

# Assorted Tips for Mac Users of Lertap5

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## Background information

Three Excel workbooks comprise Lertap5. They are Lertap5.xlsm, Lertap5MacroSetA.xlam, and LertapRibbon.xlam.

Of these, only Lertap5.xlsm functions as an “ordinary” Excel workbook, that is, one that can be opened normally, and has worksheets with data of one sort or another. This workbook also houses the main Lertap5 code modules. These modules are referred to as “macros” – collectively, they are an extensive, integrated suite of small computer programs written in “VBA”, Visual Basic for Applications. Note that the macros in Lertap5.xlsm are invisible to users<sup>1</sup>. (See an example of a macro [here](#).)

The other two workbooks do not contain worksheets of any sort. They contain just macros with more VBA code. These are entirely subservient to Lertap5.xlsm, that is, they are never opened directly – they wait to be summoned, something that usually happens automatically when the Lertap5.xlsm workbook is opened by a Mac user.

Lertap5MacroSetA.xlam has the special-purpose macros accessed via the “[Macs Menu](#)” from within Lertap5.xlsm. These are “open source” -- users may view them using the Visual Basic Editor under the “Developer” tab in Excel. (See [this reference](#) for more information.)

LertapRibbon.xlam is a special file whose task is to mount the Lertap tab in Excel. As it opens, Lertap5.xlsm will automatically call this file, asking it to seat the Lertap tab and make it ready for use.

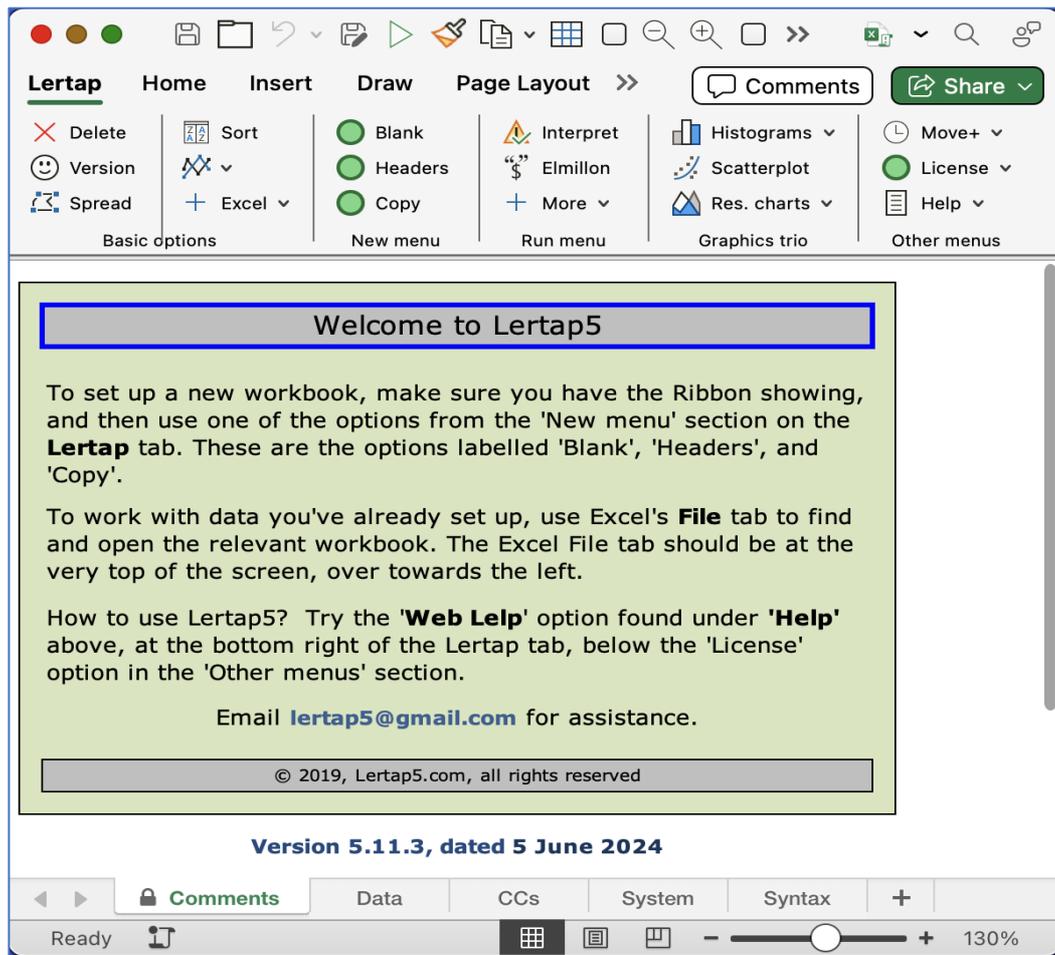
The screen snapshot on the following page displays the Lertap tab<sup>2</sup> as seen after the Lertap5.xlsm workbook was opened using “Microsoft Excel for Mac”. The same workbook is used on Windows computers and the Windows default screen settings are used on the Mac. The resultant screen image may be too small for some Mac users – if so, the handy slider at the bottom right of the screen may be readily used to enlarge it – as seen below, the image resolution is set at 130% -- just grab the white dot in the center of the slider and pull it to the right to enlarge the image.

Also note that, after the Lertap5.xlsm file has been opened, Excel for the Mac may ask to be given permission to open the two related files, Lertap5MacroSetA.xlam, and LertapRibbon.xlam. This is normal and may be expected to happen when Lertap5.xlsm is opened for the very first time.

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<sup>1</sup> The most common extension for an Excel workbook is `xlsx`; `xlsm` is used when the workbook contains worksheets and code macros; `xlam` is used when the workbook has macros only.

<sup>2</sup> On a Mac, there are times when the Lertap tab **will not be displayed**. See [this document](#) for help.

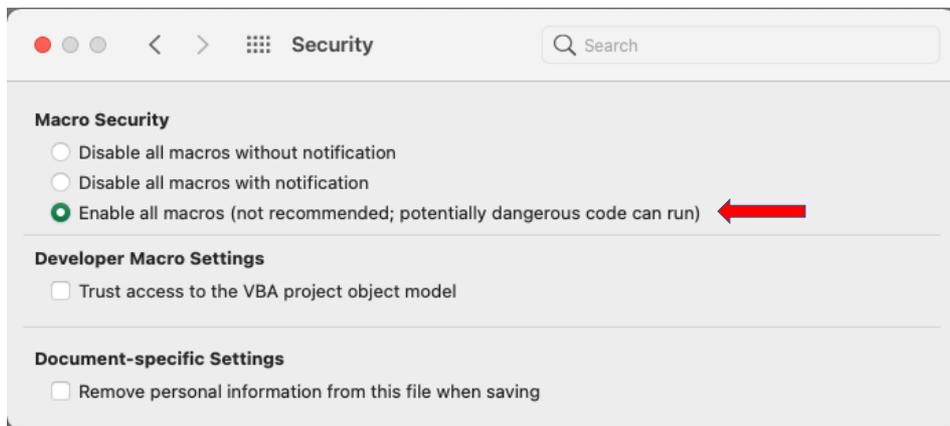
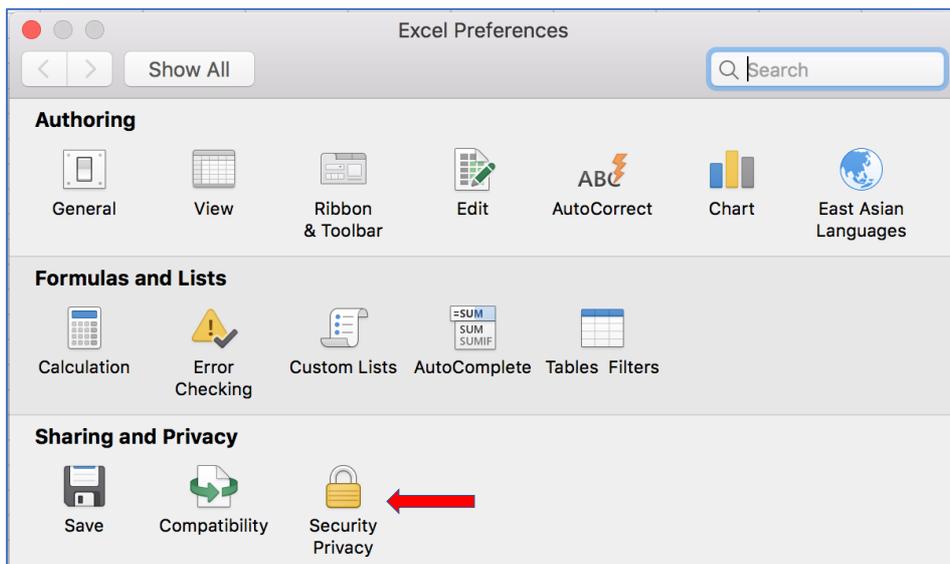
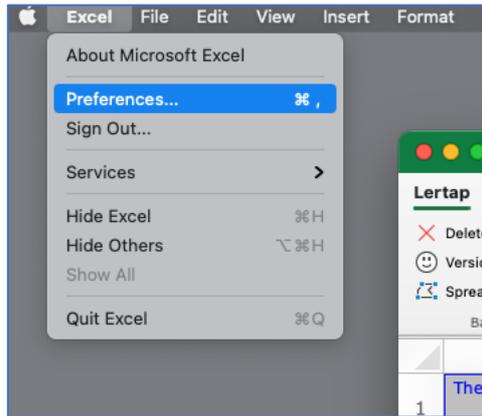


VBA macros have had something of a bad name – nasty programmers can, and have, written macros for Excel, Word, OneNote, and PowerPoint that can cause real havoc with a computer; they might, for example, introduce a virus. For this reason, Excel usually informs users when a workbook has macros, and asks for an OK confirmation before continuing.

This is a good idea, but can become very tiresome in Lertap5 when run on a Mac. The three macro-laden Excel Lertap workbooks mentioned above will each prompt Excel to display its warning message, and users end up having to click OK three times unless they turn off macro security.

### Turn Macro Security Off?

The way to get Excel to automatically accept macros, without worrying about them, is to go to Excel Preferences, Security Privacy, and select the third option under Macro Security to “Enable all macros”:

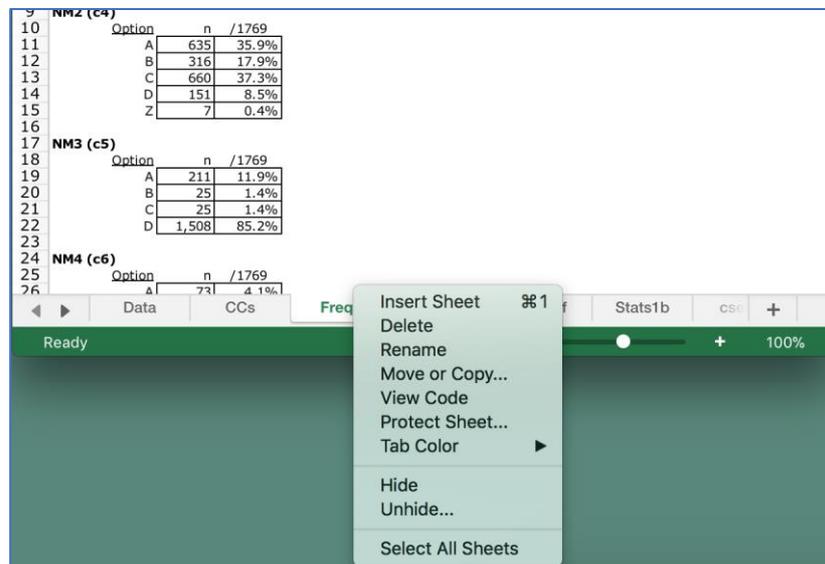


## Zoom-a-Rama?

When running on some Macs, Lertap's worksheets often appear to be almost condensed, and can be hard to read.

It's possible, and easy, to scale up all of the sheets in a workbook. There are two ways to do this.

One way is to let the mouse cursor hover over the name of a worksheet, such as “Freqs” (for example), and then click the right mouse button. A little menu should open up. It will have, at the bottom, “Select All Sheets”.



Once this little menu is displayed, and “Select All Sheets” is clicked on, the + sign on the zoom bar at the bottom of the screen can be used to enlarge all of the current worksheets (a zoom of 120% or 130% works well on my 13” MacBook Pro).

That zoom bar at the bottom of the screen, towards to right hand side, looks like this:



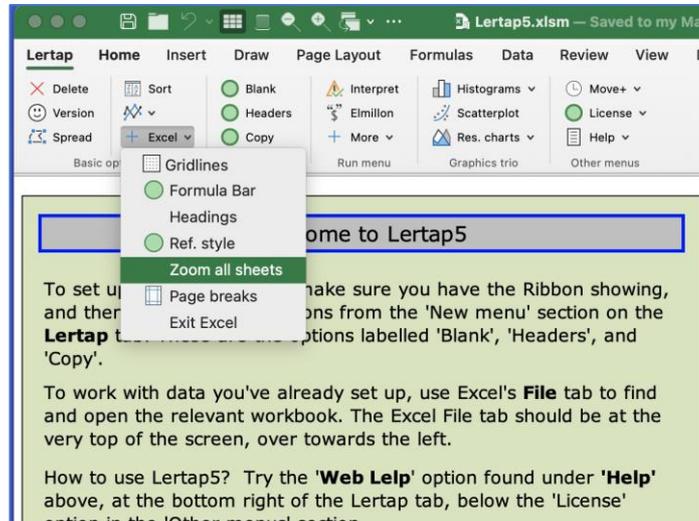
Another way involves making use of the setting in Row 57 of Lertap5’s System worksheet, and then calling on a special macro to get the job done.

Here’s a snapshot of part of the System worksheet:

|    | 1  | 2                       | 3                        | 4                     |
|----|--|-------------------------|--------------------------|-----------------------|
| 1  | <p>These are Lertap5 system settings. Don't change them unless you know what they do!</p> <p>The settings below are the standard ones for the Excel 2010, 2013, and 2016 versions of Lertap.</p> | <b>System Settings</b>  |                          |                       |
| 2  |  | <b>Present setting:</b> | <b>Allowed settings:</b> | <b>Usual setting:</b> |
| 56 | (... empty ...)  |                         |                          |                       |
| 57 | <b>Window Zoom setting</b>   | 130                     | 25 to 200                | 110                   |
| 58 | Annotate <b>Stats-f</b> reports?   | yes                     | yes / no                 | yes                   |
| 59 | (... empty ...)  |                         |                          |                       |
| 60 | <b>Automatically output packed plots (for "quintile" plots)?</b>   | no                      | yes / no                 | no                    |
| 61 | Run the plot packer in <b>interactive mode</b> ?   | yes                     | yes / no                 | yes                   |

The zoom setting is presently set at 130 (%) in this example – it’s found in row 57, column 2.

The special macro, “Zoom All Sheets”, is listed on the drop-down little Excel menu of options, as shown in this snapshot:



A click on “Zoom All Sheets” will get Excel to zoom all worksheets to 130% (in this example). If the setting in row 57 of the System sheet were changed to 115, then the zoom would be 115%.

## Help?

Most of the worksheet “reports” made by Lertap have a little [underlined blue h](#) towards the right-hand side of row 2 (visible in some of the screen snapshots in this document). This is a context sensitive hyperlink to “[Lelp](#)”, the online help system. Useful.

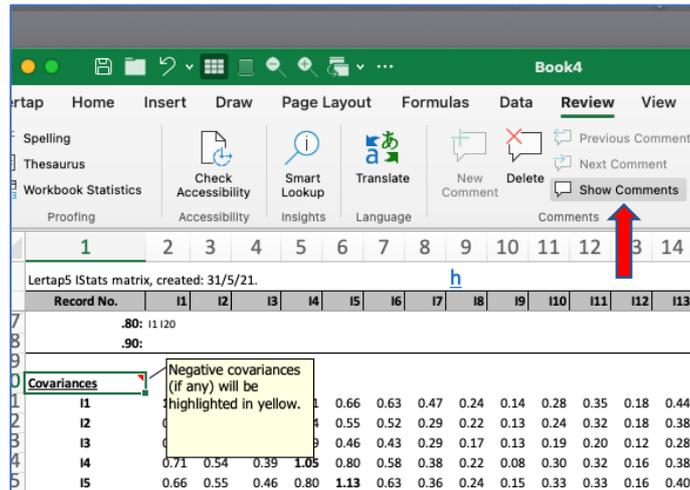
At times a small red triangle will appear in the upper-right corner of a cell. These signal that a special note or comment is available; the idea is that users can hover their mouse cursor over the cell, and a note/comment will appear to help explain the cell’s contents.

This works pretty well in Windows versions of Excel, but I have found the Mac versions to be somewhat recalcitrant – the cell’s special note often does not show.

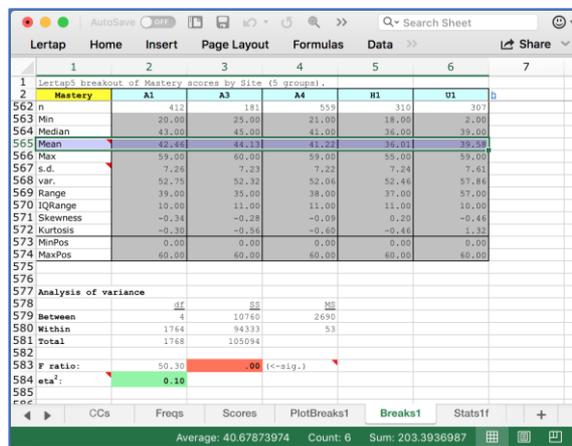
Excel’s Review tab has an option to “Show All Comments”. It works as seen below<sup>3</sup>:

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<sup>3</sup> In later editions of Mac Excel, comments are referred to as “Notes”. Use “Show all notes”.



## Darker, Darker, Ye Font



The screen above displays a “[Breaks1](#)” report, comparing test results from three American examination sites, with one from Haiti, and with one from Uruguay. To make the text darker, use <Command><A> to select all of the worksheet’s cells, and then <Command><B> to turn on bold. (<Command><A> means to hold down the Command and the A keys at the same time.)

If that doesn’t quite do the job you had in mind, click in the cell close to the top of the screen, on the very left, in the first column, above the first row. It has a triangle in it but is otherwise empty. Here’s a wee snapshot with the triangle shown in dark green:

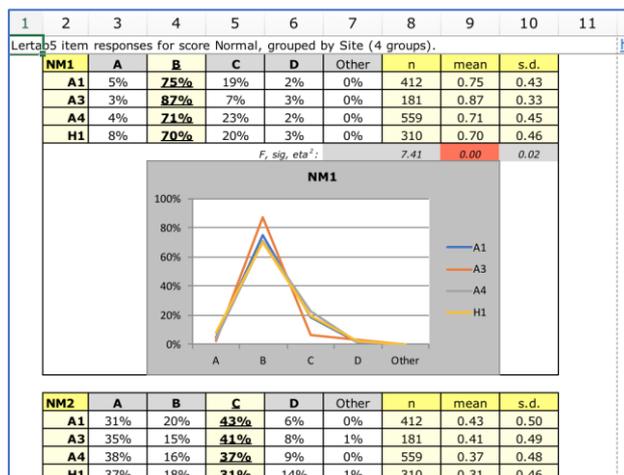


Clicking in that cell selects all of the worksheet’s cells. After that, <Command><B> will put all text in bold.

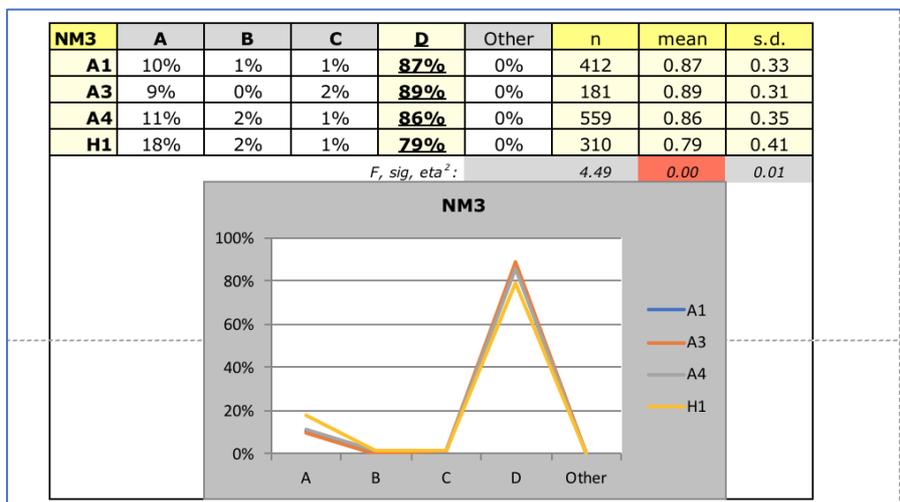
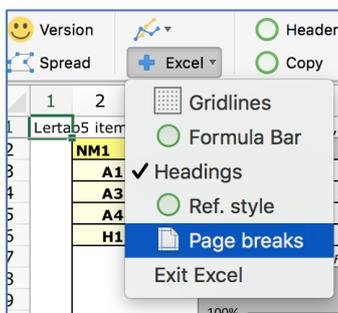
## Being page marked?

At times Excel, after making a fresh “report” worksheet at Lertap’s bidding, will leave page break lines on the report. These lines appear as a string of dashes. The screenshot below gives an example – there’s a vertical line of dashes just after column 11.

The dashed line indicates, in this case, that the plots will fit within the width of a printed page, were you to go ahead and print the results. There are times when a Lertap report will be too wide for printing in portrait mode and, in such cases, the dashed lines serve to suggest that landscape mode would be better.



The dashed lines may be turned off by using the “Page Breaks” option on the little “Excel” drop-down menu:



Note where the page break lines are in the plot above. The horizontal dashed line indicates that this plot will be spread over two pages.

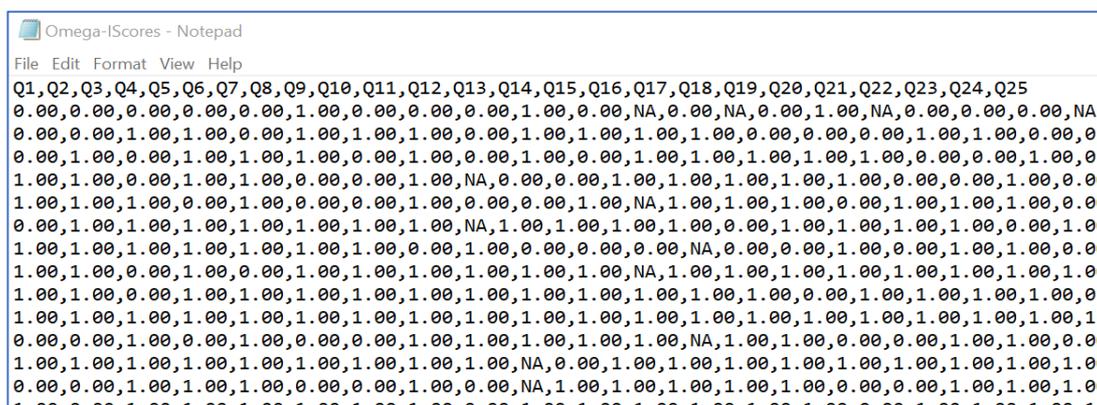
Lertap has a way of controlling the breaks so that this will not happen, something that's done by using a "page break control". The page break control is found in row 92 of the System worksheet. The default setting is "no" – this is because Excel runs *noticeably* faster when it doesn't have to concern itself with page breaks. For more information, refer to [this topic](#), and to the bottom of [this one](#).

## Making a csv file of item scores on a Mac

[This webpage](#) discusses the computation and use of item scores in Lertap. Such scores are informative in and of themselves, of course, but some users will want to use them in order to delve deeper, perhaps by undertaking additional reliability and IRT analyses.

Examples might be [this study](#) comparing alpha and omega reliability measures, and [another one](#) involving the use of free data analysis resources for a bit of Rasch IRT work.

Branching out from Lertap results to other item and test analysis software will very often involve the use of "csv" files, where csv = comma separated values. The screen snapshot below is an example of the contents of a csv file. In this case the Windows "Notepad" app has been used to display the contents of a file called "Omega-IScores.csv". On a Mac, the TextEdit app would be used instead of Notepad.



```
Omega-IScores - Notepad
File Edit Format View Help
Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q20, Q21, Q22, Q23, Q24, Q25
0.00,0.00,0.00,0.00,0.00,1.00,0.00,0.00,0.00,1.00,0.00,NA,0.00,NA,0.00,1.00,NA,0.00,0.00,0.00,NA,
0.00,0.00,1.00,1.00,0.00,1.00,1.00,1.00,0.00,1.00,1.00,1.00,1.00,1.00,0.00,0.00,0.00,1.00,1.00,0.00,0.
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1.00,1.00,1.00,0.00,1.00,0.00,0.00,1.00,0.00,0.00,1.00,NA,1.00,1.00,1.00,0.00,1.00,1.00,1.00,1.00,0.00
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0.00,0.00,1.00,0.00,1.00,0.00,0.00,1.00,1.00,1.00,1.00,1.00,1.00,NA,1.00,1.00,0.00,0.00,1.00,1.00,0.00
1.00,1.00,1.00,1.00,1.00,1.00,1.00,1.00,1.00,1.00,NA,0.00,1.00,1.00,1.00,1.00,1.00,1.00,1.00,1.00,1.00
0.00,0.00,1.00,1.00,1.00,0.00,0.00,1.00,0.00,NA,1.00,1.00,1.00,1.00,1.00,0.00,0.00,1.00,1.00,1.00,1.00
1.00,0.00,1.00,1.00,1.00,1.00,1.00,1.00,0.00,1.00,1.00,1.00,1.00,1.00,1.00,1.00,1.00,1.00,1.00,1.00,1.00
```

Each row in the above screen snapshot has 25 entries, with a comma separating one entry from the next. In this example, the entries correspond to item scores for students who sat the [Lertap Quiz](#), responding to its 25 questions.

The first row has the 25 item "numbers", from Q1 to Q25.

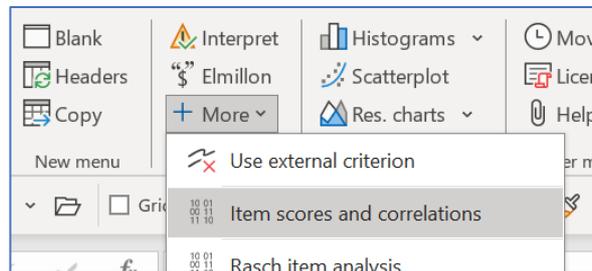
The second row has 25 item scores for the first student, with a score of 1.00 for a right answer, 0.00 for an incorrect answer, and "NA" if the student did not answer an item. It would appear that this student did not do too well on the quiz as the great majority of the item scores in the second row are 0.00 or NA.

There are 25 columns, one corresponding to each item. There is no student name or other ID in the first column in this case.

*Okay then, I've explained what a csv file looks like. How to get Lertap to make one?*

Right, okay, let's assume that I have a workbook open and have used Lertap's Interpret and Elmillon options to get results in Stats1f, Stats1b, and Stats1ul worksheets. I want to get item scores.

My first step is to take the "Item Scores and Correlations" option (see screen snapshot below). [This webpage](#) discusses what the option does, mentioning that it results in the addition of an "IStats" worksheet to the workbook I have open at the moment.



An IStats worksheet has several sections. One section, the first one, will have the item scores I want.

To break out just these item scores from IStats there are two options. "[IStatsPruner](#)" is one, [Omega1](#) macro is another. They are both reached via the "[Macs Menu](#)".

IStatsPruner will add two new worksheets to my workbook: IScores and ICorrs.

Omega1 will add an IScores worksheet to my workbook, and, when working on a computer running the Windows operating system, it will also create a csv file called Omega-IScores.csv

Unfortunately, the Omega1 macro, when run on a Mac, is currently incapable of creating a csv file. This could be an issue which may be addressed by Microsoft in a forthcoming revision of Excel for MacOS.

What the Omega1 macro does now, when run on a Mac, is create a new Excel workbook which will have a single *worksheet* with item scores that might be called something like "Book1". The workbook itself might be called "Book1.xlsx", "Book2.xlsx", or ... (it depends on how many other Excel workbooks are open at the time).

Mac users will then have to ask Excel to save a copy of this workbook as a csv file, and **name it Omega-IScores.csv** – and, oh yes, by the way – before the workbook is saved with that name, the contents of its worksheet should be made to resemble the screen snapshot seen on the previous page: the first row in the worksheet should have item names, such as Q1,

Q2<sup>4</sup>, ..., and it's best if the first worksheet column does not have a student ID of some sort; the first column should have student responses to the first item.

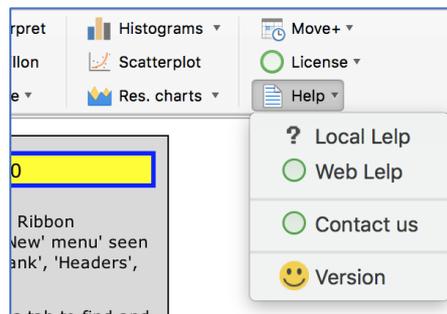
There's more that the Omega1 special macro does when run under Windows: it downloads a small collection of special data analysis scripts which make it possible to undertake additional research. When run on a Mac, however, it will not do this. But all is not lost – those same scripts may be downloaded from the “[Related tidbits](#)” found at the bottom of [this webpage](#). Incidentally, the reason the csv file should be called **Omega-IScores.csv** is because the scripts, unless modified, all expect incoming data to be in a csv file with that name.

## Windows is better than macOS?

I wouldn't say so. Both systems have great features. However, when it comes to Excel, the Mac version is not yet quite on a par with the equivalent version of Excel as found in Windows. However, as time passes it's getting closer for sure.

The VBA in the Windows version of Excel makes it possible to add more help buttons to assist users, and it also makes it easier to add more controls, text, and color to the Ribbon. The dialog boxes that present options to users are easier to program in Windows, work better, and can provide a help button.

Windows supports “[chm](#)” files, self-contained help systems which may be created using a variety of authoring tools, such as “[Help and Manual](#)”. These are easy to link to from within Windows versions of Excel.

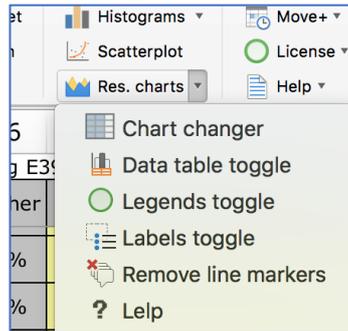


The “Local Lelp” option in Lertap is an example; in Windows, it links to a file called `L RTP57HHelp.chm`, a file stored locally on a user's computer within the Lertap5 folder, alongside `Lertap5.xlsm`. (To read about this thing “Lelp”, click: “[Lelp](#)”.)

Another example is shown below. Many of Lertap's drop-down menus have a link to Lelp at the bottom. They're meant to link to the respective topic in the `L RTP57HHelp.chm` file, and, under Windows they do.

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<sup>4</sup> These item “names” do not have to be Q1, Q2, .... they can be anything, but the shorter the better; if they're longer than, say, 6 characters, bits of Lertap's output might appear messy.



Lertap has been programmed to make good use of its local chm help file. However, when Lertap runs on a Mac, all links to it fail as the Mac does not yet support chm files. Instead, when “Local Lelp” is selected in Mac Lertap, Excel’s own help system gets activated, not the system specially made for Lertap. Most of the “? Lelp” links presently do nothing on the Mac.

Lertap is a bit easier to understand and use when running under Windows. As Mac Excel continues to evolve it will, hopefully, be easier to bring over more of the features that are at present limited to Windows Excel.

### More assistance

Lertap documentation is extensive, covering a manual and no less than four websites. Next time you’re on an extended flight, load up your computer or tablet with Lertap reference material (some of it is boring, yes, but not all of it – the manual is something of a “hoot” in many places, and the boring parts can serve to cure insomnia).

To get to the main website, the gateway to almost all things Lertap5, [click here](#).

Email addresses: [lertap5@gmail.com](mailto:lertap5@gmail.com) and [l.nelson@curtin.edu.au](mailto:l.nelson@curtin.edu.au)