**Differences between PSPP and SPSS**

**PSPP Users’ Manual**

* There is a help button in PSPP but I was not able to open the reference manual when I clicked on “Help.”
* You can open and print the users’ manual by going to <http://pspp.awardspace.com/>

**Listing variables**

* PSPP will list the variables and then you select those variables you want to use. PSPP lists the variables using the variable labels. However, it’s easier to find the variables if they are listed by variable names. You can change the way PSPP lists the variables by right clicking anywhere on the list of variables and selecting “Prefer variable labels” and that will list the variables by name.
* You will have to do this each time you encounter a list of variables. There is no way to do this permanently.

**Running syntax files**

* To run a syntax file in both PPSP and SPSS, click on “Run” in the menu bar and then click on “All” to run all the commands in the file or select the commands you want to run and click on “Selection.”

**Frequencies**

* If you do not want to compute any statistics in SPSS, you don’t click on the “Statistics” button and SPSS will skip computing any of the statistics.
* If you do not want to compute any of the statistics in PSPP, you have to add a subcommand to your syntax file that reads “/STATISTICS = NONE”. In the graphical interface to PSPP, you need to uncheck the default statistics (i.e., mean, standard deviation, minimum, maximum) to stop PSPP from computing these statistics.
* When you run a bar chart in PSPP it attempts to write the value labels below the appropriate bar. If your value labels are too long it will overwrite the labels. The value labels for P1\_PARTYID in PSPP are unreadable. SPSS doesn’t have the same problem.
* When you run a histogram in PSPP for a variable that has some very large values and many smaller values (e.g., S1\_NUMMEN, S2\_NUMWOMEN) the histogram is unreadable. SPSS does a better job of drawing the histograms for these variables.
* PSPP lists the variance as one of the statistics it will compute but in fact it does not compute and write out the variance. This is not a problem since the variance is just the square of the standard deviation. PSPP will compute and write out the value of the standard deviation.

**Charts (Graphs)**

* PPSP is very limited in terms of graphs. It will create pie charts, bar graphs, histograms and scatterplots. However, there is no capacity to edit these charts which limits their usefulness. PSPP does not create box plots.
* SPSS has more capabilities for creating charts and graphs.
* In terms of less expensive options, Excel is probably your best bet.
* I decided not to revise STAT4S for PSPP since it was heavily dependent on creating graphs and charts.

**Compare Means/Paired-Samples T Test**

* SPSS has a box where you move the first variable and another box where you move the second variable in the paired-samples t test.
* PSPP has a box (i.e., Var 1) where you move the first variable. Then you have to move the slider at the bottom of the “Test Variable(s)” box to the right to see the Var 2 box where you put the second variable.

**Temporary**

* The TEMPORARY command is used in PSPP to make a change such as selecting out particular cases and applying that change to only the next command. Without the TEMPORARY command the change would apply to all subsequent commands.
* See Select If below for an example.

**Select Cases**

* PSPP will execute the SPSS commands to select out particular cases and will do it correctly.
* However, the graphical interface in PSPP is not user friendly. Click on “Data” in the menu bar and then click on “Select cases.” Select “Use filter variable” and move the variable you want to use to select cases into the filter box. PSPP will select out the cases that have a value of 0 or have user-defined missing values or system missing values. PSPP will select out these cases for your entire session unless you put the TEMPORARY command right before the SELECT CASES command. The purpose of the TEMPORARY command is to tell PSPP to carry out the SELECT IF command for only the next command (e.g., the paired-samples t test) and then go back to using all the cases.
* The SPSS commands to select out the cases are not intuitively clear and should not be given to students.
* In Exercise STAT7S you have to use the TEMPORARY command so you can execute several Select If commands. In the exercise I listed the commands and asked students to cut and paste them into a blank PSPP syntax file and then execute them. This should be relatively easy for students to do.  
  TEMPORARY.  
  SELECT IF d5\_sex = 1.  
  T-TEST PAIRS=d4\_educ WITH d29\_speduc (PAIRED)  
   /CRITERIA=CI(.9500)  
   /MISSING=ANALYSIS.  
  TEMPORARY.  
  SELECT IF d5\_sex = 2.  
  T-TEST PAIRS=d4\_educ WITH d29\_speduc (PAIRED)  
   /CRITERIA=CI(.9500)  
   /MISSING=ANALYSIS.
* It’s important that these commands be entered into the PSPP syntax file exactly as written so cutting and pasting them is the best solution.

**One-Way Analysis of Variance (ANOVA)**

* SPSS has an option to run one-way analysis of variance from within the MEANS procedure which is part of COMPARE MEANS.
* PSPP does not have this option so you will need use the ONE-WAY ANOVA command which is also part of COMPARE MEANS.
* SPSS will compute Eta, a measure used with a nominal or ordinal measure and an interval measure. PSPP does not compute Eta but it is easy to get Eta from the one-way analysis of variance output. Just divide the between-groups sum of squares by the total sum of squares. That’s what I have students do in exercise STAT13S,

**Crosstabs**

* In SPSS the default for “Cells” is the count but in PSPP the default is count and the row, column, and total percents. That means that you need to tell students to uncheck the row and column percent boxes so they won’t get percents they don’t want. Getting all these percents will confuse them.
* When running the Chi Square test in SPSS the output will tell you the number of cells for which the expected frequencies is less than 5. This is handy since one of the assumptions of the Chi Square test is that the expected frequencies aren’t too small which is often defined as less than 5. PSPP does not give you this information. You can see the expected frequencies in PSPP by checking the “Expected” box in the “Cells” list of options.

In SPSS you can add control variables in the bottom box of the crosstabs dialog box. I couldn’t see any way to do this in PSPP. However, PSPP will run a SPSS syntax file that includes control variables. Here are the instructions I included in Exercise STAT12S telling the students how to do this.

In order to run a table with a control variable, we need to create a blank syntax file. To do this click on “File” in the menu bar and then on “New” and finally on “Syntax.” A blank syntax file should open. Enter the following commands into the syntax file. It’s easiest to do this by copying and pasting the commands into the syntax file.  
CROSSTABS  
 /TABLES=porn1\_pornlaw BY r8\_reliten1 BY d5\_sex  
 /STATISTICS=CHISQ GAMMA/CELLS=COUNT COLUMN.  
To run this command click on “Run” in the menu bar and then click on “All.” Your table should appear in the output window.

Notice the format of the “TABLES” subcommand. It lists the table you want to run in the following order – dependent variable BY independent variable BY control variable.

**Transform/Compute/IF**

* In SPSS you can use IF commands to create different values of a variable depending on the condition specified in the IF command.
* PSPP will run SPSS syntax files containing these IF commands but I cannot find any way to create them using the graphical interface for PSPP. Here are the instructions I included in Exercise STAT16S\_pspp telling the students how to do this.  
    
  Now you want to change the value for d5\_sex\_males to 1 for all the males in the sample. To this you will have to create a PSPP syntax file and then execute the file. Click on “File” in the menu bar and then on “New” and then on “Syntax.” This will open a blank syntax file. In the syntax file enter the following command. Remember that you can do this by cutting and pasting these commands into the PSPP syntax file. Once you have done this click on “Run” in the menu bar and then click on “All.”

IF (d5\_sex = 1) d5\_sex\_males=1.