The Conclusion Formula

PUBLISHED OCTOBER 6, 2016

Last updated on October 5, 2016

Since I joined Minnesota in 2013, I have had the privilege of teaching the second-year paper seminar, which all of our PhD students are required to take, and in which they get to write an entire research paper from start to finish.

Every fall, I go over Keith Head's tremendously useful Introduction Formula, which has the double benefit of (i) minimizing the amount of uncertainty you face when writing the introduction for your research papers, and (ii) ensuring that you follow the social norm(s) surrounding how an introduction should be written for an economics paper. Then, because there isn't much more to the introduction formula than Hook-Research Question-Antecedents-Value Added-Roadmap, I show students examples of introductions written using that formula, to show them that the formula does indeed work.

When I taught the introduction formula last week, someone asked: "But how should we write the conclusion?" Beyond what I had learned in high school, I didn't really have a good answer, so I figured I should look around and see if there are any obvious social norms surrounding how conclusions are written for economics papers; I found nothing. Even William Thomson's otherwise wonderful ***Guide for the Young Economist*** has nothing about how to write conclusions.

The Conclusion Formula

Many economics papers titled their conclusion "Summary and Concluding Remarks," which is a pretty good indication of how your conclusion should proceed. What I learned in high school was that a good conclusion should have two main parts: (i) a summary of what you have spent the several pages before the conclusion doing, and (ii) the way forward.

I am not claiming to be a master at writing conclusions, but I have written enough of them to get a good sense of what works, and to provide the following guidelines to cut on the transaction costs other people face when writing conclusions. Strictly speaking, a conclusion should be structured as follows:

1. ***Summary***. You've surely heard that when writing a research paper, "tell them what you're going to tell them, tell them what you want to tell them, and tell them what you just told them." This part is obviously tedious–you have just spent 40-some pages telling them–but it needs to be there, and it needs to be different enough from the abstract and the introduction. Note that I didn't say it needs to say something new; it just needs to be different enough. If possible, tell a story.

2. ***Limitations***. Some people like to have a “Limitations” section at the end of their results section; I like to have that myself. But the conclusion should also emphasize the limitations of your approach.
3. ***Implications for Policy***. Presumably, your work has some sort of implication for how policy is made in the real world. This will not always be the case–some papers make a purely technical point, or a point that is only ancillary when it comes to making other policy-related points–but I would guess that since you are reading this blog, there is a high likelihood that what you are working on has some policy implications. Discuss what those implications are, but don’t make claims that are not supported by your results, and try to assess the cost of what you propose in comparison to its benefits. You can do so somewhat imperfectly (if I were a betting man, I would bet that this is where the phrase “back-of-the-envelope calculation” comes up the most often in economics papers), since the point of your work was presumably about only one side of that equation–usually the benefits of something, sometimes its costs, but rarely both. In two or three sentences, can you identify the clear winners and losers of a given policy implications? Its political feasibility? How easy or hard it would be to implement?
4. ***Implications for Future Research***. Finally, your work is not perfect. Your theoretical contribution could be generalized, or broadened by relaxing certain assumptions. Your empirical contribution could probably benefit from better causal identification for better internal validity. Even with a randomized controlled trial (RCT) with perfect compliance, you might want to run the same RCT in additional locations for external validity. If you are writing a follow-up paper, this is a good place to set the stage for it.*

* This is why I often tell students not to look for research ideas in the conclusions of the papers they read, because conclusions either list (i) ideas that are so difficult to execute that the authors of the papers you’re reading didn’t think it was worth exploring them, or (ii) ideas that those same authors are already working on.