

Some Research and Writing Tips

Part 2: Writing

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ALL COMMENTS ARE WELCOME

Abstract

This guide gives tips on how to do (quantitative) research and on how to write it up. These insights seem to hold throughout all (social) sciences. I illustrate them using examples from finance and economics. My main goal is to save budding researchers time by preventing them from doing bad research and helping them to attract attention to their research by writing it better. My insights are based on learning from the best and from many of my own time-wasting mistakes over the last twenty-five years.

JEL-codes: A1, B1, C1, D1, E1, F1, G1, H1, I1, J1, L1, M1, N1, O1, P1, Q1, R1, Y1, Z1

Disclaimer: These are my views. Feel free to prove me wrong and get top publications your own way.

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Introduction

In my experience, (quantitative) research¹ in all fields is essentially based on the same underlying principles. Unfortunately, guidelines regarding these principles are rare. Most students have to learn it the hard way by picking up bits and pieces of advice along their academic way.² Most researchers not only lack advice on doing research, but they also get precious little advice on how to write up their findings properly.

In this guide³, I give my personal views on what separates good research from bad research (Part 1) and what separates good and bad writing (Part 2). My hope is that it prevents budding researchers from wasting time on research that was doomed to fail from the start - like some of my own - and helps them to achieve a higher level of research quality (and publications). I will rely on examples in finance and economics, often related to my own work simply because I know the details and the reasoning behind the choices I made and I prefer to criticize my own work rather than the work of others. Last but not least, these examples are also easy to explain to a non finance or a non economics audience.

This guide is intended for researchers like myself who can use a little help every now and then. Of course, what is true in the Arts also holds in the Sciences: the truly gifted can flaunt any guideline and still research and write brilliantly.

PART 2: WRITING

1.0 No one will read your paper

How do you determine which academic papers to read? I receive numerous e-mails with working papers in my field.

¹ While many principle I discuss here also apply to qualitative research my foces is on quantative research.

² Surprisingly many of the ‘how to write and do research’ guides also beat around the bush and fail to address what I would consider the ‘main issues’ and do not go much further than suggestions that an abstract should summarize your research.

³ This guide is based on: my own research and writing experience, my teaching of ‘How to do research’ classes for Master and PhD students, workshops taught for staff and PhD students in universities around the world, my experience from research projects with staff and PhD students, and my experiences as an editor, associate editor and a referee. Most of all, I have been fortunate enough to learn from some of the best, and less fortunate in that I have made many of the mistakes I discuss here myself.



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I glance over the titles to determine whether it is interesting or relevant to what I am doing. If I like the title, I read the abstract, see who wrote it and look at the affiliation of the author. Based on some sort of implicit weighing of these quality indicators I may move on to the next or download the paper and read the introduction.

If you are like me, you rarely read a paper from beginning to end. In fact, in this era of information overload the approach above seems to be the way to select any piece of information we consume. I decide which newspaper articles I read based on the headline and then by reading the first sentence of the first paragraph. If the journalist has not got my attention by then I move on. Professional writers realise that. Look at any recent e-mail from a magazine or news website and see how they have structured the information for you. Journalists know that readers ignore most stuff and you have to really try hard to get their attention.

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As readers, most researchers behave similarly but they seem to forget the readers' perspective as soon as they write about their own research. They assume that their research is so interesting that their fellow academics will be patient enough to give them the benefit of the doubt. Unfortunately, no matter how good your research, most readers won't.

Most readers will not read your paper. They may read the title of your paper. And, if you are lucky, they may continue to read your abstract. If it is your lucky day they may even read the introduction and look at some of your tables. However, it is unlikely anyone will read much beyond that.

Editors of top journals easily get a thousand papers a year. They cannot read them all from beginning to end so they will immediately look for three things.

- 1) What is this paper about?
- 2) Do the authors know what they are doing?
- 3) How big is the contribution to the literature?

This has important implications for the way you need to write your paper. Firstly, you need to write well. Secondly, you need to structure your paper properly which means you need to get to the point as soon as possible.

2.0 Writing well

Many researchers find it hard to write well. The reason is simple. As a researcher, you need to structure a logical sequence you have in your mind into a somehow logical sequence for an unknown reader. The reader's logic may be fundamentally different from yours or that of your research. To add to the problem if you are deeply engaged in your research you may have stopped seeing the wood for the trees i.e. complexity has overtaken clarity and the fundamental point has been lost. This appears to be natural state of mind occurring in all creative processes.⁶

To write well I need to work hard. More often than not I do not get it right first, second, or third time round. My abstracts and introductions have easily been revised four or five times before I get to a first draft. Often they change dramatically from one draft to the next.

In my view many inexperienced researchers underestimate the importance of writing.

I believe that apart from defining a proper research question, as discussed in part 1, underestimating the importance of writing is one of main reasons why many PhD students fail to get attention for their work. But this is true not only for PhD students. I have no hard evidence but I would not be surprised if it causes 75% of the rejections of papers at top journals. Most researchers do not fail because they are not technically skilled, or because they work on the wrong research question, but because they cannot write – or simply do not put in the effort, assuming they will be given the benefit of the doubt.

Around 75% of my time goes into writing of papers. Thinking about what to write where (structure) and how to write it.

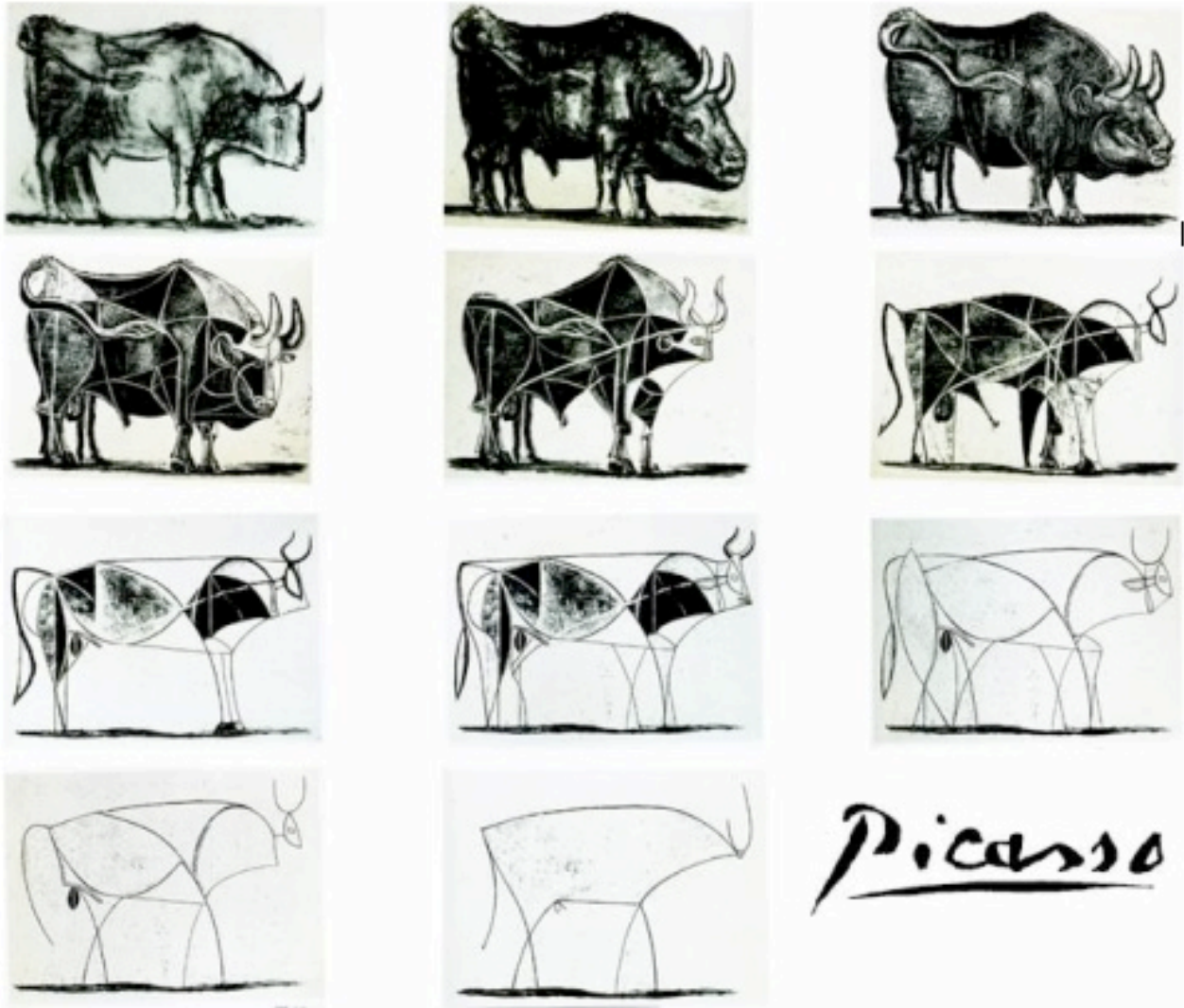
2.1, Structure

When I talk about structure I do not mean the paper structure. That is relatively easy. Title, Abstract, Introduction, (Literature Review), Data, Main Test, Main Result, Robustness Tests, Conclusion. What I mean is how to structure the story you want to tell. There is so much that seems important, especially when you have just done your research, and once you have written it down it reads like complete chaos with no logical sequencing whatsoever. Too much information and unnecessary detail.

The first thing you need to worry about is: What is the story you want tell? Strip your research to the core, like Picasso's bull drawings. In your mind your research is like a detailed bull (and often you are lucky if you can see the full bull). But you need to get to the core. Or even better, start with the core. What if you only had one sentence to describe your research and results? What if you only had a paragraph? Start with the stripped-down painting and add a bit more detail if need be. You will find most of the time you will need surprisingly little to get your message across.⁷

⁶ See for instance Creativity Inc. by Ed Catmull. A book worth reading. It seems that filmmakers struggle with similar problems to academic researchers.

⁷ The same goes for presentations. If you ever want to see a strong violation of 'rational expectations' go to an academic conference and see how many academics can correctly estimate the time of a presentation. The problem is that they want to tell it all. In their preparation they start with a full blown story and then – if you are lucky - take slides out. A better approach is to do it the other



Pablo Picasso, Bull (plates I - XI) 1945

2.2 Writing tips

I cannot give you a full blown writing course but I can give you some tricks that may help you write better. Of course it already helps if you are willing to put in the effort and realise the importance of writing well.

2.2.1 Be critical of your own writing

The first trick is simple. Many people write but hardly ever look back critically at what they have written. In their mind, at the time of writing, each sentence follows logically from the previous one. At the time the 'it' refers to something in the previous sentence and once 'it' is down on paper they no longer worry whether on closer inspection 'it' really does unambiguously refer to what they intended 'it' to refer to. So read what you have written

way around. Start with the stripped bull! Assume you have only five minutes to present and two slides. What would you tell? Then expand and assume you get ten minutes and fives slides. It will do wonders for your presentations.

and re-think whether what you wrote makes sense - not only whether it makes sense to yourself but also to others. This is the first step towards better writing.

2.2.2. Stick to the facts

When you talk about results and what you do in your paper, it helps to stick as closely to the facts as you can. It also helps to be specific. Often you see researchers having a tendency to think up possible explanations for what they have found which they fail to test and their results do not substantiate. This does not stop them from building castles in the air based on these unsubstantiated claims, frivolously ignoring any other 'possible explanation'. The story tends to start drifting in different directions. I have seen papers where theory and hypotheses had little in common with the actual empirical results.

2.2.3. Assume your reader is an idiot

That may be putting it too strongly but from a writing perspective assume your readers do not know. Try and tell your story to a 13 year old. What do you do and why do you do it? Step by step and one step at the time. Write plain English. Make sure a journalist in your field can understand what you do. This holds for title, abstract, and introduction. Impactful research is the buzz word in universities these days and many researchers would not need to change their research one bit if they wrote what they are doing in plain English. If you introduce a new concept make sure you immediately explain what you mean as soon as you introduce it. For example: 'the Efficient Market Hypothesis, which basically states that financial market returns are difficult to predict'. Sometimes people introduce new concepts which the reader sees four or five time before the author gets around to explaining it. Most readers have given up by then.

2.2.4. Writing is like good wine

Nothing changes as much as the perception of your own writing over time. Once you have that first draft, you have written a masterpiece well worthy of a Pulitzer. You get that 'why wait, let's submit' feeling.

When you write a first draft keep in mind that to an outsider it will read like a first draft. In fact, I have seen referee reports (fortunately not about my own papers) commenting that the paper 'reads like a first draft'. It is not a compliment. I do not think I have ever written a first draft of a paper that I have been happy with three months later. While having co-authors helps, they are not a natural safeguard against the problem. They are in the same boat as you are: too engulfed in the research to write well.

What I find works well is to print the paper. (yes, on good old fashioned paper). In my experience no matter how hard you try on screen, it reads differently once you have printed it. That paper round of revising (and I do it at least twice) somehow makes a huge difference.

2.2.5. Learn from the best

Go to the main journals in your field and read not only WHAT top researchers write but also HOW they write it. For instance, In my view in finance Utpal Bhattacharya is one of the best paper writers around. When I was a columnist his papers were perfect. I only needed to read the intro to get all the information I needed. To this day I read all his papers when they appear on SSRN not only from a research point of view but also to learn a thing or two on paper writing.

2.2.6 Text editing

It is amazing to see how many papers I have seen as an (associate) editor or referee that are written in poor English (often by non-native and native speakers alike). If you do not take your work seriously no one else will. Try to get it perfect before you submit. You will not get the benefit of the doubt. Of course, there can be an occasional typo or grammatical error. But submitting unpolished first draft papers is a sure way to get rejected. As an editor I generally would be reluctant to mail them out to referees.

If you are not a native speaker, always use a text editor who is a native speaker.

2.2.7. Some simple tips

Consider this sentence:

‘In this paper it shall be shown using OLS that there is a statistically significant lagged effect between stock market returns and price changes of oil’.

Before your read on it may be good to read it again. Let it sink in. Now think how you feel about this sentence for a moment. Anything wrong? And why? Could you do better?

I feel it is a bad sentence for more than one reason:

- 1) It does not use plain English. Who in the real world knows what ‘lagged effects’ and ‘OLS’ are?
- 2) It uses passive speech ‘it shall be shown’ rather than the active form ‘This paper shows’ or ‘We show’ or ‘I show’.
- 3) It uses the acronym OLS and you should never use acronyms if you can avoid them.
- 4) It discusses techniques: OLS.
- 5) It uses jargon "OLS and a lagged effect".
- 6) It is unnecessarily long (26 words)
- 7) It states the obvious: ‘In this paper’. Yes, where else?

What if I correct all these mistakes? What am I trying to say when I use the term 'lagged effect'? Basically that oil price changes predict stock returns. In fact, why not just say that. ‘oil price changes predict stock market returns’. Obviously this result is statistically significant otherwise I would not write it. So if I cut all the proverbial crap, I get:

‘Oil price changes predict stock market returns’

Rather than:

‘In this paper it shall be shown using OLS that there is a statistically significant lagged effect between stock market returns and price changes of oil.

Imagine you have two papers opening with one of these sentences. Which paper would you rather start reading?

Note that I have just taken a sentence of 26 words and reduced it to 7 in plain English, saying much more clearly what the paper is about. You also do not need to be an expert to understand it.

Let me get back to some of those mistakes as they happen often.

2.2.7.1. Acronyms

There was a time that as an author you had to type everything on a typewriter. That was a time that if you had to regularly repeat a concept like Cross Sectional Return Dispersion (CSRD), you would get tired typing. With the invention of 'search and replace' there is in most cases no point to abbreviations any longer. (I am not talking about other reasons for abbreviations. For instance, abbreviations that are well known like 'ASAP' or the ones you prefer not to spell out completely like 'WTF'.) Unfortunately many researchers seem to think acronyms are helpful to readers. Even worse these researchers seem to think that the more the merrier. The reader gets sentences like the 'CSRD during the recession phase of the NBER defined cycle indicates GARCH like behavior is not only present in volatility but also a characteristic of CSRD'. This sentence makes perfect sense to me but I would understand completely if you think 'WTF'.

Do not use acronyms if you can avoid them because a second problem with them is that you tend to use them more and more often. It leads to poor writing. If you force yourself to keep thinking in terms of the full expression you will write better because you will avoid using it in full and become more creative in finding ways around it. You will start to shorten the concept but in a way that it stays meaningful to the reader but in variations, like 'Return Dispersion'.

2.2.7.2. Passive versus Active

My guideline is simple. Passive voice shall be avoided as much as possible! Often people use passive voice to avoid using 'We' or 'I'. Don't. There is nothing wrong with 'We'. Use 'We' for co-authored papers, 'I' for single authored papers – yes, there is nothing wrong with 'I' either. There are at least three reasons why you should avoid passive speech. 1) It is more difficult to read than active speech. 2) It leads to imprecision in your formulation. For example. "It is generally thought that (Johnson and Johnson, 2014). This is imprecise. Do Johnson and Johnson do the general thinking here? Or, do they argue there is general thinking going on or do they show that people generally think? And which people are we talking about? Active speech almost natural forces you to be precise. "Johnson and Johnson (2014) show that 20% of all Americans think that...." 3) Passive speech is most often ugly in academic writing. Only use passive speech when it improves on active speech. And I find that so hard to judge that I prefer to err on the side of active speech.

2.2.7.3. I wrote you a long letter

Most people find it hard to write briefly and to the point even though brief and to the point is better. The quote 'I wrote you a long letter, because I did not have the time for a short one', attributed to a number of people (including Pascal, Cicero and Mark Twain) sums it up nicely. Avoid 'Boilerplate' as Deirdre McCloskey calls it in her must-read book on 'Economical Writing' (this book is a joy and only takes two hours to read. My advice: buy it, read it, enjoy it but more importantly use it!).

I always get a bit confused if students ask me ‘how long should this or that paper be?’ Your story needs a certain number of words to tell it. Use as few as you possible can. The same goes for your research. When I started taking my own writing more seriously I found I could easily reduce what I wrote by half, still saying the same thing, just by trying to be concise.

The problem is that while most of us are taught how to write this does not mean we are taught how to write. Compare it with making music. Most of us can play an instrument but making music is a different story. Of course we cannot all be Shakespeare or Hemmingway, but just trying to improve your writing, keeping it short and make it interesting can dramatically improve readability.

2.2.7.4. Be specific and precise

Try not to pay lip service only, be specific and precise in all your formulations. For instance, the sentence ‘oil price changes predict stock market returns’ may be short but we are precise as we use ‘oil price changes’ and not ‘oil prices’.

2.2.7.5. Examples

Readers grasp concepts and theories easier if you start with an example and then generalize rather than the other way around.

2.2.7.6. Variation

If you notice that you use the same structure throughout to discuss a topic, change it around. Your work does not need to be a literary masterpiece but it does not need to be at the other end of the spectrum either. Nothing wrong with a bit of variation. Try and make your paper an interesting read without going overboard.

2.2.7.7. Anything before ‘that’ can often go

Take something you have written. Search all sentences that contain ‘that’ and remove anything before and including the ‘that’. Read your piece again. You’ll be surprised. For instance, “~~We find that~~ oil price changes predict stock returns”.

2.2.7.8. Revise

You will write better if you first write down what you want to say and write it as it comes naturally to you. Then go back with specific exercises in mind. For instance,

- 1) Removing anything before ‘that’
- 2) Change all passive speech
- 3) Can I shorten what I have written?

2.2.7.9. Repetition

Avoid repeating yourself and if you do, say so. Make sure you let the reader know you know you do it.

3.0 Your paper

3.1. Your title

3.1.0 Inform

Your title is the first point of contact and it had better be good. My view nowadays is that first and foremost your title should be informative. If you can also have a bit of fun or

intrigue the reader that is a plus. But say what your paper is about in as few words as possible.

3.1.1. Techniques

Unless your paper is on techniques they should not be in your title. As discussed in Part 1 (econometric/statistical) techniques are tools to answer questions in our fields. Our paper (referred to in Part 1) entitled "Temporal Aggregation in GARCH models" never attracted a large audience. Of course not. If anything, it scared people away. The interesting bit about the paper was the finance part: do stock returns at, say, monthly frequencies, exhibit volatility clustering? (go through turbulent and tranquil periods). At the time an interesting research question. As soon we changed the title to "Volatility Clustering in Monthly Stock Returns" the paper became a revise and resubmit.

For reasons explained in Part 1 the sure way to reduce your reader base is to refer in your paper to the 'Dutch experience', the 'Malaysian case' or the 'New Zealand evidence'. This will surely immediately alienate most readers, as they tend not to be Dutch, Malaysian, or Kiwi's. Worse if you refer to a country in your title it is often an indication of bad research.

3.1.2. Intriguing titles

I used to think that intriguing titles were better. So I was happy with "Striking Oil. Another Puzzle?" Unfortunately I regret it now. While academics like puzzles, the title does not clarify that the paper deals with the question as to whether oil price changes predict stock market returns. My guess is that because of this we miss out on quite a few citations.

3.1.3. Sex sells

Keep in mind that most researchers are (almost) human. So anything that works in the real world for real people might work in academia too. If you do not believe me, check out on SSRN.com how many downloads a paper got that has a four letter word as its title. In this case the four letter word is a good title as it was exactly what the paper was about: the four letter word. But keep in mind 'form follows function' all the time.

3.1.4. Take your time

I spend an awful lot of time thinking about titles of papers. It is extremely difficult to come up with good short descriptive titles that inspire the reader to read the abstract. Titles tend to be like good wine, they generally improve over time. Spending time on your title is a good exercise as it forces you to get to the core of what your paper is about. In the process don't hesitate to kill your darlings. In most cases plain English is better than jargon. But not always. We once started a paper on international political uncertainty and stock returns and as simply "War and Peace" had already been taken, we used "War, Peace and Stock Markets". We later decided to switch it to the "Time-varying rare disaster risk and stock returns." The reason was simple. At the time 'rare disaster risk' had taken on a specific meaning in the finance literature and that was exactly what our paper was about.

3.1.5. Questions

Questions are good - or were good. Some people seem to dislike them nowadays as they are becoming more and more common as attention grabbers in journalism. So use them carefully. Personally I try to avoid them. But if you ask a question make sure you provide the answer in the paper.

Whatever you do keep in mind that the main goal of your title is to get your readers to read the first sentence of the abstract.

3.2. Your abstract

3.2.1. First sentence

It is not rocket science to work out what the first sentence of your abstract should do. (Just have a look at how journalists write). The first sentence of your abstract is the punch line. Without a doubt this is the most important sentence of your paper. Your first sentence should give the main results/idea of your paper building on your title. Make sure that your first sentence and title complement each other and prevent repetition and preferably that the sentence summarizes the main conclusion of your paper as clearly as possible and in as few words as possible.

If you were only allowed one sentence to describe your paper what would that sentence be? 'Oil price changes predict stock market returns. What if you feel you cannot summarize what you have done in one sentence? That can mean one of two things. You might have a better alternative that keeps the reader going. It does happen. Unfortunately it is more likely you have not thought enough about your research and why you should have done it in the first place. This is also why I encourage you in Part 1 to start writing an abstract and introduction ASAP.

Compare your title and your first sentence with an elevator pitch (http://en.wikipedia.org/wiki/Elevator_pitch).

3.2.2. What else should be in the abstract

Apart from your first sentence, make sure you include a sentence as to why your results are important (if that is not obvious) and give some of those main results. Essentially, your abstract should contain all the information about your paper you want your readers to remember if they only read your abstract. I revisit many papers at a later stage even though initially I only read the abstract.

3.2.3. Short

Your abstract should be as short as possible. And then you need to cut it down to a 100 words. In my view an abstract should not be longer than 100 words. Do not allow yourself more (because you end up on a slippery slope if you allow 101 or 102). Some journals like the Journal of Financial Economics don't even allow longer abstracts. And rightly so. Firstly, it forces you as an author to limit yourself to what is really important. Secondly, a short abstract signals to the reader you know to stick to the point. Long abstracts do not bode well.

3.2.3. Abstract and Introduction

As I mentioned before it is a good idea to try and write abstracts and introductions before you start doing your research, because if you cannot write your thoughts on your research down clearly, you may not be doing the right research. The additional benefit of preliminary writing is that it focuses your mind on the aspects of your research that are important and it prevents you from 'drifting' when researching, which may cost you an awful lot of unnecessary time. It seems to be in our nature. I start with writing abstracts and introduction and often spend a couple of days on writing them. I know that over the years I

will probably rewrite them often. But starting with abstract and introduction focuses me on what is going to be important about a paper.

3.3. The introduction

3.3.1. Sequence

There sometimes is a logical sequence to telling your story depending on your topic (and your contribution). For instance, if your paper adds to a debate in the literature, the debate and main issue you resolve may be a good starting point.

If there is no logical sequence write your introduction in this order:

- Research question (sometimes your results imply your research question, you do not need to specify it separately).
- Main results (write them down and stay as close to the actual tests as you can and give a feel for the size).
- main robustness checks & controls
- Conclusions based on these results (elaborate carefully how your 'proxies' may relate to 'concepts'?) and yes they must be in the introduction.
- Motivation as to why your research is important: broader implications
- Contribution to the literature: spell out what the main differences and similarities are to what other papers or strands have done. Which differences and similarities are driving your result. But keep in mind that the people you cite may be your referees! Formulate exact and if you really have to criticize make sure you do it in such way that your possible referee will not be offended!

It often seems strange to begin with the results. But trust me, often once you read it back, you will be surprised how often you miss those results early on.

3.3.2. Your first and/or second paragraph.

Cochrane (2005)⁸ suggests putting your research question and your main results in the first paragraph. I agree, do it as soon as possible. Sometimes you need a short paragraph as an introduction but then your research question and main results should be in the second paragraph at the latest. Let me say that again: your main result and your research question should be in the second paragraph at the latest. Give the main results as soon as possible and if there are obvious robustness checks you did (the elephants in the room from Part 1), mention those. As noted before, it stops the reader from wondering and tells the editor you know what you are doing. Other robustness checks can wait until later in the introduction. Also make sure you give the reader a feel for your findings and if you discuss a model give the reader the intuition. For instance, if you find a January effect, give a ballpark figure of its size. Is your January return 0.1 percent higher or 5 percent more than the average month? How strong is what you find: 'an oil price shock of one standard deviation (around 10%) predictably lowers world market returns by 1%.' Or, as another example, when you cover more than one country, note how many countries show a significant effect. Essentially you want to give the reader a short summary of your main findings and what they mean. Ask yourself what your reader is asking 'What does this mean? And 'Why is the author/researcher doing this?' You need to keep (implicitly) answering these questions

⁸ John Cochrane, Writing Tips for Ph. D. Students, 2005. Available (and worth reading) at http://faculty.chicagobooth.edu/john.cochrane/research/Papers/phd_paper_writing.pdf

throughout your paper. Unless the reader is your mother you might not get the benefit of the doubt.

Do not be afraid to jump in. You do not need to spell everything out: 'Show don't tell'. Consider fiction literature. Here is the first sentence of "No Second Chance" by Harlan Coben:

'When the first bullet hit my chest, I thought of my daughter.'

It is easy to deduce a number of facts from this sentence. In good old academic writing you would have first provided 'context' and introduced the shooter, the person who got shot, his daughter, the rest of his family etc.... By the time you got to the actual shooting your reader would be fast asleep... There is nothing that prevents you from writing a bit like this. Consider this first sentence:

'Laws prohibiting insider trading came late to Germany.' The World Price of Insider Trading, Journal of Finance (Utpal Bhattacharya, Hazem Daouk)

You are in the story almost immediately. In fact I liked this sentence so much we tried to do something similar in our 'Striking Oil' paper.

'Oil prices did not change much before 1973.'

Make an effort to write well and tell an interesting story and as long as it remains non-fiction it will be all right.

Note that you are expected these days to give results in the introduction (and in the first two paragraphs). Again in the good old days it was customary to only summarize results in the conclusions. No more. Say what you did, what you find and why that is important first. Sometimes students even forget to give their research question or results in the introduction. Or, almost as bad, you get a discussion of their research question on page six of the introduction. Rest assured that most readers and most surely the editor of a top journal will have moved on. Do not start with 'context', 'background' or an 'extensive literature review'. 'Background' is called 'background' for a reason. As a reader I cannot put your discussion of any background or literature in perspective if I do not know what you are doing.^{9,10}

⁹ Or to quote Deirdre McCloskey: "Please, I beg you, spare your readers/audience your "Background" or a "Literature Review". Your audience is interested in what you do not what others have done! Your writing must be interesting: Restatements of the well known bore the readers; routine mathematical passages bore the readers; excessive introduction and summarisation bore the readers. Get to the point that some sceptical but serious reader cares about and stick to it."

¹⁰ By the way: the same goes for your presentations. Your audience is interested in what you do. Not what all others have done unless it is extremely relevant for what you do. So first your research question and your main results (always good if you run out of time during a presentation). Continue with contribution and then - if you really, really must - some background or a literature review but generally speaking you would not need them and it seems a bit silly to spend so many pages and particularly presentation time on what others have done.

Make sure that if you start with an introductory paragraph it does not end up as a hollow 'throat clearing paragraph'. A good way to prevent that from happening is to assume that for every claim you make in your introduction you have to provide a source. So if you want to say 'globalization has increased dramatically' or 'the world becomes more complex every day' make sure you are able to back up that claim. Go over every sentence and be able to provide a source. Because you'll find that many of those throat clearing sentences are at the end of the day empty phrases. For instance, you could easily argue that the world is getting simpler every day.

The same goes for long argumentation on what is causing a specific result. Sometimes inexperienced researchers get carried away seeing a strange result. They have an explanation and keep building and building long arguments. However, they lack the evidence to support these arguments. Don't.

3.3.3. Motivation/Contribution

Spell out why your findings or your research question are important. Your motivation and contribution (see also part 1)! Tell it as it is and do not overclaim.

After you have given the main results explain what motivates your paper and how your paper contributes to the literature. This part cannot be long enough (Interestingly my text editor asked: What? Pages and pages of it?....., Well OK.... maybe I would stop after a page or three). Here is where you essentially try to convince the reader why what you are doing is important and tell the editor why your paper should be published in their journal. You want to be as specific as possible (see Part 1) and don't get into pseudo motivation, motivating only one part of your research question (see also Part 1 for more detail). What you can say about your topic here essentially determines the level of the journal you can submit your paper to. Again, a lot of people find that hard to determine and seem to overstate and overestimate their own paper quality. (Some tips how to prevent that are again in Part 1). But for the top journals you will have to bring something new to the table and not a marginal improvement on earlier work. That may seem difficult, but these are not A* journals for nothing. A common mistake is to claim more than you can deliver, which happens a lot if you mix 'proxies' and 'concepts'.¹¹ Also be aware that if you are too modest the referees may not pick up on your actual contribution.

3.3.4. Discussion of the literature.

Lesson number 1. Keep in mind that the people you cite may be your referees! Criticize papers only if you really, really have to and if so assume the referee is the person who wrote the paper you criticize. If you have ever had your paper cited, you will notice that this is sensitive and even a sentence that may seem innocuous enough to someone else can really rub the person of the article you cited the wrong way. I never realised that until I read some references to my own work. And the Dutch are not known for being the most sensitive people in the world. Also make sure you cite conclusions correctly. On the basis of how often people give new meaning to some of my work, this is pretty worrying.

3.3.5 Contents of the introduction

Your introduction should contain everything you want the reader to take away from your paper and, as I said before, should be in plain English. Ideally, a journalist can read your

¹¹ Master students often go wrong explaining why they think it is interesting rather than why the reader should think it is interesting.

introduction and write an article on your paper without going wrong. But try to keep it short, simple and stupid. Don't try to show off your intelligence. Your goal is to report on the interesting research you did. It is not to show how smart you are. Also make sure your introduction is self contained. If you refer to something that may be unknown to your reader spell it out. We once wrote a first draft of a paper claiming that our dataset satisfied most of the criteria of an ideal data set in our research area. We forgot to spell out what those criteria were leaving the reader wondering.

3.3.6. That last table-of-contents paragraph...

I could not say this better than Deirdre McCloskey:

“The outline of this paper is as follows.” Don't, please, please, for God's sake, don't. Nine out of ten readers skip to the substance, if they can find it. The few who pause on the paragraph are wasting their time. They can't understand the paragraph until, like the author, they have read the paper, at which point they don't need it. Usually the table-of-contents paragraph has been written with no particular audience in mind, least of the audience of first-time readers of the paper. Even when done well it lacks a purpose. You will practically never see it in good writing, unless inserted by an editor who doesn't know good writing. Weak writers defend it as a “roadmap.” They got the idea from Miss Jones: “Tell the reader what you're going to say. Say it. Say that you've said it.” It's exceptionally bad advice, and the person who made up this memorable phrasing of it is burning right now in Hell.”

Next time you think of putting one table of contents paragraph in, read this again. If your supervisor wants you to, make them read this.

3.3.7. When are you done with your introduction?

‘It seems that perfection is reached not when there is nothing left to add, but when there is nothing left to take away’.

-Antoine de Saint Exupéry

In my view a story in an introduction just needs a minimum number of words to be told. Use that minimum number of words and no more. Do not leave a paragraph in just because you have written it. Keep in mind that ‘less is more’ (except for motivation).

The rest of your paper is relatively simple.

3.4. The rest of your paper

3.4.1. Literature review

Sometimes it makes sense to have a literature review before your analysis (and if you are working on a Master or PhD thesis you may be required to show you are able to master the literature) but in most academic studies avoid them if you can and focus on discussing the relation of your paper to the literature in your introduction.

If you do put in a literature review, realize that doing a good literature is more than summing up the main finding of study after study. A good literature review should put your

work into context and tell an interesting tale in itself. Again it should be self contained so make sure you explain concepts and techniques you include in your discussion and that the whole is understandable. Generally, the closer an article relates to your paper, the longer its discussion should be. Broadly speaking there is no reason to start a literature review at the beginning chronologically and work your way forward to the most recent work. The best approach is to find the literature working backwards (Google Scholar has a 'cited by' option that comes in handy here. You can find the most recent papers just tracing papers back to the future from some papers in your area). Find articles closest to your work then go back in the past and find the articles you need to put those articles in context. The best way to discuss the literature depends much on the story you want to tell. Look at some examples of published literature reviews in your area and see how they are written. As a rule of thumb I tell students to make sure they at least give some background on research question, contribution to the literature (differences and similarities to other studies), data used (not all results can be generalized so allow the readers to verify whether they feel comfortable), main results and main conclusions based on these results.

3.4.2. Get to the main point ASAP

There should be as little between beginning and main result as possible. If you can have your main result in Table 1. Do it.

Generally first discuss your main data. If you use other data later I also would introduce them later on a need to know basis. However, some people prefer things organized in sections. In my experience, the rule is that if you fall into one category, the referee falls into the other category and feels very strongly about it.

From the start of your paper justify everything that can be perceived as a choice. For instance, 'We use data ranging from 1715 as this is when the available time series start. Our analysis ends in 2006. This is where the database on international political crises ends.' You show your choices are not arbitrary but guided by data availability. Keep doing this for any choice whether it is data or techniques. Show the reader you know what you are doing and why you are doing it. If a choice is arbitrary than acknowledge that and if you are going to do a robustness check (in an appendix) with respect to the specific choice made, announce that too.

Some people also prefer to have all the hypotheses in one section, number them and then start testing them in a results section after discussing the data. When they get to Hypothesis 10a, they assume the reader will still remember what that hypothesis was. Again, while this used to be the formal way – and does cater to the people who like things organized - it is not very reader-friendly. Basically, you tell a story. There is no academic law that says it needs to be as formal and boring as possible. My approach is to tell your story and provide information on a need to know basis. First introduce the hypotheses needed for your main test. If you need more hypotheses, introduce them when you need them. Take the reader on your journey, take them by the hand and make sure you do not lose them along the way. So after the data introduce the main test or base case as soon as possible, report the main result, then do robustness tests.

3.4.3. Conclusions

As you summarize your results in your introduction you do not really need a conclusion. But it still seems customary. And sometimes it can be useful to give a bit of perspective on

your result. Quite frankly, given that the introduction has more or less taken over the role of an 'executive summary' I struggle what to write as most has been said and done.

Moreover, and this is personal taste, I would stay away as far as possible from suggesting further research as it reads like 'stuff we could not be bothered doing'. However, recently I heard someone argue that this 'further research' was good to include because if you had some main restrictions in your analysis, rather than putting them down as 'main restrictions' you could suggest them as a direction for further study. In this way your research would not look as restricted. The advantage would be that you signal to the reader you are aware of the limitations but do not call them limitations. This is probably a matter of taste. Somehow it doesn't feel right to me but if you feel it helps...

'Policy implications' is another interesting one. I always find those a bit insulting towards policy makers. If there are policy implications in my work I hope that the policy makers are at least smart enough to deduce them themselves.

So what you want to put in your conclusions I'd probably best leave up to you.

3.4.4. General comments

Again everything we discussed before in individual sections also goes for your full paper: shorter is better. Many robustness tests can go in appendices. If you must, discuss the ones that go in an appendix qualitatively in the paper after the robustness tests you feel that must go in the paper.

Make sure you give your reader all the information needed to replicate your findings. Also, abstain from giving unnecessary details, like the software you use. If you use estimation software we nowadays assume it is solid stuff and it has become about as relevant as reporting the chair you are sitting on.¹²

Some more research and writing references

Good references (lots of it from the JFE website):

Tips of Rene Stulz:

<http://jfe.rochester.edu/tips.htm>

Joint Editorial Comments

<http://jfe.rochester.edu/jointed.htm>

<http://jfe.rochester.edu/jointed13.htm>

Paper submission check list

<http://jfe.rochester.edu/checklist.pdf>

Editor of the AER:

¹² In my case that is a Senator SP640HA (Havana Black) which was manufactured in week 22 of 2010.

<http://vita.mcafee.cc/PDF/EditorExperiences.pdf>

Writing tips from John Cochrane

http://faculty.chicagobooth.edu/john.cochrane/research/Papers/phd_paper_writing.pdf

Pitching Research Robert Faff

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2462059

From the editors: Publishing in *Academy of Management Journal*. Seven Part series. The first one is *Topic Choice* and appeared in 2011, Vol. 54, No. 3, 432–435.

<http://people.few.eur.nl/kole/WritingAdvice.pdf> by Erik Kole

Deirdre McCloskey: *Economical Writing*, Waveland Press Inc. 2000.

Ben Goldacre: *Bad Science* (visit <http://www.badsience.net>)