RECENT ATTITUDES TOWARD ABORTION: TWO MULTIVARIATE ANALYSES

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This paper is a portion of a larger study of public opinion about abortion which documents the change in attitudes toward abortion in the early seventies. Data from the 1972, 1973 and 1974 N.O.R.C. General Social Surveys are used. In the expanded version using tabular analysis we explored the relationships of several variables to attitudes toward abortion. Independent variables in those analyses included education, religion, church attendance, sex, age, race, region of residence and size of place of residence. All of these factors to varying degrees are related to attitudes toward abortion. But, the complex interdependence of these variables and changes of those relationships over time poses serious difficulty for the researcher trying to devise a theoretical scheme to understand the relationships among determinants and correlates of abortion attitudes.

* * *

The use of a summary device becomes imperative if one wishes to examine interrelationships among correlates or attitudes toward abortion in addition to or instead of simple differentials. Several multivariate techniques could function as summary devices. Here, however, we discuss results obtained under one multivariate strategy, the log-linear model for the analysis of tabular data as developed by Goodman (1970, 1971, 1972a, 1972b). To simplify the analysis, we will limit the scope of this paper to five variables: education, religion, church attendance, size of place and region of residence. One conclusion to be drawn from this exercise is that the relationships among correlates of abortion attitudes are relatively complex, at least relative to the type of analysis typically done. Theoretical implications of this finding are discussed below.

To those familiar with log-linear models[1] the advantages are fairly clear. As Davis (1974) says, it "gives the analyst a clear and concise statement of what is going on in his contingency tables." As a corollary of this it can be said that this form of model also provides a simple scheme for summarizing and expressing what is going on in tables. The system has its disadvantages, too; one in particular is discussed as it presents itself.

In the two examples which follow all variables have been dichotomized.[2] This was done for parsimony, primarily, although it facilitates interpretation of the parameters too. This is especially helpful in these cases since the models with which we will be dealing contain interaction effects.

Let us first consider a model which deals only with the respondent's educational achievement, religion, and religious intensity and the relationships of these variables to the respondent's attitude toward abortion. Table 1 displays the required tabulation for each year in the form used by Goodman. Under the Goodman scheme one proposes a model under which the cell frequencies in Table 1 are predicted from various sets of tables of dimension less than four. Predicted tables (i.e., those expected under the hypothesized model) are compared to the original cell frequencies by means of either a goodness-of-fit χ^2 or a χ^2 based on the likelihood ratio.

In general, the type of a model typically implied by straightforward discussion of attitude differentials can be diagrammatically represented as in Figure 1a. That is, there is thought to be or observed to be some covariance between some variable X and the attitude measure A. In the slightly more complex scheme of Figure 1b one assumes that the level of attitude A is dependent both on the level of X and of Y and furthermore that there is some covariance between the variables X and Y. Many times the analysis stops at this level of simple effects, not allowing for the possibility of interaction effects which might be present in tables of dimension greater than two.

For the data in Table 1, let us examine first a simple, "direct effects" model much like the one in Figure 1b, but which has three exogenous variables.

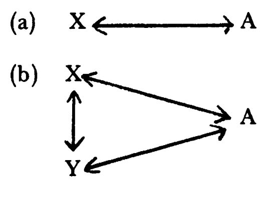

Figure 1. Two simple models relating correlates of attitude measures X and Y with the attitude measure A. Figure a assumes A depends only on X; figure b assumes A depends on levels of both X and Y.

That is, the model is *constrained* to contain no interaction effects, but we do allow for the possibility of covariation among the correlates of the dependent variable. According to the Goodman scheme this model is equivalent to fitting the data with the six bivariate "marginal tables" (ER), (EC), (RC), (EA), (RA), and (CA). (For simplicity, a two by two table is designated by the notation (AB). We refer to the variables included in the table by the first letter of the name only.) If we do this we are saying that expected frequencies for each of the cells, F_{ijkl}, $i,j,k,l = 1,2$ where a subscript of 1 corresponds to a category marked "-" and a subscript of 2 corresponds to a category marked "+" are predicted by the following equation

$$F_{ijkl} = \eta \, \tau_i^{E} \tau_j^{R} \tau_k^{C} \tau_l^{A} \tau_{ij}^{ER} \tau_{ik}^{ER} \tau_{jk}^{RC} \tau_{il}^{EA} \tau_{jl}^{RA} \tau_{kl}^{CA} \qquad (1)$$

where

$$\tau_1^E = \tau^E , \quad \tau_2^E = \frac{1}{\tau^E}$$

$$\tau_{11}^{EA} = \tau_{22}^{EA} = \tau^{EA} , \quad \tau_{12}^{EA} = \tau_{21}^{EA} = \frac{1}{\tau^{EA}} \text{, etc.,} \qquad (2)$$

$$\prod_{i=1}^{2} \tau_i^A = 1 \quad \prod_{i=1}^{2} \tau_{ij}^{AB} = \prod_{j=1}^{2} \tau_{ij}^{AB} = 1$$

and η is a constant used to weight each of the sixteen equations represented by (1) such that

$$\sum_{i=1}^{2} \sum_{j=1}^{2} \sum_{k=1}^{2} \sum_{l=1}^{2} F_{ijkl} = n$$

where n is the total number of respondents in the original table.

Using the τ's from (1) we can express the model in a different form. Instead of predicting frequencies one can predict the "odds ratios" for any given variable and associated subscript configuration. This procedure is similar to predicting the level of the dependent variable in regression analysis, but one predicts instead the ratio of the frequencies in the "plus" and "minus" categories of the variable designated "dependent." That is, if we think of abortion attitude A as dependent we would construct a model to predict the ratio

$$\frac{f_{ijk1}}{f_{ijk2}} = \omega_{ijk\cdot}$$

More precisely, we use the tau parameters to predict the expected frequencies F_{ijk1} and F_{ijk2} and divide them to obtain the "expected odds ratio,"

$$\Omega_{ijk\cdot} = \frac{F_{ijk1}}{f_{ijk2}} \quad . \tag{3}$$

From (2) and (3) we can see that the equation for the expected odds ratio can be expressed concisely in terms of a new set of parameters

$$\gamma_{\cdot}^{\bar{A}} = (\tau_{1}^{A})^{2}, \quad \gamma_{i}^{E\bar{A}} = (\gamma_{i1}^{EA})^{2} \quad , \text{ etc.}$$

That is, expressing the ratios in (3) in terms of the gammas we obtain

$$\Omega_{ijk\cdot}^{\bar{A}} = \gamma_{\cdot}^{\bar{A}} \gamma_{i}^{E\bar{A}} \gamma_{j}^{R\bar{A}} \gamma_{k}^{C\bar{A}} \quad . \tag{4}$$

Similarly, we can express expected odds ratios for the other three variables in the model by

$$\Omega_{\cdot jk1}^{\bar{E}} = \gamma_{\cdot}^{\bar{E}} \gamma_{j}^{R\bar{E}} \gamma_{k}^{C\bar{E}} \tag{5}$$

$$\Omega_{i\cdot k1}^{\bar{R}} = \gamma_{\cdot}^{\bar{R}} \gamma_{i}^{E\bar{R}} \gamma_{k}^{C\bar{R}} \tag{6}$$

and

$$\Omega_{ij\cdot 1}^{\bar{C}} = \gamma_{\cdot}^{\bar{C}} \gamma_{i}^{E\bar{C}} \gamma_{j}^{R\bar{C}} \tag{7}$$

Interpretation of both the tau and gamma parameters is rather straightforward. The taus multiply a constant times either a number or its inverse depending on the subscript configuration. Clearly then a tau equal to 1 indicates "no effect" since the multiplication of the parameter times the constant yields the constant. A parameter greater than one increases an expected frequency while its inverse would decrease the expected frequency in the opposed category. Gamma parameters alleviate the multiplication by the constant and predicts the odds *ratio* directly. An odds ratio of 1 for any given subscript configuration, e.g., $\Omega_{ijk\cdot}$, indicates no differential for that configuration, and accordingly the product of the appropriate gammas would equal one. Similarly, if there is no effect from a given variable or set of variables the individual gamma parameter in most cases would be equal to one.

Finally, we can write the model represented by equations (4)-(7) in a linear additive form by taking the logarithms of both sides of each to find another set of summary parameters. Doing this, one obtains

$$\Phi_{ijk\cdot} = \beta_{\cdot}^{\bar{A}} + \beta_{i}^{\bar{A}} + \beta_{j}^{E\bar{A}} + \beta_{k}^{C\bar{A}}$$

$$\Phi_{\cdot jk1} = \beta_{\cdot}^{\bar{E}} + \beta_{j}^{R\bar{E}} + \beta_{k}^{C\bar{E}}$$

$$\Phi_{i\cdot k1} = \beta_{\cdot}^{\bar{R}} + \beta_{i}^{E\bar{R}} + \beta_{k}^{C\bar{R}}$$

and

$$\Phi_{ij\cdot 1} = \beta_{\cdot}^{\bar{C}} + \beta_{i}^{E\bar{C}} + \beta_{j}^{R\bar{C}}$$

Similar to the equations using gammas the entity on the left side of the equation is dependent on a "general mean" coefficient (those with single letters in the superscript and a set of "bivariate effect" parameters (those with two letters in the superscript). The beta parameters are especially useful in determining the statistical significance of any given "effect." Let us now present the results of the first example both for the substantive results they provide and as an illustration of parameter interpretation.

Table 2 presents the gamma and beta parameters from a model allowing two variable effects only. That is, the data of Table 1 were fitted using only the six two variable marginal tables mentioned above. The "standard effect" parameters (in parentheses in the righthand column for each year) are the beta parameters divided by their standard deviation. Goodman notes that for large samples this parameter is distributed normally so these parameters can be used to assess statistical significance. (It should be noted that Goodman has devised other methods for assessing the statistical significance of the entire model and individual parameters as well.)

Table 2 reveals several things. Most notably the model does not fit the data well at all as indicated by the chi-square statistics. (We do not reproduce the tables of expected frequencies because of space limitations.) Second, we find covariances among the exogenous variables as expected with the exception of the relationships between education and church attendance in 1972 and religion and church attendance in 1973. (These are the two letter "variables" containing Es, Rs, and Cs in Table 12.) Otherwise, highly educated people tend to be Catholic and attend church often, and without being redundant, a greater proportion of Catholics than Protestants attends church often.

The primary variable of interest, the one that is designated "dependent," is attitude toward abortion. This analysis confirms the results from tabular analyses which indicated education is strongly related to attitude but the strength of that relationship is decreasing (note the effects of the "variable" EA), religion is significantly related to attitude only in 1973 (RA), the year of the Supreme Court decision, and church attendance is the variable most strongly and consistently related to attitude (A).

This is all well and good, but there are two problems. First, the log-linear analysis tends to mask some important details of these relationships. Second, the model does not fit the data well.

Masking of detail is expected when any summary device is employed, but very often it is the peculiarities of data which are the most interesting. For instance, the attenuation of the relationship between education and attitude toward abortion results solely from an increase in approval by those with the lowest degree of educational attainment. This reverses the trend of the sixties when the upper educated groups became more favorable toward abortion and the lower educated groups remained consistently against it.

As to why the model does not fit the data well, it would be tautological to say "because the relationships are too complicated to be adequately accounted for by the simple direct effects model, but this is probably the best answer. There are probably interaction effects present. On the basis of tabular inspection we noted a three variable interaction among education, religion, and abortion attitude; that is, the relationship between education and abortion attitude depends on religion or equivalently the relationship between religion and abortion attitude depends on educational achievement.[3]

This interaction effect is evident from the significant interaction parameter E R A in Table 3 (except in 1973 which could be expected examining the original tables). Table 3 gives a very special sort of model, the so-called "saturated model" in which all parameters are allowed, all degrees of freedom are used up, and the data are reproduced exactly. The saturated model is a fishing expedition, used to see what effects might be present in a set of data. In this case its use is probably justified for two related reasons. First, simple, intuitive models do not fit the data well. That means that simple theoretical notions are probably inadequate to account for the observed relationships. Having few if any more complicated theories we resort to an empirical clam dig which the saturated model provides. Second, in a long search process characteristic of the Goodman system we found few models which fit the data better than the simple effects model with the one interaction term added (this result is uncharacteristic of the Goodman system).[4] It seems that we have encountered a set of data which Davis (1974:223) warned might exist when he said:

> I strongly suspect, but cannot prove, that it is possible to fail in the attempt to find a final model. The problem seems to occur in a set of data with a large number of effects of borderline strength. . . . the failure of a general model such as the single-variable or the two-variable model [as we have considered above] means "it is not the case that nothing is going on," which is not quite the same as saying "something definite is going on."

As can be seen in Table 3 several of the interaction effects in each of the three years could be considered to be of "borderline strength" (e.g., "variables" RCA in 1973 and ECA in 1974).

One final comment should be made about Table 3 as it relates to the findings reported above. We said that the primary direct effect of a religious variable on abortion attitude was the effect of church attendance rather than denominational identification. Table 3 indicates this is the case in 1972 and 1974 but not in 1973. In 1973 the interaction effect of religion and education on attitude disappears, the covariance between the two is reduced as is the covariance between religion and church attendance, and the direct effect of religion on abortion attitude appears.

Confirming this tabular analysis reveals that in 1973 the Protestants, both those who seldom go and those who often go to church, increased in approval of abortion, while the Catholics did not. Not until 1974 did all Catholics become more favorable toward abortion. It would appear that Protestants responded much more quickly to the Supreme Court decision although such an inference must be made cautiously.

To conclude this presentation let us consider a model which seeks to explain the relationships between region and size of place of residence and abortion attitude. Recall that it was suggested that education and the religious variables probably account for a large part of the differentials in abortion attitude on these variables. That is to say, the six variables under consideration might be related in a manner similar to that shown in Figure 2.

It is appropriate at this point to insert a parenthetical comment about the non-causal appearance of the diagram in Figure 2 (and the diagrams in Figure 1). In the tradition of causal analysis the arrows would be either single headed or curved (or there would be two single headed, straight arrows connecting variables). As Goodman (1972b) points out, equations such as (4)-(7) above represent a wide range of equivalent "causal models." Rather than attempt to justify one model or the other we opt for simple statements of covariance, differentials if you will, even in our diagrammatic presentations. In addition to being an "easy out" option it is our opinion that Figure 2 best represents the static nature of the theory and the associated data with which we are dealing.

The arrow between region and religion was included because of the fact that there are a large number of Protestants in the South. An arrow from S.R.C. Belt Code to education was included thinking that people in urban areas would have a greater opportunity to obtain formal education and that they would have higher educational achievement on the average. There is no reason to expect region to have a direct effect on education. We do, however, expect it to have an indirect effect through the urban-rural variable. Similarly, Belt Code is not thought to have any direct relationship with religion. Figure 2 includes all of the covariances between pairs of the three variables, education, religion and church attendance. Inspection of Figure 2 suggests, however, that some of these bivariate relationships and possibly the interaction effect of education and religion on abortion attitude might be attenuated under this slightly more complicated but also more complete scheme. Perhaps the most important theoretical statement in Figure 2 is expressed by the lack of an arrow between either size of place or region of residence and abortion attitude. Expecting "complete explanation" of these relationships by education and the religious variables may be unwarranted, but it is a speculation that can be tested against the data.

Table 4 gives a *partial listing* of coefficients obtained under the *saturated model*. We have excluded all interaction effects except those of region and size of place of residence on education and education and religion on abortion attitude. All other interaction effects are statistically insignificant (although several of them are of borderline strength, again).

There are several important things to note in Table 4. First, consider the relationships among education, religion, and church attendance. The relationship between education and religion, as speculated, was reduced to statistical insignificance although it remains an "important" component of the model. Similarly the relationship between education and church attendance is reduced, but the relationship between religion and church attendance remains relatively unchanged, as might be expected from the model depicted by Figure 2. Next, note the interaction effect E R A; it too has been reduced a great deal by the inclusion of the exogenous variables region and Belt Code. Third, examine the relationships between the exogenous variables and the "intervening variables." The expected relationship between religion and region is certainly apparent; the relationship between education and Belt Code is only marginally significant in 1973 and 1974. The expectations of nil relationships with church attendance are supported, for the most part.

Finally, and perhaps most important, what do the results say about the "explanatory power of the intervening variables"? They should reduce the relationships between region and size of place of residence and abortion attitude to insignificance if there was a relationship there in the first place (as is not the case with size of place of residence and abortion attitude in 1973 and 1974).[5] Comparing values from Table 4 and note one can quickly see that although the relationships are not nil they are all reduced dramatically. This lends some support to the argument that education and religion play an important role in accounting for differences in abortion attitude by region.

Obviously, this sort of analysis could be conducted for each of the differentials we explored in the expanded version. For present purposes, however, it will be instructive to stop here and summarize what has been done. This exercise began by noting the limitations of simple tabular analysis. Those limitations are magnified as the number of variables under consideration is increased or if one attempts to assess a set of data under some set of theoretical notions. To avoid some of these limitations the strategy of multivariate analysis using a log-linear model was employed. It allowed us to subject some of the claims made in the previous section to empirical analysis and it provided a concise scheme for assessing the overall utility of a general theoretical model. It must be re-emphasized, however, that the sets of data with which we have been dealing serve as examples which highlight some of the limitations of the log-linear strategy. In a future paper, we intend to apply this and alternative strategies in a comparative way to the analysis of some of these differentials.

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FOOTNOTES

1. We proceed in this section as if the reader is at least somewhat familiar with this system.

2. Variables and the nature of the dichotomies used in these two examples are:

REGION OF THE COUNTRY: South (including the South Atlantic, East South Central, and West South Central regions) and Other.

SRC BELT CODE: Urban (all SMSAs and suburbs) and rural (counties which have no towns of 10,000 or more or counties which have towns of 10,000 or more which are not classified as "urban").

EDUCATION: measured by years in school completed—0 to 11 years and 12 or more years in school.

RELIGION: religious identification on a forced choice question limiting responses to Protestant, Catholic, Jewish, Other, or no religion. We dichotomized this variable Protestant and Catholic excluding all other respondents.

CHURCH ATTENDANCE: self report of how often the respondent attends religious service—Seldom (once a month or less) and Often (more than once a month). "Don't know" and "no answer" responses were excluded.

ABORTION ATTITUDE: 0-3 "Yes" responses and 4-6 "Yes" responses.

3. Following are the values of Yule's Q for the 2 x 2 tables relating education and abortion attitude for given religions:

	1972	1973	1974
Protestant	.58	.21	.37
Catholic	.23	.18	-.05

4. The goodness-of-fit chi-squares (with 4 degrees of freedom) and their probabilities under the model (ERA), (EC), (RC), (CA) are:

Year	χ^2	$Pr(\chi^2)$
1972	7.88	0.09
1973	15.18	0.01
1974	8.55	0.07

Note that in 1973 when we expected no interaction effect among education, religion, and attitude, the addition of the interaction effect makes little difference in the goodness-of-fit of the model.

5. Standard effect coefficients under the saturated model for the variables region, size of place of residence and attitude toward abortion follow:

Variable	*1972*	*1973*	*1974*
Region Size	-8.01	-4.27	-3.90
Region Abortion Attitude	3.06	2.88	4.27
Size Abortion Attitude	-5.55	-1.75	-0.35

* * * *

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Table 1

Observed Cross-Classifications on Four Dichotomized Variables*
from the 1972, 1973, and 1974 NORC
General Social Surveys

			Abortion Attitude					
Education	Religion	Church Attendence	- 1972	+	- 1973	+	- 1974	+
-	-	-	136	75	98	107	108	105
-	-	+	170	58	112	57	93	58
-	+	-	21	22	42	41	21	37
-	+	+	83	28	40	12	31	21
+	-	-	80	227	73	217	72	224
+	-	+	142	136	117	150	139	150
+	+	-	37	55	28	67	30	72
+	+	+	107	57	107	50	102	61
		Table Total	1434		1318		1324	
		Excluded	179		186		160	
		Total Sample	1613		1504		1484	

*Dichotomized Variables = (1) Education: 0-11 years (-); 12 yrs. or mroe (+); (2) Religion: Protestant (-), Catholic (+); (3) Church Attendance: Seldom (-), Often (+); (4) Abortion scale score: Disapproving (-), Approving (+). See note 8 for specification of categories.

Table 2

Estimates of γ and β parameters for the Simple
Model Relating Education (E), Religion (R), and
Church Attendance (C), to Abortion Attitudes (A)
for 1972, 1973, and 1974

Variables	1972 γ	β	Stand.Effect	1973 γ	β	Stand.Effect	1974 γ	β	Stand.Effect
E	0.61	-0.48	(-7.20)	0.59	-0.52	(-7.71)	0.52	-0.66	(-9.56)
R	2.75	1.02	(14.94)	2.46	0.90	(13.32)	2.66	0.98	(14.28)
C	0.74	-0.32	(-4.43)	1.04	0.04	(0.66)	0.98	-0.02	(-0.41)
A	1.37	0.32	(4.50)	1.08	0.08	(1.19)	0.94	-0.08	(-1.03)
E R	1.19	0.16	(2.41)	1.17	0.16	(2.24)	1.21	0.20	(2.82)
E C	1.00	0.00	(0.04)	1.32	0.28	(4.06)	1.30	0.26	(3.88)
R C	1.42	0.34	(5.00)	1.08	0.08	(1.05)	1.21	0.18	(2.64)
E A	1.72	0.54	(8.00)	1.54	0.44	(6.33)	1.39	0.34	(4.84)
R A	0.86	-0.14	(-2.19)	0.76	-0.28	(-3.98)	0.90	-0.10	(-1.43)
C A	0.64	-0.44	(-6.46)	0.61	-0.25	(-7.37)	0.62	-0.46	(-6.76)

Goodness-of-fit $\chi^2 = 18.87$ $\chi^2 = 21.35$ $\chi^2 = 19.80$

df = 5

Table 3

Estimates of γ and β parameters under the Saturated Model Relating Education (E), Religion (R), Church Attendance (C), and Abortion Attitude (A) for 1972, 1973, and 1974

	1972			1973			1974		
Variable	γ	β	Stand. Effect	γ	β	Stand. Effect	γ	β	Stand. Effect
E	0.64	-0.46	(-6.86)	0.61	-0.48	(-6.96)	0.53	-0.62	(-8.97)
R	2.66	0.98	(14.66)	2.59	0.96	(13.71)	2.69	1.00	(14.44)
C	0.71	-0.34	(-5.08)	1.08	0.08	(1.08)	0.96	-0.04	(-0.71)
A	1.28	0.24	(3.62)	1.04	0.04	(0.62)	0.86	-0.16	(2.25)
E R	1.17	0.14	(2.20)	1.14	0.14	(1.87)	1.21	0.20	(2.80)
E C	0.94	-0.06	(-0.07)	1.44	0.36	(5.17)	1.32	0.28	(4.03)
R C	1.39	0.34	(4.98)	1.02	0.02	(0.33)	1.19	0.16	(2.47)
E A	1.54	0.44	(6.48)	1.49	0.40	(5.78)	1.25	0.24	(3.42)
R A	0.92	-0.08	(-1.12)	0.79	-0.24	(-3.30)	0.98	-0.02	(-0.33)
C A	0.62	-0.46	(-6.94)	0.58	-0.54	(-7.84)	0.62	-0.48	(-6.93)
E R C	1.08	0.08	(1.12)	0.81	-0.22	(-3.04)	0.98	-0.02	(-0.42)
E R A	1.25	0.24	(3.49)	1.08	0.08	(1.10)	1.21	0.20	(2.77)
E C A	1.06	0.06	(0.94)	1.06	0.06	(0.98)	1.14	0.14	(1.91)
R C A	1.08	0.08	(1.09)	1.17	0.14	(2.11)	1.10	0.10	(1.49)
E R C A	1.10	0.08	(1.33)	0.96	-0.04	(-0.69)	1.02	0.02	(0.32)

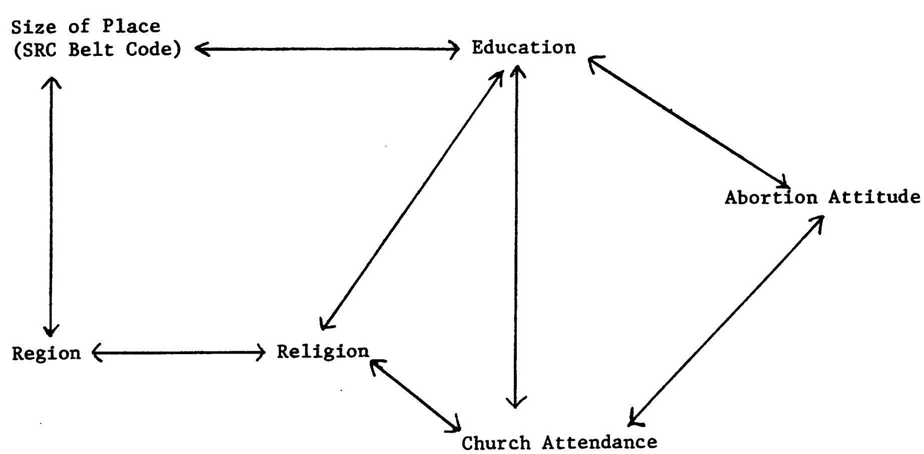

Figure 2. A hypothetical model relating region and size of place of residence to abortion attitude through the education and religion variables.

Table 4

Partial Listing of Coefficients from the Saturated Model Relating Region (P) and Size of Place (S) of Residence to Abortion Attitude (A) through Education (E), Religion (R), and Church Attendance (C) for 1972, 1973, and 1974

	1972			1973			1974		
Variables	γ	β	Stand.Effect	γ	β	Stand.Effect	γ	β	Stand.Effect
P	0.31	-1.16	(-10.51)	0.35	-1.04	(-10.19)	0.38	-0.96	(-10.34)
S	1.12	0.12	(1.11)	0.66	-0.42	(-4.09)	0.71	-0.34	(-3.72)
E	0.58	-0.54	(-4.89)	0.61	-0.48	(-4.73)	0.50	-0.68	(-7.33)
R	4.24	1.44	(13.15)	3.46	1.24	(12.07)	3.24	1.18	(12.62)
C	0.62	-0.48	(-4.42)	1.00	0.00	(-0.07)	0.90	-0.12	(-1.19)
A	1.30	0.28	(2.47)	1.14	0.14	(1.37)	0.96	-0.04	(-0.36)
P S	0.66	-0.40	(-3.73)	0.76	-0.28	(-2.81)	0.76	-0.26	(-2.87)
P E	1.12	0.12	(1.03)	1.08	0.08	(0.72)	0.98	-0.02	(-0.30)
S E	0.90	-0.10	(-0.85)	0.79	-0.22	(-2.19)	0.79	-0.22	(-2.44)
P R	2.13	0.76	(6.91)	1.93	0.66	(6.42)	1.69	0.52	(5.65)
S R	0.76	-0.28	(-2.58)	0.94	-0.06	(-0.55)	0.81	-0.20	(-2.18)
E R	1.25	0.24	(2.13)	1.12	0.10	(1.06)	1.23	0.22	(2.31)
P C	0.85	-0.18	(-1.58)	0.85	-0.18	(-1.66)	0.86	-0.14	(-1.49)
S C	1.32	0.28	(2.57)	0.86	-0.14	(-1.39)	0.96	-0.04	(-0.46)
E C	0.86	-0.16	(-1.37)	1.35	0.30	(2.96)	1.32	0.28	(3.02)
R C	1.56	0.44	(4.03)	1.08	0.06	(0.68)	1.23	0.20	(2.18)
P A	1.16	0.14	(1.32)	1.25	0.22	(2.19)	1.25	0.22	(2.45)
S A	0.81	-0.22	(-1.99)	1.00	0.00	(0.10)	1.02	0.02	(0.20)
E A	1.56	0.44	(4.06)	1.56	0.44	(4.36)	1.30	0.26	(2.87)
R A	0.86	-0.14	(-1.34)	0.74	-0.30	(-3.00)	0.92	-0.08	(-0.94)
C A	0.69	-0.36	(-3.30)	0.59	-0.52	(-5.04)	0.69	-0.36	(-3.92)
P S E	0.77	-0.24	(-2.27)	0.74	-0.30	(-2.89)	0.76	-0.28	(-3.06)
E R A	1.17	0.16	(1.39)	1.02	0.02	(0.11)	1.17	0.16	(1.64)