Recommendations:

When preparing a class or presentation involving PP, ask yourself:

1. Is the PP taking over as the core of the presentation, rather than remaining in the background as a **supplement**? Are you, the speaker, becoming just an audio track for the slides? If so, discard the presentation and start over from a list of learning objectives. PP may be useful as an additional channel for summary thoughts and/or graphics. It should be a visual aid for the speaker, rather than the speaker being an auditory aid for the PP.

2. Is the content being **distorted** by the need to fit it into the format of a Powerpoint slide? If so, consider alternative media you might use:

- Printed handouts (like this one) hold vastly more information with more flexible layouts.
- Physical objects (like the Tufte books) have special appeal.
- Discussion, role playing, interactivity
- Other things besides PP that can go on a computer screen (Word, Excel, web pages, etc).
- Mnemonic devices like metaphor and powerful openings and closings

3. What **additional content** could be conveyed with additional resolution—more data and detail? Enhanced ability to move from particular to general to particular (PGP)?

4. Do the media chosen for class support the **learning objectives**? Focus on PP only if and to the extent that a linear or image-laden or animated presentation best achieves a learning objective.

5. Am I remembering that **the audience and their time are precious** and that I should not waste their time, nor should I condescend to them, by dumbing down complicated material?

Notes
[1] Based on a study by Edward Tufte of 1,460 text-only slides in 189 powerpoint reports posted on the internet and top-ranked by Google in March 2003. For a range of content, Tufte also measured the 26 slides in 3 official presentations on the Columbia shuttle problem produced by Boeing (median words per slide of 97) and 654 slides in 28 Powerpoint textbooks published from 1997-2003 (median words per slide of 15).
[2] Edward Tufte, The Cognitive Style of Powerpoint (Cheshire, Connecticut: Graphics Press LLC, 2003) at 4.
[3] Dave Paradi, "Survey Shows How to Stop Annoying Audiences with Bad Powerpoint," www.communicateusingtechnology.com/articles/pptsurvey_article.htm (5.5.2004).

Powerpoint and
the Demise of Western Civilization
By Richard Whisnant 5.7.04

" every medium of communication is a unique art form which gives salience to one set of human possibilities at the expense of another."
Gerald Stern, poet and National Book Award winner, in *McLuhan: Hot and Cool* at 123 (Montreal: McGill-Queen's University Press, 1981).
◊

"What is gained in the use of Powerpoint is power, control over the audience through quality transparencies, and an unwavering sequenced flow. But something is also lost. It is no bargain to have key themes presented as naked text at the cost of traditional rich text."
Denis Hlynka and Ralph Mason, "Powerpoint in the Classroom: What is the Point?" *Educational Technology* 45 (Sept/Oct 1998).
◊

"In corporate and government bureaucracies, the standard method for making a presentation is to talk about a list of points organized onto slides projected up on the wall. For many years, overhead projectors lit up transparencies; slide projectors showed high-resolution…slides. Now "slideware" computer programs for presentations are nearly everywhere…

Alas, slideware often reduces the analytical quality of presentations. In particular, the popular PowerPoint templates (ready-made designs) usually weaken verbal and spatial reasoning, and almost always corrupt statistical analysis."
Edward Tufte, Prof. Emeritus, Yale (information and interface design, statistics)
www.edwardtufte.com

The Powerpoint (PP) Problem in a Nutshell
Powerpoint (PP) evolved from graphics presentation software to become not just a visual aid, but the very structure of many (~30 million/day) presentations in and outside classrooms. PP very easily becomes a crutch; it makes life easier for presenters. But this ease can come at a pedagogical cost for audiences. PP is an inherently low-resolution delivery tool for content. PP-driven presentations are therefore either dumbed down or mind-numbingly repetitious from too many textual slides. PP should be one choice (among many other tools) for supplementing a presentation, rather than being the main factor that structures a presentation.

Many "rules of thumb" have evolved for producing PPs, often aimed at mitigating these problems. But these "rules" just create their own problems. Better to start with explicit learning objectives and pull out the PP if and only if it fits with the goals of a particular presentation.

Low resolution = less content OR more monotony

Computer screens have much lower resolution than do printers. This is one reason why it is hard to read long text passages on the computer. Add in a projector (further lowering resolution) and a PP template (reducing screen size and adding monotony), season with a typical "rule" for PP slides (such as: "no more than six lines with six words each") and you have a recipe for "death by Powerpoint." The typical way around this resolution problem for PP presenters is to string together many slides, producing the distinctive glazed-eye, slack-jawed student whose attentiveness has been killed by thirty slides that all look similar.

Poverty of content on PP slides is caused by three things: the design style, which typically limits the display space devoted to content; the fact that slides are projected, requiring large type so audience members can read from the back of the room; and finally the fact that PP allows presentations by people who don't have that much to say in the first place.

Fluff (such as cute pictures) are often added to mitigate the monotony, further diluting the content and lowering the transmission rate for information.
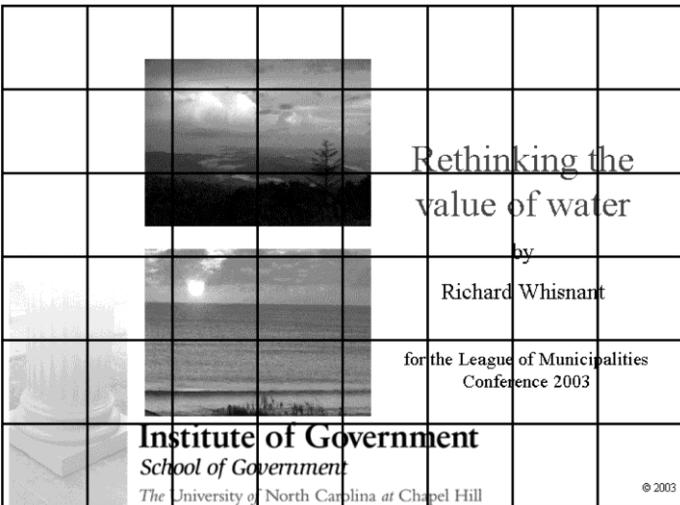

Figure 1. SOG Template takes about 25% of already low-rez space

Low resolution does not necessarily promote clarity of learning. Detail and nuance is often important to learning, especially for adults.

Oral presentations typically proceed at 100-160 words per minute; not especially fast data transmission, compared with reading (300-1000 printed words per minute) and visual pattern recognition (people find their way quickly around a printed map with 5 to 40 megabytes of information in the visual field). The PP slide typically shows around 40 words—about **8 seconds worth of reading material**.[1]

By way of contrast, the 400 or so words and one picture on this page (1/4 of the handout) would thus take over 10 PP slides to convey. Even this is misleading, since the bulletized style promoted by the PP templates and need for large typefaces prevents the use of full, let alone long, sentences.

"Many true statements are too long to fit on a PP slide, but this does not mean we should abbreviate the truth to make the words fit. It means we should find a better way to make presentations."[2]

Possibilities enhanced and possibilities suppressed by Powerpoint

Enhanced:	Suppressed
Linearity of presentation	Interactivity
Use of images	Freedom from spatial and technological limits
Use of animations	Nuance and depth of ideas
Clarity of type	

Rating the Annoying Elements of Powerpoint

A 2003 survey asked 159 people to list the top three most annoying things about PP presentations.[3] The results are instructive for PP creators. Note that problems with text (as opposed to graphics) are the leading cause of annoyance:

The speaker read the slides to us	60.4%
Text so small I couldn't read it	50.9%
Slides hard to see because of color choice	37.1%
Moving/flying text or graphics	24.5%
Annoying use of sounds	22.0%
Overly complex diagrams or charts	22.0%

[1] Based on a study by Edward Tufte of 1,460 text-only slides in 189 powerpoint reports posted on the internet and top-ranked by Google in March 2003. For a range of content, Tufte also measured the 26 slides in 3 official presentations on the Columbia shuttle problem produced by Boeing (median words per slide of 97) and 654 slides in 28 Powerpoint textbooks published from 1997-2003 (median words per slide of 15).

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