

## **Jason Ford's module**

### **Data Analysis Exercise Sociology SYP3520: Criminology Correlates of Desistance**

#### **Description**

The primary researchers in the process of desistance from criminal behavior are Sampson and Laub. Their research has shown that marital status and employment are correlates of desistance. That is, adolescents involved with crime were more likely to discontinue offending in adulthood if they were married and had a good job. However, we have also discussed that this research was based on a re-analysis of the Glueck data, which includes data from males born in Boston during the 1920's. This means that most of what criminologists know about the process of desistance from crime is based on a sample of adult males in the 1950's. There is no question that life in America has changed drastically in the past fifty years. Given the importance of examining historical change inherent in the life course perspective, it is important to determine how changes in the social structure over time impact individuals. Therefore, the goals of this data analysis exercise are to examine changes in marriage and employment over the last fifty years. The purposes are to identify the changes that have taken place, and to hypothesize how these changes may affect the process of desistance from crime today.

#### **Data Sets**

- CENTREND
- MARR5090
- EDOC5090

#### **Key Variables**

##### Marital Status

- Never Married
- Separated
- Divorced
- Widow
- Currently Married

##### Occupation

- Top Working-class
- Other Working-class
- Service
- Blue Collar

##### Race

- Non-black vs. Black

## **Census Data**

Every ten years, the United States Bureau of the Census surveys the population of the country to determine its size and characteristics. Attempting to locate and collect information on every person living in the United States is a very difficult undertaking, and many individuals are missed and many groups undercounted (homeless people, for example). Nevertheless, the U.S. Census makes great efforts to collect information on everyone, and census data provide an extremely valuable resource for examining the changing size, composition, and characteristics of the population of the United States.

Analysis of census data is difficult because of the large number of individuals surveyed and the extensive information collected on each individual analysis is time consuming and expensive. The data that you will use was prepared by the Social Science Data Analysis Network (SSDAN) at the Population Studies Center at the University of Michigan. The information is assembled in data sets composed of a small number of variables for more efficient analysis. (A variable is a characteristic of an individual such as marital status, age, or income). The SSDAN staff actually created a few of the data sets that you will use specifically for this class. Each data set that you will use for this exercise and for subsequent data analysis projects in the class contains information on a random a sample of individuals in the United States who are 15 years of age and over surveyed by the U.S. Census.

## **Using *StudentChip***

The copy of *StudentChip* software you purchased includes instructions on its use. You will be using the software to produce crosstabulations that will show changes in marital status and occupation type over time and differences between racial groups.

## **Crosstabulations and Graphing**

You will be using two techniques to examine changes in the social structure between 1950 and 1990. A crosstabulation shows the relationship between two variables, for example year and marital status or race/ethnicity and number of children. The crosstabulation below shows the relationship between year and education for adults. It shows the educational attainment of individuals in four different census years. In 1950, 65.8% of the population had not completed high school. In 1980, 33.5% of the population had not completed high school (notice that the table is percentaged across the rows). The numbers in the last column are the total numbers in each year and the overall sample total. We can conclude that the educational attainment of individuals in the United States has increased between 1950 and 1980. By calculating the percentage differences we can assess the magnitude of these changes. For example, we can say that 32.3% more people had not completed high school in 1950 than in 1980 (subtracting 33.5% from 65.8%). We can say that 22.2% more people completed high school in 1980 than in the 1950. And we can say that the increase in college attendance occurs at an accelerating rate since

1.4% more people completed college in 1960 than in 1950, 3.0% more people completed college in 1970 than in 1960, and 5.6% more people completed college in 1980 than in 1970.

**EDUCATIONAL ATTAINMENT BY YEAR: 1950-1980**

	No High School	High School Degree	College Degree	TOTAL
1980	33.5%	50.2%	16.2%	13274
1970	47.6%	41.8%	10.6%	10941
1960	59.0%	33.4%	7.6%	9955
1950	65.8%	28.0%	6.2%	8711
ALL	49.6%	39.6%	10.8%	42881

In this crosstabulation, year is the independent variable and education is the dependent variable. Year is called the independent variable because it is the causal variable. Change in year (i.e., the passage of time and associated developments) is causing increases in education. Changes in education are not causing changes in year.

Graphing presents a picture of the data in a crosstabulation that represents the relationship between independent and dependent variables. For this exercise, you will be constructing line graphs (these graphs can be created using StudentChip). Line graphs allow you to represent changes over time as you will do in this exercise (or to compare two or more groups on the same graph as you may do in subsequent data analysis projects).

**Exercise Instructions**

**A. Changes in Marital Status 1950-1990**

First, examine information on the changes in marital status that occurred between 1950 and 1990. Once you are in *StudentChip*, open the directory **CENTREND**, and then open the data file named **MARR5090**. Choose the *Crosstabulation* option from the *Command Menu* and ask for a crosstabulation of "year" by "marital" (the marital status of individuals). Remember that the independent variable should always be the row variable. Always enter the row variable first when specifying variables using the crosstabulation command. Using the *Table Menu*, specify *Percentage across*. A crosstabulation of year and marital status will appear on the screen. Record the percentages in the crosstabulation in the spaces provided on the answer sheet. Construct line graphs by using the *Table Menu*, specify *Plot line*.

**QUESTIONS:** What changes have taken place in marital status between 1950 and 1990? In particular, what are the trends for the categories of currently married and never married, as well as divorced? Based on these changes what are the implications for the relationship between marriage and desistance in contemporary society?

Second, given the importance of the race/crime relationship it is helpful to examine these changes in marital status based on race (black vs. non-black). Go back to the data file named MARR5090. Once again, choose the *Crosstabulation* option from the *Command Menu* and ask for a crosstabulation of "year" by "marital". Using the *Table Menu*, specify *Control* and select race. A crosstabulation of year and marital status will appear on the screen for both non-blacks and blacks. As above, record the percentages in the crosstabulation in the spaces provided on the answer sheet. Construct line graphs by using the *Table Men*, specify *Plot line*.

QUESTIONS: What happens to the trend in marital status once race is entered as a control? Are there different trends in marital status for non-blacks and blacks? Was the pace of change more rapid for blacks compared to non-blacks or has change taken place at a relative constant rate? Given the known correlation between racial background and arrest rates, what implications do these differences have for desistance from crime in contemporary society?

## B. Changes in Occupation Type 1950-1990

First, examine information on the changes in occupation type that occurred between 1950 and 1990. Once you are in *StudentChip*, open the directory **CENTREND**, and then open the data file named **EDOC5090**. Choose the *Crosstabulation* option from the *Command Menu* and ask for a crosstabulation of "year" by "occ" (the occupation type of individuals). Remember that the independent variable should always be the row variable. Always enter the row variable first when specifying variables using the crosstabulation command. Using the *Table Menu*, specify *Percentage across*. A crosstabulation of year and marital status will appear on the screen. Record the percentages in the crosstabulation in the spaces provided on the answer sheet. Construct line graphs by using the *Table Menu*, specify *Plot line*.

QUESTIONS: What changes have taken place in occupational type between 1950 and 1990? In particular, what are the trends for blue collar jobs? Based on these changes what are the implications for the relationship between employment and desistance in contemporary society?

Second, given the importance of the race/crime relationship it is helpful to examine these changes in occupation type based on race (black vs. non-black). Go back to the data file named **EDOC5090**. Once again, choose the *Crosstabulation* option from the *Command Menu* and ask for a crosstabulation of "year" by "occ". Using the *Table Menu*, specify *Control* and select "race". A crosstabulation of year and occupation type will appear on the screen for both non-blacks and blacks. As above, record the percentages in the crosstabulation in the spaces provided on the answer sheet. Construct line graphs by using the *Table Men*, specify *Plot line*.

QUESTIONS: What happens to the trend in occupational type once race is entered as a control? Are there different trends in for non-blacks and blacks? Was the pace of change more rapid for blacks compared to non-blacks or has change taken place at a relative constant rate? Given the known correlation between racial background and arrest rates, what implications do these differences have for desistance from crime in contemporary society?

### **Summarizing Results and Drawing Conclusions**

Finally, write a paper summarizing the results of your investigation of changes in marital status and occupation type between 1950–1990. This summary should be based on your answers to the questions posed at each stage of the analysis (it may be helpful to refer to the tables and graphs you have constructed). In addition, based on the changes in marital status and occupation type over time, draw conclusions for the meaning of the relationship between marriage/employment and desistance from crime in contemporary society. Is it okay for criminologists to rely on the work of Sampson and Laub, or is further research, using a more contemporary sample, necessary to understand the process of desistance from criminal behavior? In addition, can you think of any other changes in the social structure that have occurred over the last fifty years that may impact the process of desistance from crime (you may want to explore the data sets in the CENTREND file to answer this final part)?

## ANSWER SHEET

### Year by Marital Status

	Never Married	Separated	Divorced	Widowed	Currently Married
1950					
1960					
1970					
1980					
1990					

### Year by Marital Status (Non-blacks)

	Never Married	Separated	Divorced	Widowed	Currently Married
1950					
1960					
1970					
1980					
1990					

### Year by Marital Status (Blacks)

	Never Married	Separated	Divorced	Widowed	Currently Married
1950					
1960					
1970					
1980					
1990					

**Year by Occupation**

	Top W.C.	Other W.C.	Service	Blue Collar
1950				
1960				
1970				
1980				
1990				

**Year by Occupation (Non-blacks)**

	Top W.C.	Other W.C.	Service	Blue Collar
1950				
1960				
1970				
1980				
1990				

**Year by Occupation (Blacks)**

	Top W.C.	Other W.C.	Service	Blue Collar
1950				
1960				
1970				
1980				
1990				