Notes on How to Present a Paper

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February 2019

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These notes provide some insights on what you should have in mind when preparing an oral presentation. I focus here on presentations in conferences, intended to last between 20 and 40 minutes. However, longer presentations, such as seminars and job market seminars, should follow more or less the same guidelines.

The quality of the oral presentation is independent of the quality of your paper, but has an impact on its appreciation. The presentation should have two essential features : the plan that you follow should be simple and clear to everyone ; and the way in which you present should be pleasant (or at least, should not be unpleasant). I review these points in two separate sections, but you should keep in mind that these two sections are in fact complementary. I also provide some simple tips in a third section.

1   The structure of the presentation

Unless you intentionally try something else, your presentation should have a standard structure, consisting of an introduction, the presentation of your model/data, the results, and a discussion of these results. Within that standard framework, there is still a lot a freedom.

1.1   The introduction

Every part of the presentation is important and should be well designed. However, the introduction is the most important, because it is the moment when the audience forms its judgment. If your introduction is not good, people will not listen carefully to the rest, and will be prone to dislike your work. On the contrary, if your introduction is good people will start with a positive judgment and will be friendly.

The introduction should answer the following questions, in order :

1–   What is the research question ?
Here you should take the broader view of your topic. It is better to give the impression that you want to "save the world" than that you are trying to marginally extend an existing result. You have to be careful not to sound too ambitious, but the general question must be interesting to a large fraction of the audience. In fact, you should phrase your research question in such a way that people of the street would understand it and find it interesting.

2–   Why is it important ?
You are very familiar with your topic and with the implications of your model/empirical investigation. But the audience is not. So it is not always clear why the question you asked is important. You should try to relate your work to real-world facts that concern everyone. At the end of this slide, the audience (everyone, not only the specialists)

should be convinced that you are investigating a serious question, and they should be ==expecting to learn something== from your contribution.

3– and 4– "What do we know, what do we ignore" and "what am I doing" ?
Items 3 and 4 can be interchanged, depending on the context. If your paper is an extension of another paper, obviously you should mention that paper before you explain what you are doing. On the contrary, if your contribution is totally new and original, you might want to contrast it with previous work by explaining yours before.

Regarding the overview of the literature, you have to ==stay as general as possible==. You must consider that ==the audience does not know the papers you are talking about==, and explain them briefly. Do not present a list of 20 papers, select them and group them into categories. Mentioning all these papers has to make sense. So explain the general messages of the literature and ==attract the attention on what is missing==. Then, when you present what you are doing yourself, it should be done in contrast to all these papers.

Regarding what you are doing, you have to avoid presenting so many details that you are presenting the paper twice. You must explain what you are doing ==as if the audience was non economists==. And it should be clear to the audience that you are filling a gap in the literature you just mentioned (or are about to mention).

5– Eventually, an overview of your results
This is not mandatory, it depends on your preference. If you want, you can give an overview of what you obtain. This has one drawback : it kills the suspense. It also has two advantages : first, people who fall asleep still get the general message ; second, it gives the audience more time (the rest of the talk) to understand your results. They can follow the rest of your presentation, knowing what they are trying to understand.

1.2   The model / The data

This part of the presentation is crucial if you want people to follow correctly. It is the easiest part to loose everyone. You should respect some important rules :

• ==Do never overestimate the audience's ability to follow== this part. If your model is complex, present the simplest case, and mention that in the paper you are analyzing a more complex model.
• Keep it short. It is hard to follow a model presented over 10 slides.
• Avoid complicated equations. Do not assume that the letters you are using are common knowledge, ==describe all the letters==.
• If you can, ==find an example that illustrates== the main features of your model.
• Insist on the points that make your paper original. The audience will not necessarily link

what you said about your contributions and the model you are presenting. You should do that for them.

1.3 Main results

More details on this are in the sections about the slides and the oral presentation below. But the main messages are :

• Select your messages and make them simple. ==You will NOT be able to say everything== you know. So instead of rushing through to say everything, take your time and ==select few== ==messages==.
• ==Draw the conclusions== of these results yourself. Never let the audience deduce what your results are, and what they imply.
• If you can, ==provide some intuitions== on where these results come from. But do NOT give a full proof, just a sketch (unless your contribution is methodological).

1.4 The conclusion

Take a couple of minutes to summarize what you have done. Do not start again the whole presentation, just restate the research question and the answer you provided. You can come back to the related literature to stress what is different in your contribution.

2 The slides and the oral presentation itself

A presentation consists of ==two things : your slides, and you, commenting the slides==. Both are important and go together. Your presentation will be unpleasant if you have nice slides that are badly presented, or if you have horrible slides that are nicely presented. So the slides and the oral part have to be prepared one with respect to the other.

Here is a list of recommendations to avoid making an unpleasant presentation. They can be sufficient, but by no means necessary.

2.1 The slides

- They should be as light as possible
  The audience has no time to read a slide overcharged with text. Do not give unnecessary details, the details are in the paper. ==The audience should be able to navigate through the slide easily==. In case you present an empirical paper, do NOT present a slide with a 50x50 array. Just present the main specifications.

- One or two informations per slide
  Slides must contain no more than a few lines, and no more than one or two ideas at

most. *Ideally, one slide one message*. *Sometimes it is not possible. Then it is better to have two slides for one message than one slide for two messages.*

FIGURE 1 – Too much text!

FIGURE 2 – Too difficult to navigate

FIGURE 3 – Easy to read and follow

- Their content must be strictly included in what you say
  People in the audience only have one brain. It is very difficult to listen and read different information at the same time. Therefore, anything that is written on a slide must be said at some point. You can say more that what is written, but you cannot write more than you say.

- Expect to spend between 1,5 and 2 minutes on each slide
  Of course, you can sometimes spend more on a specific slide, you should rarely spend less, but setting a time per slide has (at least) two advantages. First, it gives you a good approximation of the number of things you will be able to say. If you have 30 minutes, then you should prepare around 20 slides, including the title slide and the conclusion slide. This will help you when you construct your presentation, as you now have a constraint to respect. Also, it will give you a sense of time during your presentation. You can then constantly know if you are on time, late or ahead of schedule.

- Slides allow for nice illustrating graphs
  If you can, present a leading toy example during your presentation. Something that is easy to follow and conveys the main intuitions. Slides allow to present nice graphs on which you can build your reasoning. And often, a graph does a much better job than an equation.

Networks: concepts and notation

- Network: every economist who has published a paper is a node; set of nodes $N = 1, 2, .., n$ and n is the as the order of the network. For $i, j \in N$, let $g_{i,j} \in \{0, 1\}$ be a link that signifies a co-authored paper between them.
- Paths: A path between i and j either if $g_{i,j} = 1$ or if there is a set of distinct intermediate co-authors $j_1, j_2...j_n$, such that $g_{i,j1} = g_{j1,j2} = ... = g_{jn,j} = 1$
- The set of nodes and the links will be referred to as a network and denoted by G.
- $N_i(G) = \{j \in N : g_{i,j} = 1\}$ as nodes with whom i has a link; let $\eta_i(G) = |N_i(G)|$.

FIGURE 4 – Easy concepts but hard to follow

Important : always detail axes and variables with figures and tables.

Shortest Path

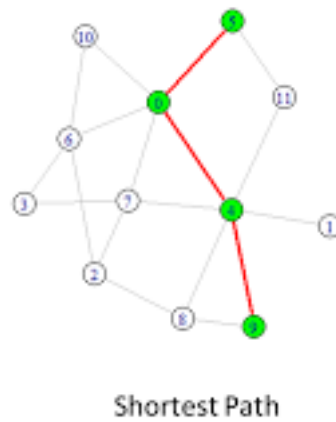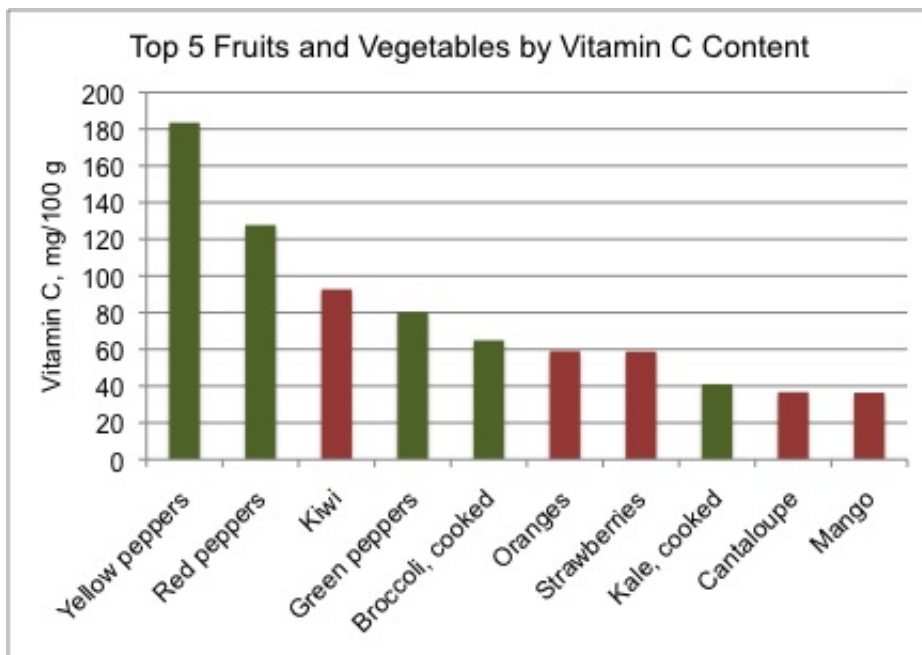FIGURE 5 – Easy concepts and easy to follow

FIGURE 6 – Detail the axes

"This graph shows the 5 best fruits and vegetables by Vitamin C content. Green bars represent vegetables, red bars represent fruits. On the horizontal axis you can see the name of the fruit or vegetable ; on the vertical axis we represent the concentration in vitamin C. For instance, green peppers contain 80 mgs of vitamin C per 100 g."

- Recall the outline when you change sections

  It is important that the audience always knows where you are in your presentation. If you change section, it has to be clear to the audience that you have finished what you were saying and that you are now turning to something else. Either you recall the entire outline, or you include a slide with the title of the new section, but the audience has to know. Additionally, this allows people who lost track to start following again.

- Slides with results should contain only the results

  When it comes to your results, the slide should not contain anything else than your result. You must leave no chance to the audience to miss the result by reading another information.

$$i\hbar\dot{\rho}_{mn}(t) = \frac{1}{N}\sum_{k=1}^{N}\left[i\hbar\left\{\dot{a}_m^k(t)a_n^{k*}(t) + a_m^k(t)\dot{a}_n^{k*}(t)\right\}\right]$$

$$= \frac{1}{N}\sum_{k=1}^{N}\left[\left\{\sum_l H_{ml}a_l^k(t)\right\}a_n^{k*}(t) - a_m^k(t)\left\{\sum_l H_{nl}^*a_l^{k*}(t)\right\}\right]$$

$$= \sum_l \left\{H_{ml}\rho_{\mathrm{l}n}(t) - \rho_{ml}(t)H_{\mathrm{l}n}\right\}$$

$$= (\hat{H}\hat{\rho} - \hat{\rho}\hat{H})_{mn} \tag{1.24}$$

Here, use has been made of the fact that, in view of the Hermitian character of the operator, $\hat{H}$, $H_{nl}^*=H_{ln}$. Using the commutator notation, Eq.(1.24) may be written as

$$\frac{\partial\hat{\rho}}{\partial t} + \frac{i}{\hbar}\left[\hat{H},\hat{\rho}\right] = 0 \tag{1.25}$$

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FIGURE 7 – Where is the result ?

We can state our main result:

Theorem

$$E = mc^2$$
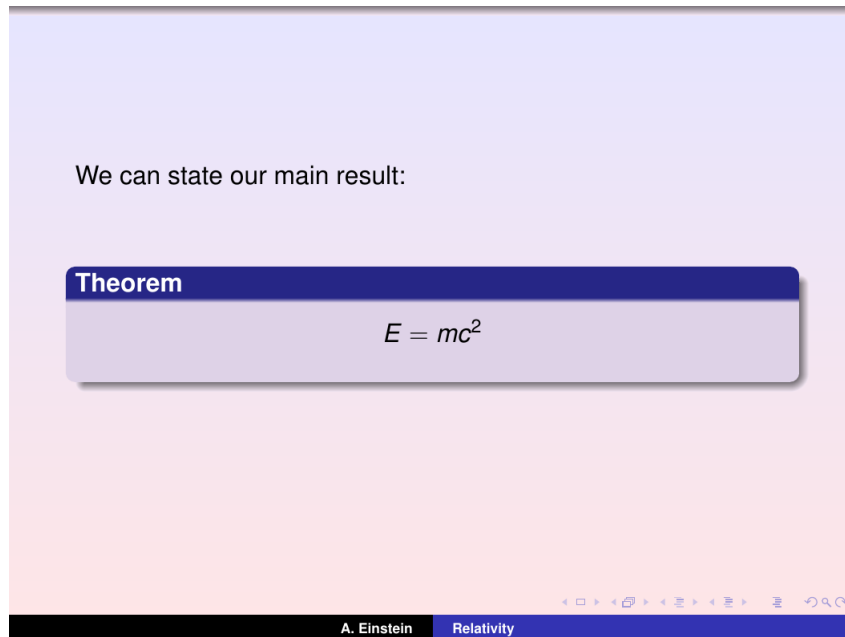
A. Einstein   Relativity

FIGURE 8 – Presenting results

2.2 The oral presentation

- At all time, be as simple as possible
  You do not have time to enter into many details. Your objective is that the main messages (your results and your contribution to the literature) are understood. So state them as simply as you can. People remember simple messages, they forget complex messages. In addition, people can blame you if they do not understand, they will not blame you for the contrary!
  Sometimes, a leading example with do a better job than technical equations. If you can, present your results on a specific illustrating example.

- Do not speak for the specialists
  Eventhough there might be some specialists in the audience, do not speak to them or for them. Your messages should be designed to be understood by the entire audience. Specialists will appreciate to have more time to think about your results, and not feeling obliged to listen. In the same vein, never try to impress the audience with technical skills. Most likely you will not impress anyone, they will just get frustrated. Your objective is not to show what you can do, it is that they understand what you have done.

- Speak loud, slowly, and with variations in tone
  Nothing is worse than a speaker who speaks at a low volume and in a monotonic tone. Only passionate people will listen until the end. You have to speak loud, make sure that the people in the back row hear what you are saying. You also have to speak

slowly, so that people have the time to process what you are saying. If you talk too fast, people will be exhausted after 15 minutes and unable to focus. Last, it is important that you ==sometimes change the tone== (a pause can work), in order to draw the attention of the audience. If your tone is monotone, people can fall asleep, eventhough you speak loud and slow.

- Look at everyone and do not read the slides
  People can read the slides, you are not there for that. You are there to ==tell a story to the audience==. So look at the audience and talk to them. Be careful, ==do not stare at one== or two, it makes them uncomfortable and makes the other uninterested. Accordingly, if someone asks a question, ==do not answer only to him==. Answer so that everyone can hear and gets your point.

- Plan to be short rather than long
  People appreciate when you finish slightly ahead of schedule, it gives the feeling that you have well prepared your presentation. On the contrary, ==it is highly frustrating when you are too long==. Because people get fed up, especially if they are not specialists. Moreover, if you are late you are likely to speed up in order to finish, which is very unpleasant.

- Recall where you are when you change section
  Insist orally by making a transition : "so we have just seen that xxx, we now turn to xxx".

- Introduce all the concepts
  Do never assume that people know what you are saying, do ==never overestimate the audience==. All letters must be explained orally, and all equations must be detailed orally. Accordingly, never use "jargon" words as if they were common knowledge, nor references to papers without briefly mentioning their results.

- Detail the results
  One typical flaw consists in detailing the model, and zooming through the results. You should spend some time on the main results. ==Read the theorems/propositions... out loud, slowly, and explain precisely what you are saying==. If your paper is empirical, spend some time on the main tables, detail the lines and the columns, pick some of the numbers and explain their meaning. If you present a graph, detail the axes, be slow, make sure everyone has time to understand what is on the graph.

- Orally express what your results tell us
  Do not let the audience guess the meaning of your results. Always state the conclusions that can be drawn, because ==the audience could interpret a result incorrectly==. And it is

better to repeat important messages rather than not detailing them at all.

- Do not be defensive
  Some people tend to be unintentionally aggressive when they answer questions, because they want to show that the question did not destabilize them. It is a common mistake that you have to avoid. Every question is valid and is an opportunity to clarify some points. If the question does not make sense, do not consider that the person is stupid, consider instead that you were not clear enough and explain again. If the comment suggests that what you have done is worthless, do not get into a fight, defend your work without directly contradicting the audience.

3 How to prepare your presentation

An essential fact that you must know and admit : everyone is nervous about presenting his work in front of other people. Even if some people look very relaxed, you should know that they, too, are nervous before starting. You must also know that some time after you have started (5 minutes), your stress will have disappeared without you even noticing. But before the presentation and during the first minutes, you **will** be nervous. Once you have admitted that, there are some things you can do.

- Practice your presentation at home
  Once your presentation is ready, isolate yourself somewhere and try it with a clock in hand. Generally, after 10 minutes you will realize two things : first, sentences do not come out naturally ; second, you are being much too long. Do not stop, carry on with your presentation and at the end of every section (introduction, model etc.), write down the time it took. At the end, you will see how much you have to take out. If the presentation is designed for 30 minutes and it took you one hour, you know that you need to get rid of half of the information.
  In fact, this is not true, because once you are in front of the audience, you take less time to say the same things, as you do not hesitate on your sentences as much as you do when you are alone. So if it takes you one hour, you can expect that the same presentation will in reality take you 50 minutes. So if you divide the content by two, your presentation will last about 25 minutes instead of 30, and that is just perfect.
  Once you have adjusted your slides, start again with the simulation until you reach the correct duration. Because you have written down the time taken for each section, you can of course adjust only those sections of the presentation that are too long.
  Generally it takes at least 5 tries before reaching the correct length.

- Learn the first sentences by heart
  A critical moment of a presentation is the introduction and in particular the first

slides. That is the moment when people form their first judgment, where your audience decides on how much they will listen. However, because of stress, you can have a bad start once in front of the audience and this could be detrimental for the rest of your presentation.

One efficient way to go through the first moments is to learn the first sentences off by heart. Something like "I am xxx from Aix-Marseille School of Economics and I will present a paper titled xxx, co-authored with xxx from University of xxx. The problem I am examining here is... "

Once you have started, the rest will follow automatically, especially if you respected the previous point (rehearsing at home). Then the stress will have disappeared before you even notice.

- Do not worry about having style

  Do not feel obliged to look cool, to make jokes etc. This is an unnecessary pressure. Restrict yourself to being comfortable with the structure of your presentation, to follow the steps you fixed, and to make sure your main messages pass clearly to the audience. Later on, when you are comfortable with the foundations of oral presentations, you will be able to add some style.