work to change unfair rule or law	.20	.08	.58
	14. Respect honor system at University of Florida	.01	.06	.52
	24. Confident in present choice of career	-.13	.02	-.47
	13. Like to preserve present university system	-.08	.04	.45
	2. Like to organize group activities	.34	-.29	-.41
	1. Number offices in organizations past three years	.32	-.33	-.35
	27. Likely to take course without prerequisite	.12	-.02	-.27
	25. How confident that you will do well in college	.05	-.08	-.23
Sum h <sup>2</sup>	2.8	3.3	2.2	

\*Percentages refer to percentage of the common variance for which factor accounts. Total variance, 30%.

Factor I accounts for 34% of the common variance, with the highest loading on "Time spent in playing sports." Other questions here have to do with an interest in becoming a government agent, a test pilot, and joining a number of organizations. The items here seem to indicate a self-confidence and self-reliance, along with a versatility of interests. These are somewhat congruent with Area 6, along with an additional connotation of wide interests.

Factor II, which accounts for 40% of the common variance, seems to consist primarily of items concerning an active life with a valuing of the activity itself, and a gregariousness which carries with it a connotation of liking people for themselves. This factor is similar to Factor IV for the older sibs, and confirms those tendencies postulated separately in Areas 4 and 5.

Factor III, accounting for 26% of the common variance, seems to indicate a flexibility which was not anticipated as an area of relevance.

#### *Additional Results*

*Interests and Activities.* When the means of individual items on the Interests and Activities questionnaire were compared by *t* tests, only three questions differentiated the older sibs from the younger at the 10% level of confidence or better. "Like to be the president of fraternity" shows a higher mean for the older sibs. Since this item has its highest loading on Factor I for the older sibs, it serves to identify the direction of this factor; that is, toward a liking to organize or control. "Like to be a test pilot" also shows a higher mean for the older sibs, but does not have a high loading on any of the factors for the older sibs. "Time spent in playing sports" has a higher mean for the younger group. This helps to identify more clearly the activity orientation postulated for the younger sibs.

*Family Interests.* Here the subject ranked himself on various interests in relation to the rest of his family constellation, and the number of times he placed himself in first place was tabulated. The older sibs ranked themselves significantly more often in first place.

Looking at the individual items, the older sibs have a higher mean ranking of self on all but two of the items, and the differences for these two are not significant. The items on which the older sibs have significantly higher means seem to fit into the general picture of the older group seen in the factor structure, that is, an interest in organizing activities and serious pursuits.

Thus, the results for this instrument are congruent with the factor structure found for the older sibs, but do not seem to confirm that for the younger sibs. This may be due in part to the overall tendency of the older sibs to rank themselves higher than do the younger sibs.

*Sentence Completion.* The responses on the Sentence Completion instrument do not differ greatly for the older and younger sibs. In describing the kind of organizations they like best, the older sibs stress the functional and organizational aspects more than the younger sibs do.

*Early memories and values.* Of the younger sibs 10 had memories which involved the home, family, and marriage, while only 2 of the older group gave this kind of response. Of the older sibs 11 chose a memory relating to a place or trip, while only 4 of the younger chose this kind of memory.

In specifying what they considered "the most important thing in life," a greater number of the older sibs responded with an answer which suggests religious values or philosophy of life.

#### DISCUSSION

The factors which seem to indicate tendencies toward organizing and conservatism for the older sibs confirm part of the proposed attitudinal structure. However, the factor of seriousness, or studiousness, occupies a less important place in the structure than was postulated. This may be due in part to a less adequate sampling of items from that area of interest. In addition, there is a factor which can be described as a preference for activity and gregariousness. This was postulated as an important area of interest for the younger sibs, but not for the older sibs. Another factor, described as inner-directedness, was also not predicted as a separate area of interest.

For the younger sibs, there is also a factor which can be described as activity orientation and gregariousness, but it occupies a more important, or central, position in their factor structure, accounting for 40% of the communality, as compared with 22% for the older sibs. A factor indicating a feeling of confidence also occurs in the structure for the younger sibs. The foregoing factors for the younger sibs were predicted in the proposed attitudinal structure. An additional factor which was not postulated seems to be best described as flexibility.

A possible indication that the preference for activity may take different directions for the two groups is that for the older group,

"like to lead a very active life" has a high loading on Factor I, which we have described as reflecting a liking to organize and control people and activities. For the younger group, on the other hand, this same item has its highest loading on Factor II, which was described as activity orientation and gregariousness.

While it should be emphasized that any factor analysis is limited by the nature and range of the original questions in the instrument, the findings here seem to indicate that the differences between the first-born and second-born males in our sample are differences in attitudinal configuration or structure, and not differences in degree of preferences. At least in the areas covered in this study, younger and older male sibs in our sample seem to be different kinds of people.

A consistent pattern for each of the two groups is seen throughout the instruments used. The general approach of the older sibs is seen as serious, possibly dictated by conscience and a striving for achievement. Their activity preferences appear to be those which deal with organization and control.

The younger sibs, on the other hand, while also activity oriented, seem to value activity for its own sake and as a way to be with people, rather than for purposes of controlling them. The younger sibs can also be characterized as having a wide variety of interests, which may be pursued more for hedonistic reasons than for any underlying system of ideals.

From the finding that the factor structure for the older sibs consists of 5 factors while that for the younger sibs consists of only 3 factors, we may conclude that the older sibs may be more complex, differentiated individuals than the younger sibs.

In addition, a description of the older sibs from the factor structure would seem to be more meaningful in that there is more communality for their factor structure (35%) than for that of the younger sibs (30%). It might be useful to think of this difference as evidence of more conformity to a pattern among the older sibs.

In contrast, the younger sibs would seem to be best described by individuality and idiosyncrasy. Their entire factor structure shows a quality of diffuseness described as versatility and flexibility, with a concomitant de-emphasis on seriousness of purpose or desire to control others.

In interpreting the results of a factor analysis, which in operational terms only indicates a consistency of responses across items for a given group, care should be taken to avoid postulating an iso-

morphic relation between factor structure and personality configuration. In this study, however, the questions which were selected for the instrument and the relations postulated for the responses to these questions were derived from theoretical formulations concerning older and younger sibs, empirical studies testing these formulations, and the theoretical speculations of the present investigators. Since the results here seem to substantiate these predictions in part, it is felt that they have some psychological relevance.

In attempting to relate the present findings with those of Schachter (8), we ran into the difficulty of finding no comparable groups among our subjects and his with which meaningful comparisons could be made. We chose a very selected population in order to control more explicitly the complex influences of the variables of family size, sex of subject, and sex of sibling, in addition to birth order. Thus our subjects were male college students from two-child families, whereas Schachter's were largely female students from families of varied sizes. Furthermore, we investigated differences in the factor configurations of attitudes and interests, whereas Schachter explored the affiliative responses to experimentally induced anxiety. For these reasons we have not found any very meaningful way to compare the results of these two lines of investigation.

#### SUMMARY

This study investigated the relation between ordinal position in the two-child family and modes of reaction at the college level. Subjects were 52 first-born and 52 second-born males with male sibs, from two-child intact Protestant homes, and matched on several relevant variables.

The subjects were administered an interests and activities questionnaire, a family ranking form, and a sentence completion form, all of which were derived from postulated preference and interest structures for the two positions. The interests and activities questionnaire was factor-analyzed for the older and younger sibs separately.

For the older sibs, the factor structure includes tendencies toward organizing activities and conservatism, both of which were predicted, as well as a preference for seriousness, which is relatively unimportant in the structure. In addition, there is an active-gregarious factor, and one which can be described as inner-directed, neither of which was predicted.

For the younger sibs, there is an active-gregarious factor, and one describing confidence, which were predicted. In addition there is a factor which may be described as flexibility, which was not predicted.

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