

.....Using StudentChip to Create Tables.....

This tutorial illustrates how to use the StudentChip program to analyze our SSDAN census datasets with table analysis (crosstabs) and a few other features. It is not meant to be an exhaustive explanation of StudentChip, but will walk you through the steps required to answer some basic questions using the program. The tutorial is broken into the following sections: Accessing StudentChip and Finding a file, Saving your Output, Making a Crosstab, Controlling, and Exiting the Program.

The example we will use here focuses on the following questions: Are there differences in the earnings of women and men, ages 35-44, in 1990? Do these differences decrease when we look at specific occupations? To investigate these questions we will use the dataset **WORK9-35**, taken from the 1990 U.S. Census, containing information on women and men ages 35-44 who work full time, year round.

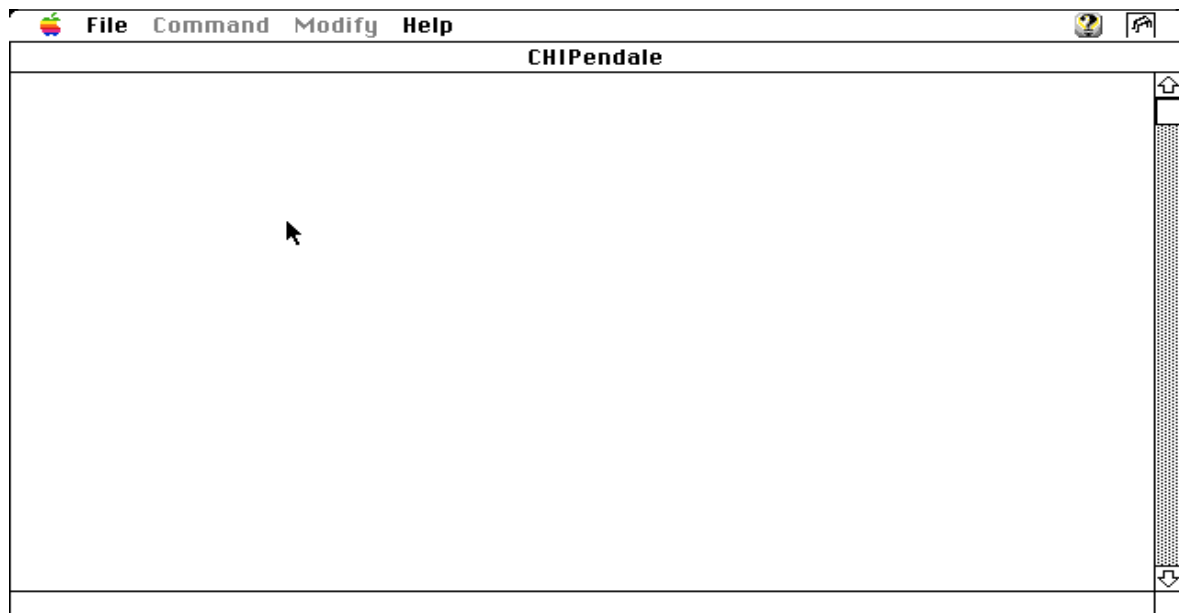
A CCESSING STUDENTCHIP AND FINDING A FILE

To investigate the above question, we need to access StudentChip, and then locate the dataset WORK9-35.

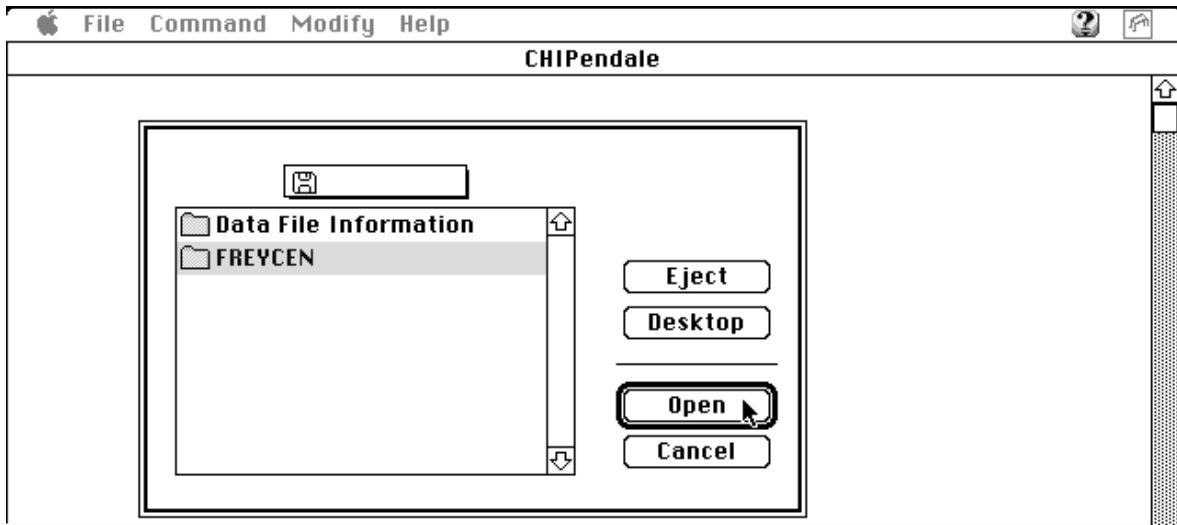
To access StudentChip: (1) Put the disk in the drive (2) "Double click" on the icon for the disk, and (3) "Double click" the StudentChip icon. The screen will begin to blink as the program is opening.

Now locating dataset **WORK9-35** requires knowing how datasets are organized. The datasets on your disk are all contained in the folder **FREYCEN** which is subdivided into two folders. The first is titled **CEN5080**, and it contains datasets usually spanning the years 1950 to 1980. The second, titled **CEN90**, contains datasets using 1990 census data. You can always tell a dataset in the CEN90 folder because it has a single "9" in the name. Therefore, **Work9-35** is in the CEN90 folder, so we will proceed to locate it there.

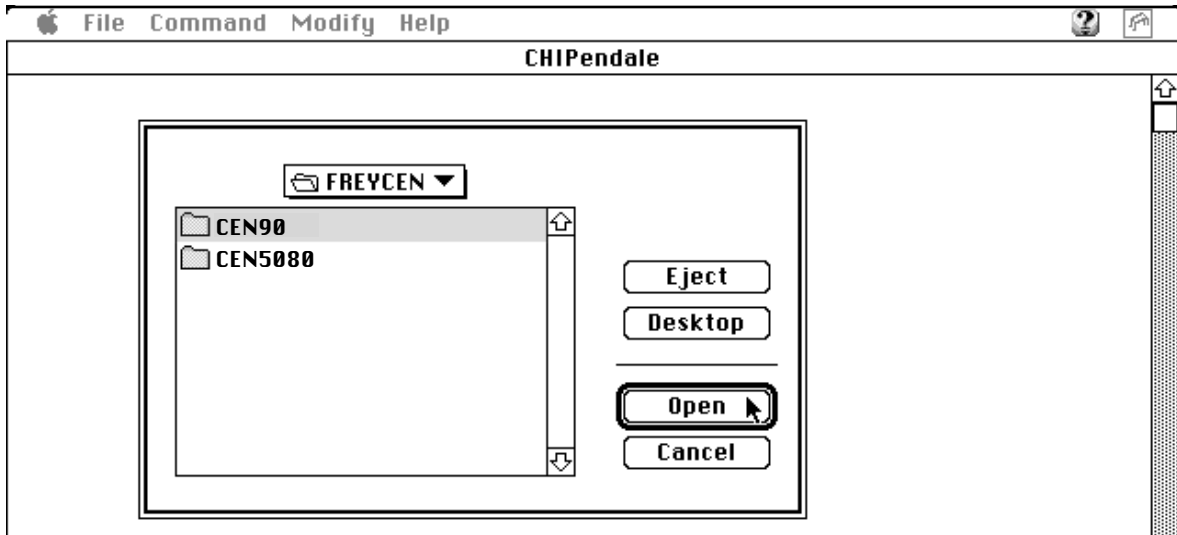
Once you are in the StudentChip program, you will see a screen like this:



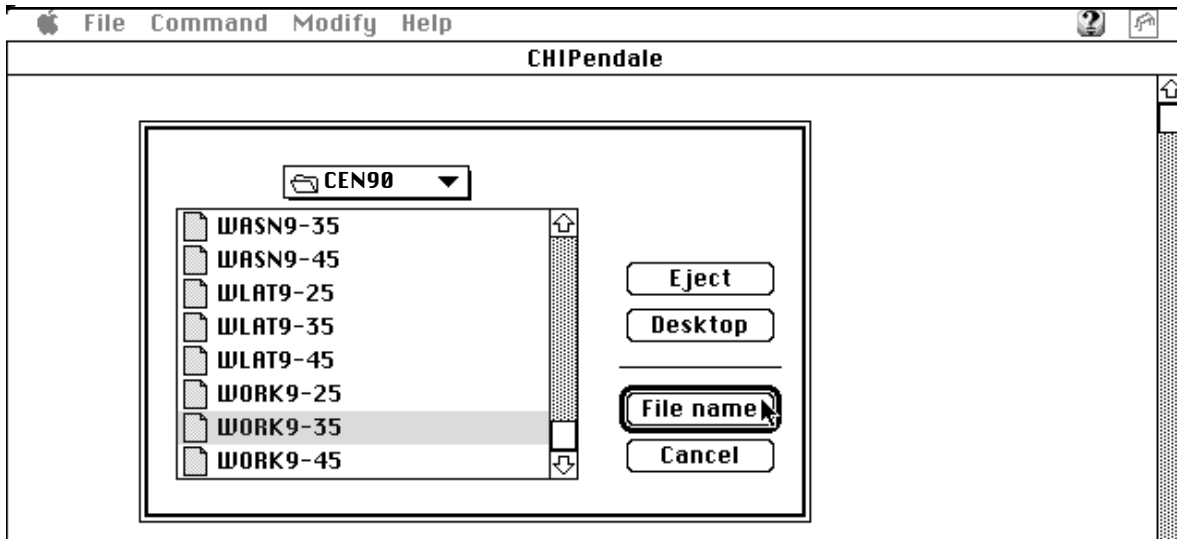
To find a dataset, click the FILE menu, and select the OPEN command. From here, first select the file **FREYCEN**, and then click the OPEN button (see picture on following page).



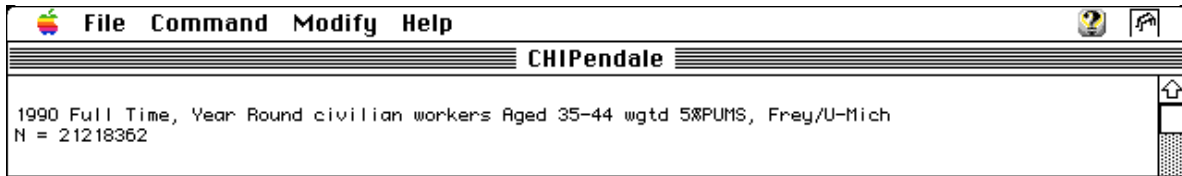
Then select the **CEN90** directory, and once again click the **OPEN** button (see picture below).



Next, select the file **WORK9-35** file and click the **FILE NAME** button (see picture below).

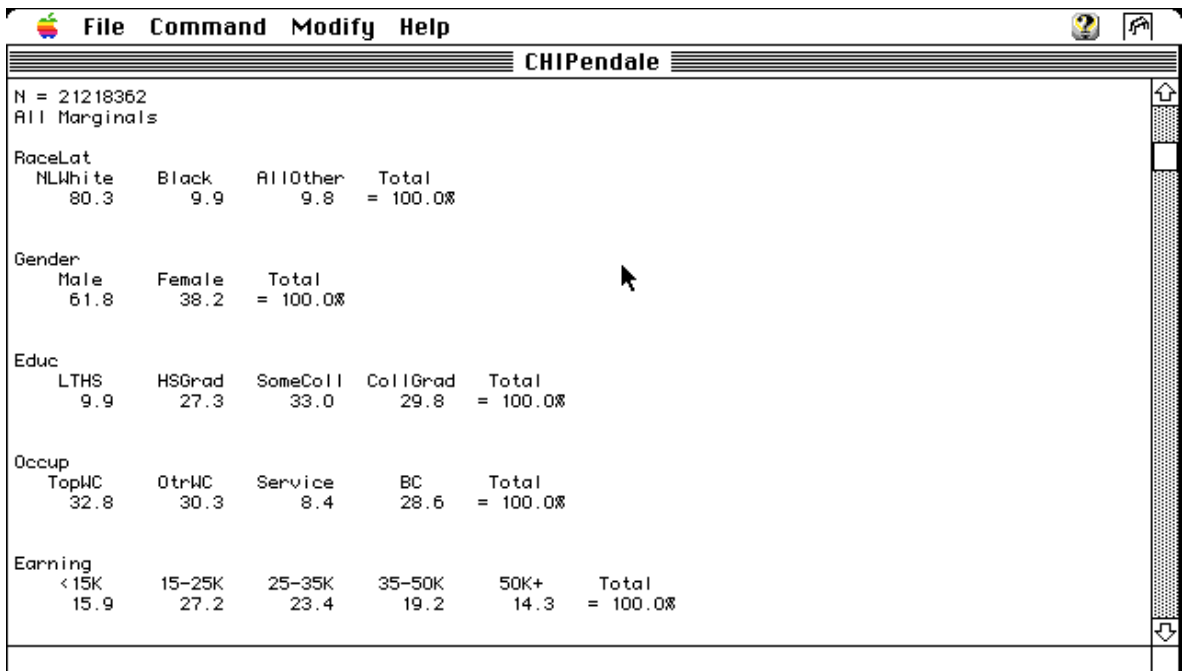


Your screen will then look like this:



As pictured above, StudentChip will display basic information about the data set **WORK9-35**, including its selected population: 1990 Full-time, year round workers, age 35-44, and size of the population.

You can find out about the variables in the datasets by using the **COMMAND** menu and selecting the **ALL MARGINALS** option. **ALL MARGINALS** displays all of the variables and categories included in the dataset. Here is what the output should look like for the dataset **WORK9-35** (see picture below).

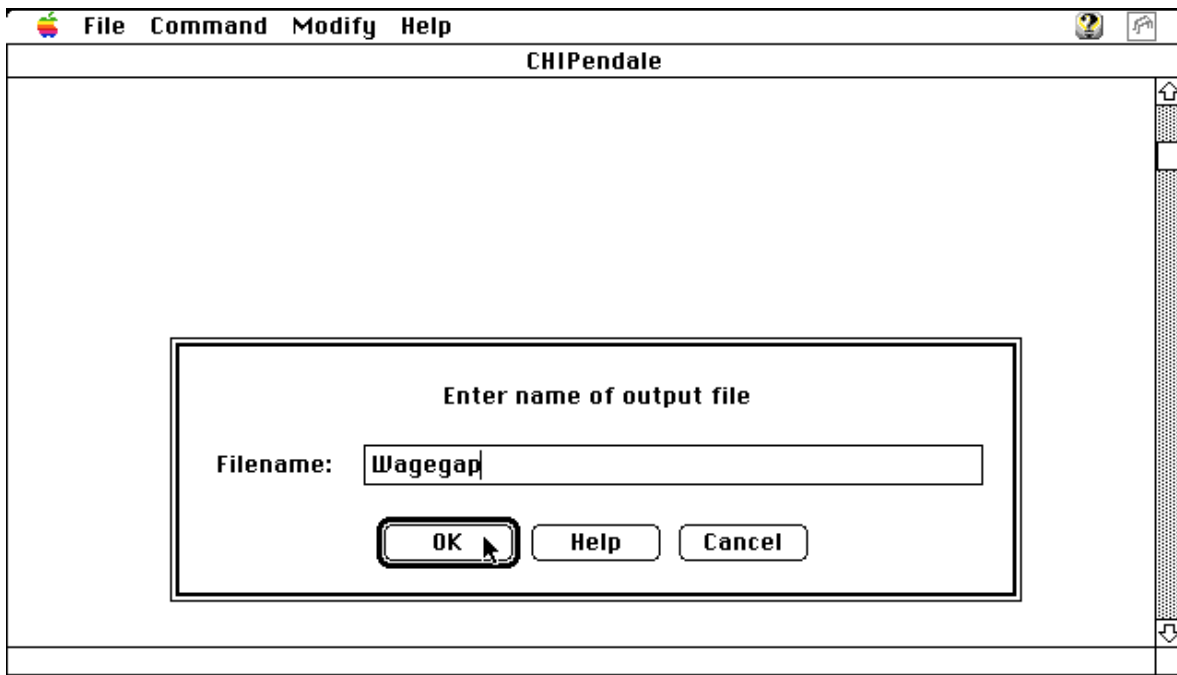


The marginals show that dataset **WORK9-35** contains five variables: RaceLat (race status), Gender, Educ (education), Occup (occupation), and Earning. Since we are mainly interested in Gender, Earnings, and Occupation, we will focus on these particular variables for our tables. Note that the earnings variable contains five categories: less than <15K (less than \$15,000), 15-25K (\$15-25,000), 25-35K (\$25-35,000), 35-50K (\$35-50,000), and 50K+ (above \$50,000). Note that 14.3% of the people in this analysis earn more than \$50,000 per year.

The occupation variable contains four categories: TopWC (Top White Collar), OthWC (Other White Collar), Service, and BC (Blue Collar). Note that 32.8% of the people are in top white collar jobs, which includes managers and professionals.

SAVING YOUR OUTPUT

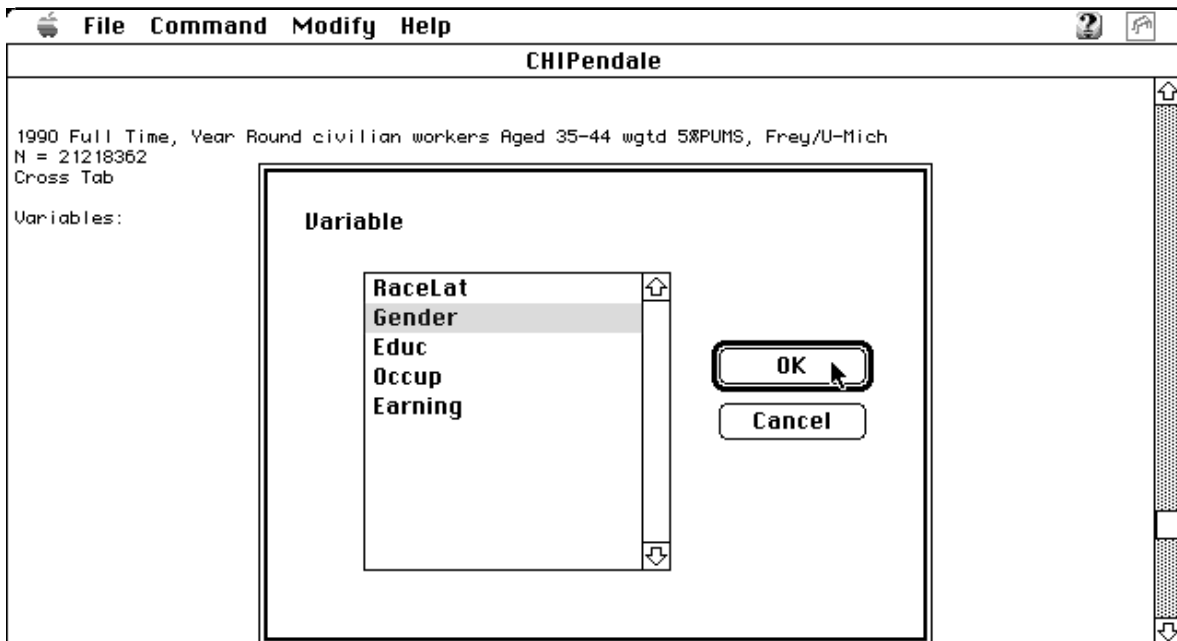
Before you proceed further with analysis, you need to make an output file, so that you will have file containing all of your work when you are finished using StudentChip . To make an output file, go back and pull down the **FILE** menu and select the option **LOG**. After you have done this, you will be asked to type in a short name of your choice of either letters or numbers (see picture below). We have named our output file "Wagegap." Please name your output file and then click on the **OK** button (don't forget the name of your **LOG**!)



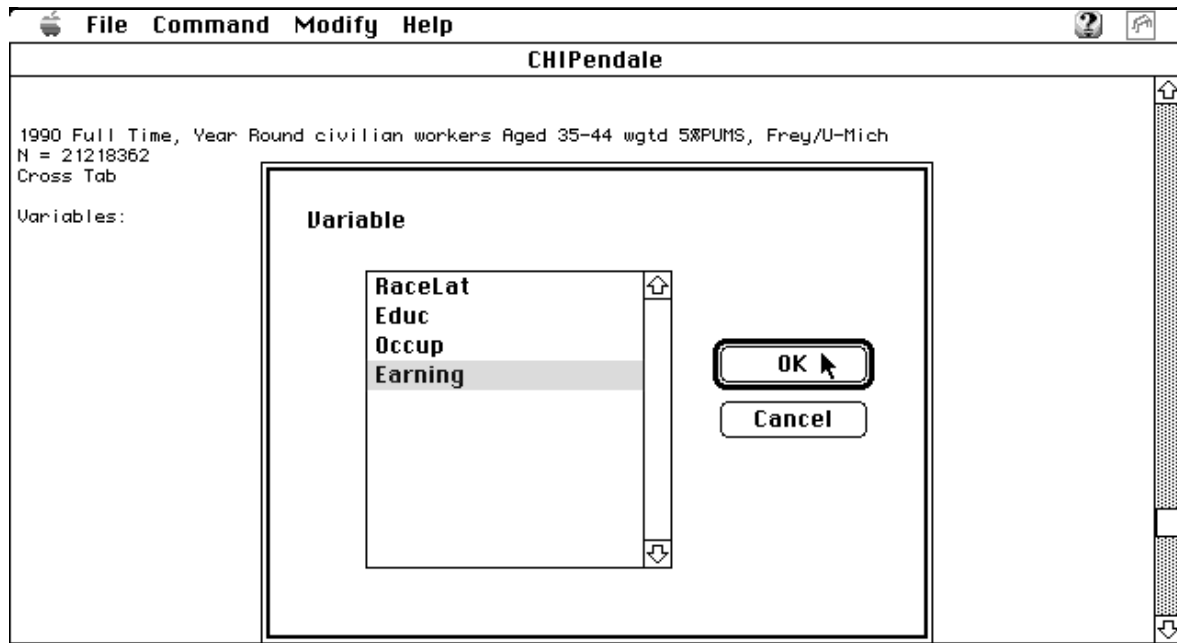
After you are done with your work, but before you exit the program, go back to the FILE menu and select END LOG. This will save the output file, with your chosen name, on your disk. You can later access this file with any word processing program (like Microsoft Word or WordPerfect) or spreadsheet program (like Excel) to observe the results of your analysis. You can also print your output file immediately by using the PRINT FILE command located under the FILE menu.

MAKING A CROSSTAB

Returning to our example, we want to use this data file to compare men's earnings with women's earnings. This requires making a table which cross tabulates GENDER with EARNING. To do this, we will construct a table using the CROSSTAB command located in the COMMAND menu. After selecting the CROSSTAB command, your screen will look like this:



From here, you need to select the variable GENDER, and then click the OK button (as shown on the previous page). Next, you will need to select the variable EARNING, and then once again click the OK button (see below). Notice: the first variable you select (gender) will be the rows of the table, and the second variable, earnings, will be the columns of the table.



After you have selected the variables gender and earnings, go to the OPTIONS menu and select the PERCENT ACROSS option. After selecting the PERCENT ACROSS option, your screen should look like this:

	<15K	15-25	25-35	35-50	50K+	Total
Femal	26.4	36.7	21.0	11.1	4.8	8102575.0
Male	9.5	21.4	24.8	24.1	20.2	13115787.0
All	15.9	27.2	23.4	19.2	14.3	N = 21218362.0

(Note: Although not illustrated here, the program also includes a PERCENT DOWN option. This command is located in the FILE menu, just below the PERCENT ACROSS command. PERCENT DOWN allows you to have the data add up to 100% by column, instead of by row, as with the PERCENT ACROSS command. This option would be more appropriate if you wanted to know what percentage of the people who earned above \$50,000 per year were male, and what percentage were female.)

The table above shows that of all women, 26.4% earn less than \$15,000, 36.7% earn between \$15,000 and \$25,000, and so on. Note all of these earnings categories sum to 100%. The Total category shows the number of women in the sample. Of men, 9.5% earn less than \$15,000, and so on. The ALL row represents the percentage of the entire sample in that earnings category. By analyzing this table,

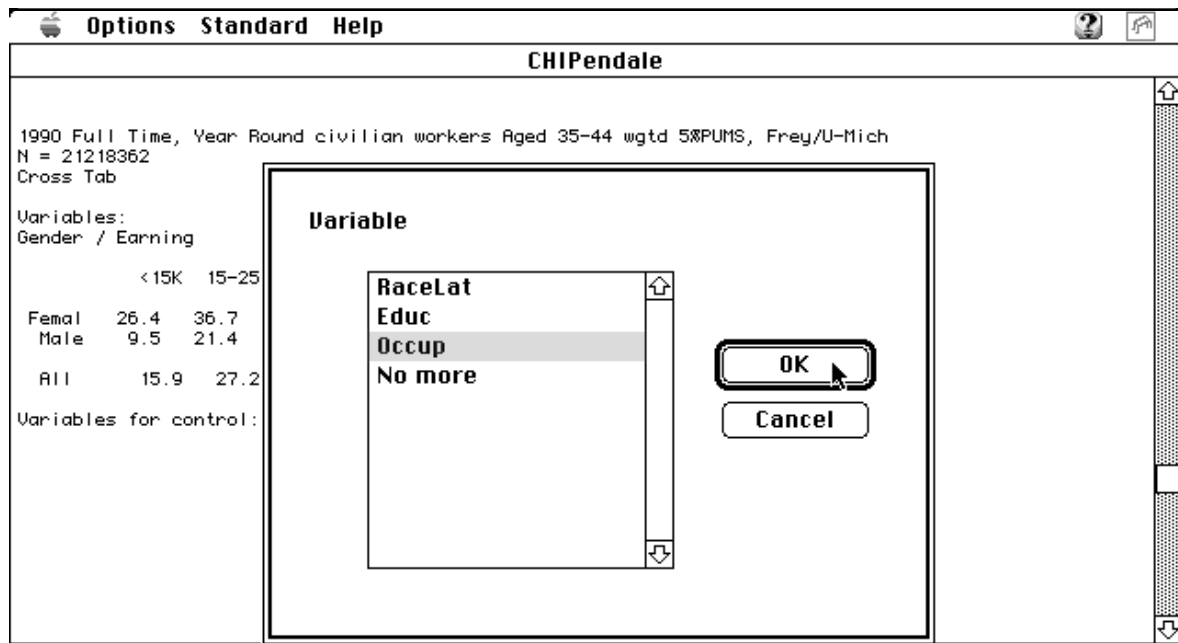
we see that there are actually large differences between men and women's earnings. A larger percentage of women earn less than \$15,000 while a much smaller percentage earn more than \$50,000; only 4.8% percent of women, compared to 20.2% of men, earn more than \$50,000 per year.

Once you are in StudentChip, there are two levels of menus, which you will notice as you progress through the program. The first level, which we used earlier, allows you to open files, get basic file information like marginals, modify variables, and do other basic tasks. It includes: FILE, COMMAND, MODIFY, and HELP (see top picture on previous page). The second level appears while you are doing crosstabs and includes: OPTIONS, STANDARD, and HELP (see bottom picture on previous page).

While in the second level, you can return to the first level by selecting the EXIT command from the OPTIONS menu, which ends your work within this crosstab and allows you to open a new dataset. From the first level, you can select a new crosstab with this dataset, open a new dataset (from the FILE menu as discussed earlier) or exit the program by selecting EXIT from the FILE menu.

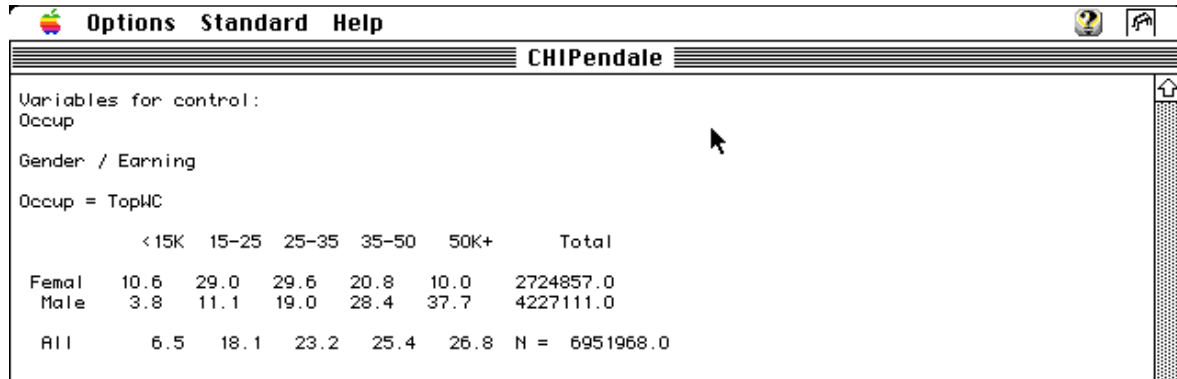
CROSSTABS THAT "CONTROL" FOR ADDITIONAL VARIABLES

Instead of leaving the crosstab, suppose we want to investigate gender differences in earnings further. Therefore, we will remain with the second set of menus. We now want to see the effect that the variable occupation has on the variable earning. In other words, we want to compare the earnings of women and men within specific occupations. We call this "controlling" the original table for occupation. In effect, we are looking at earnings differences between men and women under the "controlled" conditions that they have the same occupations. To do this, you simply go to the OPTIONS menu and select CONTROL. From there, you select the variable OCCUP, click the OK button (see picture below).



Then select NO MORE, and click the OK button one more time.

You then return to the OPTIONS menu and select PERCENT ACROSS again, and this is what you will see:



The screenshot shows a window titled "Options Standard Help" with a sub-header "CHIPendale". The main content area displays the following text and table:

Variables for control:
Occup

Gender / Earning

Occup = TopWC

	<15K	15-25	25-35	35-50	50K+	Total
Femal	10.6	29.0	29.6	20.8	10.0	2724857.0
Male	3.8	11.1	19.0	28.4	37.7	4227111.0
All	6.5	18.1	23.2	25.4	26.8	N = 6951968.0

This is one of the four tables you will get in this example. This one shows you the earnings specifically for women and men who are in top white collar jobs. What this table tells us is that within this occupational category, while 37.7% of men earn more than \$50,000, only 10% of women earn that much. You would continue by reading the table in the same way as the earlier example.

By clicking the mouse you can scroll through your new tables that are specific to people in each occupational category. The tables show the earnings distribution of people with other white collar jobs (OtrWC), then service workers, then blue collar workers (BC).

You could also control for additional variables by selecting more control variables. For example, if you wanted to control for education in addition to occupation, you would get a table that compares men and women's earnings for each combination of education and occupation, totaling 16 tables in all. Before proceeding, go to the OPTIONS menu and select EXIT. This will take you back to the first level of menus (FILE, COMMAND, MODIFY, HELP). Before you proceed, go to the FILE menu and select CLEAR.

EXITING THE PROGRAM

In order to Exit the program, simply go to the File menu and select the QUIT option.