**RELG4R: Exercise Using SPSS to Explore Conceptualization, Measurement, and Relationships Among Variables with an Alternative Focus on Fundamentalism**

Author:   Ed Nelson
Department of Sociology M/S SS97
California State University, Fresno
Fresno, CA 93740
Email:  **ednelson@csufresno.edu**

**Notes to the Instructor:**  The data set used in this exercise is gss14\_subset\_for\_classes\_RELG.sav which is a subset of the 2014 General Social Survey.  Some of the variables in the GSS have been recoded to make them easier to use and some new variables have been created.  The data have been weighted according to the instructions from the National Opinion Research Center.  This exercise uses RECODE to combine categories in existing variables, SELECT CASES to select out a subset of cases, FREQUENCIES to see how respondents answered the questions, and CROSSTABS to explore the relationships among variables.  In CROSSTABS, students are asked to use percentages, Chi Square, and an appropriate measure of association.  A good reference on using SPSS is *SPSS for Windows Version 23.0 A Basic Tutorial* by Linda Fiddler, John Korey, Edward Nelson (Editor), and Elizabeth Nelson.  The online version of the book is on the [**Social Science Research and Instructional Council's Website**](http://ssric.org/node/582).  You have permission to use this exercise and to revise it to fit your needs.  Please send a copy of any revision to the author.  Included with this exercise (as separate files) are more detailed notes to the instructors, the SPSS syntax necessary to carry out the exercise (SPSS syntax file), and the SPSS output for the exercise (SPSS output file). Please contact the author for additional information.

I’m attaching the following files.

* [**Data subset**](http://ssric.org/files/gss14_subset_for_classes_RELG.sav) (.sav format).
* [**Extended notes for instructors**](http://ssric.org/files/Extended_Notes_for_Instructors_for_RELG4R.docx). MS Word (.docx) format.
* [**SPSS syntax file**](http://ssric.org/files/SPSS_Syntax_for_RELG4R.sps) (.sps format).
* [**SPSS output file**](http://ssric.org/files/SPSS_Output_for_RELG4R.spv) (.spv format).
* [**This page**](http://ssric.org/files/RELG4R.docx) in MS Word (,docx) format.

**Goals of Exercise**

The goal of this exercise is to think about a concept typically called religious fundamentalism and to consider how we might measure this concept using data from the General Social Survey.  Once we have decided on a measure, then we will explore the relationship between this variable and various forms of religious behavior and opinions on various social issues.  The exercises also provides practice in using several SPSS commands --  RECODE to combine categories in existing variables, SELECT CASES to select out a subset of cases, FREQUENCIES to see how respondents answered the questions, and CROSSTABS to explore the relationships among variables.   Your instructor will tell you how to access the data set which is called gss14\_subset\_for\_classes\_RELG.sav.

**Part I—Finding a Measure of Fundamentalism**

You have probably heard some religions and individuals described as fundamentalist.  Have you ever wondered what that meant?  Keith Roberts in his book *Religion in Sociological Perspective* (Wadsworth, 1995, page 370) says that fundamentalists insist “on the inerrancy of scripture and on a literal interpretation of the Bible.” The project directors for the General Social Survey created a variable called FUND.  This variable classifies religions as fundamentalist, moderate, or liberal.  All the members of a particular religious group are placed in the same category of FUND.  That doesn’t mean that all Baptists or all Lutherans are placed in the same category.  Baptists and Lutherans are made up of different religious groupings.  For example, Lutherans may belong to the Evangelical Lutheran Church in America (ELCA), the Lutheran Church Missouri Synod, the Wisconsin Evangelical Lutheran Synod, or some other Lutheran group.  Baptists may belong to the Southern Baptist Convention, the American Baptist Church in the USA, or some other Baptist group.  The GSS classified Missouri Lutheran and Wisconsin Lutheran churches as fundamentalist and ELCA churches as moderate.   Southern Baptists are classified as fundamentalist and American Baptists as moderate.

In order to see this for yourself, run a crosstab for R4\_DENOM and R11\_Fund.  (See Chapter 5, Crosstabulation in the online SPSS book cited on page 1 of this exercise.)  There are a lot of categories for the variable R4\_DENOM so let’s put R4\_DENOM in the row and R11\_FUND in the column and get the row percents.  That will show us what percent of each denomination (or religious grouping) are classified as fundamentalist, moderate, and liberal.  You don’t need to get any additional statistics for this table.  All you need is the row percents.  Write a paragraph describing the relationship between these two variables using the row percents.  Pay particular attention to the way the value of R11\_FUND is assigned to each religious group.  Notice that all the members of a religious group receive the same classification (i.e., fundamentalist, moderate or liberal).

However, there is a problem with this classification scheme.  There is a lot of variety among people who belong to the same religious group.  Some members of a particular religious group might be fundamentalist and others might be moderate or liberal.  In other words, there is variation within a particular religious group.  What we need to do is to find a variable that takes this variation into account.

One of the other variables in the General Social Survey (R10\_BIBLE) asks respondents which of the following statements is closest to their feelings about the Bible.

1. "The Bible is the actual word of God and is to be taken literally word for word.”
2. “The Bible is the inspired word of God but not everything in it should be taken literally, word for word.”
3. “The Bible is an ancient book of fables, legends, history, and moral precepts recorded by men.”

There is also a category for respondents who volunteer other answers.

This question seems to capture what Roberts and Yamane say is one of the core beliefs of fundamentalists.  Those who say the Bible is the actual word of God and is to be taken literally word for word are clearly expressing a fundamentalist position while those who say that the Bible is inspired by God but should not be taken literally disagree with this position.  This provides us with another measure of fundamentalism.

Let’s recode R10\_BIBLE by combining the other category (7) with those who say the Bible is an ancient book of fables (3).  (See Chapter 3, Recoding into New Variables in the online SPSS book.)  There aren’t many who volunteer another answer and this would reduce the number of categories and make our analysis simpler without losing any critical information.  Do this by recoding into a different variable.  You could call this new variable R10\_BIBLE1 and recode 1 as 1, 2 as 2, 3 as 3, and then recode 7 as 3.  This would keep the first two categories the same and combine categories three and seven.  Do the recoding and then run a frequency distribution for both R10\_BIBLE and R10\_BIBLE1 to make sure that you have done it correctly.  If you recoded it correctly, you will want to assign value labels for the new variable, R10\_BIBLE1.

If you recoded incorrectly, you’ll have to do it again.  If you recoded into the same variable, you will need to exit SPSS (or close your file) being sure **NOT** to save it.  Then get back into SPSS and open the gss14\_subset\_for\_classes\_RELG.sav file again.  The reason for this is that you have altered the coding of these three variables and will have to get another copy of the data file to start over.  If you saved the data file, then you would have written over the original copy.  So be careful.  That’s why we said to recode into different variables in this exercise.

**Part II—More Recoding**

Now that we have found a measure of fundamentalism in our data set, let’s see if there are any differences in religious behavior between fundamentalists and non-fundamentalists. First, let’s look for variables that measure religious behavior.  One of the questions asks respondents to estimate the strength of their religious affiliation.  This variable is called R8\_RELITEN.  Respondents were also asked how often they attend religious services (R6\_ATTEND) and how often they pray (R7\_PRAY).

Before you start, run FREQUENCIES in SPSS for these three variables (R8\_RELITEN, R6\_ATTEND, R7\_PRAY).  Let’s recode all three of these variables as different variables.

The variable R8\_RELITEN records the respondent’s self-reported strength of affiliation.  The possible categories are strong (1), somewhat strong (2), not very strong (3), and no religion (4).  Let’s combine somewhat strong, not very strong, and no religion into one category and give that category a value of 2.  We’ll recode this into a new variable and call it R8\_RELITEN1.  Now we have two categories--strong (1) and not strong (2).  Be sure to recode into a different variable and not into the same variable.  Add the value labels for this variable to make it easier to read the output.

Now let’s recode R6\_ATTEND into a new variable we’ll call R6\_ATTEND1.  Let’s combine every week (7) and more than once a week (8) into one category and give this category a value of 1.  Combine once a month (4), two to three times a month (5), and nearly every week (6) into another category and give this a value of 2.  Finally, combine never (0), less than once a year (1), once a year (2), and several times a year (3) into another category and give this a value of 3.  Now we have three categories--often (1), sometimes (2), and infrequently (3).  Add the value labels for this variable to make it easier to read the output.

Finally, let’s recode R7\_PRAY into a new variable called R7\_PRAY1.  Combine several times a day (1) and once a day (2) into one category and give that a value of 1.  Combine several times a week (3) and once a week (4) into another category and give that a value of 2.  Combine less than once a week (5) and never (6) into another category and give that a value of 3.  Now we have three categories--often (1), sometimes (2), and infrequently (3).  Add the value labels for this variable to make it easier to read the output.

Now that you have recoded these variables, run FREQUENCIES in SPSS to get a frequency distribution for each of these three recoded variables.  Compare these distributions to the distributions you ran before you recoded to see if you made any mistakes.  If you made a mistake, you’ll need to do it over.

**Part III-- Differences in Religious Behavior between Fundamentalists and Non-fundamentalists**

Fundamentalism, as measured by R10\_BIBLE1, is a concept that applies only to Christians.  Therefore, before we carry out our analysis, we need to select out those respondents who are Christian.  We can use R1\_RELG to select out the Christians.  (See Chapter 3, Using Select Cases in the online SPSS book.)  To do this, click on Data on the menu bar.  Then click on Select Cases.  What you want to do is to select only those cases which are 1 (Protestant), 2 (Catholic), 10 (Orthodox Christians), or 11 (Other Christians) on the variable R1\_RELIG.  This will select out the Christians for further analysis.  Your instructor will show you how to do this.

To check to make sure you selected the correct cases run a frequency distribution for R1\_RELIG.  You should only see Protestants, Roman Catholics, Orthodox Christians, and other Christians in the distribution.

Now that we have recoded the measures of religious behavior, let’s see if there are any differences between fundamentalists and non-fundamentalists in terms of these variables.

To do this we will have to run three crosstabulations with R10\_BIBLE1 as our independent variable and R8\_RELITEN1, R6\_ATTEND1, and R7\_PRAY1 as dependent variables.  Be sure to get the correct percents and ask for Chi Square and an appropriate measure of association.

Write several paragraphs describing the relationship of R10\_BIBLE1 to each of these measures of religious behavior.  How do fundamentalists differ from non-fundamentalists?  Use the percents to help you describe the relationship. What do Chi Square and your measure of association tell you?

**Part IV-- Differences between Fundamentalists and Non-fundamentalists on Social Issues**

Let’s look in the data set for some measures of the respondent’s opinion on social issues.  You can click on Utilities in the menu bar of SPSS and then on Variables in the Utilities’ menu to see a list of the variables in the data set.  There are questions on the legalization of Marijuana (M1\_GRASS), homosexual relations (S7\_HOMOSEX), suicide (SUI1\_SUICIDE1), allowing incurable patients to die (SUI5\_LETDIE1), pornography laws (PORN1\_PORNLAW), sex before marriage (S9\_PREMARSX) and others.

Choose one of these variables for your analysis.  Select a variable on which you think fundamentalists and non-fundamentalists will disagree.

1. Write a hypothesis stating how you expect fundamentalists and non-fundamentalists to differ.
2. Write a paragraph or two that indicates why you think fundamentalists and non-fundamentalists will differ.  In other words, write an argument to support your hypothesis.
3. Use SPSS to run the crosstabulation of R10\_BIBLE1 and your variable.  Think about which is the independent and dependent variable.  Remember to get the correct percentages.  Use Chi Square and an appropriate measure of the strength of the relationship.
4. Write a paragraph interpreting the table that SPSS gave you and indicate whether the data support your hypothesis.  Use the percents, Chi Square, and the measure of association to help you interpret the table.

When you are done, remember to click on Data on the menu bar and then on Select Cases and select All Cases and click on OK.  This will remove the selection of Christians and allow you to continue any further analysis with all the cases.

**Part V—Further analysis of fundamentalism**

Fundamentalism is a concept that applies most directly to Christians and specifically to Protestants.  Let’s focus on Protestants and Catholics and compare these two groups to see whether the relationship you analyzed in Part III is stronger for Protestants than for Catholics.  To do this, click on Data on the menu bar.  Then click on Select Cases.  What you want to do is to select only those cases which are 1 (Protestant) or 2 (Catholic) on the variable R1\_RELIG.  This will select out the Protestants and Catholics for further analysis.  Your instructor will show you how to do this.

Run FREQUENCIES for R1\_RELIG to make sure you selected the right cases.  You should only see Protestants and Catholics in the frequency distribution.

Repeat the analysis you did in Part III but this time control for R1\_RELIG.  That means that you will get one table for Protestants and another table for Catholics.  Compare the tables for Protestants and Catholics and decide whether the relationship is stronger for Protestants than for Catholics.  How would you decide which relationship is stronger and how would you explain your finding?

When you are done, remember to click on Data on the menu bar and then on Select Cases and select All Cases and click on OK.  This will remove the selection of Protestants and Catholics and allow you to continue any further analysis with all the cases.