How to successfully prevent the flow of information in research presentations

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Abstract

The main body of research presentation literature is dedicated to the creation of great research talks in which the presenter successfully conveys their great wisdom to an audience of receptive minds. The great art of preventing your audience from figuring out what you actually did is not nearly as well documented or explored. In this work I will explore the different presentation mechanisms that can be used to simultaneously give an excellent talk, thoroughly confuse the audience and leave them with a feeling that you really understand what you are talking about.

1 Introduction

Creating a hard-to-comprehend talk is amazingly similar to creating an enlightening talk. You need to do things like consider your audience, plan out what you are going to say and meticulously create your slides to guide your audience through your material. The point where the two methodologies diverge is in the goals. Unlike a traditional information imparting presentation an information impeding presentation has the dual goals of convincing your audience you know what you are talking about while makings sure they don't understand anything you say.

Some critics may say that creating information impeding talks is a debasement of science and a complete waste of your audience's time. However, they are overlooking the needs of thousands of students who's results were neither interesting nor useful placing them in the not interesting and not useful results quadrant, aka Bovik quadrant, of the quest for fundamental understanding and considerations grid put forth by Donald Stokes [2]. Unlike the praised work in Pasteur's quadrant the work in Bovik quadrant is woefully ignored and not given the recognition it deserves.

The purpose of this work is to assist students everywhere in accomplishing two goals with their talks 1) convince the audience that you did something worthwhile 2) make sure the audience never figures out what that important thing was. These are ambitious goals but never fear they are completely accomplishable if you pay close attention to this guide.

In order to impede information flow during your talk you need to accomplish the following sub tasks:

- Encourage interior audience discussion
- Belittle the audience
- Mislead the importance and relevance of your data
- Use as much time as possible explaining unimportant information

In this work I will discuss each of the major components of a talk and look at different ways to accomplish these tasks in each component. Curious how your going to accomplish all this in a single talk? Well, read on.

2 Motivation

Cloud computing! Cancer! Google! Health care! Kittens! Global warming! Remember, whatever your research is it can be related to the hot news item of the week. All motivation really is tying your research to your favorite well funded buzzword. Remember that good motivating examples accomplish three things 1) convince audience your work is important 2) take up as much time as possible and 3) make it unclear just how many of the world's problems you are actually going to solve in this talk.

When properly obfuscating a talk its important to pick your motivating example carefully. You want an example that lots of people care about so that they will leave your talk feeling like you solved something important even if they didn't understand a word of what you did. But you also need a motivation that not too many people understand and is hard to ask detailed questions or point out inconvenient facts like your motivation and your work have nothing in common.

Cloud computing is a wonderful example of a good motivation topic. Everyone knows that cloud computing important, complicated and either doomed to failure or the next bit thing. Cloud computing needs machine learning to ensure optimal usage. It needs security to protect data from the unnamed dangers lurking in the clouds. It needs theory if it is ever going to work. It needs PL to specify how different elements can interoperate safely. Whatever your work is about play it up in relation to your motivating topic. Without your vital, unspecified, work your motivating topic would be crippled and the world would descend into chaos.

When introducing a motivating example, like cloud computing, be sure to spend plenty of time on it. Remember the more time you spend on your motivating example the less you have to talk about your actual research or even worse, your results. Besides motivating examples are far more fun to talk about and listen to. So spending lots of time on it will actually be enjoyable for both you and your audience.

One of the purposes of a motivational topic in an information imparting presentation is to introduce the problem you are going to be solving in the remainder of the talk. In an information impeding presentation this is an excellent opportunity to mislead your audience by implying that your research solves many more problems than it actually does. For example strongly type checking the Internet would make it more secure. Therefor nearly all security problems associated with cloud computing can be solved by applying a novel type checking method.

3 Problem statement

The problem statement is arguably the single most important part of your talk. The problem statement lets your audience know what you will be talking about. This is bad. You do NOT under any circumstances what the audience to figure out what you are talking about.

If possible, you should really skip this part of your talk. The best solution is to leverage your motivating example and just assume that it doubles as a problem statement. Thereby not skipping the problem statement while still not clearly explaining it.

4 Outlines and organization

Outlines are generally a bad idea if you want to make sure your audience gets the wrong lesson from your talk. But this doesn't mean you can't have an outline slide. Remember the goal here is to give what looks like a good talk while ensuring the audience doesn't understand what you say.

A good outline will let the audience know what is coming, what you are going to tell them about and how you are going to solve your problem all in a neat package. Creating an outline with no meaning that meets these requirements is actually trivial just copy the following onto an outline slide. In your talk just read the slide and provide no extra information.

- Introduction
- Motivation
- Background
- Methodology
- Results
- Conclusion

This simple outline gets you points with the audience for having an outline while giving them no additional data about what is coming.

5 Graphs and diagrams

Graphs follow a similar rule to statistics. Remember there are lies, dam lies and statistics. Similarly graphs give you the ability to give your audience the wrong impression while not lying.

To begin with there are the tried and true graph and figure obfuscation techniques. Leave out labels. Leave out the scales. Use three dimensions. Use as many of Excel's colors, textures, and eye candy as possible thereby impressing your audience with the visual complexity. A good example of this sort of graph can be seen in Figure 1. This is actually a graph of all the book sales in the US from 1940 to 1989 but that is impressively hard to tell from the graph. Use a Chinese coloration scheme where red is good and white is bad which completely confuses American audiences. Put in as much data as possible even if it could be left out or isn't relevant to your point.

Math is already a horribly confusing topic why would any sane person put more of it into a talk on purpose? Be wary of adding math and especially wary of adding statistics which can be questioned. It is far better to add a graph similar to Figure 2 which shows the clear superiority of your technology. If the difference is clear enough to your audience you can safely skip over any issues of statistical significance or error bar reporting.

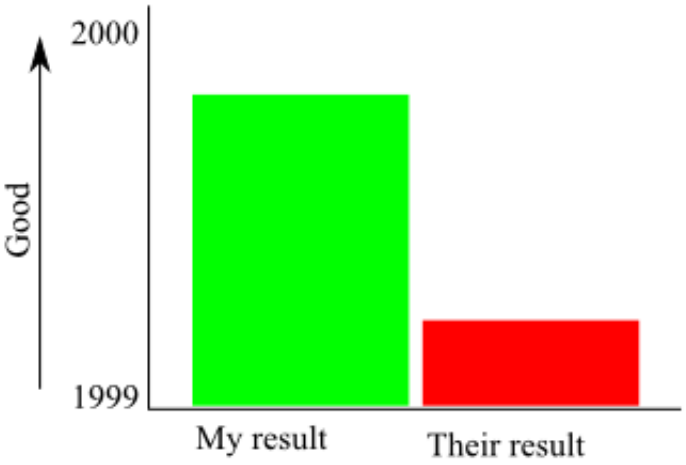

Figure 2: Example of a graph showing the clear difference between your good result and the opposing technologies poor result. Remember clear results speak for themselves and if they don't you just need to muddle with the graph until they do.

If simple graph alterations fail to adequately describe the importance of your results you may have to resort to more complicated tricks. Thankfully many books have been written on how to build good graphs which also conveniently show lots of examples of bad graphs. Tufe's famous book on The Visual Display of Quantitative Information [3] is an excellent resource.

6 Audience Questions

Annoyingly, audience members are typically allowed to ask questions during and after your talk. Life would be much easier if this practice could be avoided but unfortunately it is "traditional" and cannot be prevented.

Much like an information imparting talk it is important to anticipate audience questions in advanced and have prepared answers. Knowing your answers in advance allows you to answer questions in a way that doesn't answer the question while making your words drip with confidence and certainty. Much like a lion tamer you

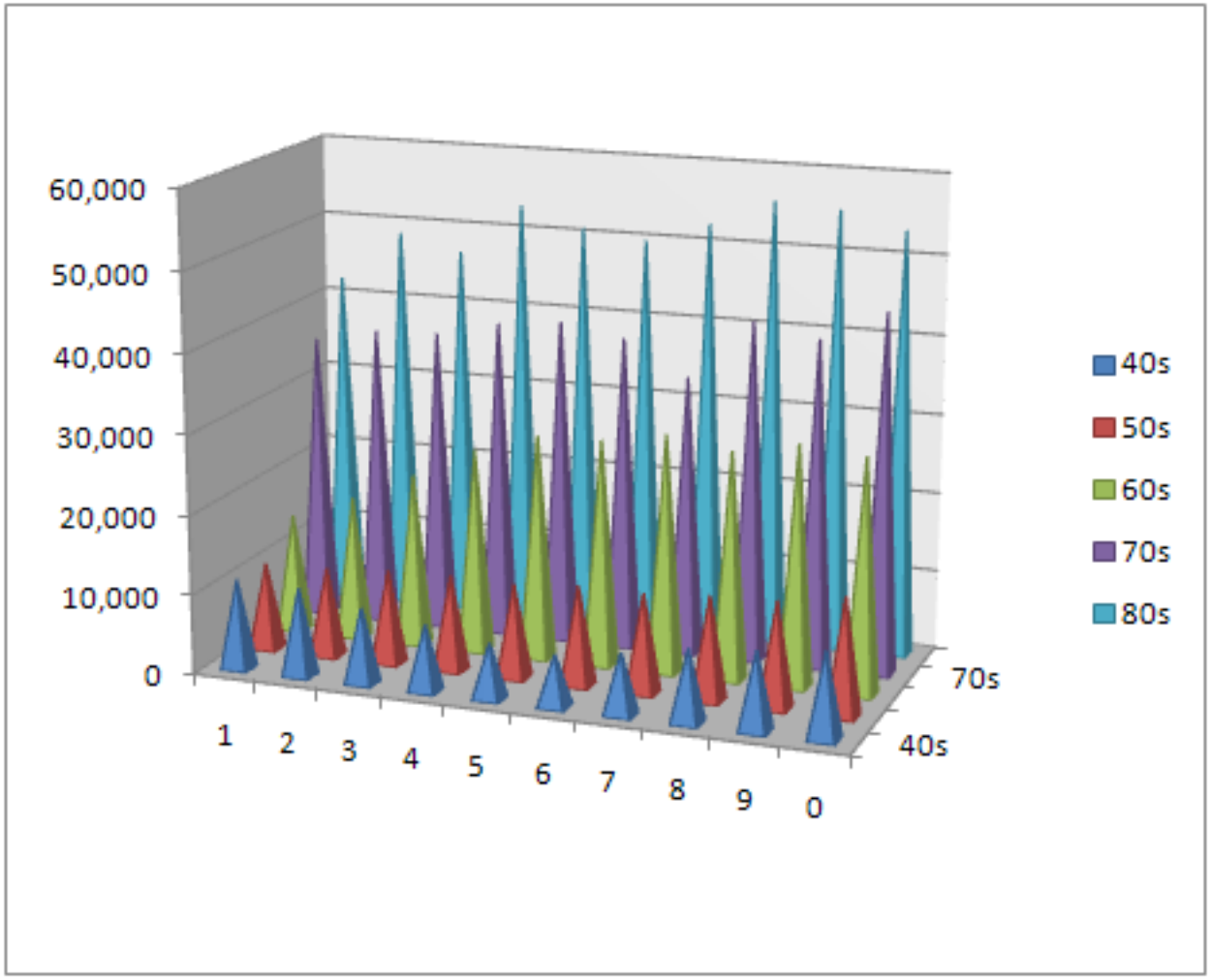

Figure 1: Example of a visually confusing graph created using simple MS Excel default tools. Note the lack of any explanation as to why this graph is here or what it is about.

should show no fear before your audience and subdue them through your aggressive eye contact and confidence.

If an audience member asks a question which reveals a flaw in your work or in some way doesn't show you in the best light, answer a different question. Beauty is in the eye of the beholder and question interpretation is in the ear of the presenter. If you need some examples of how to do this effectively just watch any presidential debate. The art of question avoidance and deflection is what politicians are very good at. If you need to cite facts in your answer pick little known works and refer to the author by first name. (For example: Joe)

Get upset when others challenge you. An attack against your research results is really a personal insult to you. After all you poured your heart and soul into this research for the last n years who are they to condemn it after less than an hour? Also, a heated discussion between you and the audience member will distract the rest of the audience from your talk and reduce the time available for other people to ask questions.

If an audience member asks you a question about a result which isn't yours you should defend the other author and answer as if it was your research. This shows deference to the other author's hard work and derails the talk for several minutes until the audience discovers this is cited work not yours.

7 Belittling an audience

You are smart. Well that is obvious since you are reading this paper. Its important to let your audience know how smart you are. Since you are reading this paper your results likely fall in the Bovik quadrant [2] and are unlikely to impress upon your audience how smart you are. Therefore its vital to make this fact clear in other ways.

To make your audience understand how smart you are it is vital to make them understand just how much they don't know. After all getting the results you have was hard. Its important for your audience to appreciate just how much work you had to do and how mentally taxing and frustrating it was. How do you do this? Simple, show them the details. Don't hold anything back. If there is something confusing in your domain don't be afraid to say it. If you have tons of data points show them all. And most importantly do not simplify or explain yourself. You are the Alan Turing in the room and they are supposed to keep up. And if they can't keep up that is an indication of their ineptitude not yours.

Frequently use terms like "obviously" and "clearly" to underline how little your audience actually knows. Obviously your research cures all the worlds problems. Your results clearly show this and all the equations and math backing it up are intrinsically obvious. Don't bash this into the audience. A truly superior researcher just knows that they and their research is perfect. If you approach your talk with this in mind and a good bit of confidence you will be impressed at how fast your audience falls into line.

One simple trick is to use ambiguous domain specific words. Everyone knows that people who use large uncommon words are smarter. If your audience has to spend time figuring out the words you are using then they will miss some of the results you didn't want them to understand. A good example of a seemingly innocent word is "feature". Which when used in a Machine Learning context has a specific general meaning as well as a specific meaning in your research which you can conveniently forget to provide thereby making the audience feel inadequate for not understanding this clearly obvious term. Additionally, audience members from outside the domain will assume they know what the term means and will stay confused for many slides before giving up hope of understanding the clearly complex research you are engaged in.

If you have equations with 20+ variables that are impossible to comprehend without serious study, don't be afraid to show them. Math equations are a truly beautiful construction. They

are arguably competently self explanatory and therefor require little to no explanation. They also require a significant amount of attention and brain power to comprehend and map onto your talk topic. A sufficiently high number of complex equations and/or proof statements will often cause a portion of your audience to give up and just assume that you know what you are talking about.

Graphs are very useful in belittling an audience. However, they are such an important topic that they appear all on their own in Section 5.

8 Practice Talks

Giving practice talks to ensure minimal information conveyance is typically frowned on. Really if you have time to give a practice talk you should have been using that time to get better results and therefor not need this guide. However, if you are determined to practice your non-information giving skills there are a few things you can do to make your practice talk more successful.

Give your practice talk audience slide handouts to make notes on. Having something to write on makes the audience members feel more important. Don't worry, if you have picked your audience well most of them won't actually write anything. The handouts are also useful for you to go back through and read the notes. Comments like "where is this going?" or "??!!??" or better yet "impressive!" indicate that your talk is going well. While comments like "why are you using the XYZ methodology instead of the ZYX methodology?" indicate a dangerous level of methodology understanding in your audience.

Only invite people who already know your research. This way they don't actually have to listen to your talk but can give good advice at the end and explain to the other audience members what you actually did in far more glowing terms than you could because unlike you they can exadurate in ignorance. They are also less likely to ask hard questions or nit pick your slides.

Invite the people who came to your practice talk to your actual talk. That way if anyone complains about the talk they will be on hand to explain just how bad it used to be and how impressed they are with your improved presentation.

9 Concluding the talk

Writing a talk conclusion is actually extremely easy and nearly identical to an information imparting talk. Remember that outline slide we created in section 4? Take the same set of bullet points, toss out the Introduction and Conclusion and make each point into a partial sentence. The resulting set of bullet points should read something like this: I told you about this big important problem (Motivation) that no one else has adequately solved (Background), I did something brilliant (Methodology) and completely solved the problem (Results).

Remember to NEVER, EVER introduce new material in the conclusion. Besides the obvious problem of finding more material to add and the risk of an audience member calling you on something, you aren't even supposed to be putting material here. Why would you make life harder for yourself than it needs to be? The audience doesn't want new info, you want to tell the audience as little as possible, everything is good, don't rock the boat.

This is also a good place to remind you that one of the goals of a good information impeding talk is that the audience is happy and feels like you are competent and tried to give a good talk. The conclusion is your last chance to make it clear to the audience that you really did something useful, even if they didn't understand it, and that they haven't wasted the last hour of their lives. The best part is that you can do this without ever stating anything specific. In fact the exact words "I showed that our solution is vastly superior to existing solutions" can be safely said when reading the "results" bullet of the conclusion slide in the majority of talks.

What you proved or how well it worked need never even be mentioned.

10 Simple Tips and Tricks

The lessons above will give you a good start to creating an optimal information impeding talk but there are a few extra embellishments you can add that will make your talk run all that much rougher.

Page numbers Leave them out! Page numbers allow your audience to make effective notes and to refer back to specific points in your talk during their questions. Without page numbers the audience is forced to write more vague notes or copy the titles from your sides which takes more time. Also referencing the slide again during the questions will take time which decreases the number of questions you will get.

Distracting computer messages Leave them on, thereby ensuring those audience members who have managed to follow your work are temporarily distracted and are unable to pick up the train of your talk again. Its best if the distracting messages are innocent looking and therefor not something you may have anticipated. Email notifications are good by they only pop up in the corner and vanish on their own. System messages such as failure to backup or out of battery power are much better as they cause Power Point to exit out of the slide presentation all together buying you several minutes of technological fixing during which you don't have to present. Also, the interruption is sufficient to cause your audience members to loose their train of thought.

Eye contact This is a tricky one. Effective eye contact is important during your talk. You need to use aggressive eye contact to stare down the opposition and challenge them to disagree with you. But be wary of too much eye contact though as you can inadvertently engage your audience and keep them from their mid afternoon nap. Be careful who you look at in the audience and avoid anyone who looks distracted or who might zone out or doze off if left alone.

Talking fast This is an excellent plan if this is how you plausibly normally talk. If you tend to be high strung and talk somewhere near the speed of light there is no reason to slow down for your talk. The faster you talk the less likely your audience will comprehend what you are talking about. If you talk calmly normally you can still safely speed up your speaking by a small margin and blame it on being nervous.

Um, like, uh Talking fast is hard, talking to slowly makes you look, well, slow, so what are you to do? The answer is to add filler words. Similar to the filler found in meat products, word filler has no value and has an unproven negative comprehension effect on the audience. If you are stuck, need time to think, forget what to say, or just need to waste more time on a slide feel free to add in liberal amounts of any of the "um," "like" or "uh" filler words. These words add nothing to your presentation but they do make it a bit harder for the audience to determine what you are saying and they ensure that you are saying something even if you don't have anything to say.

Cluttered slides Do this. While you don't want to assist your audience in understanding exactly what you did you also don't want to be seen as leaving out important information. The simple solution is to hide the needle of knowledge in a haystack of words. The more words on the slide the less likely your audience is to actually read anything. So bury your statistical significance test results in the middle of a paragraph of text and feel confident that you both provided

them to your audience and that your audience will never find them.

Talking to the screen instead of the audience Don't do this. While the projection screen or even your computer screen may seem less intimidating than your audience you really shouldn't talk to them. It can make you look a bit crazy and imply that you are not the top notch researcher you are. The goal of your talk is to impress your audience with your supposed research skills, not convince them that you are crazy and think that projector screens can hear you and talk back. Take a deep breath and repeat the following litany against fear to yourself, turn around, and speak to the audience.

> I must not fear.
> Fear is the mind-killer.
> Fear is the little-death that brings total obliteration.
> I will face my fear.
> I will permit it to pass over me and through me.
> And when it has gone past I will turn the inner eye to see its path.
> Where the fear has gone there will be nothing.
> Only I will remain [1].

11 Conclusion

Every year thousands of students woefully discover that their research results fall into the unprestegious Bovik quadrant. Unlike Pasteur's quadrant or Bohr's quadrant, Bovik quadrant research creators would rather no one ever discovered that their research results are both not interesting and not useful.

Bovik quadrant members have been woefully neglected by research talk design experts who focus nearly all their energies on how to create information imparting talks for those lucky researchers with good results. In this work I have attempted to address this inadequacy by providing recommendations on how to create an information impeding talk. Using the skill set gleamed from this work the reader should now be able to 1) convince an audience that you did something worthwhile 2) make sure an audience never figures out what that important thing was.

12 Bibliography

References

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