The Long Range Effectiveness of Different Types of Jewish Education.

Aug 75

29p.; Paper presented at the Annual Meeting of the American Sociological Association (70th, San Francisco, California, August 24-29, 1975); Tables 1 and 2 may not reproduce clearly

Analysis of Covariance; Attitudes; Elementary Secondary Education; Higher Education; Jews; Judaism; Religious Cultural Groups; Religious Education; Socialization; Statistical Analysis; Surveys; Tables (Data)

This study assesses the effectiveness of different types of Jewish schools in producing adult religious involvement, using a sample of 1,009 individuals from the Chicago area and an analysis of covariance design. Based on his analysis, the author concludes that the type of supplementary Jewish education received by over 80 percent of those Jews who have received any form of Jewish education has not had any lasting impact on their adult religious involvement. Statistical analysis showed that the relationship between Jewish schooling and adult religious involvement is not wholly linear. Schooling exhibits threshold, plateau, and ceiling effects; it begins to have an impact at 2,000 hours, reaches a plateau between 3,000 and 4,000 hours, and obtains a maximum effect at 10,000 hours when reinforced by other agents of religious socialization. (Author/JG)
THE LONG RANGE EFFECTIVENESS
OF DIFFERENT TYPES OF
JEWISH EDUCATION

By

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Presented at the Annual Meetings of The American Sociological
Association, San Francisco, August 24-29, 1975
"The Long Range Effectiveness of Different Types of Jewish Education"

ABSTRACT

This study assesses the effectiveness of different types of Jewish schools in producing adult religious involvement, using a sample from the Chicago, Illinois area and an analysis of covariance design. The study concludes that the type of supplementary Jewish education received by over eighty percent of those Jews who have received any form of Jewish education, has not had any lasting impact on their adult religious involvement because they do not go long enough. It is not true that a little schooling is better than nothing. The relationship between Jewish schooling and adult religious involvement is not wholly linear. Schooling exhibits threshold, plateau, and ceiling effects. It begins to have an impact at 2000 hours and reaches a plateau between 3000 and 4000 hours, and obtains a maximum effect at 10,000 hours when reinforced by other agents of religious socialization.
THE LONG-RANGE EFFECTIVENESS OF DIFFERENT TYPES OF JEWISH EDUCATION

Studies of the effects of colleges on attitude and personality change show that the main effect of colleges is to accentuate family socialization (Feldman and Newcomb, 1970). Similarly, a national study of the effects of Catholic parochial schools showed that the main effect of those schools was to reinforce parental effects. Thus, Catholic schools had an impact only on those who came from religious homes. In contrast, three studies have appeared in recent years indicating that Jewish schooling affects adult religious attitudes and behavior even when parental and other influences are controlled.

Dashefsky and Shapiro (1974), using a sample of adult males between the ages of 22 through 29 in the St. Paul Minnesota area, found a zero order correlation (r) of .23 between hours of Jewish education and their Jewish Identification Scale. Lazerwitz (1973), using an area sample of Chicago Jews, reports a zero order correlation of .36 between Jewish education and his scale of "religious behavior". Himmelfarb (1974), using a sample of Chicago adults drawn from persons with "distinctive Jewish names" and alumni of an all-day Jewish high school and a local college of Jewish studies, reports a zero order correlation of .49 between hours of Jewish schooling and a summary measure of "total religiosity". Using multiple regression analysis, controlling for some measure of parental effects and numerous other variables (which differ from study to study), each researcher attempted to estimate the independent effects. Dashefsky and Shapiro report the smallest effects for Jewish schooling (beta = .14), Lazerwitz is next (beta = .21) and Himmelfarb reports the highest independent effects (beta = .27). Thus, they all report
an independent contribution of Jewish education, but they differ in their estimates of the magnitude of that contribution.

The differences between these studies in their estimates of the independent contributions of Jewish education to Jewish identification could easily stem from the different variables controlled in each equation. In fact, it is instructive for students of religious socialization to compare these studies on the different causal assumptions implicit in their study designs and data manipulations. The differences might also stem from the way variables common to these studies are measured—particularly Jewish identification. For example, Himmelfarb shows that Jewish schooling contributes differently to different types of religious involvement. On eight different measures of adult religiosity, the independent contribution of Jewish schooling ranges from non-significant on one measure to .31 (beta) on another measure.

A third possible reason for the differences between these studies might be the different samples used. Dashefsky and Shapiro argue that Jewish schooling does not predict as well in their study as in Lazerwitz's study because there is not much variation in their sample in the amount of Jewish education received by their respondents. St. Paul has one communal afternoon school which all students attend whether Orthodox, Conservative, or Reform. Lazerwitz and Himmelfarb, both using Chicago respondents, also have samples which differ substantially in the sample variance on Jewish education. Lazerwitz had very few respondents who had an all-day school education, whereas Himmelfarb deliberately sampled day school alumni. Thus, Himmelfarb's sample varies from those who had no hours of formal Jewish schooling to those who had almost 14,000 hours of Jewish schooling. Perhaps, then, different ranges of amounts of schooling have a differential impact on religiosity to
which simple linear models are not sensitive. This would help explain the differences between different studies of the impact of Jewish education and between studies of Jewish and Catholic schooling.

Simple linear models are also not sensitive to the differential impact of various types of Jewish schooling. None of the studies discussed above investigated whether the relationship between amount of schooling and religious-ethnic identification holds for all types of Jewish schooling. This paper will attempt to answer that question and discuss the interaction between type and amount of schooling.

Sample

The sample used for this study is the same one used for the study by Himmelfarb discussed earlier. A sample of adult Jews having "distinctive Jewish names" (Massarik, 1966) were chosen from the Chicago, Illinois phone book and supplemented with a sample of alumni from two Chicago Jewish schools who were currently residing in the area. One of the schools was a high school and the other a college. The purpose of the alumni sample was to ensure enough cases with higher level Jewish education. The sample population was surveyed by means of a mail questionnaire. Of the 4,665 questionnaires mailed, 1,418 were returned (30.4%). All respondents who were unmarried, foreign born, offspring of an interfaith marriage, or not raised as a Jew were eliminated from the analysis. Thus, this paper is based on 1,009 cases.

A comparison of the characteristics of these respondents with a more representative sample of the Chicago Jewish community drawn for the National Jewish Population Study (Jewish Federation of Metropolitan Chicago, 1973) indicates that this sample has more respondents who are married, middle-aged (i.e., between 25 and 55), somewhat more wealthy (excluding the poor in
particular), substantially more professional and native American. The population seems to be more religiously educated and involved, but that appears to be mostly a product of the slightly greater proportion of Orthodox Jews in the sample. The Orthodox portion of the sample is over-represented by 3.4 percent and is peculiar in its American nativity, its youth, and its educational and economic achievements. However, since this is an explanatory rather than descriptive study, representativeness was not considered to be of paramount importance. While the magnitude of relationships might differ between samples, with the proper controls the causal relationships ought to be similar.²

Measures

For the purposes of this study, adult religious involvement was measured by multiple scales. A factor analysis of 41 separate items of religious involvement yielded eight factors or types of religious involvement:

a) **Devotional**—ritual observance

b) **Doctrinal-Experiential**—belief in basic tenets of the faith, and experience of a supernatural presence

c) **Associational**—participation in Jewish organizations

d) **Fraternal**—residence in a Jewish neighborhood and having mostly Jewish friends

e) **Parental**—child-rearing practices which encourage children to be involved in Jewish life

f) **Ideological**—attitudes in favor of support for the state of Israel

g) **Intellectual-Esthetical**—reading, studying, and accumulating books, art work, and music on Jewish topics

h) **Ethical-Moral**—charitable attitudes and behavior.
These eight scales encompass four objects to which religious involvement can be oriented: (1) \textit{Cod}--devotional and doctrinal-experiential; (2) \textit{Community}--associational, fraternal, parental and ideological; (3) \textit{Cultural system}--intellectual-esthetical and (4) \textit{Individuals}--ethical moral. They also encompass both behavioral and attitudinal modes of involvement. Finally, a measure of total religiosity was formed by standardizing the eight scales and weighting them by their factor score coefficients.\footnote{A difficult problem in analyzing the effects of different types of Jewish education is categorizing respondents by type of Jewish school attended. Over 40\% of this sample attended more than one type of school. Therefore, the respondents were grouped into six school categories ordered by the average number of hours spent on Jewish studies. The six categories are: (1) no Jewish schooling; (2) Sunday school only; (3) mixed non-day schooling (e.g., a combination of Sunday school, afternoon school, private tutor, and teacher's institute or college of Jewish studies); (4) afternoon school only; (5) some day school (i.e., attended an all-day school and some other type of Jewish school); and (6) day school only. Since individuals who attend Jewish schools differ not only in the hours of Jewish studies received, but also in the number of years; respondents were categorized further by total number of years of Jewish schooling received. Table 1 shows the mean hours of Jewish schooling received by respondents in the various school categories. As one looks across the rows or down the columns, the hours of Jewish schooling increase. Thus, it was expected that within the same range of school years religious involvement would increase across school types; and within school types, religious involvement would increase with the number of years of Jewish schooling. Those who had no Jewish schooling can be viewed as a control group.}
Another difficult problem in analyzing the effects of different types of Jewish education is estimating the effects of school type that are independent of years of Jewish schooling, parental religiosity, spouse's religiosity and other factors influencing adult religious involvement. Those who attend the most intensive types of Jewish schools are generally the one's who attend a Jewish school for the longest period of time, come from highly religious homes, and marry a highly religious spouse. Previous analysis determined that there are from two to five variables other than Jewish schooling that affect religious involvement. To find enough individuals for comparison who are similar in every other way except in their Jewish educational background, would require a much larger sample than is presently available and would still be nearly impossible. One way of handling this problem is through an analysis of covariance.

Findings

Table 2 shows the analysis of covariance tables for each dimension of religious involvement by type and years of Jewish schooling. The table shows the means, the number of cases (N) and the adjusted means (Adj) for each cell of a table, the F tests for significance of the adjusted cell means and equality of slopes and the variables used as covariates on each dimension of religious involvement. The number of cases per cell differs a little from one dimension to another because of missing values. All of the dependent variables were standardized. Thus, the grand mean of each religious
involvement dimension is zero.

Table 3 shows the significance level of t values for linear contrasts of the adjusted group means for each dependent variable in Table 2. The first five columns show the probability of no linear increase in religious involvement (i.e., the probability of making a Type I error) with increased years of a type of Jewish schooling from no Jewish schooling through the greatest number of years of schooling existing for that school type. The last three columns show the probability of no linear increase in religious involvement with movement across school types (from less intensive to more intensive types of Jewish education) among individuals with a similar number of years of Jewish education.6 Tables 2 and 3 should be viewed together.

Tables 2 and 3

Since the many cells in these tables make the analysis quite complex, the basic trends will be summarized.7 Both Sunday schools and afternoon schools have almost no effect on any dimension of adult religious involvement. In fact, on several dimensions of religious involvement, higher levels of Sunday school seem to produce less religious involvement (but not significantly less). The major exceptions to this finding are that seven to twelve years of Sunday school produces significantly greater associational involvement than no Jewish schooling, and seven to twelve years of afternoon school produces significantly greater ethical-moral involvement than no Jewish schooling. However, even in the latter case, afternoon schooling produces less than average religiosity.
For both Sunday schools and afternoon schools, the adjusted mean in most cells is higher than the actual mean. This indicates that school influences on religiosity are more positive than other influences that have combined negative effects on those who attended these types of schools. However, this positive effect is minimal. Apparently, afternoon schools and Sunday schools are not equipped to compensate for the negative effects of irreligious parents, spouse, or other influences; and when compared to no Jewish schooling, seem to be a waste of time.

Three trends in the effects of day schooling upon religious involvement can be seen in these data. (a) Day schooling has substantial impact on three dimensions of religious involvement: devotional, intellectual-esthetic, and ethical-moral. These are the same dimensions previously shown to be highly correlated with hours of Jewish schooling (Himmelfarb, 1974a). (b) Where day schooling has an impact, it is usually substantial only when schooling has gone beyond six years (except on the intellectual-esthetic dimension where fewer years produce some effect). (c) There is no statistically significant difference between the religious involvement scores of those with more than twelve years of day schooling and those with 7 to 12 years of day schooling.

A cursory glance at Table 2 might lead one to conclude that day schools have a negative effect on ideological involvement, but that conclusion would be mistaken for several reasons. First, there is no significant difference between the adjusted means on the ideological dimension at different levels of day schooling. Second, the unadjusted means for those who attended day school tends to be higher than the unadjusted means for those who attended other types of schools, except for those who attended other schools beyond
twelve years. Thus, day school alumni are fairly high in ideology but their ideological involvement is a product of parental religiosity, spouse's religiosity and Jewish organizational participation, rather than Jewish schooling. Third, these findings, perhaps more than others, change when other measures of ideological involvement are used.

The items in the ideological scale measure a sense of obligation to support Israel politically and financially. However, when other items about personally immigrating to Israel and encouraging one's children to do so were analyzed separately (not shown here), there was a significant linear trend from no Jewish schooling through all levels of day schooling. There was also a linear trend from Sunday schools through day schools-only for those who had 7 to 12 years of Jewish education. Thus, it seems that day school pupils are influenced toward conventional forms of ideological involvement from sources outside of the school, but the school plays a fairly important role in instilling a sense of personal obligation to immigrate to Israel. These latter findings are supported by the research of Gerald Engel (1970) who found that among North American Jewish settlers in Israel, those who had received a day school education were overrepresented by about two and one-half times their proportion in the North American Jewish population.

Those who had some day schooling and some other type of Jewish schooling follow a similar pattern as the day school-only group. The significant linear trends with increased years of schooling are on the same dimensions for those with some day schooling as for those with day schooling-only (i.e., devotional, intellectual-esthetical and ethical-moral).
For those who had **mixed types** of non-day schooling some surprising findings appeared. We expected that those who had more than one type of supplementary schooling would score higher in religiosity than those who had only Sunday schooling and lower than those who had only afternoon schooling. This is the general pattern exhibited in Table 2 for those who attended a Jewish school from one to six years. There are a few exceptions\(^{10}\) to this pattern, but none of the differences between the school types at that level are statistically significant whether or not they follow the expected pattern. Surprisingly, though, among the respondents who attended school from seven to twelve years, those with mixed schooling scored higher than those with only afternoon schooling on all of the dimensions of religious involvement except the ethical-moral dimension. These differences are not statistically significant but they indicate a trend.

To pursue the matter further, we removed those cases from the mixed school types whose schooling was a combination of school types other than Sunday and afternoon schooling. When comparing those with seven to twelve years of afternoon and Sunday school, we found that the afternoon-only group scored a little higher on all but three of the dimensions (devotional, doctrinal and ethical-moral), but again the differences were not statistically significant. Thus, the earlier ascendance of the mixed school types was due to those who attended some other type of schooling besides Sunday, afternoon, or day school. Probably, it was due mainly to those who had a few years of college level Jewish schooling but less than twelve years of total Jewish education.
Table 3 shows a very significant linear trend from no Jewish schooling through all levels of mixed schooling, but this finding is also somewhat misleading. If one looks at the linear contrasts from no Jewish schooling thru twelve years of mixed schooling, there is a significant \((p < .05)\) linear trend on only three dimensions of religious involvement (devotional, intellectual-esthetical, and ethical-moral). Furthermore, if the mixtures of school types other than Sunday and afternoon school are removed from the mixed schooling category all of the linear trends from no Jewish schooling to twelve years of mixed schooling are statistically nonsignificant.

What does all of this data manipulation and these many qualified findings show? They indicate something very interesting: supplementary Jewish schooling does not contribute much to adult religious involvement unless it lasts for more than twelve years. But after twelve years there is no difference between supplementary types of Jewish schooling and all-day schooling (see last column of Table 3).

**Explanation**

Earlier analysis of these data showed that additional hours of Jewish schooling leads to increased adult religious involvement, particularly devotional, intellectual-esthetical, and ethical-moral involvement. However, we now see that the positive relationship between hours of Jewish schooling and adult religiosity does not hold for all types of education. Supplementary forms of Jewish education generally do not affect adult religiosity unless they last for more than twelve years. All-day schooling does not have much impact unless it lasts for at least seven to twelve years, but beyond that level increased day schooling does not seem to increase adult religiosity. Thus, there is interaction between years of Jewish education and type of school attended.
There may be several factors characteristic of the different types of schooling that would explain these findings, such as differences in curriculum, faculty, and student bodies. However, one factor seems compelling since it is common to both type and years of school attended: hours of Jewish schooling. If we look at the average number of hours Jewish schooling for each combination of type and years of schooling (see Table 1), and consider the effects displayed in Table 2, it seems that hours of Jewish schooling has both threshold and plateau effects. Jewish schools do not have any positive effect on adult religiosity until there is at least a total of approximately 2,000 hours of schooling, and it produces its greatest effects at around 4,000 hours. More than 4,000 hours does not seem to increase religiosity much further.

This can be seen more graphically in Figure 1 which diagrams the relationship between hours of Jewish schooling and total religiosity, plotting the actual means and the means adjusted for parental religiosity, spouse's religiosity, organizational participation, generation American and income. An earlier examination of the data indicated that there were certain critical points in the schooling process that had substantial effects upon adult religiosity but the increments in schooling between these points did not produce corresponding increments in religiosity. To illustrate this, hours of Jewish schooling was divided into nine groups: zero hours (no Jewish schooling), 1 to 1,499 hours, 1,500 to 2,999 hours, 3,000 to 3,499 hours, 3,500 to 3,999 hours, 4,000 to 6,999 hours, 7,000 to 9,499 hours, 9,500 to 10,499 hours and 10,500 to 13,760 hours. The midpoint of each group is

Figure 1
plotted on the graph. The dotted line represents the actual mean scores for the groups and the solid line represents the adjusted means. The numbers in parentheses are the number of cases in each group.

Looking at the adjusted means first, one can see in Figure 1 that the effects of additional hours of schooling is very similar to those inferred from Table 2. When other factors contributing to total religiosity are held constant, Jewish schooling has no positive effect until there has been approximately 2,000 hours (2,250 on the graph) of Jewish studies (this is the threshold), the effects become substantial at a little over 3,000 hours (3,250 on the graph), and reach a plateau at close to 4,000 hours (3,750 on the graph). There seems to be another increase in religiosity at 10,000 hours but it is not statistically significant. But, what if the other variables contributing to total religiosity are not held constant?

A look at the actual (unadusted) means in Figure 1 will indicate that the general effect of controlling for other variables was to reduce the strength of the relationship between hours of schooling and religiosity. However, when schooling is supported by other agents of socialization (like parents, youth organizations and, particularly, spouse which is the variable having the greatest effect on adult religiosity), it has a significant impact earlier (at 3,250 hours, rather than at 3,750), and increments in schooling beyond that level produce further slight increments in religiosity until about 10,000 hours of schooling have been accumulated. There is a dramatic jump in religiosity ($p < .025$) at around 10,000 hours, but beyond that there is another plateau.

These two graphs suggest that Jewish schooling does not have any statistically significant impact on adult religiosity until there is approximately 3,000 hours of Jewish schooling. There is a steady increase
in religiosity between 3,000 and 4,000 hours, but beyond 4,000 hours increased schooling does not increase religiosity unless reinforced by other agents of socialization, particularly spouse. If such reinforcement occurs, there is another significant increase in religiosity when schooling reaches approximately 10,000 hours, but that is the ceiling and there is no further increase in religiosity with additional hours of schooling. The necessity of extra-school support should not be viewed as some event which occurs randomly and, therefore, cannot be expected to combine with schooling to produce a ceiling effect. On the contrary, earlier analyses of these data (Himmelfarb, 1974a) showed that additional hours of Jewish schooling also increases the likelihood of marriage to a religious spouse.

Implications

In the last few years it has become fashionable to talk about schools as if they have no effect (Coleman, et al., 1966; Mosteller and Moynihan, 1972; Jencks, et al., 1972). A recent article by Wiley and Harnischfeger (1974) showed that educational researchers have been by-passing very simple measures of schooling which vary substantially within a metropolitan area: number of hours in the school day and number of school days per year. They showed that hours of schooling had a substantial relationship to verbal, reading, and mathematical achievement when controlling for pupils race and number of possessions and children in the home. Similarly, earlier studies of Jewish education (Dashefsky and Shapiro, 1974; Himmelfarb, 1974a) showed that hours of Jewish schooling have an impact on adult religiosity when controlling for parental religiosity and other contributing factors. However, now we see that the effect of hours is not completely linear. There is a
threshold below which, and plateaus beyond which, hours of Jewish schooling have no effect, unless supported by other influences on religiosity. There is also a ceiling beyond which schooling and other influences combined have no effect.

Whether these threshold, plateau, and ceiling effects occur for the effects of other types of schooling on other types of school outcomes needs to be investigated. One cannot hesitate to speculate, though, that the impact of Catholic schools upon their students would be much greater if they had a more intensive religious studies program. For example, a student who goes to Catholic school all the way through college only accumulates a maximum of about 3,200 hours of religious studies. This is the point at which religious instruction only begins to have a significant impact according to these data.

The policy implications for Jewish schools are more clear. Educational reform in Jewish schools, as in public schools, has concentrated on changes in curriculum and methods of instruction. While curriculum and methods reform are undoubtedly necessary, it can be inferred from these data that such reform will probably not be sufficient unless joined by a drastic increase in student exposure to the curriculum and methods. Stated very simply, most supplementary Jewish schools, now attended by almost 80% of Jewish children who receive some form of Jewish education, do not provide enough hours of schooling to have any substantial long range impact on their students, and unless they do, curriculum and methods reform will probably be a waste of time and money.13
NOTES

1. This information related in private communication.

2. The actual number of cases for any of the correlations presented may be somewhat less than 1009 due to missing values on different variables.

3. A recent study by Leslie (1972) presents a fairly comprehensive review of the literature on response-rate-bias and concludes that low response rates produce some biases on the independent variables (e.g., age, sex, education, etc.) but not on the dependent variable, particularly when homogeneous populations are surveyed. In other words, if one surveys doctors about medicine and gets mostly younger doctors to respond, Leslie would argue, their responses would be similar to those of the nonrespondents. Younger doctors will answer more like doctors than like members of their age group. Accordingly, we expect that at least with those independent variables related to adult religiosity controlled (e.g., age, education, income, etc.), the religious attitudes and behavior of respondents within those categories will not differ much from nonrespondents in the same categories.

For more details on the representativeness of this sample, see Himmelfarb (1974b).

4. For a more detailed explanation of these scales see Himmelfarb (1975).

5. Although this analysis is presented as a two-way analysis of covariance, available computer programs necessitated computation as a one-way analysis of covariance. Therefore, only one F value is reported.

6. With multiple contrasts there is a high probability of increasing the experiment-wise error. A suggested method for controlling experiment-wise error is to set the alpha level for the experiment at .10 and divide by the number of contrasts to obtain the level at which the null hypothesis will be rejected for any single contrast. In our case that level is $.10/8 = .0125$. Thus, we assume that no linear trend exists unless there is less than .0125 probability that the results could have occurred by chance. See Meyers (1972) for a discussion of this formula.

7. Some of the specific contrasts that will be mentioned are based on the analysis of the matrices of r values for all cells in each table. These contrasts are not shown in Tables 2 and 3.

8. The exceptions are these: for respondents with one to six years of Jewish schooling, those with mixed schooling had higher average scores than those with only afternoon schooling on the devotional, parental, and intellectual-esthetical dimensions of religious involvement. Respondents with one to six years of Sunday school-only scored higher on the doctrinal dimension than those with one to six years of mixed schooling.
9. There seems to be an inverse relationship across school types on the ideological dimension for those who have had more than twelve years of schooling. However, if the immigration measures of ideological support are used, the direction of that relationship is reversed.

Table 3 indicates that Day schools contribute significantly more than supplementary schooling to ethical-moral religious involvement (P < .025), but to be statistically strict, we should require a significance level of .0125. (See footnote 6 above.)

10. Actually, the mean number of years of schooling for those with more than twelve years of mixed schooling is 15.6 years. The mean number of years of schooling for those with seven to twelve years of day schooling is 10.1 years.

11. That is, the level of religiosity is not significantly different (P < .01) than the level obtained by those with no Jewish schooling.

12. The ceiling effect apparent here might be due to the scales that were used. That is, if more items were used that distinguished "very" religious from "extremely" religious persons, perhaps hours of Jewish schooling would predict adult religiosity in a more linear fashion.

13. These judgements of contemporary Jewish schools are based upon analysis of data on individuals who last attended a Jewish school from 10 to 50 years ago. It is possible that Jewish schools today are very different than the schools attended by these adults and, perhaps, more effective. However, this possibility seems unlikely for two reasons. First, age is not strongly related to religiosity in these data, and the direction of its influence tends to be positive when other factors related to religiosity are held constant. Second, the characteristic of schooling that correlates most highly with adult religiosity is hours of Jewish studies (compared to years, or type, of Jewish schooling). The changes in Jewish schools over the years have been toward fewer hours of Jewish studies. Thus, one can reasonably argue that contemporary Jewish schools are probably even less effective than their counterparts of years ago.
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Tables for "THE LONG RANGE EFFECTIVENESS OF DIFFERENT TYPES OF JEWISH EDUCATION"

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Presented at the Annual Meetings of The American Sociological Association, San Francisco, August 24-29, 1975
### TABLE 1
MEAN HOURS OF JEWISH SCHOOLING
BY TYPE OF JEWISH SCHOOLING AND
TOTAL YEARS ATTENDED

<table>
<thead>
<tr>
<th>No Jewish Schooling</th>
<th>Total Years</th>
<th>Sunday School Only</th>
<th>Mixed (^a) Schooling</th>
<th>Afternoon School Only</th>
<th>Some Day School Only</th>
<th>Day School Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1-6</td>
<td>334</td>
<td>925</td>
<td>1,111</td>
<td>2,218</td>
<td>2,446</td>
</tr>
<tr>
<td></td>
<td>7-12</td>
<td>1,060(^b)</td>
<td>2,128</td>
<td>2,780(^b)</td>
<td>4,890</td>
<td>7,944</td>
</tr>
<tr>
<td></td>
<td>13+</td>
<td>4,143</td>
<td></td>
<td></td>
<td>8,704</td>
<td>11,024</td>
</tr>
</tbody>
</table>

\(^a\) Mixed schooling is a combination of more than one school type, but no day schooling.

\(^b\) These schools do not go beyond high school.
### Table 2

**Analysis of Covariance Tables for Dimensions of Religious Involvement by Type and Years of Jewish Schooling**

<table>
<thead>
<tr>
<th>Dimensions of Religious Involvement</th>
<th>Type of Jewish Schooling</th>
<th>Years</th>
<th>Value ( b )</th>
<th>( t )</th>
<th>( \beta )</th>
<th>( F_{adj} )</th>
<th>( \rho_{adj} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Devotional</td>
<td>Sunday School Only</td>
<td>1-6</td>
<td>-0.386</td>
<td>1.041</td>
<td>0.157</td>
<td>1.169</td>
<td>0.062</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7-12</td>
<td>-0.402</td>
<td>2.130</td>
<td>0.100</td>
<td>2.217</td>
<td>0.383</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13+</td>
<td>-0.405</td>
<td>2.321</td>
<td>0.106</td>
<td>2.500</td>
<td>0.433</td>
</tr>
<tr>
<td></td>
<td>Afternoon School Only</td>
<td>1-6</td>
<td>-0.386</td>
<td>1.041</td>
<td>0.157</td>
<td>1.169</td>
<td>0.062</td>
</tr>
<tr>
<td></td>
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<td>7-12</td>
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<td>0.106</td>
<td>2.500</td>
<td>0.433</td>
</tr>
<tr>
<td></td>
<td>Zion     School Only</td>
<td>1-6</td>
<td>-0.386</td>
<td>1.041</td>
<td>0.157</td>
<td>1.169</td>
<td>0.062</td>
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<td>0.100</td>
<td>2.217</td>
<td>0.383</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13+</td>
<td>-0.405</td>
<td>2.321</td>
<td>0.106</td>
<td>2.500</td>
<td>0.433</td>
</tr>
</tbody>
</table>

- \( F_{adj} \): Adjusted Mean
- \( \rho_{adj} \): Adjusted \( \rho \)

Note: The table represents the analysis of covariance for dimensions of religious involvement by type and years of Jewish schooling. The table includes values for different types of Jewish schools and years, along with statistical measures such as \( b \), \( t \), \( \beta \), and \( \rho_{adj} \), and provides an adjusted mean \( F_{adj} \).
### TABLE 3
LINEAR CONTRASTS IN ADJUSTED MEANS FROM TABLE 5.2

<table>
<thead>
<tr>
<th>DEPENDENT VARIABLES</th>
<th>COLUMN CONTRASTS</th>
<th>ROW CONTRASTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Schooling Thru Sunday School</td>
<td>No Schooling Thru Mixed Types</td>
</tr>
<tr>
<td>Devotional</td>
<td>.457</td>
<td>.000</td>
</tr>
<tr>
<td>Doctrinal-Experiential</td>
<td>.263*</td>
<td>.05</td>
</tr>
<tr>
<td>Associational</td>
<td>.048</td>
<td>.029</td>
</tr>
<tr>
<td>Fraternal</td>
<td>.734*</td>
<td>.820</td>
</tr>
<tr>
<td>Parental</td>
<td>.508</td>
<td>.001</td>
</tr>
<tr>
<td>Ideological</td>
<td>.484*</td>
<td>.000</td>
</tr>
<tr>
<td>Intellectual-Esthetic</td>
<td>.349</td>
<td>.000</td>
</tr>
<tr>
<td>Ethical-Moral</td>
<td>.303</td>
<td>.000</td>
</tr>
<tr>
<td>Total Religiosity</td>
<td>.333</td>
<td>.000</td>
</tr>
</tbody>
</table>

*This is the alpha level of a linear contrast in the opposite direction of that indicated in the column heading (e., the probability that there is a negative relationship between more intensive Jewish education and adult religious involvement which is due to chance.)
Fig. 1--ACTUAL TOTAL RELIGIOSITY FOR CRITICAL INTERVALS OF HOURS OF JEWISH SCHOOLING AND MEANS ADJUSTED FOR:
RELIGIOSITY OF PARENTS AND SPOUSE, ORGANIZATIONAL PARTICIPATION, GENERATION AMERICAN, AND INCOME

F for: adjusted cell means = 7.39 ($P < .00$), actual means = 37.79 ($P < .00$);
F for: equality of slopes = .68 ($P > .94$)

(N) = Number of cases in group.