

## IV.D. Propensity to Change Responses in a Delphi Round as a Function of Dogmatism

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Since one of the assumptions of Delphi is that it "reduces the influence of certain psychological factors such as ... the; unwillingness to abandon publicly expressed opinions, and the bandwagon effect of majority opinion" (Helmer, 1966), it would seem of interest to examine the effect of personality upon an individual's performance during several Delphi rounds. Specifically, the question can be raised concerning the willingness of a more dogmatic individual to change his answer in a Delphi round (whether he is an expert or a nonexpert). Since dogmatic thinking is characterized by resistance to change (Rokeach, 1960), it might be posited that the dogmatic individual would be less likely to change his position when confronted by the opinions of others. It might be further presumed that the type of question asked, i.e., those upon which the individual could be considered either more or less expert, might also affect performance of highly dogmatic as opposed to less dogmatic individuals. It was therefore predicted that the number of changes made by a high dogmatism group ( $D_H$ ) would be less than a low dogmatism group ( $D_L$ ), and that the ( $D_H$ ) group would change less on questions on which they might be considered expert than on questions on which they would be considered less expert.

### Method

The subjects for the study were ninety-eight graduate students enrolled in a class in Educational Psychology, most of whom were school teachers.

Berger's (1967) revision of Rokeach's Dogmatism Scale (the FCD Scale) was administered on the first day of class. Subsequently the class was used as a Delphi panel and asked to make certain estimates. Four types of questions were utilized. Ten questions defined the subjects as nonexpert, such as the number of farms in the United States. Ten other questions concerning class size, teachers' salaries, length of the school year, and similar items defined the subjects as experts.

Eighteen other questions were value-oriented items. Subjects were to respond in terms of what certain values in the United States will be in 1980, and also what they should be. The latter set made each person a fully qualified "expert."

With these question categories as a base, it was possible to use the questions to define the respondents as expert or nonexpert.

The Delphi procedure was continued through three rounds. During rounds two and three each subject was given the group median,, interquartile range and his own response to the previous round for each item. He was asked to "review [his] projection on the basis of the information provided" and to change his answer if he wished to do so.

## Results

The  $D_H$  and  $D_L$  groups were identified as those scoring in the upper or lower 27 percent of the class on the FCD Scale (Berger, 1967). Second- and thirdround changes were tabulated for those who were both inside and outside the interquartile range for each of the four sets of questions. The results of that tabulation are shown in Tables 1 and 2.

**Table 1**  
**Proportion of Individuals Changing Answers**  
**Round Two**

Type of Item	Percent Changing High Dogmatism		Percent Changing Low Dogmatism	
	Inside Range	Outside Range	Inside Range	Outside Range
Almanac	29.5	76.2	13.6	63.1
"School" Questions	20.3	64.7	6.1	54.0
Predictions of Values	13.4	74.8	4.5	50.8
What Values Should Be	12.8	71.9	7.2	59.3

**Table 2**  
**Proportion of Individuals Changing Answers**  
**Round Three**

Type of Item	Percent Changing High Dogmatism		Percent Changing Low Dogmatism	
	Inside Range	Outside Range	Inside Range	Outside Range
Almanac	6.9	29.2	6.8	14.5
"School" Questions	4.1	18.6	3.4	14.8
Predictions of Values	8.9	19.7	1.9	6.7
What Values Should Be	9.2	15.8	1.9	6.0

A significant difference was found between the groups in the number of times they changed their answers. For round two the value for chi-square was computed as 18.48 with 7 degrees of freedom. This value is significant at the .01 level. The corresponding value for the third round was 14.78, which is significant at the .05 level.

## Discussion

It would seem that personality characteristics of the individual involved in the Delphi panel have some effect upon his propensity to change. Of interest as well was the finding that the High Dogmatism group exhibits significantly more changes.. Thus: the prediction that they would be less likely to change is not upheld. A possible explanation for this may be that if the dogmatic individual looks to authority for his support, then in the absence of any clearly defined authority the dogmatic individual would tend to seek the support of whatever authority seems present. In this case authority would be the median of the group response.

The second prediction that the High Dogmatism group would change less on questions where they could be considered expert, i.e., "school questions" and "what values should be" than on questions where they could not be considered expert, i.e., "almanac questions" and "what values will be," was upheld on the second round (chi-square 6.622 with one degree of freedom) but not on the final round. There were no significant differences on either round for the Low Dogmatism group.

These results seem to indicate that the High Dogmatism group is less likely to change an answer to a question on which they consider themselves expert than one on which they consider themselves less expert, but that in the presence of some "perceived" authority such as the group median, High Dogmatism groups will exhibit more change than Low Dogmatism groups.

## References

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