



EDWARD R. TUFTE'S

'THE COGNITIVE STYLE OF POWERPOINT:
PITCHING OUT CORRUPTS WITHIN'

Let's just talk about your business was a statement from Louis Gerstner at one of the first meetings when he had just become the new president of IBM and 'encountered a big company caught up in ritualistic slide-ware-style presentations' [Tufte 3]. What Gerstner witnessed was an inadequate presentation in consequence of the cognitive structure of Microsoft's presentation software PowerPoint talking past the essence. 'Since 10^{10} to 10^{11} PowerPoint slides are produced yearly' [Tufte 30], PowerPoint has an incredibly large number of opportunities to harm communication. Though this is a convincing number, it merely accompanies various concerns on PowerPoint's quality. Both together motivate to question the problems with PowerPoint and to ask how presentations can be improved.

The Cognitive Style of PowerPoint: Pitching Out Corrupts Within is an essay by Edward R. Tufte that describes the cognitive style of PP and its obstructive impact on presenting high-quality analytic evidence. Tufte studied statistics at Stanford University and political science at Yale University, taught courses in statistical evidence, analytical design and interface design and acted as consultant for companies, such as NASA, Apple, The New York Times, IBM and many others, on data analysis and display design. At the same time he is owner and founder of Graphics Press LLC, where he self-publishes his books. [edwardtufte.com]

Tufte's essay on PowerPoint presents and discusses the results of a detailed analysis of '10 case studies, an unbiased collection of 2000 PP slides and 32 control samples from non-PP presentations' [Tufte 3] which indicate that PP reduces the analytic quality of serious presentations and disrupts and trivializes evidence.

PowerPoint's cognitive style is for instance constituted by the low resolution of the slides which forces the presenter to reduce the amount of information per slide immensely, to increase the number of slides immensely in turn and above all this, to break well-formulated sentences into detached fragments introduced by bullet points of different size and shape.

Another aspect is the sequentiality of the slide format (the quick appearance and disappearance of information) which has a negative impact on the impulse of comprehension an attentive audience would naturally have – especially when used in combination with the so-called *slow reveal* function of PP. The sequencing works against the audience who attempts to make comparisons, to connect ideas and to understand the content, as well as against the presenter who can hardly establish a narrative to show 'relevant evidence [...] in adjacent space' [Tufte 5] which would again provide the basis for the audience.

The hierarchical structure of bullet point lists causes two kinds of damage to serious content; to use Tufte's words it 'dilutes thought' [16].

Book Review

Edwar R. Tufte

The Cognitive Style of PowerPoint:
Pitching Out Corrupts Within

Book Review

INTRODUCTION

- Let's just talk about your business
 - Louis Gerstner
 - President of IBM
 - Witnessed insufficient presentation
 - Microsoft's presentation software PowerPoint

Book Review

INTRODUCTION

- 10¹⁰ to 10¹¹ slides per year
 - PowerPoint harms communication
 - Concerns on quality
- Question problems with PowerPoint

Book Review

EDWARD R. TUFTE

- Studied statistics at Stanford University and political science at Yale University
- Taught courses
- Consulted companies
- Founded and owes Graphics Press

Book Review

THE COGNITIVE STYLE

- Obstructive impact on evidence
 - analysis of
 - case studies, slides and control samples
- Reduced analytic quality
- Evidence disrupted and trivialized

Book Review

THE COGNITIVE STYLE

- Low resolution of slides
 - Reduced amount of information
 - Increased amount of slides
 - well-formulated sentences are broken up
 - Detached fragments introduced by bullet points

Book Review

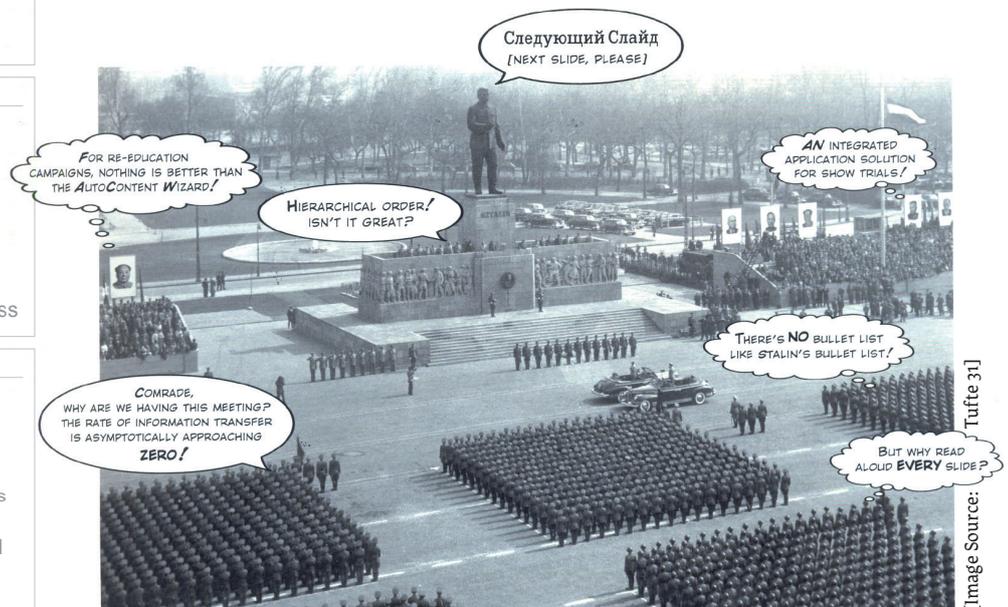
THE COGNITIVE STYLE

- Sequentiality of the slide format (= appearance and disappearance)
 - slow reveal
 - negative impact on comprehension
 - no comparisons, connections and understanding
 - no adjacent space for relevant evidence

Firstly, the bullet points mislead into presenting words or phrases, 'imprecise statements, slogans, abrupt and thinly-argued claims' [Tufte 5] instead of whole sentences. Secondly, Tufte states that the hierarchy of lists is too generic to represent complex relationships or it leaves critical relationships altogether unspecified [16]. The contorted statements only represent 'effects without causes' and leave out the 'who, what, how, when and where' [Tufte 16] – that is to say every possibility to create complex language and complex thought.

Tufte goes on to criticise the *pitch culture* of PowerPoint created by chartjunk ('incompetent designs for data graphics and tables' [Tufte 4]) and PP Phluff ('[over-]branding of slides with logotypes, a preoccupation with format not content and a smirky commercialism that turns information into a sales pitch and presenters into marketeers' [4]).

All these influences will be replicated and intensified when PowerPoint templates are used or when PP presentations are 'printed out on paper, attached to emails [and] posted on the internet' [Tufte 26].



Tufte's arguments are well-documented and well-pictured. His writing is highly informative and accompanied by interesting details that explain his work. The chapters on the cognitive style of PowerPoint follows a detailed case study about the NASA space shuttle Columbia, which was damaged during its launch and eventually crashed when it entered the atmosphere. It is shown that the use of PP by the engineers who evaluated the damage had an impact on the way NASA officials interpreted the presented analyses and assessed the threat. Two review boards investigated the accident and concluded that 'PP is an inappropriate tool for engineering reports, presentations, documentations and the technical report is superior to PP. Serious problems require serious tools' [Tufte 14].

THE COGNITIVE STYLE

- Hierarchical structure of bullet point lists causes damage (dilutes thought)
 - instead of sentences
 - words, phrases, statements, slogans, claims
 - hierarchy of lists is
 - too generic
 - leaves relationships unspecified

THE COGNITIVE STYLE

- effects without causes
- *who, how, when and where* are left out

THE COGNITIVE STYLE

- Pitch culture of PowerPoint
 - chartjunk
 - incompetent designs for graphics + tables
 - PowerPoint Phluff
 - over-branding, logotypes
 - preoccupation with format
 - commercialism

THE COGNITIVE STYLE

- Templates, print outs, email attachments, posts on the internet
 - influences are replicated and intensified

CASE STUDY

- NASA
- Space shuttle Columbia
- Was damaged during launch, crashed when it re-entered
- PowerPoint influenced the way NASA officials assessed the threat

CASE STUDY

- Review boards concluded:
 - PP is inappropriate for
 - engineering reports
 - presentations
 - documentations
 - technical report superior to PP
- “Serious problems require serious tools”*

OTHER CONTENTS

- Origin of visual presentations
- Structure of PP comparison to Microsoft's bureaucracy
- Comparison with other media
 - Pravda
 - totalitarian structure of propaganda newspaper

Apart from the criticism of PowerPoint, Tufte goes back to the origin of visual presentations to ask what the causes of visual presentations are [27]. He identifies the large commercial bureaucracy of Microsoft as a metaphor for the structure of PP and works out that statistical data represented through PP is nearly as content-free as the newspaper *Pravda* in 1982 ('back then the major propaganda tool of the Soviet communist party and a totalitarian government') [Tufte 5]. In his conclusion, he gives various ideas how to improve presentations, statistical graphics, tables and handouts.

Tufte's essay is relevant to serious presenters who want to perform in a way that allows them to sustain and support their credibility, who want to be understood by the audience and who want their content to be represented in its own analytical style. The essay is also relevant to listeners who 'need to understand something [and who want] to assess the credibility of the presenter' [Tufte 31]. As this essay reveals mechanisms of communication, I would recommend reading it at least to those who use the tool or consume presentations made with it. The provided insights help to reject the use of PP consciously and protect from becoming entangled in its traps.

WORKS CITED

TUFTE, Edward R. *The Cognitive Style of PowerPoint: Pitching Out Corrupts Within*. Connecticut: Graphics Press LLC, 2006. Print.

TUFTE, Edward R. *The Work of Edward Tufte and Graphics Press*. Section: About ET, ET resume here. Web. 5 July 2012. <http://www.edwardtufte.com>

OTHER CONTENTS

- Improvements
 - presentations
 - statistical graphics and tables
 - handouts

RECOMMENDATION

- Content is relevant to
 - Presenters
 - credible
 - understandable
 - Listeners
 - understand
 - assess credibility

RECOMMENDATION

- Content is relevant to
 - those who use the tool
 - those who consume presentations made with it
- Helps to reject PowerPoint
- Protects from becoming entangled in its traps

Bibliography

- Tufte, Edward. The Cognitive Style of PowerPoint: Pitching Out Corrupts Within. Connecticut: Graphics Press LLC, 2006.
- The Work of Edward Tufte and Graphics Press. Edward Tufte, Section: About ET. Graphics Press LLC, n.d. [http://www.edwardtufte.com/bbord/q-and-a-fetch-msg?msg_id=0003mW] Assessed: 5 July 2012

THANK YOU