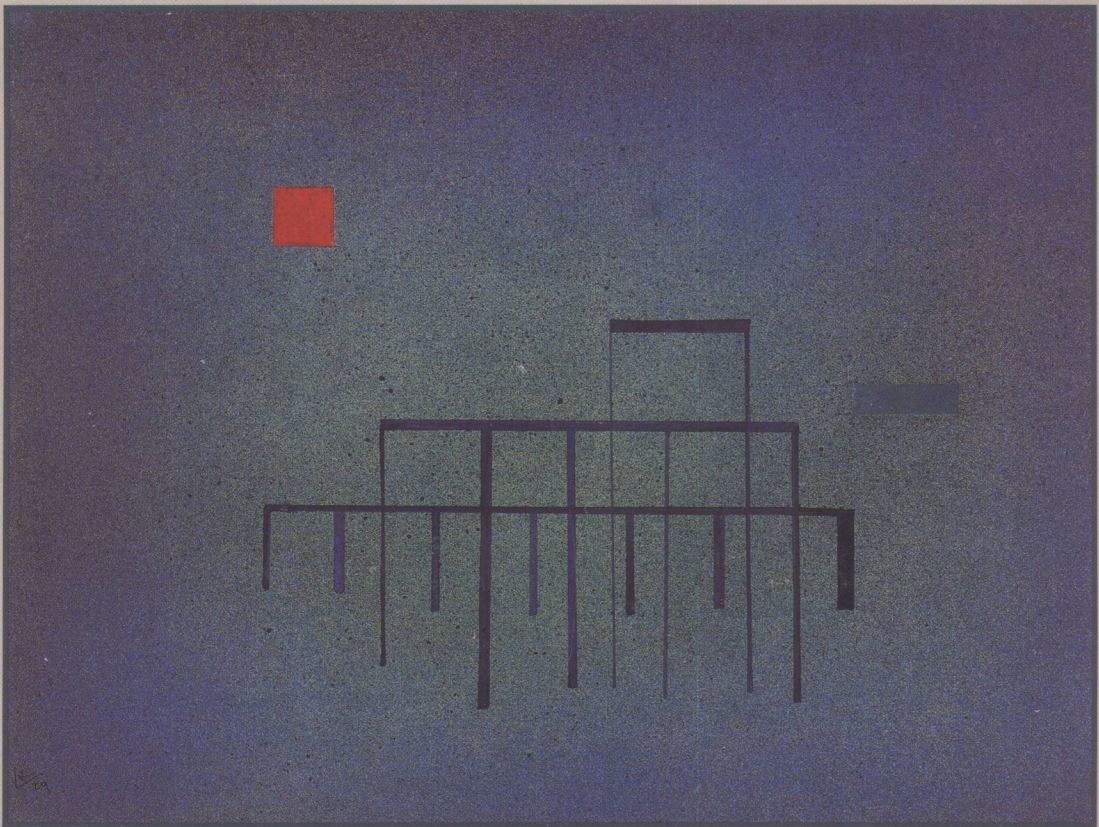


THIRD EDITION

SPSS *Manual to Accompany Gravetter and Wallnau's*

Essentials of **S**tatistics *for the Behavioral Sciences*



ZANDRA S. GRATZ

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Gravetter and Wallnau's
ESSENTIALS OF STATISTICS
for the Behavioral Sciences

3rd Edition

ZANDRA S. GRATZ

Kean University



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TO THE INSTRUCTOR

Computers have entered our lives in many ways, and have changed forever the way many tasks are accomplished. Computation of statistics is one such task. Computer skills are a requirement for many jobs and graduate programs. Students with SPSS skills and experience are at an advantage when continuing their education or starting their careers within the behavioral sciences.

This manual contains very detailed instructions; no step is taken for granted. This is to allow a student with no previous computer knowledge to work **independently and proceed at their own pace.**

By using the computer to quickly accomplish the calculations necessary for basic statistical analyses, the student (and instructor) are freed from long, tedious computations. This allows the instructor to spend more time on teaching the concepts and assumptions involved in choosing a statistic and interpreting the results.

Once the computers are turned on, lecture becomes difficult. When planning your instruction, consider using the first half of the class period for lecture and discussion, and the second half of the class period for computer supported statistical analyses. In this manner, students can generate the appropriate statistics at their own pace. Interpreting the results (Output) can be a homework assignment or an opportunity for you to engage in a series of small group discussions with students prior to their exiting the classroom.

As you and your students use this manual, any suggestions or comments for improvement would be greatly appreciated.

Zandra S. Gratz, Ph.D.
Kean University

TO THE STUDENT

Some students wait until the very last semester possible to take statistics. This, at least in part may be related to a fear of having to perform what appear to be complex and/or tedious mathematical calculations. Using the computer to perform both simple and complex statistical analyses alleviates the need to spend long time periods on mathematical calculations. This manual presents step by step instructions for using the computer to compute statistics. Even if you have never used a computer, if you follow the step by step instructions provided, you will be able to competently use the computer to generate statistical analyses.

When you use your bank card, you are using a computer. To use your bank card, you must:

- Speak the language (checking or savings);
- Know your secret code number;
- Press specific keys; and
- Know what to do first, second, third.

To use the computer to analyze data, you must:

- Speak the language;
- Press specific keys (buttons), and
- Know what to do first, second third.

This manual presents the sequence of steps you must follow to instruct the computer to carry out each statistical analysis. It is the intent of this manual that it allow you to use the computer with the same ease as your bank card. In fact, it may be easier, there is no secret code to remember!

Just as a bank teller does not tell you whether to deposit your money into your checking or savings account, this manual does not provide information as to which statistic you need to compute or how to interpret your Output. For this, refer to the text or your instructor.

As your skills increase, you will find that it takes only minutes to generate statistical results. **Remember, take your time and read each step.**

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Section I

Introduction To This Manual The Computer and SPSS 8.0 for Windows

The computer is a tremendous asset to the computation of statistics. If you are not very familiar with computers, HAVE NO FEAR. This manual does not assume you have any computer background. Rather, step by step instructions are provided to guide you through instructing the computer to generate statistics. In order to calmly and competently generate statistics via the computer, you must read the instructions in this manual; follow them step by step.

This manual presents the information necessary to use SPSS 8.0 for Windows (Statistical Package for the Social Sciences). If you are working with a different version of SPSS (other than 8.0) some of the screens may differ than that depicted in this manual. However, for most statistics described, most of these differences represent minor changes in format. Although this manual was designed to help you conduct a variety of statistical analyses, it will not help you to determine which statistic to calculate nor will it help you to interpret your results. To decide which statistic to compute or the meaning of your results, consult *Essentials of Statistics for the Behavioral Sciences (Essentials)* or your professor.

2 SPSS Manual to Accompany *Essentials of Statistics*

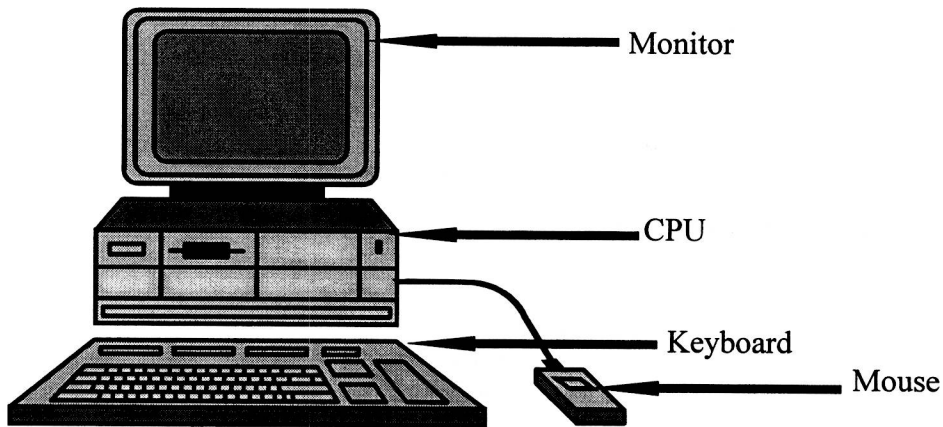
This manual is divided into four sections:

- | | |
|-------------|--|
| Section I | Section I presents an overview of this manual, the computer, and entering and exiting the SPSS program. |
| Section II | Section II deals with creating, saving and retrieving SPSS worksheets. In order to use SPSS to analyze data, you must enter your data into an SPSS worksheet. |
| Section III | Section III is the core of this manual. Section III presents step by step instructions to compute statistical analyses. Section III is organized by Chapters in <i>Essentials of Statistics</i> . Each Chapter details instructions to use the computer to compute an example from the text as well as one practice problem. |
| Section IV | Section IV describes the steps needed to print your data or your output (statistical results). |

The Computer

As you begin, it is important to know your workstation. That described here, as shown in Figure 1, is typical of an IBM or IBM compatible computer workstation.

Figure 1
Computer Workstation



As you look at YOUR computer, try to identify each part:

Monitor (TV Screen)

CPU (central processing unit)

Keyboard (typewriter-like keys)

Mouse

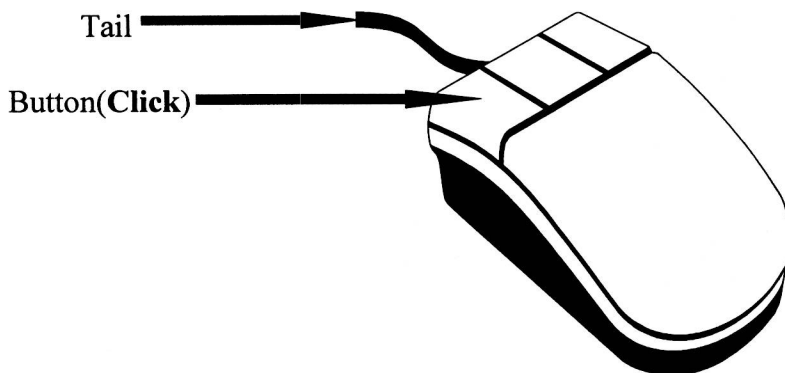
Power source (surge suppressor/electric connection)

Next, locate where the on/off switches are for the monitor, CPU and Power source. You must also determine if you have a printer connected to your computer, if you are sharing a printer with other computers, or if you do not have a printer.

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The Mouse. As with most Windows applications, the mouse is a very useful tool in navigating through SPSS options. The tail of the mouse should point away from you, toward the computer. When working in Windows (SPSS), you will need to point to objects or choices. To do this, slide the mouse around the mouse pad (or any flat surface), until the arrow on the screen points to the object you wish to choose. In this manual, choices to be pointed to (selected) will be shaded. When instructed to “**click**,” press the button on the left side of the mouse (see Figure 2).

Figure 2
Computer Mouse

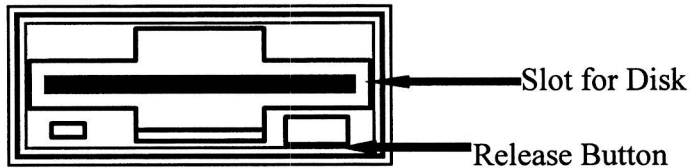


Disk Drives and Hard Drives

The Hard Drive is inside the CPU where you can not see it. The hard drive is used to store (save) programs (and data). The SPSS program that you will be using is probably stored on the hard drive. The hard drive is usually called C Drive (C:).

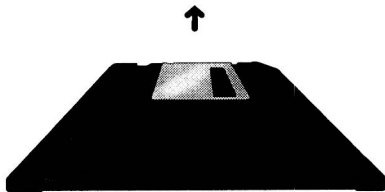
The Disk Drive, as shown in Figure 3, is the slot in which you can insert your disk.

Figure 3
Disk Drive



Unless otherwise instructed, you will need a 3.5 High Density Disk (formatted). As you follow along in this manual, instructions are provided for saving your data on disk. As shown in Figure 4, when inserting your disk in the Slot, the side with the metal goes in first, writing side up.

Figure 4
Disk



Introduction to SPSS 8.0 for Windows

SPSS is a menu driven program. Using the menus in SPSS is similar to using a menu in a restaurant. You must first learn where in the menu to look. In a restaurant, if you want an omelette, you must look under “egg dishes,” not desserts. Once you know the correct section of the menu, you must make a choice: ham or bacon omelette. The SPSS main menu is divided into several categories (see Figure 6). Within each category, options for you to choose from appear. In statistics, the options you choose depend on what you are interested in having the computer do for you. Unlike the restaurant, where you have to pay for an incorrect choice, in SPSS, if you make an error, you only need to start again.

To begin, you must turn the computer on.

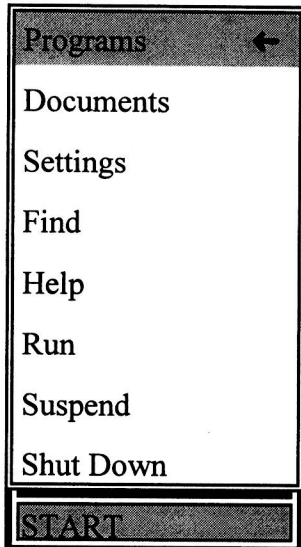
This usually includes:	Turn the main power source ON;
	Turn the monitor ON; and
	Turn the CPU ON.

Once the computer does some internal checks, you will see the Windows Screen on the Monitor. You must learn how to enter the SPSS program. How to enter the SPSS program depends on how your computer is organized.

In some computer setups, an SPSS icon (picture or symbol) will be on the screen; if you see an SPSS icon, using the mouse, point to the **SPSS icon** and **click** twice to open the program.

If you do not see an SPSS icon, **click** on the **Start Button** (Windows 95). Within the Start Menu, you will see the word Programs (see Figure 5). Point and **click** on **Programs**. Read through the Programs sub-menu. If you see **SPSS 8.0 for Windows** among the choices, point to it and **click**.

Figure 5
START Menu



If these methods did not work, ask your instructor or lab assistant how to enter the SPSS program. Write the procedure down so that at the next session you will know how to enter the program.

SPSS Program Entry Instructions:

As pictured in Figure 6, once you have entered SPSS you will see a blank worksheet.

Figure 6
SPSS Worksheet

File Edit View Data Transform Statistics Graphs Utilities Window Help

						▲
	VAR	VAR		VAR	VAR	VAR
1						
2						
3						

Take some time to explore the SPSS Main Menu (shaded in Figure 6). Notice that if you point to an item in the SPSS Main Menu, a set of choices appears. The choices which appear are referred to as the Pull Down Menu. Using the mouse, explore each Pull Down Menu.

As you progress through this manual, and SPSS, when you select an SPSS Pull Down Menu choice, you will be shown sub-menus. Again, similar to the restaurant, sub menus are similar to the Meat, Fish and Poultry sub headings which follow the main heading of “Entree.”

In a restaurant, once you decide on Steak, you must also choose how it should be cooked (rare or well done). Similarly, SPSS will present you a Statistics Box in which you will tell SPSS several things including which data to analyze.

If you frequent a particular restaurant often, there will be some days in which you can order your lunch with out looking at the menu. Similarly, there are shortcuts (icons) which you could use to ask SPSS to perform some functions. This manual will rely solely on the menus; after you have “visited” SPSS a few times, you may wish to try some of the short cuts (icons).

If you are not entering data (described in Section II) at today's computer session, when you are finished exploring the SPSS menus, you must exit SPSS.

Exiting the SPSS Program

To exit the SPSS program, you must **click** on the **File** choice in the Main Menu Line. As shown in Figure 7, the File Pull Down Menu appears. Using the mouse, highlight **Exit** and **click**.

Figure 7

SPSS Worksheet: Exit Selected

File Edit View Data Transform Statistics Graphs Utilities Window Help

