This package consists of the last two labs for Project 2.

Lab 2-12: Discussion, Scale Revision, and Appendix B
You will write a discussion that (1) summarizes your findings, (2) discusses the limitations of your research, and (3) describes and explains the revisions made. You will revise the scale and put the revised scale in Appendix B.

Lab 2-13: References and Abstract
You will assemble the references for all materials cited and write your abstract.

Project 2
Lab 2-12: Discussion, Scale Revision, and Appendix B
5 Marks

Purpose
This assignment has two purposes. The first purpose is to revise the measure. The revised measure will be given in Appendix B. The second purpose is to write the discussion section, which will summarize and critique the study and explain the revisions done.

Part 1: Summary of Results
Write a short paragraph to summarize your results. Add this paragraph to your paper, in a new section called Discussion. In published papers, many people will read nothing but the discussion section, and so it is important that you summarize the purpose and findings at the beginning of the discussion. Therefore, write a short paragraph to summarize your results:
1. Start by stating the purpose of this project (to examine the quality of the scale you are examining).
2. Then summarize EACH of your results: internal consistency, validity, the two item analyses, the first principal component, and the multiple-factor principal component analysis. Be sure to summarize your results, not repeat them: There should be no numbers or statistics in here anywhere.
3. Conclude with a statement that evaluates the overall quality of the scale as it currently stands.

Be sure your summary is complete, clear, and accurate.

Part 2: Limitations of Your Research
The next paragraph is a discussion of the limitations of your research. Brainstorm a list of the limitations of your research, and then organize them into a coherent paragraph. Here's a few ideas to get you started:
1. Who did you use for your sample, and does this place limits on your ability to generalize your findings to other populations? If your participants were mostly the same age, sex, or ethnicity, would the relationships between variables change if you measured a different age group, a different ethnic group, or the other sex? Would the constructs be defined and understood in the same way by test takers who were a different age, different sex, or different ethnicity? Do NOT just say “Our study used university students and this limits our ability to generalize to other populations.” IF you think your results would CHANGE in other groups, state HOW you think it would change and WHY you think it would change.
2. Did your sample have more than one subgroup (such as males and females or people from different cultures), but you combined the two groups in a single analysis? If so, how does that affect your ability to make inferences about those subgroups? Would you expect the internal consistency, validity, and factor analyses to be the same in each subgroup or different? If different, what differences would you expect? Clearly explain your reasoning.

3. Does your sample suffer from restriction of range on one or both of the scales you used, and if so, how do you think your internal consistency, validity, and factor analyses were affected? Clearly explain your reasoning.

4. Is the data on one or both of your scales severely skewed, and if so, how do you think this affected your internal consistency, validity, and factor analyses? Clearly explain your reasoning.

These are just a few ideas to get you started. Cover each of these ideas if they are relevant, but be sure that you do not overlook other important limitations of your study.

**Part 3: Scale Revision and Creation of Appendix B**

Next you will decide what revisions to make to the scale you are examining, and then make those revisions. You will write one or more paragraphs to describe and explain the revisions you have done, and you will create a new version of the scale, which we’ll call Appendix B.

To ensure that ALL students have the opportunity to revise their items, the revised measures for ALL projects must include AT LEAST five new or revised items. These can be replacements or revisions of poor quality items, or additions of new items. For example, if you have a 10-item scale and three of the items are bad, you can replace those three items and write two new items.

For most people, revising your scale is the hardest part of this entire project, because you have to do revisions that will make the scale BETTER than it current is. Follow these steps.

First consider the items:

1. Start by looking back at the item analyses you did. Note your conclusions from those analyses, in terms of which items should be revised or removed if you wanted to improve internal consistency and validity.

2. Look at the item-level factor analyses. Which items did not load on the first principal component and which had a coefficient with the opposite sign from what you wanted? When you extracted multiple factors, which items did not load on any factor and which loaded on a factor that you do not want to measure? Which factors seemed to have too many items and which factors had too few?

3. Read the items themselves. Do you see anything that can be improved? Do any of the items violate any of the guidelines for item writing? Will this measure be used with people from a different culture? If so, would any of these items measure a different construct than the intended one, in that other culture?

4. Check how many negatively coded and positively coded items there are. Do you have roughly equal numbers of each? If not, would it improve the scale to have equal numbers or make the scale worse?

5. Considering all the information above, decide what you think is the biggest weakness of the scale at this time. Remember, there are dozens of possible goals when revising a test. What do YOU really want to focus on? You might decide to try to improve several aspects of the scale at once, or you might decide to focus on only one or two things. It’s your choice.

6. Based upon the above, decide which items to remove, which to make minor revisions to, and which to replace.

For each item that you intend to remove or revise, decide what your goal is in removing or revising this item. Greater clarity? Higher internal consistency? Higher convergent validity coefficient or lower
discriminant validity coefficient? Greater construct validity? Less cultural bias? Or more than one of these? Write yourself a note, to remind yourself of your goals for each item.

For each item you want to add, decide what your goal is in adding this item. Do you want to increase internal consistency by having a longer test? Do you want to balance the number of positively keyed and negatively keyed items? Do you want to include content that is under-represented right now? Something else? Write yourself a note, to remind yourself of your goals for each item.

Next, consider other aspects of the scale:
7. Read the name of the scale. Do you want to leave this exactly as it is or change it?
8. Read the title at the top of the scale (which might or might not be the same as the name of the scale). Do you want to leave this exactly as it is or change it?
9. Read the instructions. Do you want to revise the instructions a little, or a lot, or leave them exactly as they are?
10. Read the response scale. Do you want to leave it exactly as it is? Change it a little? Or switch to an entirely different response scale (which might require you to revise every item)?
11. Look at the layout and formatting. Can these be improved?
12. Consider the response format. If the measure is currently administered on paper, would you prefer it to be administered orally or on computer? If it is currently administered on the computer, would you prefer it to be administered on paper (this would make it easier for you to present the revised scale in your appendix). If the scale is currently administered individually, would you prefer it to be administered in a group (and what changes to the instructions, items, and response scale might be required by that)? If the scale is currently designed for group administration, would you prefer it to be administered individually, perhaps with interactions with the administrator?
13. Consider the scoring. Do you want to leave the scoring exactly as it is? Do you want to reverse key some items, or move them to a different subscale?
For each change you want to make, write yourself a note, to remind yourself of your goal in making this change.

Finally, make the necessary changes:
14. Revise, remove, and replace the items that need to be changed and write new items as needed. This means actually changing the wording of individual items. You will likely end up with a scale that is longer than the original scale. Please note that for this assignment, the revised measures for ALL projects must include AT LEAST five new or revised items.
15. Make other changes to the title, instructions, response scale, and formatting as desired.
16. Create the entire new scale, complete with title, instructions, response scale, items, and some way for respondents to indicate their response. Your goal is to create a measure that you could hand to people. Put your scale in Appendix B, at the end of your paper. Your appendix will therefore have two apparent titles: the first will be Appendix B and the second will be the title of your scale. Somewhere in the paragraph that describes the changes you made, you will refer to the revised scale in Appendix B, so that the reader knows to look at the appendix.

Note: You are responsible for the security of testing materials that you use. Even though you have revised some of the test items, some of the original items from your measure are still there. Without the permission of the copyright holder, do not give the content of individual test items in published papers, conference presentations, theses, or dissertations. If you include test items in any materials that you hand to anyone else, make sure that the person you are handing them to realizes that they need to maintain the security of the test items. For this project, if the items do not belong to you or me, and you have not obtained permission to reproduce and distribute them, then I need to maintain the security of the test items and so please write “Confidential” next to Appendix B and in the file name. If you are using one of my tests for this project, I
hereby give you permission to reproduce those items in presentations and publications: you do not need to write "Confidential" next to Appendix B.

**Part 4: Explaining Your Revisions in Your Discussion**

The second part of your discussion is a description and explanation of the revisions you made. In one or more paragraphs, (1) explain why you are revising the scale (i.e., what you are focusing on trying to improve at this point), (2) describe EACH of the changes you made (remember to describe ALL changes: the changes to the items and all other changes), (3) explain WHY you made EACH of these changes, and (4) refer the reader to Appendix B, which includes the new measure. As well, if you are ignoring any obvious problem with your scale, you need to JUSTIFY ignoring it. End your paragraph with a final summary statement, perhaps by stating your expectations for the quality of the revised measure.

Be sure that your three-paragraph discussion and your Appendix B are clear, complete, and accurate.

**WHAT YOU SHOULD HAND IN**

You will email me your paper, including your new Discussion section and your new Appendix B, when you have finished all of Part E.

**Extra Challenge: Going Beyond the Course**

There are several things you can do to improve your discussion:

1) When revising a measure, there are innumerable changes that can be made. Examine every aspect of the scale carefully (read every word; ask others to evaluate the items, instructions, and response scale; contemplate the layout; think about paper color and size, etc.), and make as many changes as you think will be helpful.

2) Discussion sections often speculate on the implications of the research for practice or theory. In reading the literature on your construct, determine what implications your results have for (a) theories of psychology, (b) research methodology, and (c) clinical or other applied practice.

3) Discussion sections often include suggestions for future research. What additional research needs to be done on this scale? What other research needs to be done on the construct underlying the scale? What new research questions are suggested by your findings?

**Extra Challenge: Presenting this research at a Conference or in a Publication**

You have now completed an original research study. You may want to present this research at a professional conference or publish it in a refereed journal article. How you go about doing this depends upon who owns the scale you have been examining.

1) If the scale belongs to you, then you can make any changes to it that you want. You can present the current paper, as it is, at a professional conference. To publish this work in a journal, I strongly recommend that you conduct an additional study (perhaps using the Psychology Subject Pool or MTurk) to evaluate the quality of the revised scale.

2) If the scale belongs to someone else, you can ask them for permission to revise the scale. They will likely want to work with you on the revisions and they may require additional studies or analyses. If you want to present or publish this research without doing additional studies and analyses, you can remove Appendix B and rephrase your discussion so that it only RECOMMENDS changes. If the scale owner is also a co-author (for example, because they collected the data), your recommendations must be given in very general terms: The scale owner won’t want to recommend specific changes that they are not yet comfortable implementing.
Purpose
The purpose of this assignment is to write the abstract and reference sections of your paper.

Part 1: Abstract
Write an abstract for your paper (between 150 and 350 words). Be sure your abstract includes:
1) the purpose of your research
2) the number of participants
3) a summary of your results (but do not include any numbers)
4) a brief description of the revisions done

In writing the abstract for your paper, I recommend that you consider the requirements for a poster at your favorite conference. For example, for the Western Psychological Association annual convention, abstracts need to be 350 words or less. For the Association for Psychological Science annual convention, you send in a 50-word abstract and a 300-word summary. Abstracts are very important, because they are the basis for acceptance or rejection at conferences, and because they are indexed in sources like PsycINFO and PsycARTICLES.

Add your abstract to the beginning of your paper, right after the title page. If you have both an abstract and a summary, such as you would need for APS, put both after the title page.

Part 2: Compiling Your References
In your References section, provide APA-format references for each of the two measures and any other sources cited.

In the 6th edition of the APA publication manual, they require that we add the doi location for journal articles. Not all journal articles have doi locations, but if they have one, we must list it. There are several ways to find doi locations. I find the following website pretty reliable:
http://www.crossref.org/

To search for a paper, enter what you know about the paper (e.g., title, journal) in the search box. Once you have found the paper, click Actions / Cite / APA. It will create a reference (including the doi address) that is CLOSE to APA format. Copy the reference to your paper and put it in perfect APA format.

If you used my dataset, here is some information about references:
For the Negative Expressivity Scale, the citation is: (Kim Barchard, personal communication, January 2015). Put this citation in the body of your paper and do not put anything in the reference list.
For my other scales, use my dissertation as the reference:
For the IPIP-NEO scales, use:
For the subscales of the Self-Report Questionnaire, use:
Part 3: Organizing Your Reference Section

1) Assemble your reference section in alphabetical order. Use hanging indents to indent the second line (note, do NOT put a paragraph break in the middle of a reference; this causes formatting problems when you reformat your references for a publication or poster, or for use in another paper). Only include references for those papers or books that you cite in the body of your paper. Make sure your references are complete, clear, and accurate.

2) Add your reference section to your paper, after the main body of your paper, just before your appendices. Make sure your tables are at the very end of the paper.

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