

HOW ^{NOT} TO GIVE A TALK

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Children's Healthcare of Atlanta

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K Club – October 14, 2019

Disclosures

- Not one “right” way to give a talk...
- ... many bad ways ...
- Some very dogmatic people out there
[howtogiveataalk.com]
- This talk reflects my own opinions

How To Give a Talk

By David L Stern

Principles

#1: Don't Put Words on Slides

#2: Use Black Slides

#3: Show Your Data

#4: Don't Tell Jokes

#5: Don't Take A Data Dump On Your Audience

#6: Practice, Practice, Practice

#7: Tell and Show

#8: Finish When You Are Done, Preferably Sooner

Overview

- General Principles
- Your Slides
- Your Presentation Style

The image features two large, thick black L-shaped brackets. One is positioned on the left side, with its vertical bar extending downwards and its horizontal bar extending to the right. The other is on the right side, with its vertical bar extending upwards and its horizontal bar extending to the left. These brackets frame the central text.

GENERAL PRINCIPLES

Entertainment Trumps Knowledge

- “There is **one big misunderstanding** when giving talks. Most people think they need to be smart, show a lot of data, share knowledge and bore the crap out of the audience ... But you know what? If I want to learn something new, I read a book, but I **go to a talk to get entertained.**



from “Desk of Van Schneider” – July 18, 2016

Passion, Storytelling & Showmanship

- *“I see presenting as a harmonious blend of **passion, storytelling, and showmanship**. It has the uncanny ability to change minds and hearts in a few brief moments. And it’s a practice that challenges and terrifies me, but I find tremendously rewarding when done right.”*



How not to give a presentation

Richard Smith

thebmj

BMJ 2000;321:1570-1

- A really bad presentation needs careful preparation
 - *prepare for the wrong audience*
 - *give an overcomplicated presentation*
 - *prepare a presentation that is the wrong length*
 - *ignore the topic you are given*



Don't use abbreviations without first defining them!!!

How not to give a presentation

Richard Smith

thebmj

BMJ 2000;321:1570-1

- **Bad slides are the traditional standby of a bad presentation**
 - *There must be far too many*
 - *They must be too small for even those in the front row to read*
 - *Flash them up as fast as you can*
 - *Ideally there should be little connection between what you are saying and what is on the slide*

13 Most Common Mistakes People Make When Giving a Speech **Inc.**



HOW NOT TO GIVE A
PRESENTATION

How to Make Sure Your
Talk Doesn't Suck

David Tong

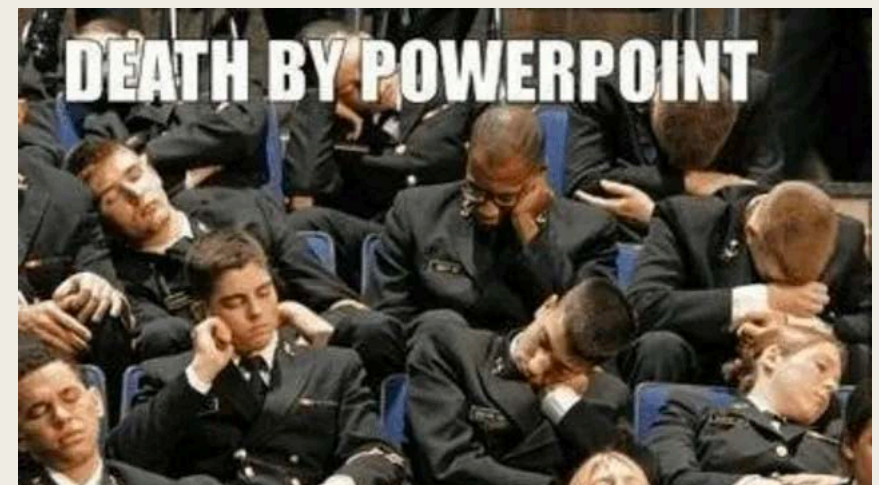
SUCK

Ways in which you can suck

In case it's not obvious, what follows are examples of what *not* to do

Death By Powerpoint

- Key contributors:
 - confusing graphics
 - slides with too much text
 - presenters whose idea of a good presentation is to read their slides out loud
- Easily recognized by:
 - glazed over audience
 - furtive use of [smartphones](#)
 - frequent trips to the bathroom

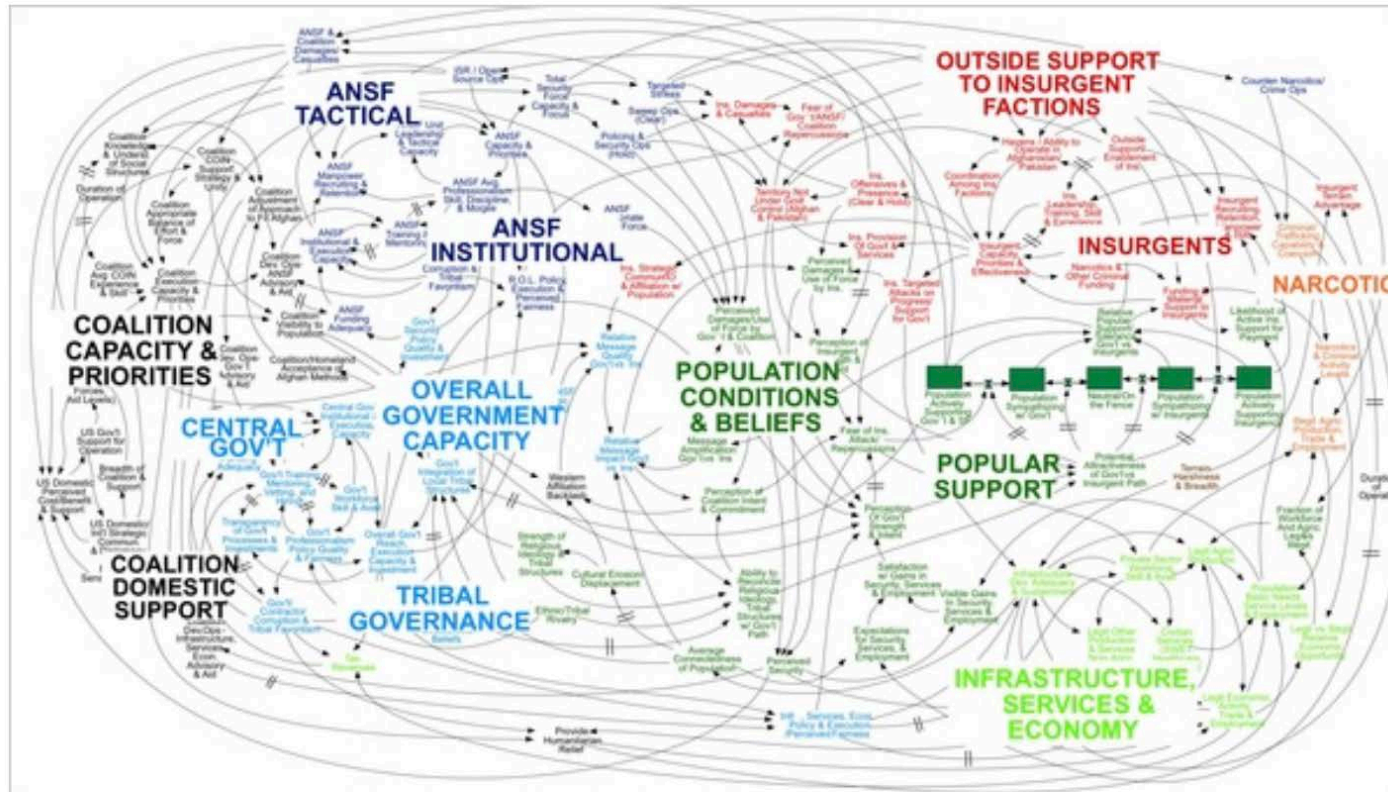


WORLD

We Have Met the Enemy and He Is PowerPoint

By ELISABETH BUMILLER

APRIL 26, 2010



“Created a division
of a keel rest standing”

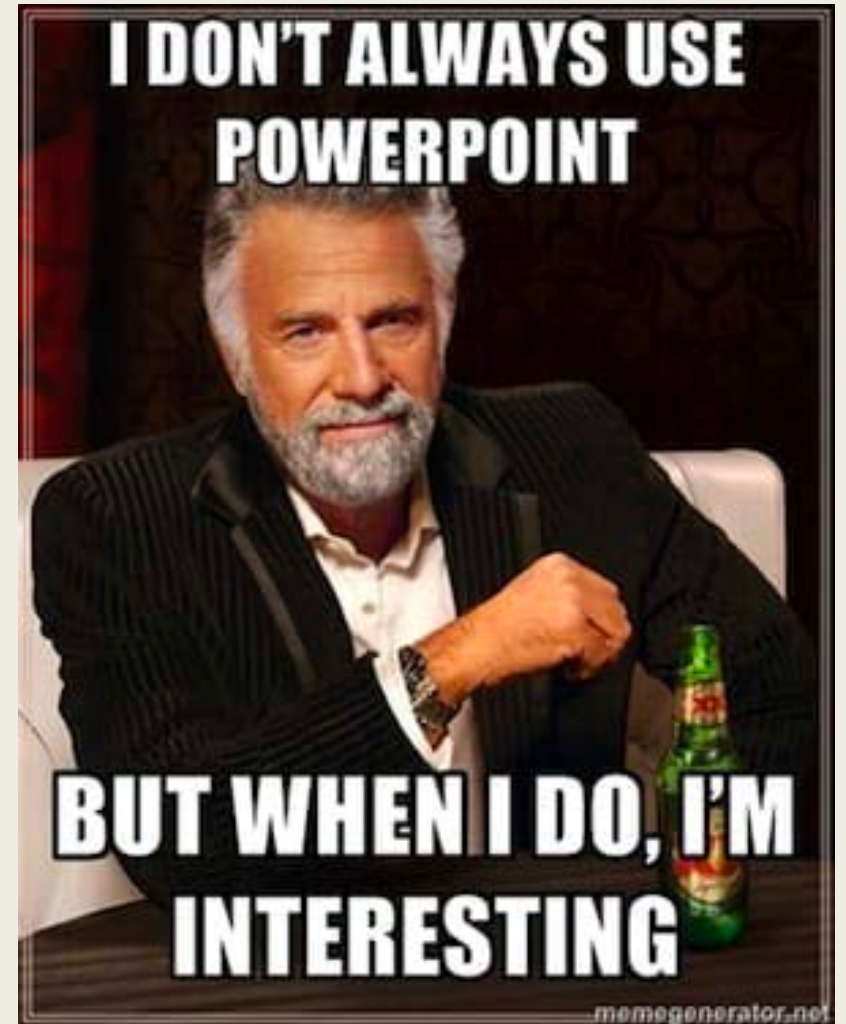
General Jim Mattis
Gen HR McMaster
April 2010



A PowerPoint diagram meant to portray the complexity of American strategy in Afghanistan certainly succeeded in that aim.

Effective Powerpoint Use

- Use technology as a visual aid to **enhance** what is being said
- Don't rely on technology to serve as focus



TEDx Talk: “How to Avoid Death by Powerpoint”

- One key message per slide
- No more than six objects/lines
- People naturally focus on

→ **SIZE**

→ **contrast**

→ *motion*

→ *signaling colors: red, orange and yellow*

Your Audience

- Why are you giving the talk?
 - *Meeting Platform?*
 - *Job Talk?*
 - *Didactic Lecture?*
- Who is the audience?
- How much do they know about my topic?

Assume the Audience is Omniscient

Introduction

As you all know, the remarkable Kontsevich-Soibelman wall-crossing formula is given by

$$\frac{d}{du} \left(\prod_{-Z_\gamma(u) \in \mathcal{V}} \mathcal{K}_\gamma^{\Omega(\gamma; u)} \right) = 0$$

Tell A Story

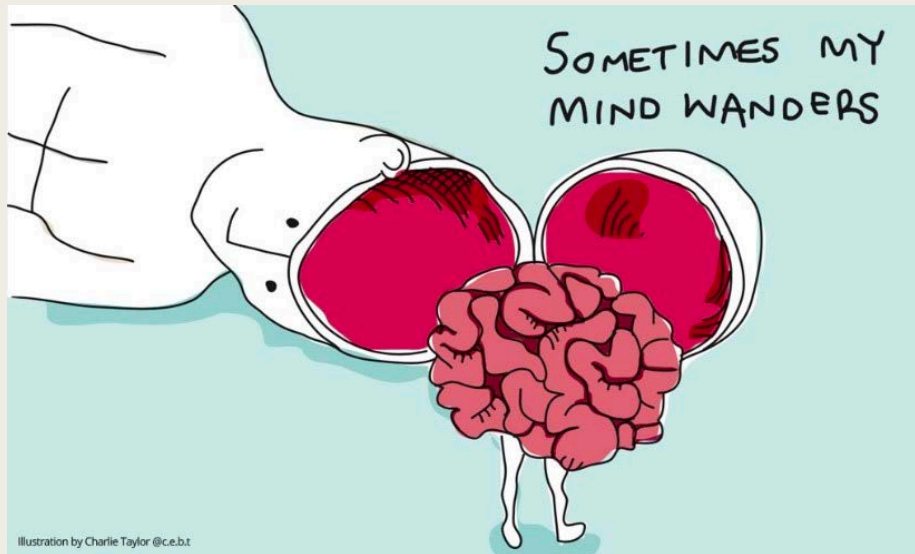
- *“There’s a reason why we can sit motionless in a movie theater for two hours, completely enamored by what we’re watching. Movies follow a **great story arc** that **builds suspense and intrigue.**”*



- Create anticipation that keeps viewers looking forward to what happens next

Tell A Story

- Establish emotional connection
- Grab attention of people whose minds – or fingers – are wandering



Tell A Story

- Present a problem (“**what is**”)
 - *Give lots of background!!!!!!*
- Build towards a solution (“**what could be**”)
- Problem-tension-solution pattern
 - *based on classical Greek dramas*
 - *effective in eliciting powerful emotion response*



Title

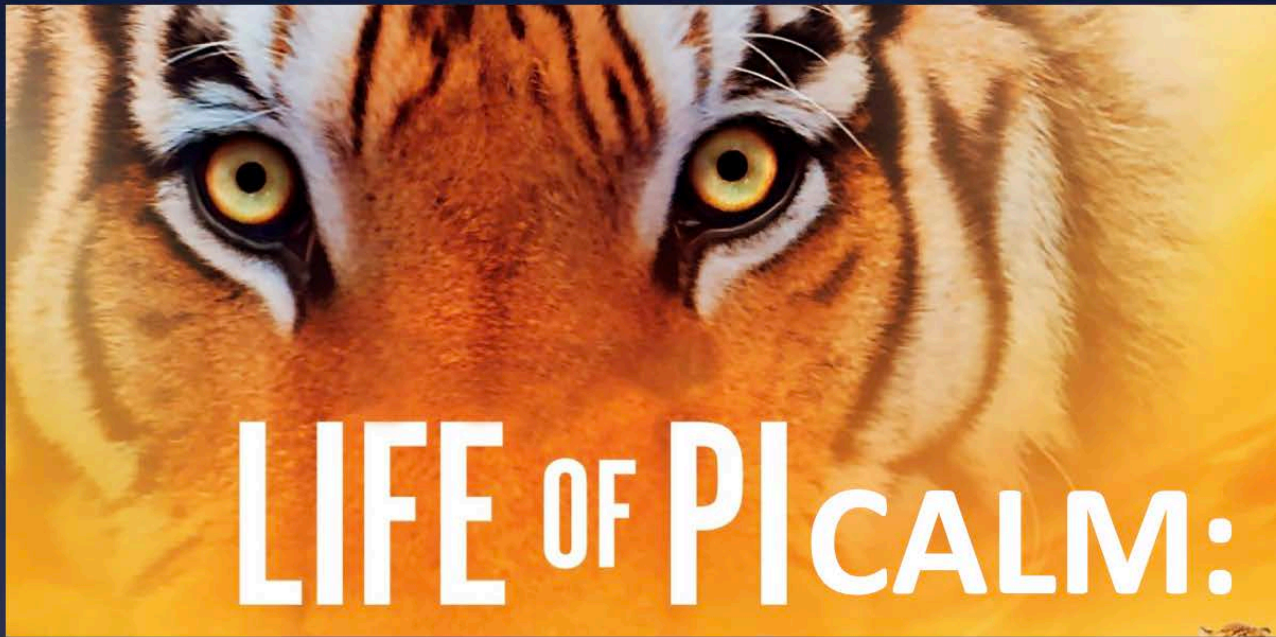
- Choose an interesting title that would make you want to hear about the topic



**KEEP
CALM
AND
CARRY
ON**

The Role of CALM Translocations in Leukemogenesis

**Dan Wechsler, MD, PhD
Pediatric Hematology-Oncology
Duke University
June 2011**



Adventures in Understanding Pediatric Leukemias



Dan Wechsler, MD, PhD
Pediatric Hematology-Oncology
Duke University Medical Center
April 2015

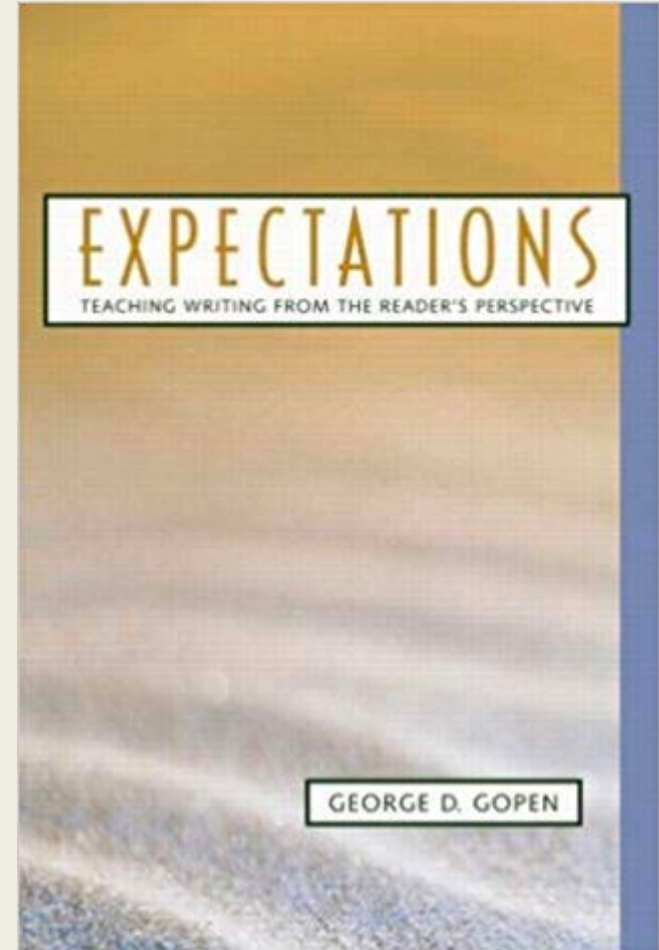
PRINCIPLE #1:
AUDIENCE ENERGY



The Science of Scientific Writing

George D. Gopen [Duke]

- *“If the reader is to grasp what the writer means, the writer must understand what the reader needs”*



American Scientist (Nov-Dec 1990), Volume 78, 550-558

“Reader’s Energy”

- Readers (reviewers) have only a certain amount of time and energy to devote to a written work
- If they have to work too hard ...
 - to find the message, it will be **missed**
 - to get through the proposal, they will **resent** it

responsible, and why are estrogen's effects so selective for arterioles? Because estrogen is able to induce nociceptor neurite sprouting in dissociated neuron cultures, it seems likely that it acts directly at the level of the neuron (C.4) (Blacklock et al., in press). If this is due to transcriptional regulation, then it may be possible to gain insight into the genes involved using massively parallel microarray technology. Results of microarray analysis revealed one gene that is highly likely to explain both increased sprouting and the selectivity of this sprouting to vascular targets. In DRG neuronal cultures, mRNA for the angiotensin II receptor type 2 (AT2) was upregulated an average of 2.24-fold following 24h estrogen treatment in a multi-chip experiment (C.5). This finding is significant for several reasons. First, recent studies show that AT2 activation potently promotes axon regeneration in a number of systems including the sciatic nerve, cerebellum, and optic nerve (Lucius et al., 1998; Cote et al., 1999; de Gasparo and Siragy, 1999; Reinecke et al., 2003) and induces neurite outgrowth in culture (Stroth et al., 1998; Cote et al., 1999; Gendron et al., 2002). In PC12 cells and undifferentiated NG108-15 cells, ANGII-mediated activation of AT2 elicits dendrite formation (Stroth et al., 1998; Gendron et al., 2002). Under conditions where nerve regeneration is induced by sciatic nerve crush, AT2 protein and mRNA are strongly and persistently upregulated (Mullinat et al., 1998); although this study did not examine which cell populations show the upregulation, preliminary studies show expression primarily in small to medium DRG neurons, in contrast to large DRG neurons (C.5). Therefore, AT2 is implicated in axonal sprouting and regeneration in a number of systems including the DRG. Another feature that makes AT2 an attractive candidate is its expression in a number of systems studied thus far, including the pituitary gland (Suarez et al., 2002). Our preliminary studies support the idea that AT2 protein is expressed in the DRG (C.6). Therefore, AT2 is regulated by estrogen in a manner that is consistent with its role in receptor axon sprouting. It is further germane that the endogenous ligand for AT2, angiotensin II, is distributed in a manner appropriate to explain the highly selective sprouting of nociceptor innervation. Production of ANGII is classically considered to be primarily in the liver. Angiotensinogen (ATG), a globular protein, is secreted by the liver into the circulation. When the juxtaglomerular cells in the kidney secrete renin, it cleaves ATG to cleave an inactive 11 peptide fragment, ANG I, which is converted to the biologically active octapeptide ANGII by Angiotensin Converting Enzyme (ACE). ACE is localized within both endothelial cells and perivascular stroma (Stern et al., 1976; Gunther et al., 1980; Naftilan et al., 1991; Morgan et al., 1998; Xia et al., 2002). There is evidence that the RAS can be regulated by estrogen (Greenland and Cote, 2002). There is a strong rationale for investigating the role of AT2 in estrogen-induced arteriolar hyperinnervation. Alterations in peripheral sensory innervation are known to occur under a number of pathological and physiological conditions. CGRP-ir fiber hyperinnervation is a normal component of wound healing (Stern and Fitzgerald, 1995; Smith and Liu, 2002), and is believed to give rise to heightened sensitivity and inflammation of the wound, as well as vasodilation and edema of neural origin (neurogenic inflammation). However, hyperinnervation by CGRP-ir fibers is also implicated as a primary factor in some female pain syndromes where estrogen is thought to play a role. For example, vulvar vestibulitis is characterized by intense perivaginal pain and profound neurogenic inflammation (Masheb et al., 2000; Bohm-Starke et al., 2001a; Bohm-Starke et al., 2001b; Smart and MacLean, 2003). Recent studies of biopsy material have shown a striking increase in numbers of CGRP-ir axons in the affected tissue (Bohm-Starke et al., 1998; Bohm-Starke et al., 1999; Tympanidis et al., 2003), implying that nociceptor hyperinnervation participates in both pain and inflammation. Accordingly, it is important to determine if estrogen-induced arteriolar hyperinnervation affects either pain sensitivity or vascular function. Because pain syndromes in human females typically do not exist in isolation, changes in peripheral nociceptor density alone may not be sufficient to incite large alterations in perception to painful stimuli. Therefore, it is important to explore the effect of estrogen both alone and in the presence of a condition known to be associated with heightened sensitivity. While a number of such conditions exist in women (e.g., irritable bowel syndrome, interstitial cystitis, fibromyalgia), a particularly tractable model is experimental endometriosis induced by transplanting portions of the uterus into the abdomen (Vernon and Wilson, 1985; Nothnick et al., 1994) in estrogen-primed rats. This

A Reviewer's
Nightmare!

Sensory nociceptor neurons are likely targets for estrogen's effects on target innervation density. Studies show that sensory ganglia contain abundant estrogen receptors (ERs) (Sohrabji et al., 1994; Papka et al., 1999; Taleghany et al., 1999; Papka et al., 2001; Papka and Storey-Workley, 2002; Papka and Mowa, 2004). Estrogen upregulates neurofilament expression in DRGs (Scoville et al., 1997), suggestive of axon outgrowth, and elicits axon outgrowth in PC12 cells expressing ERs (Gollapudi and Oblinger, 2001). Therefore, previous work provides a strong basis for suggesting that estrogen may induce outgrowth of some types of axons, including sensory nociceptors.

Estrogen and arteriolar nociceptor hyperinnervation

Our preliminary findings confirm that estrogen **does** affect vascular innervation, leading to hyperinnervation by CGRP-ir axons. In the mammary gland, sustained estrogen elevation similar to that of pregnancy results in increased numbers of CGRP-ir sensory axons, but not sympathetic axons, that are associated with arteriolar vessels (Blacklock and Smith, 2004). Because **5, increased CGRP-ir innervation is accompanied by increased total innervation revealed by the pan-ir innervation must be due to axon sprouting rather than sprouting in a stable number of fibers.** This increase in vasodilator innervation may play a role in the vasodilation that occurs at the end of pregnancy, but also raises the possibility that estrogen may be acting on the vascular system. Indeed, CGRP-ir arteriolar innervation is also increased in mesenteric and visceral (mesenteric) vascular beds (Blacklock et al., 2004). CGRP-ir innervation is highly selective for arteriolar targets, as it does not occur in mesenteric and visceral both muscle, or large arteries (C.3) (Blacklock et al., 2004; Blacklock and Smith, 2004).

The increase in arteriolar vasodilation is an important factor in explaining why resting blood pressure is lower in premenopausal women (Kotchen et al., 1982; Martins et al., 2004). The increase in CGRP-ir presumptive nociceptor sensory axons with dilatory neurogenic vasodilation (Lindsay et al., 1989; Mulderry, 1994; Gangula et al., 2004) may be important in explaining the increased pain sensitivity and neurogenic vasodilation in individuals to increased pain sensitivity. **Understand the mechanisms whereby estrogen alters vasodilation and the potential consequences.**

A remaining question is: what is the mechanism underlying the rise to the hyperinnervation? Both C and A δ fibers of the DRG express trkA and are responsive to neurotrophic factors (Bjorling et al., 2004). Similarly, it is unclear if non-peptidergic nociceptors (C.4) (Sohrabji et al., 1995; Amaya et al., 2004), are affected, nor is it clear whether estrogen affects these neurons in the same way it affects primary sensory neurons of the DRG. Answers to these questions are important in more fully defining the effects of estrogen on sensory innervation, and how hyperinnervation may affect pain sensitivity.

Neurotrophic mechanisms mediating arteriolar sensory hyperinnervation

Target innervation is regulated by limited amounts of tissue-derived neurotrophic factors, and most CGRP-ir nociceptors are dependent upon NGF for trophic support (Levi-Montalcini and Angeletti, 1968; Lewin and Mendell, 1993; Maness et al., 1994). These trkA-expressing neurons are likely to be affected by estrogen. Thus mRNA for the estrogen receptor β (ER β) is widely expressed in small, medium, and large neurons, and ER α is primarily expressed in small neurons (< 600 μm^2 ; Sohrabji et al., 1994; Yang et al., 1998; Taleghany et al., 1999; Papka and Storey-Workley, 2002), which is likely to represent the C-fiber nociceptor population. Further, trkA and ERs co-localize in DRG neurons (Sohrabji et al., 1994; Scoville et al., 1997), suggesting that estrogen may regulate the expression and function of these receptors (Toran-Allerand et al., 1988). In fact, trkA mRNA expression in DRG apparently is regulated by estrogen (Sohrabji et al., 1994; Liuzzi et al., 1999; Lanlua et al., 2001a, b). However, despite evidence for an association between estrogen and trkA, our preliminary studies failed to show any interaction between estrogen and NGF with respect to neurite outgrowth in culture. Similarly, while estrogen is known to increase target expression of NGF (Bjorling et al., 2002; Krizsan-Agbas et al., 2003), DRG explant cultures did not show increased sprouting in the presence of mesenteric arteriolar targets in defined medium containing estrogen (C.4) (Blacklock et al., in press). Therefore, it seems unlikely that estrogen is inducing nociceptor hyperinnervation through actions on NGF or its receptors.

“Audience Energy”

- Audiences have only a certain amount of energy to devote to a **presentation** before they get **bored** and...



- If they have to work too hard ...
 - to find the **slide's** message, it will be **missed**
 - to get through a **slide**, they will **resent** it



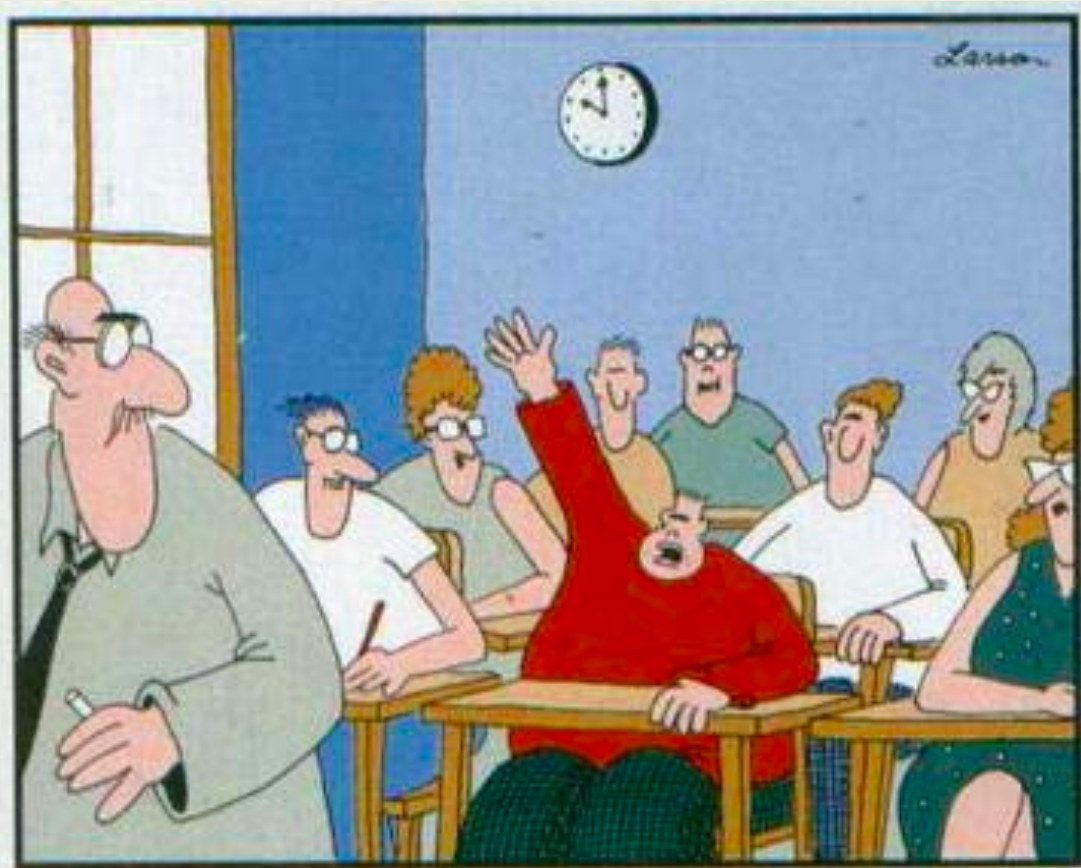
PRINCIPLE #2:
COGNITIVE LOAD THEORY



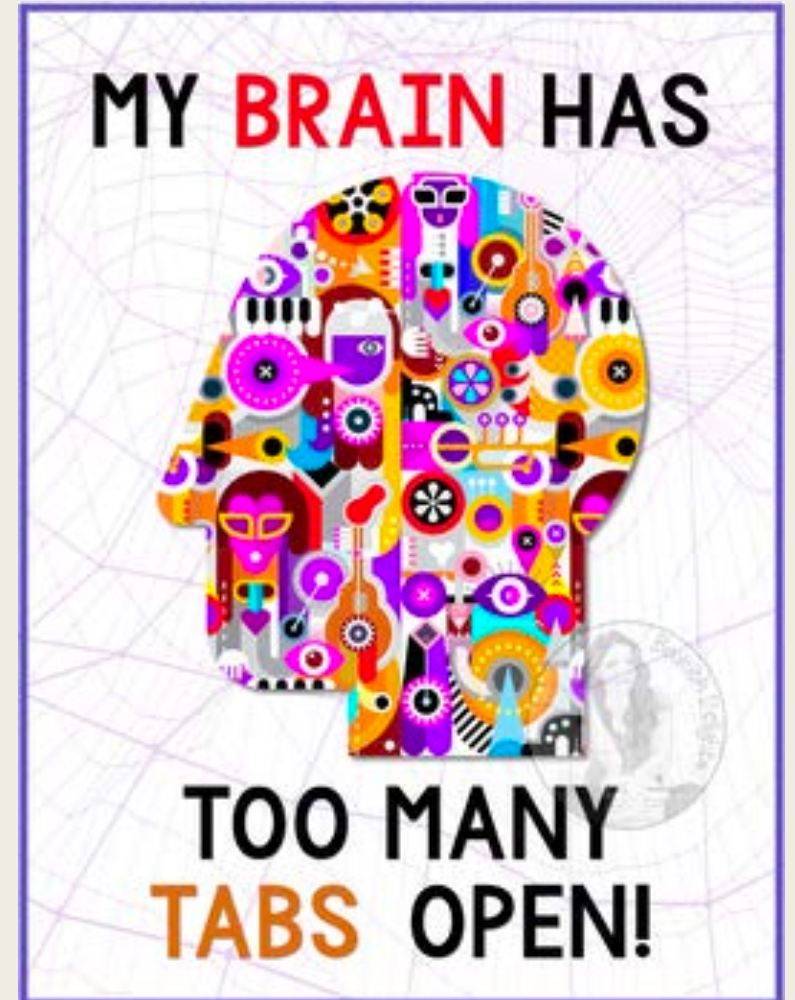
Cognitive Load Theory

- The brain can only do so many things at once
- Hard to process information in written and spoken form simultaneously
- When you see a slide filled with text, it's natural to try to read it
- Listeners can read the slides or listen to you, but **they can't successfully do both**

Cognitive Load Theory



"Mr. Osborne, may I be excused?
My brain is full."

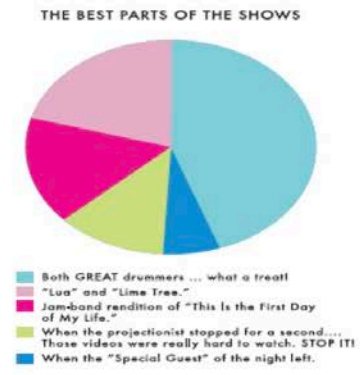
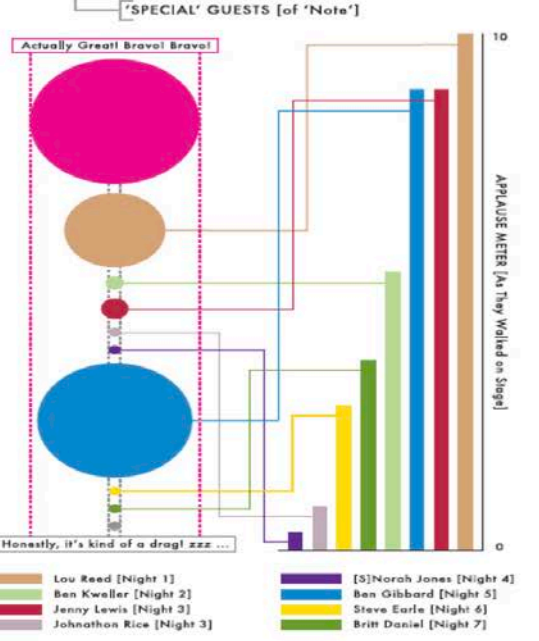
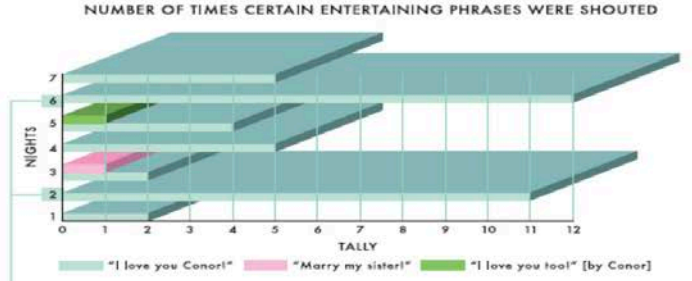
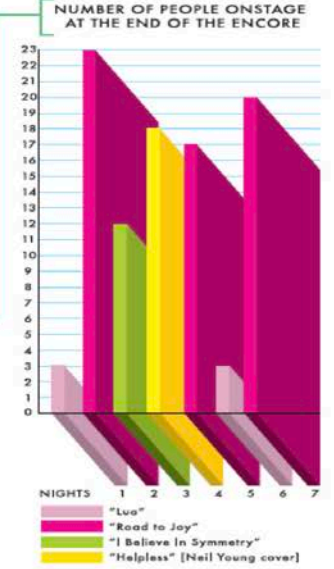
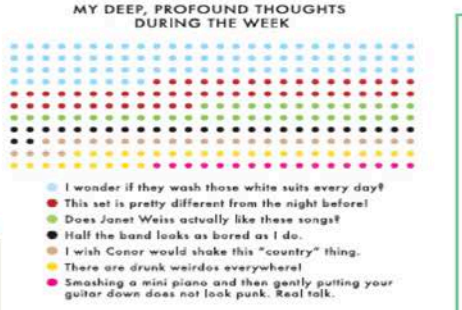
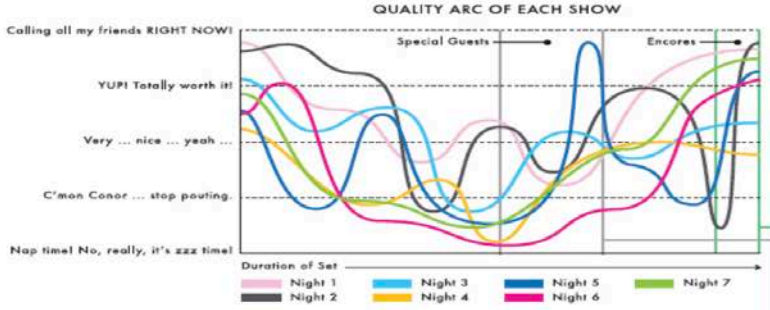


Cognitive Load Theory



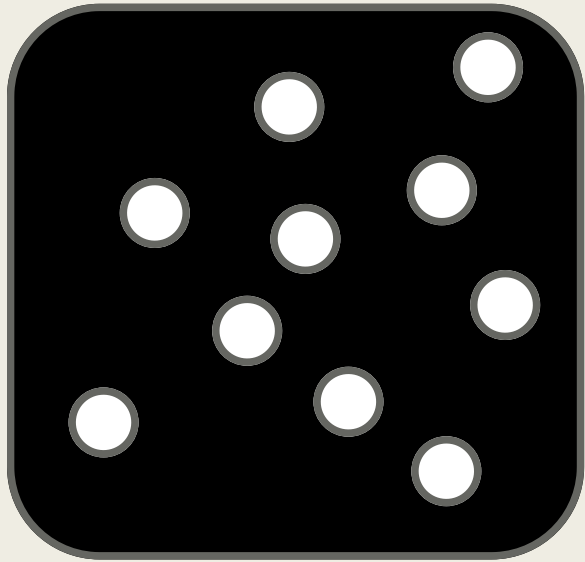
- Clutter:
 - *Extraneous words*
 - *Graphics*
 - *Animation*
 - *Sounds*
 - *Fancy transitions*
 - *Things flying across the screen*
- All these *strain* the audience's cognitive resources

Get as Much on That Page as Possible (and speak really fast)

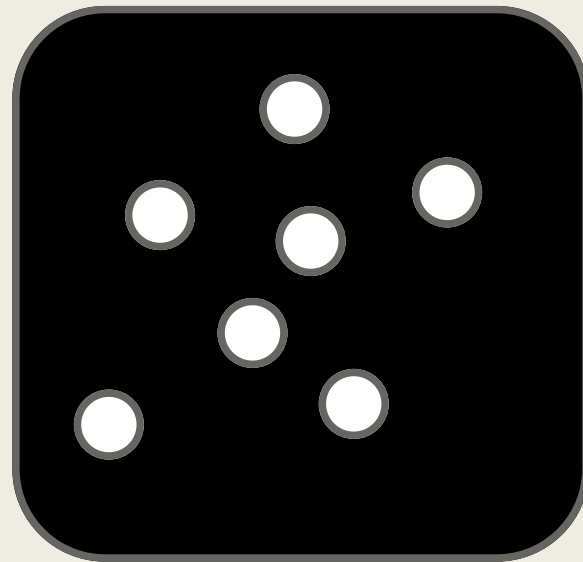




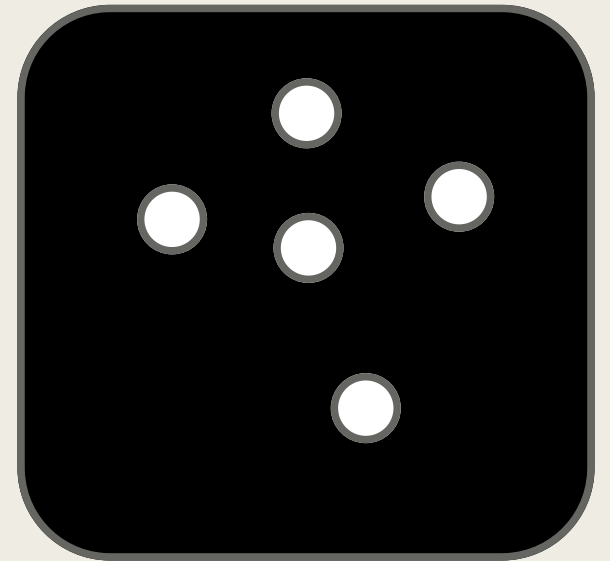
Remember – No more than 5-6 Bullets



10 dots
2 sec



7 dots
1.2 sec



5 dots
0.2 sec



max. working
memory load:
4-5 things



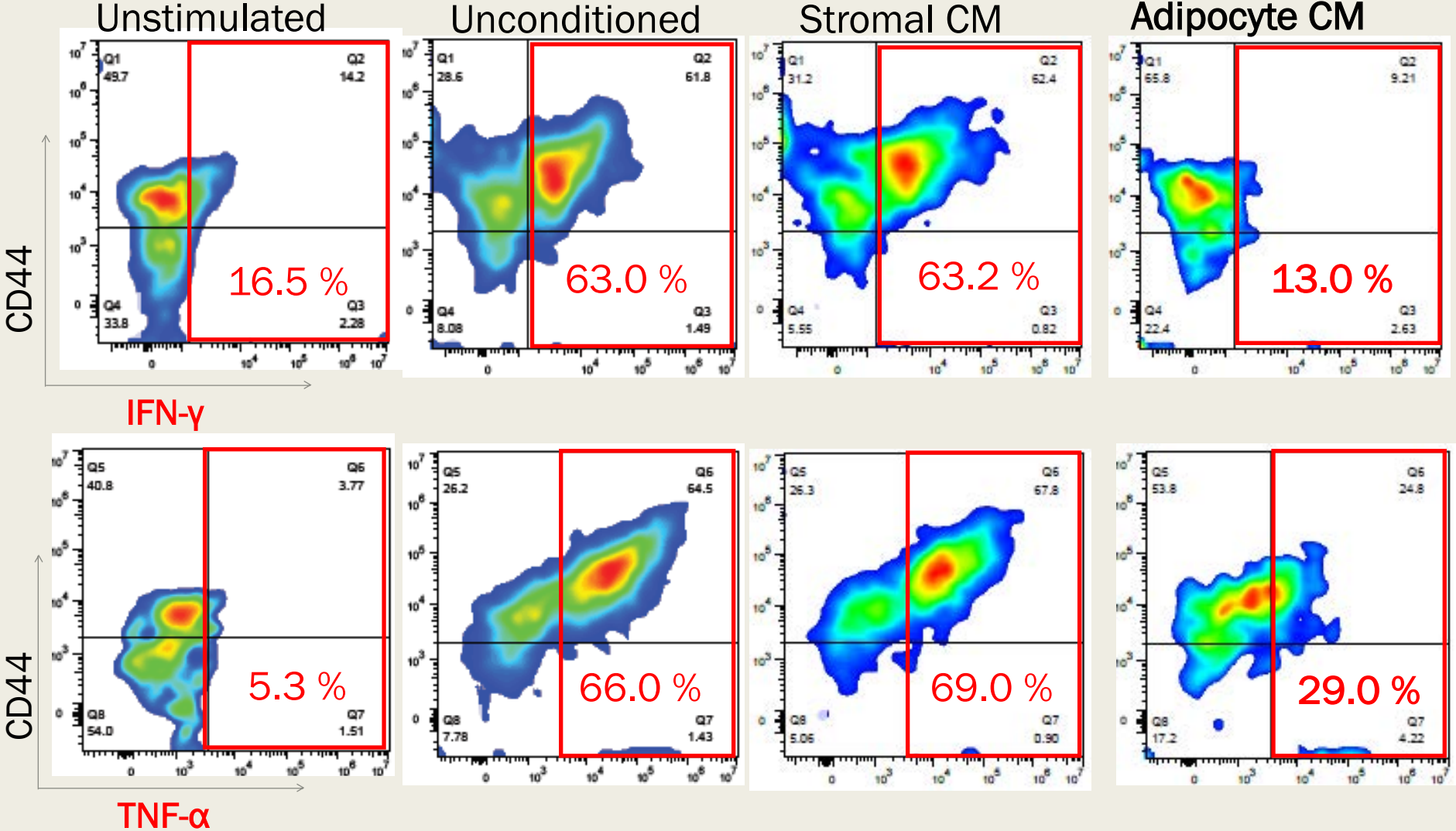
YOUR SLIDES

You Control Your Slides

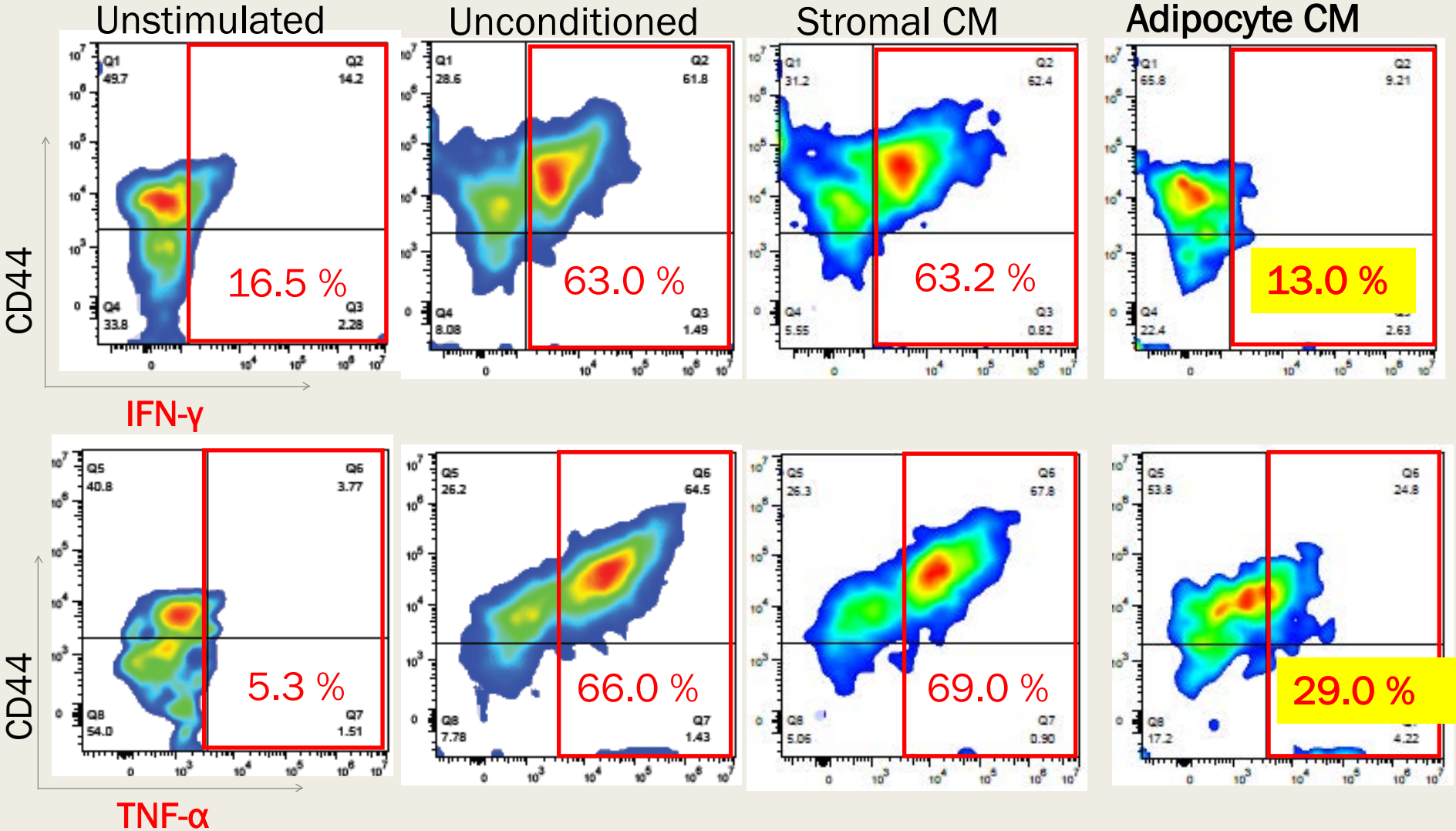
- You choose what to include/
not include on them
- You decide how many slides
- that “one slide/minute rule?”
- You can selectively highlight what’s important and
guide audience



Adipocyte-Secreted Factors Compromise Mouse CD8+ T-cell Cytokine Production



Adipocyte-Secreted Factors Compromise Mouse CD8+ T-cell Cytokine Production



Our Accomplishments

Ranked **No. 8** in the Country for Pediatric Cancer by U.S. News & World Report

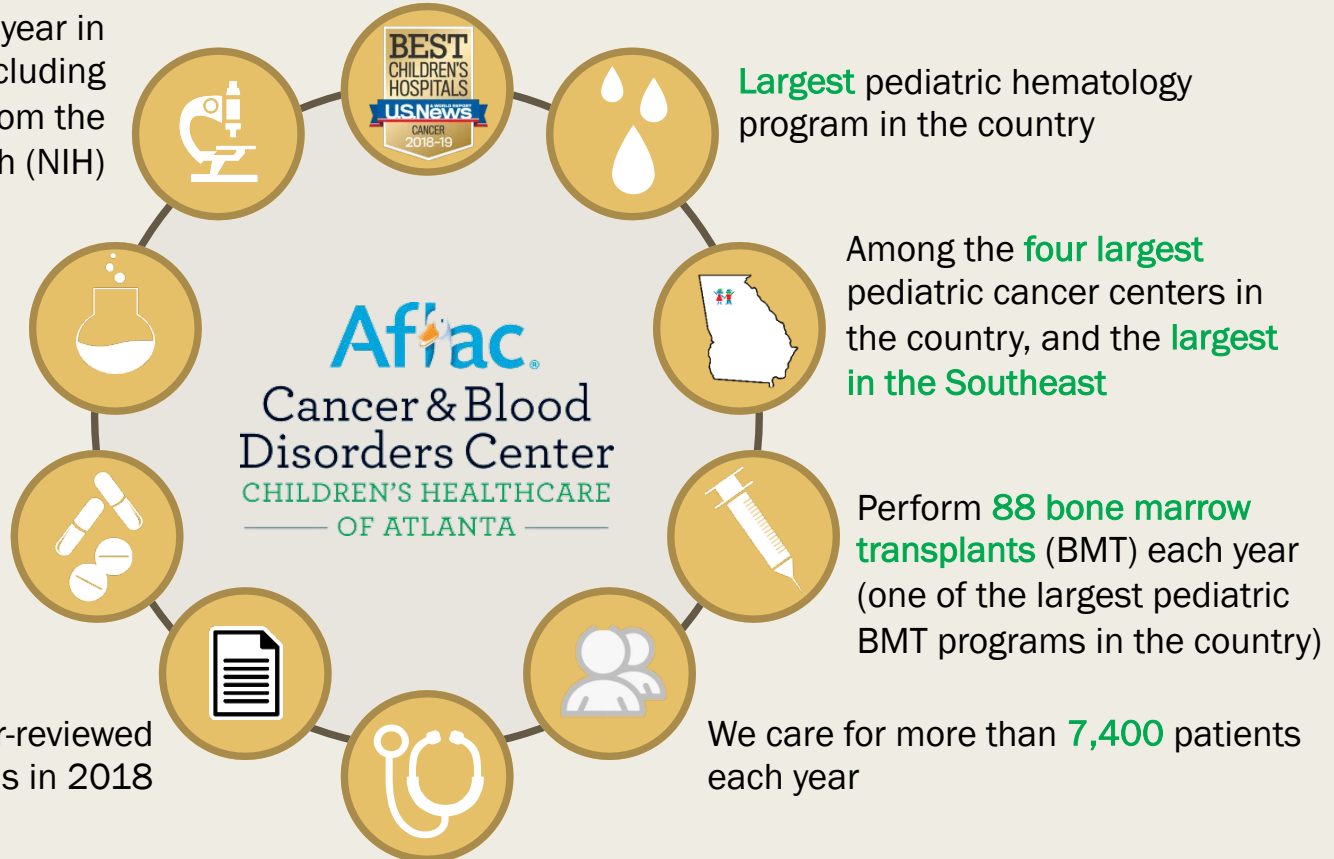
Generate over **\$20.2 million** per year in extramural research funding, including more than **\$10.7 million** from the National Institutes of Health (NIH)

One of **21** premier pediatric oncology programs designated as part of the COG Phase I and Pilot Consortium offering access to new therapeutics to children with cancer

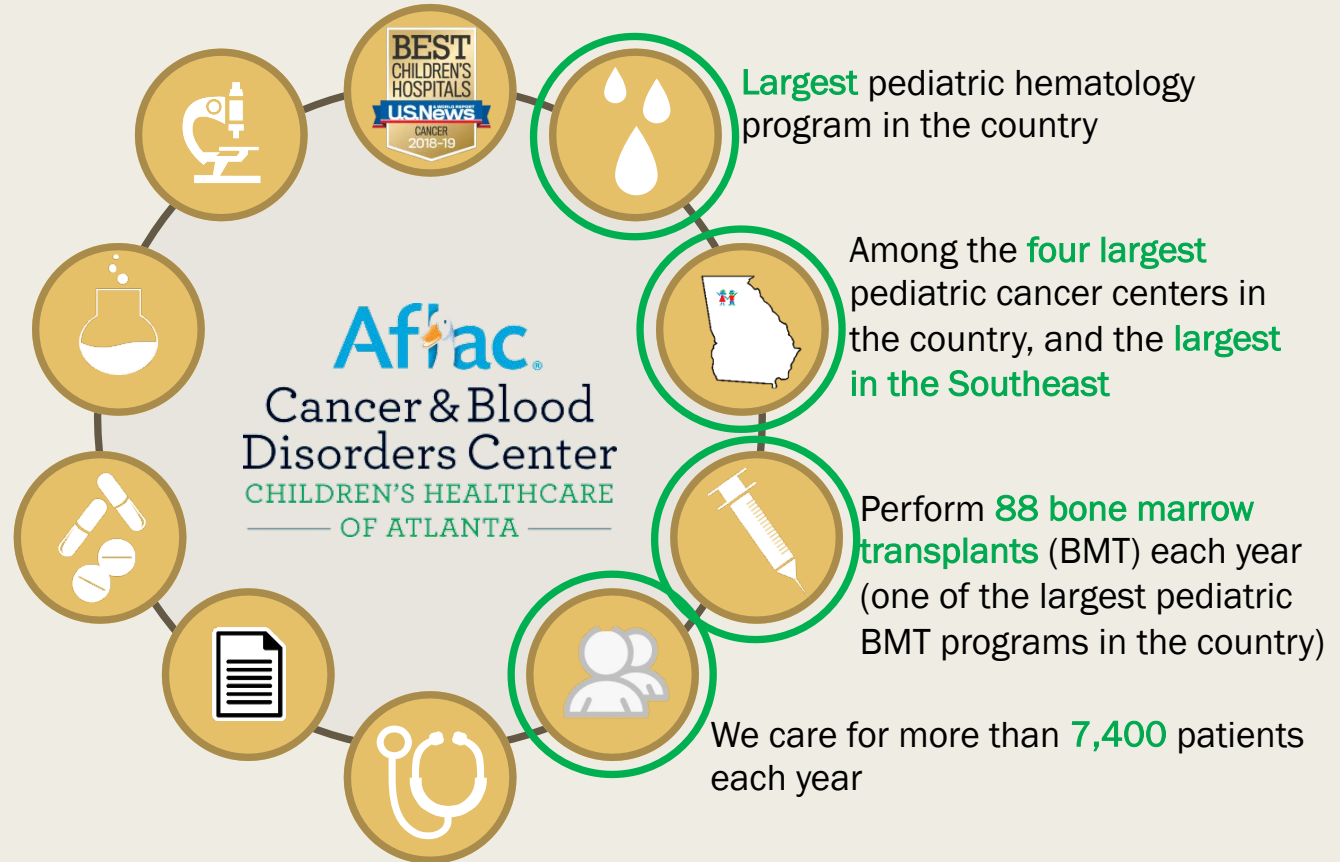
Ranked **No. 4** nationally for enrollment in clinical trials among the 200+ institutions participating in Children's Oncology Group (COG)

Our faculty had **189** peer-reviewed publications in 2018

Our **cancer survival outcomes** are **better** than the national average



Our Accomplishments



Extra Slides

- How much does an extra slide cost?



\$0.00 – Zero Dollars – Nada

- Break wordy slides up into several – it's **FREE** and makes it easier on audience

PRINCIPLES #3 & 4:

SIZE & CONTRAST

Background

- Don't clutter background with fancy patterns or graphics (e.g., your university's logo – everyone should know where you are from from your first slide)
 - clutter
 - distract audience
 - reduce readability



Background

- Do not clutter background with fancy patterns or graphics (e.g., your university's logo--everyone should know where you are from from your first slide)

- clutter
- distract audience
- reduce readability

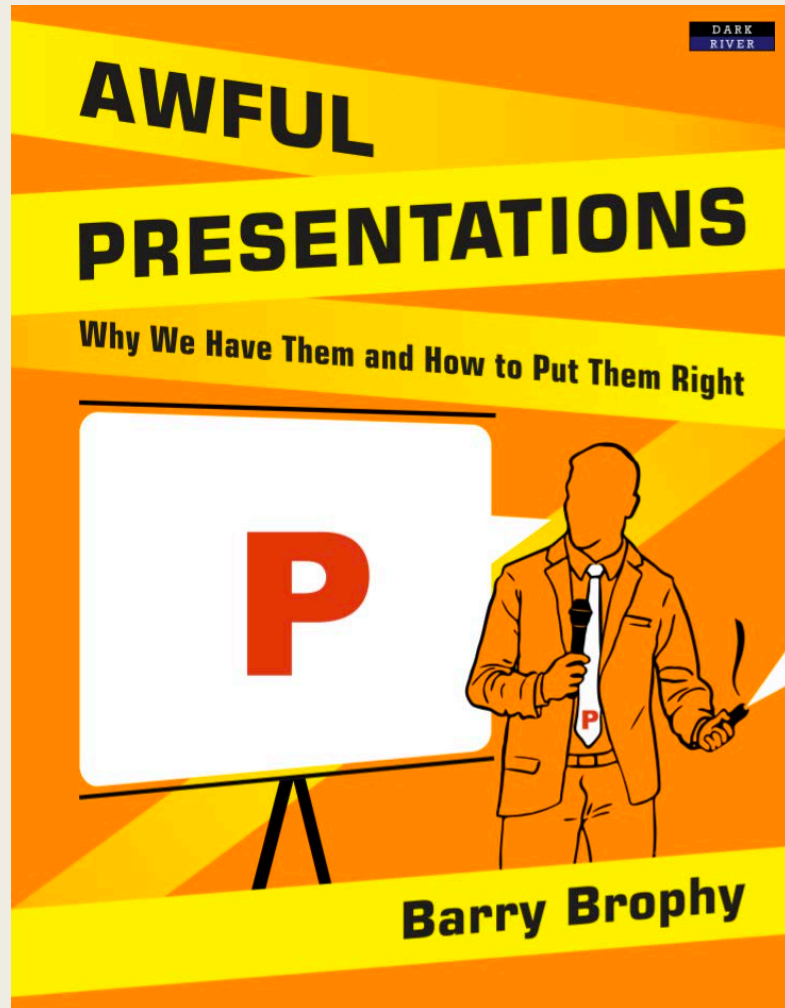


DON'T!

IS A
TERRIBLE
BACKGROUND!

DON'T USE IT!!!!!!!!!!!!!!

Minimize Text



- *“You know you’re in trouble when you catch a glimpse of the slide-sorter at the start of the presentation, and it looks like an aerial view of the American Great Plains: lots of dull-coloured rectangles, each intricately lined. Not only does it resemble ploughed prairie, it is about as interesting.”*

Preview
Appear
Blinds
Checkerboard
Dissolve In
Fly In
Fill Color
Font Color
Grow/Shrink
Line Color
Spin
Exit Effects
Path Animation
Effect Options
Animation Pane
Trigger
Animation Painter
Start:
Duration:

<p>1</p> <p>HOW NOT TO GIVE A TALK</p> <p>Richard Smith</p> <p>11.10.10</p> <p>Bad slides are the traditional standby of a bad presentation</p> <ul style="list-style-type: none"> - There must be far too many - They must contain too much information and be too small for even those in the front row to read - Flash them up as fast as you can, ensuring that they are in the wrong order - Ideally there should be little connection between what you are saying and what is on the slide 	<p>2</p> <p>Disclosures</p> <p>How To Give a Talk</p> <ul style="list-style-type: none"> There is not one "right" way to give a talk... ... but there are many bad ways to give a talk There are some very dogmatic people out there! This talk reflects my own personal opinions 	<p>3</p> <p>Overview</p> <ul style="list-style-type: none"> General Principles Your Slides Your Presentation Style 	<p>4</p> <p>GENERAL PRINCIPLES</p>	<p>5</p> <p>Entertainment Trumps Knowledge</p> <ul style="list-style-type: none"> There is one big misunderstanding when giving talks. Most people think they need to be smart, show a lot of data, share knowledge and bore the crap out of the audience. We think that we need something "worth showing". But you know what? If I want to learn something new, I read a book, but I go to a talk to get entertained. If your talk is entertaining, no one gives a s**t about what you talked about. 	<p>6</p> <p>Passion, Storytelling & Showmanship</p> <ul style="list-style-type: none"> I see presenting as a harmonious blend of passion, storytelling, and showmanship. It has the uncanny ability to change minds and hearts in a few brief moments. And it's a practice that challenges and terrifies me, but I find tremendously rewarding when done right. 	<p>7</p> <p>How not to give a presentation</p> <ul style="list-style-type: none"> A really bad presentation needs careful preparation <ul style="list-style-type: none"> - prepare for the wrong audience - give an overcomplicated presentation - prepare a presentation that is the wrong length - ignore the topic you are given Don't use abbreviations without first defining them!!
<p>8</p> <p>How not to give a presentation</p> <ul style="list-style-type: none"> Bad slides are the traditional standby of a bad presentation There must be far too many They must contain too much information and be too small for even those in the front row to read Flash them up as fast as you can, ensuring that they are in the wrong order Ideally there should be little connection between what you are saying and what is on the slide 	<p>9</p> <p>13 Most Common Mistakes People Make When Giving a Speech</p> <p>How to Make Sure Your Talk Doesn't Suck</p>	<p>10</p> <p>Ways in which you can suck</p>	<p>11</p> <p>We Have Met the Enemy and He is PowerPoint</p>	<p>12</p> <p>Death By Powerpoint</p> <ul style="list-style-type: none"> Key contributors: <ul style="list-style-type: none"> - confusing graphics - slides with too much text - presenters whose idea of a good presentation is to read 40 slides out loud Easily recognized by: <ul style="list-style-type: none"> - glazed over audience - further use of soundbites - frequent trips to the bathroom 	<p>13</p> <p>Death By Powerpoint</p> <ul style="list-style-type: none"> Key contributors: <ul style="list-style-type: none"> - confusing graphics - slides with too much text - presenters whose idea of a good presentation is to read 40 slides out loud Easily recognized by: <ul style="list-style-type: none"> - glazed over audience - further use of soundbites - frequent trips to the bathroom 	<p>14</p> <p>Effective Powerpoint Use</p> <ul style="list-style-type: none"> Use technology as a visual aid to enhance what is being said, instead of relying on the technology to serve as the focus of the presentation.
<p>15</p> <p>Cognitive Load Theory</p> <ul style="list-style-type: none"> The brain can only do so many things at once We have trouble processing information that's coming at us in written and spoken form simultaneously When you show a slide filled with text, it's natural for the audience to try to read it Listeners can read the slides or listen to you, but they can't successfully do both 	<p>16</p> <p>Cognitive Load Theory</p> <p>MY BRAIN HAS TOO MANY TABS OPEN!</p>	<p>17</p> <p>Cognitive Load Theory</p> <ul style="list-style-type: none"> Clutter: <ul style="list-style-type: none"> - Extraneous words - Graphics - Animation - Sounds - Fancy transitions - Things flying across the screen All these strain the audience's cognitive resources 	<p>18</p> <p>Get as Much on That Page as Possible</p>	<p>19</p> <p>"How to Avoid Death by Powerpoint"</p> <ul style="list-style-type: none"> TEDx Talk by David JP Phillips One key message per slide No more than six objects/lines People naturally focus on: <ul style="list-style-type: none"> - size - contrast - motion - signaling colors: red, orange and yellow 	<p>20</p> <p>Remember - No more than 5-6 Bullets</p> <p>10 dots 2 sec</p> <p>7 dots 1.2 sec</p> <p>5 dots 0.2 sec</p>	<p>21</p> <p>Remember - No more than 5-6 Bullets</p>
<p>22</p> <p>max. working memory load 4-5 things</p>	<p>23</p>	<p>24</p> <p>YOUR SLIDES</p>	<p>25</p> <p>The Science of Scientific Writing</p> <p>George D. Gopen and Judith A. Swan</p> <ul style="list-style-type: none"> If the reader is to grasp what the writer means, the writer must understand what the reader needs 	<p>26</p> <p>"Reader's Energy"</p> <ul style="list-style-type: none"> Readers (reviewers) have only a certain amount of time and energy to devote to a written work If they have to work too hard to find the message, it will be missed nearly every time If they have to work too hard to get through the proposal, they will resent it 	<p>27</p> <p>A Reviewer's Nightmare!</p>	<p>28</p> <p>Much Better!</p>
<p>29</p> <p>What Makes a Good Proposal?</p> <ul style="list-style-type: none"> A good proposal is like a good novel Immediately captures your interest It tells a story The story is told with enthusiasm and excitement It doesn't contain unnecessary information that detracts from the story line Each sentence reads easily and flows smoothly into the next 	<p>30</p> <p>"Audience Energy"</p> <ul style="list-style-type: none"> Audiences have only a certain amount of energy to devote to a presentation before they get bored and... If they have to work too hard to find the slide's message, it will be missed nearly every time If they have to work too hard to get through a slide, they will resent it 	<p>31</p>	<p>32</p> <p>Title</p> <ul style="list-style-type: none"> Choose an interesting title that would make you want to hear about the topic 	<p>33</p> <p>KEEP CALM AND CARRY ON</p> <p>The Role of CALM Translocations in Leukemogenesis</p>	<p>34</p> <p>LIFE OF PICALM: Adventures in Understanding Pediatric Leukemias</p>	<p>35</p> <p>You Control Your Slides</p> <ul style="list-style-type: none"> You choose what to put/not put on them You don't have to include everything in a published Figure or Table You can selectively highlight what's important and guide audience

Font Style/Color

- Use a plain font unless specifically highlighting a point
- The eye is naturally drawn to things in color so color can be used to highlight a point
- Indiscriminate use of color clutters your presentation and wrecks the listener's concentration
- Some people use consecutive bullets differently for the sake of "variety"

DON'T!

Font Style/Color

- Effective use of color:
 - use one color for header topic and a **different** color for bullets
 - change of color **highlights** header and draws attention to header → first thing you want listener to read
 - **DO NOT** do this excessively or audience will be distracted

Bullets

- Limit ~~the~~ number of bullets per slide to ≤ 5
 - To reduce ~~the~~ clutter on ~~the~~ slide

Avoid “the”

Bullets

- Limit number of bullets per slide to ≤ 5
 - reduces clutter
- Most people can hold 5-7 items in short term memory
- **5 bullets** – majority of audience can remember points without re-reading slide
- **>5 bullets** – some of audience will be reading slide and not listening, missing potentially important information!

Bullets

- Make bullets short and
- No complete sentences
- Most people read the slide before they start paying attention to what you are saying. Hence the longer it takes to read in your bullets the longer it takes for them to start listening to you. If they lose the thread of thought on that slide which can easily lead to a loss of concentration for your entire talk

DON'T!

Reading Slides

- Makes you look unprepared, inconsiderate, and unprofessional
- Being read to is [#1 presentation complaint](#)



Cognitive Load Theory



- This slide illustrates why it is better not to put up a bunch of bullet points at once and why you might want to think about animation
- Audiences can read much faster than they can listen to you talking
- As you are reading this third bullet, you're thinking "there's way too much to process on this slide", and I'm probably still on bullet #1
- If you've gotten this far, you probably missed the part about why animation is a good alternative, and I'm probably still on bullet #2
- By the time you get to this last bullet, you're probably thinking – *"I'm not hearing what he's saying - how can I surreptitiously pull out my phone to check my email without him knowing?"*

So what should you do?

- If you have several bullet points, [split into multiple slides](#) so each has just a few words
- Replace lengthy text with a few keywords
- Use words as prompts for the points you're making
- Make sure each bullet point is no more than a few words
- No sentences
- No paragraphs
- Have slides *support* presentation – not *be* the presentation

So what should you do? [I]

- If you have several bullets, [split them into multiple slides](#) so that each has just a few words
- Replace lengthy text with a few keywords
- Use words as prompts

So what should you do? [II]

- Make sure each bullet point is a few words (ideally that fit on one line) [oops]



- No full sentences

- Definitely no paragraphs (except quotations)

- Have slides *support* presentation – not *be* the presentation

Condense Your Slides

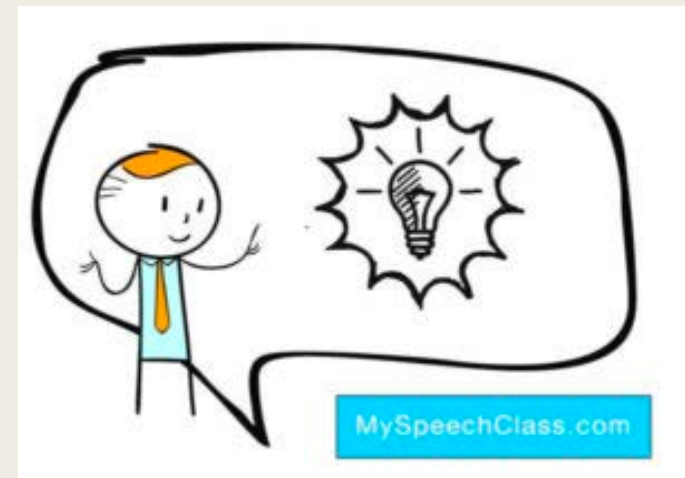
- Don't write down in words every sentence you want to share
- Illustrate main points through use of images

Pictures

- *“A picture is worth a thousand words”*
- Use pictures for emphasis instead of text
- Pictures can succinctly convey information that could take hundreds of words to convey



Pictures



- Explain pictures with ... words!
 - 👂 Verbally oriented 👂 audience can focus on words
 - 👁️ visually oriented 👁️ audience can focus on pictures
- Don't use meaningless pictures just to make slides more interesting
- Pictures should reinforce point you are making; random pictures simply **distract** and **clutter**

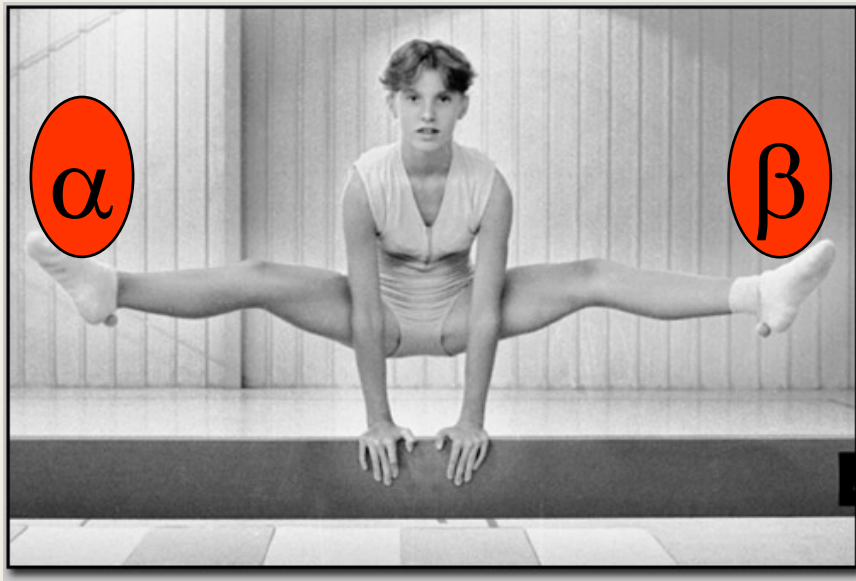
Pictures

- People are far more likely to remember pictures; when they do, they'll remember what you were talking about



Pictures

- They're even more likely to remember videos/gifs – but don't overdo it!



Powerpoint Special Effects

- Use special effects judiciously
- Powerpoint makes it really easy to create a presentation with all sorts of "geometric" effects. You should resist the temptation to use them unless they actually enhance the presentation.
- Having bullet points that are a simple example of a bad use of special effects.
- So is "pinwheel" animation.
- Even "fast" pinwheel animation is annoying.

DON'T!

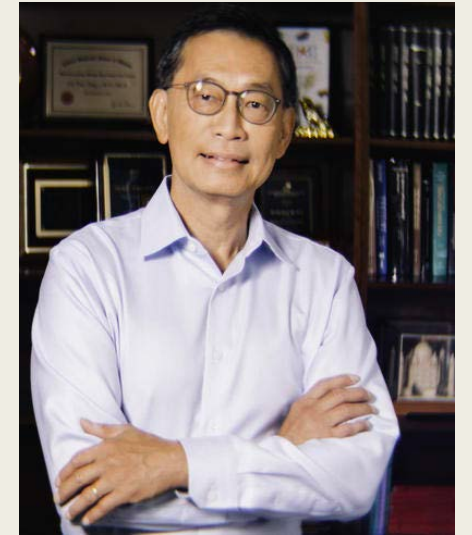
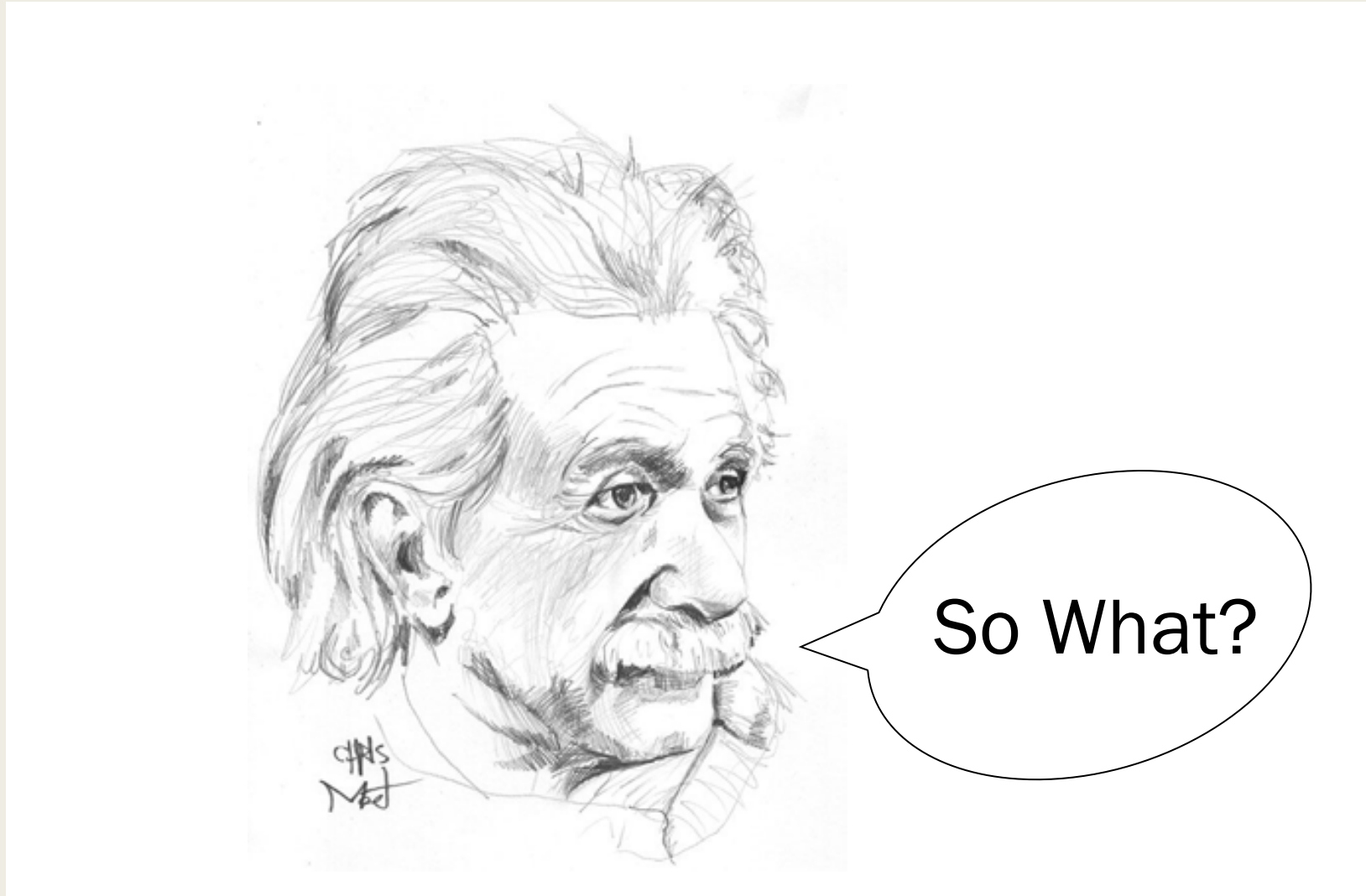
Powerpoint Special Effects

- Some people don't like animation and find it distracting [appear]
- Balance with having people read while you are speaking [wipe]
- There are different ways to animate [dissolve]
- Whatever you choose, be consistent [blinds]

Create Soft Breaks

- Re-engage short attention spans of your audience
- After every 10 minutes or so, give your audience some moments to pause by incorporating videos, activities, demonstrations or recurrent themes

The “So What?” Slide



Chi Dang, MD, PhD



**KEEP
CALM
AND
CARRY
ON**

The Role of CALM Translocations in Leukemogenesis

**Dan Wechsler, MD, PhD
Pediatric Hematology-Oncology
Duke University
June 2011**

What is CALM?

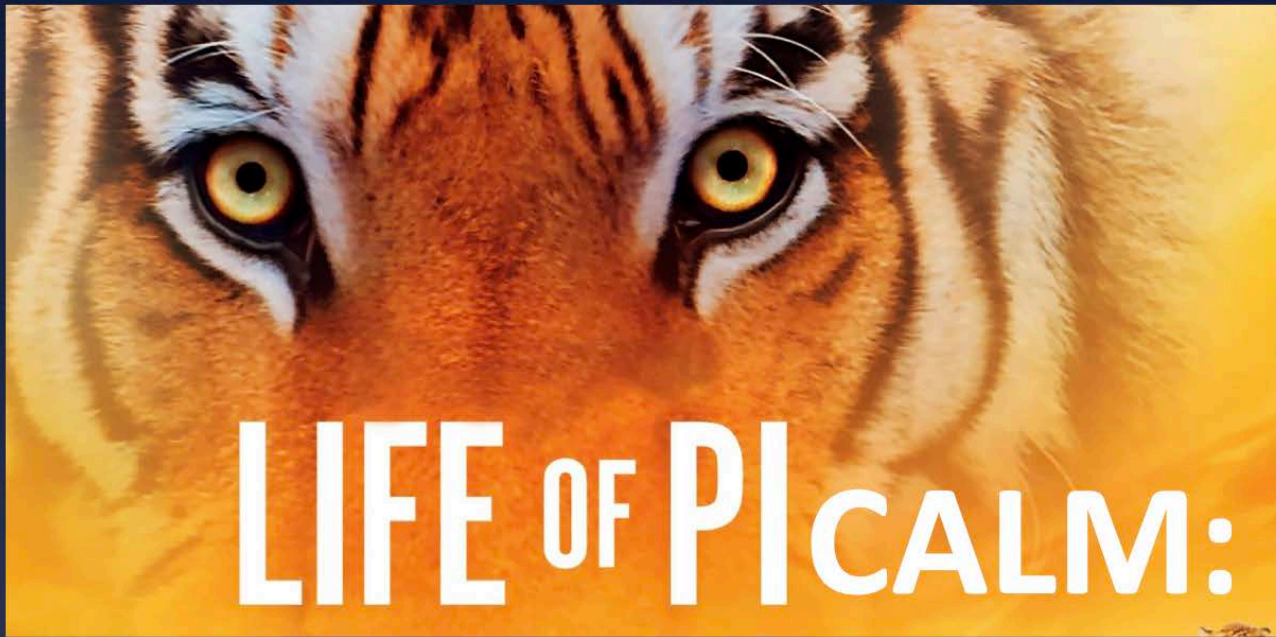


What does
endocytosis have
to do with cancer?



**OK – but what
about iron?**





Adventures in Understanding Pediatric Leukemias



Dan Wechsler, MD, PhD
Pediatric Hematology-Oncology
Duke University Medical Center
April 2015

What is CALM?



What do we think is going on??



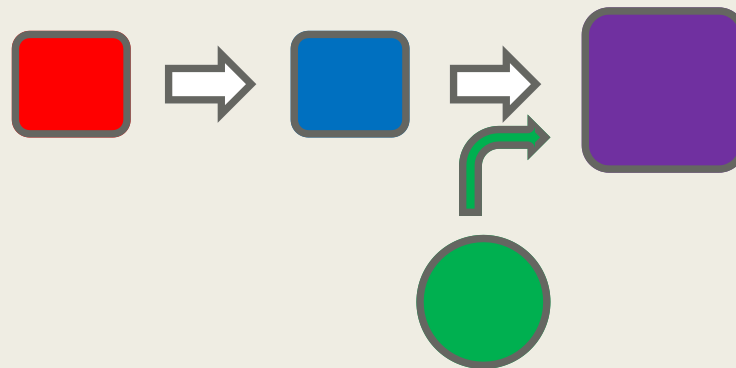
Repeat, Repeat, Repeat



- Audience is unlikely to be as familiar with topic as you
- Remind people about each of these liberally:

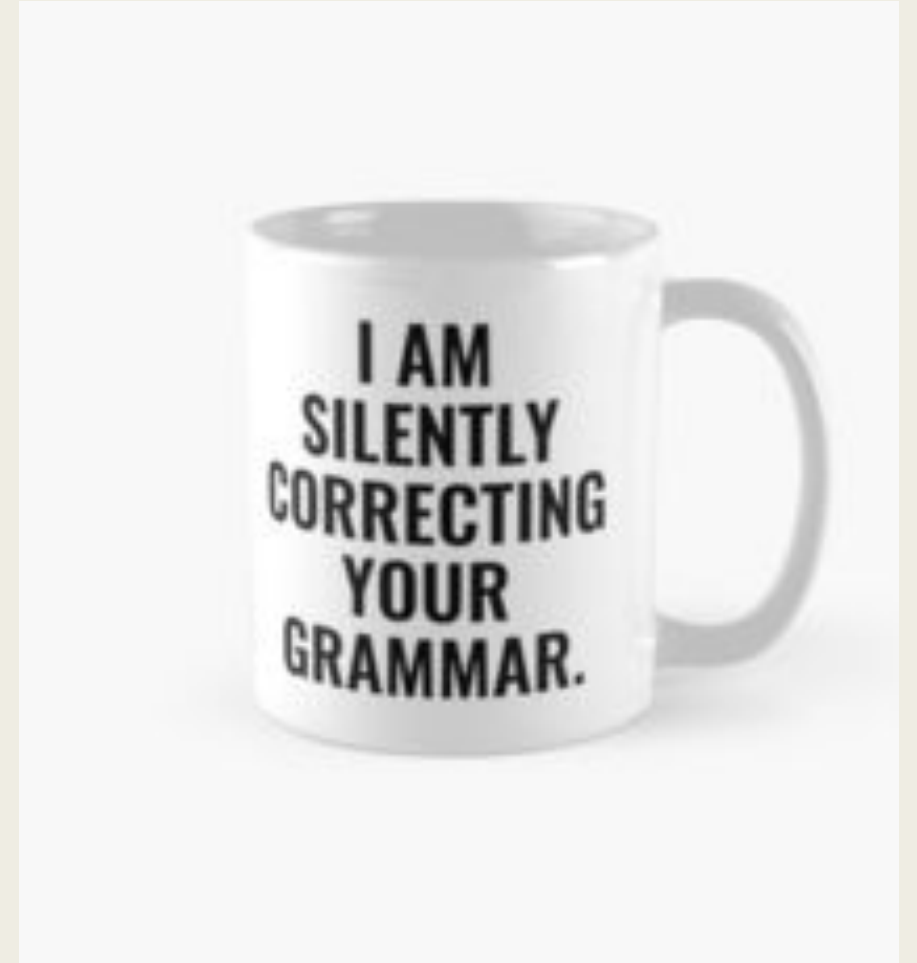
- Acronyms

- Pathways



- Concepts

Don't Forgit to Spellchekc Your SLides!



The image features two large, thick black L-shaped brackets. One is positioned on the left side, with its vertical bar extending downwards and its horizontal bar extending to the right. The other is on the right side, with its vertical bar extending upwards and its horizontal bar extending to the left. These brackets frame the central text.

YOUR PRESENTATION STYLE

It's All About You!

- Ultimately, it's **you** the audience should be paying attention to, not your slides!
- PowerPoint can create great visual aids; success determined by how **you** deliver them
- Good posture and body language fixes audience attention on **you**
- Moving around (a bit) can create positive energy

Planning for



[External] Fwd: Your Victoria's Secret Order is o...

Dan Wechsler

Dear Dan, We just wanted to let you know that your...

- Review logistics in advance - **not 5 minutes before!!**
 - Check out AV setup
 - Can you use your own laptop?
 - Yes: great!!! Make sure to bring appropriate adapters
 - No: download necessary files, fonts and software
 - Run through presentation **in the setting** where you present
- Turn off instant messenger apps and email notifications

Rehearse

- Proficient Presenters Prepare:
 - organize content & make slides
 - write script – especially for 10 min platforms!
- Perform entire presentation aloud many times
 - get feedback
- Time yourself

Energy Level

- **Enthusiasm** – eager enjoyment and active interest – audience's most desired trait
- **Boring delivery** – low monotone voice, dull facial expressions, and overall lethargy – most disliked



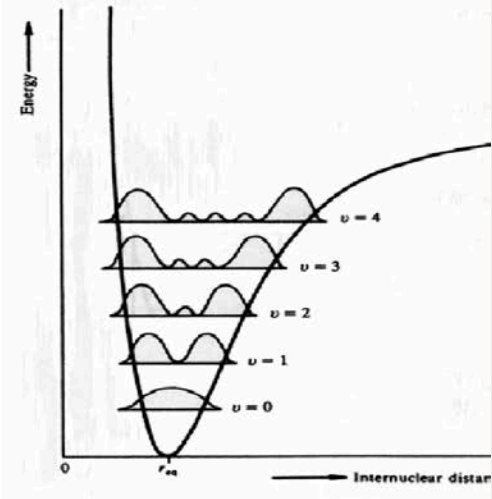
Distracting Mannerisms

- Habits that can distract the audience and jeopardize your credibility:
 - *clenching or wringing hands*
 - *pacing*
 - *keeping hands in pockets*
 - *jingling change/keys*
 - *gripping the lectern*
 - *licking lips*
 - *adjusting hair or clothing*
 - *fidgeting with a pen*
 - *placing arms behind your back*
 - *touching your face*

Show the Audience Your Back (and mumble)

Introduction

- The problem of bound states in strongly coupled quantum field theory is difficult.
- A recent mathematical development by Kontsevich and Soibelman solves this problem in supersymmetric theories



SUCK

People relate to the human face much better than the human arse

Look at your audience. Make eye contact.

[There followed a miserable performance in which I faced the board and tried to mumble, but completely failed to make my voice inaudible.]

Slow Down!!!

- Many speakers rush through talks

- Why?

- *anxiety, adrenaline, time*

- Pause

- *before and after saying something important*
 - *when transitioning from one key point to next*
 - *between opening, main body, and closing*



Don't Make Excuses

 Rich Duszak, MD and PhDisillusionment liked



Leslie Vosshall @pollyp1 · 1d 

Scientific Presentation Pro Tip: If you hear yourself saying

"I know this is a complicated slide"

"This is dense slide, but..."

"Not sure if you can see this"

Don't show that slide

 70

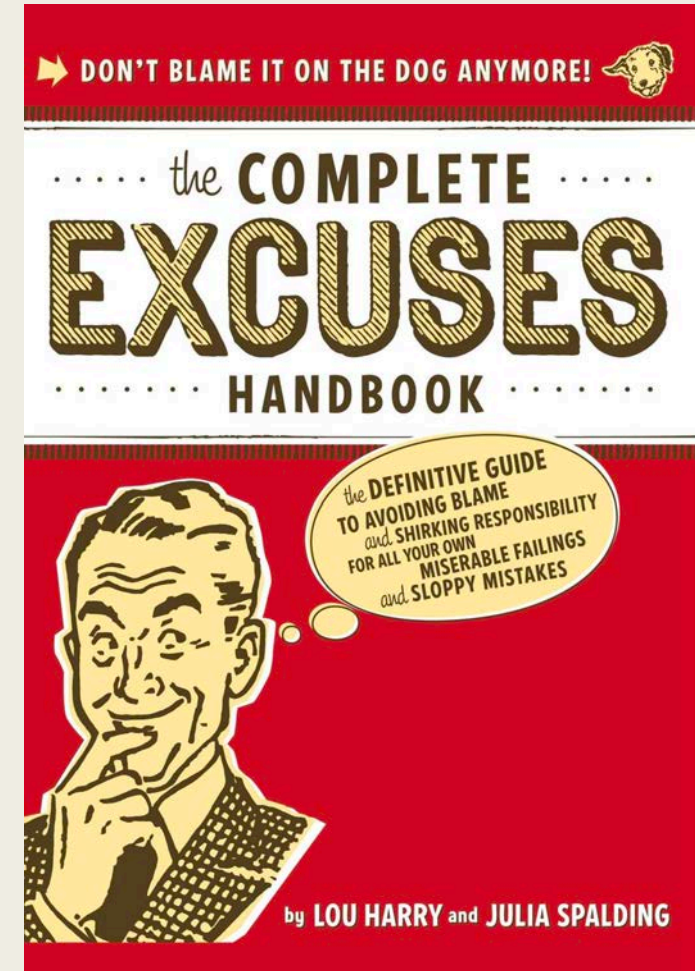
 591

 3,328



Don't Make Excuses

- Sets a negative tone
- Gives people a reason to think your presentation was underwhelming
- Shoot yourself in the foot

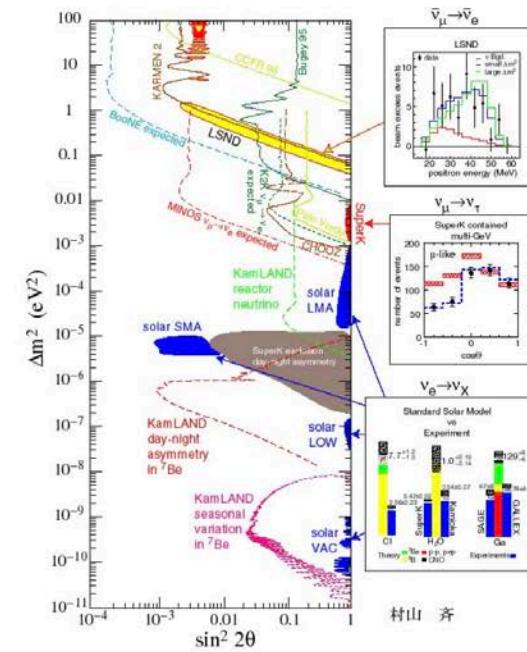


Say "I know you can't read this but..."

- Make sure all your graphs are tiny and illegible. Never label the axes.
- Throw in equations that are just cut and pasted from a paper with lots of indices and redundant notation that won't actually be relevant for the talk

$$\mathcal{L}_6 = QQQL, \bar{L}\sigma^{\mu\nu}W_{\mu\nu}He, W_\nu^\mu W_\lambda^\nu B_\mu^\lambda, (H^\dagger D_\mu H)(H^\dagger D^\mu H), \dots$$

- Use stupid colours. Green on white is always a good idea



Pointers



- **BEST:** animate your slides so you don't need one
- **WORST:** Better to not use mouse pointer
 - you will accidentally advance your slides
- If possible, bring your own pointer

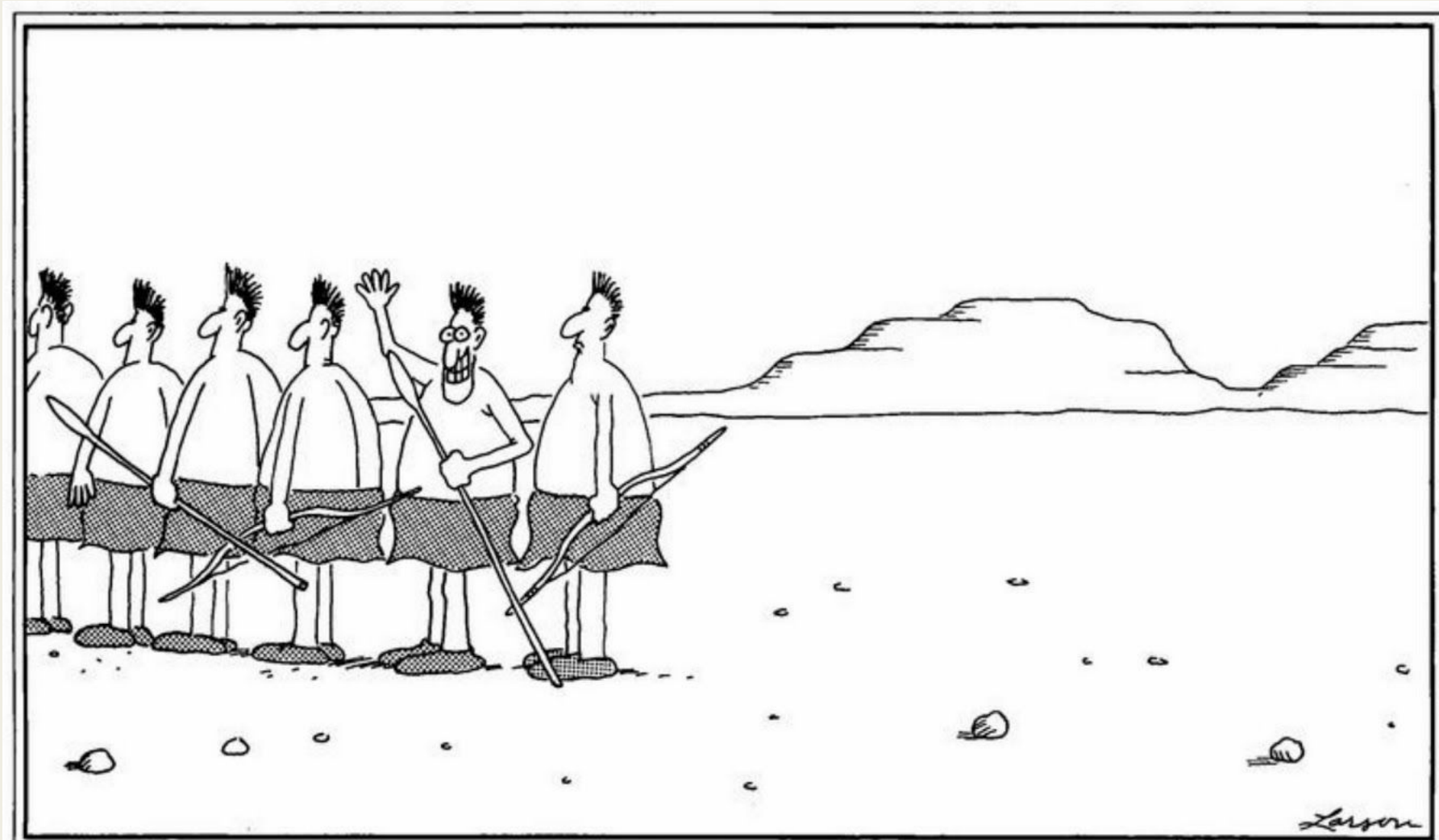
Avoid Politics



- Just don't do it!
- You never know who might be in the audience

Be Careful with “Jokes”

- Others may not find your jokes funny ... but they might
- Know your audience...



Second to last of the Mohicans

The *MOST* Important Takeaway?

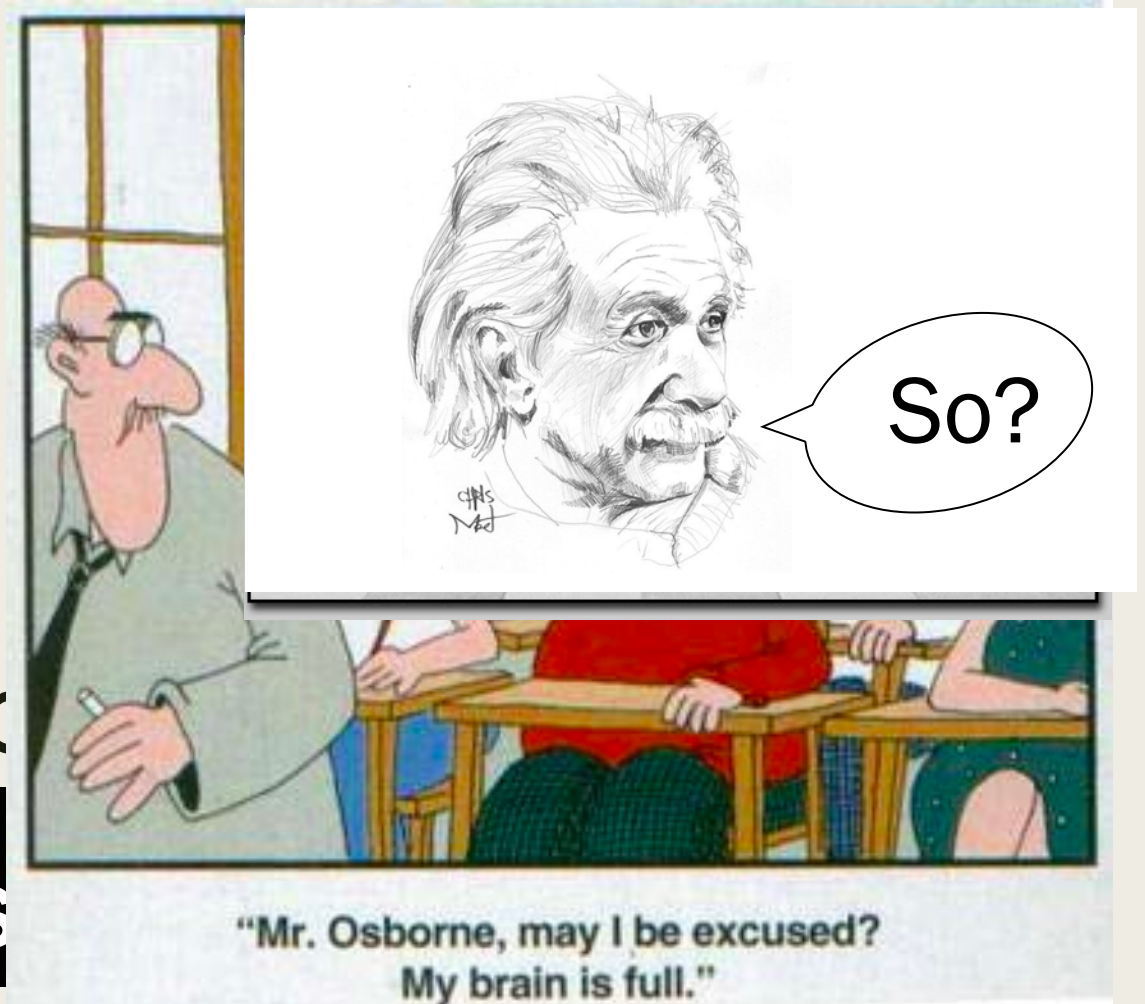
STAY. ON. TIME.

The Golden Rule

- Never never never go over time.
- Never.
- You might think that, given another five minutes, you can get more across. But you're wrong. No one is listening at that point. You are merely pissing people off.

SUMMARY

- Tell a story
- Keep it simple
- Don't clutter – ≤ 6 k
- Use **SIZE/contrast**
- Use pictures
- Use soft breaks



Death by Powerpoint



Too many bullet points. More than 4 is risky.



Too many words on a slide. Nobody listens while they read.



Too many fonts are unnecessary and *distracting*.



Same with too much **bold**, *italics*, and underlining.



Clip art. Really?

◆ Don't forget to spel chek

◆ **Turning your back on your audience to read your slides. No!!!**

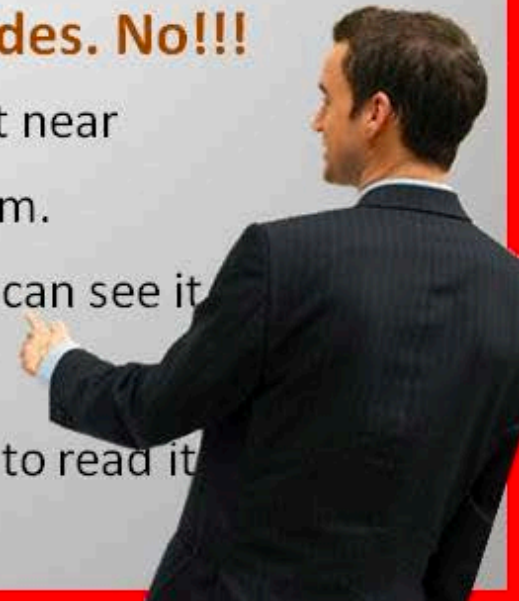
◆ Small text near the bottom.

Even if they can see it they might not be able to read it

Bad Color Schemes

Clashing background and font colors can lead to:

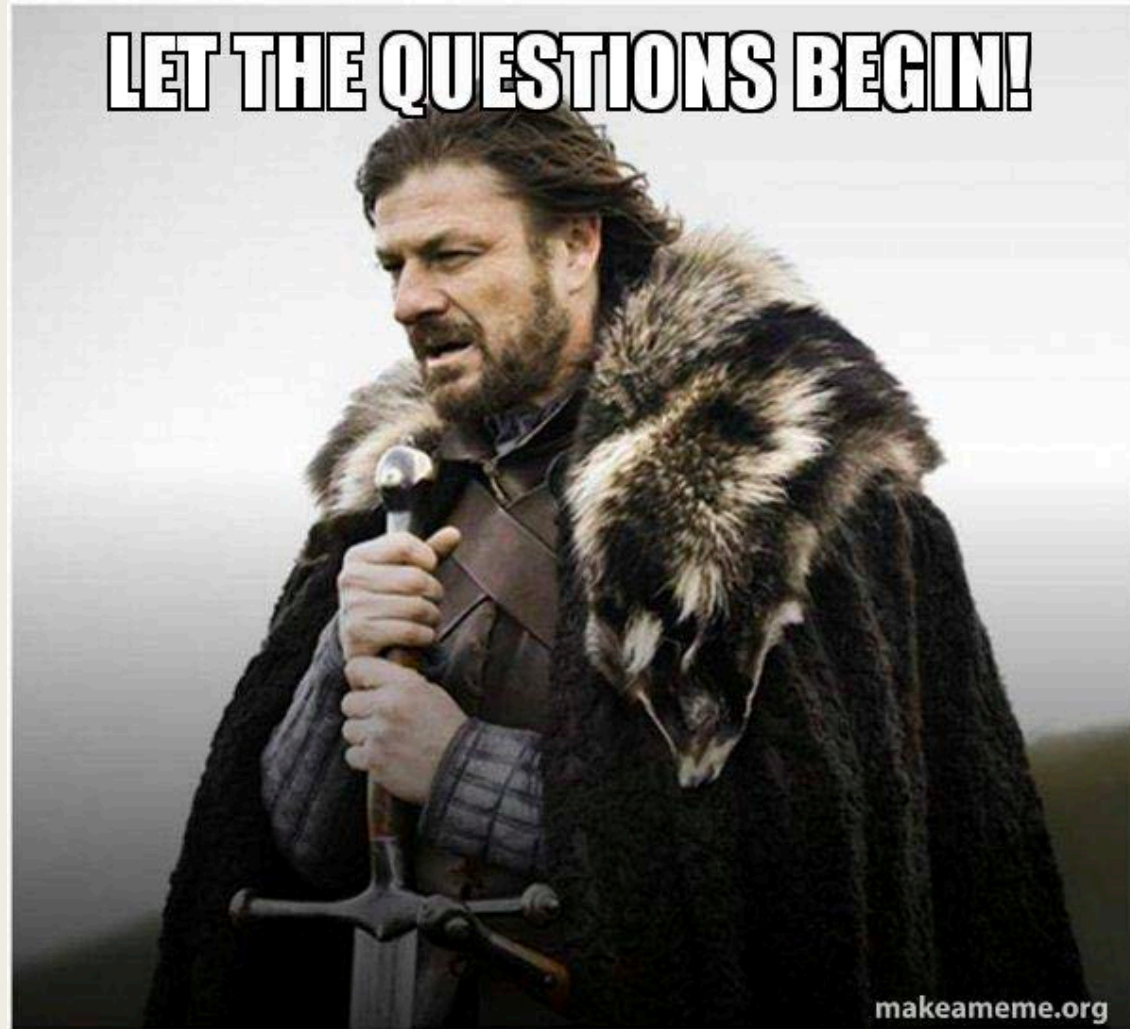
- **Distraction**
- **Confusion**
- **Headaches**
- **Nausea**
- **Vomiting**
- **Loss of Bladder Control**



Thanks

- Stephanie Wechsler, MD
- Allie Suessmith

LET THE QUESTIONS BEGIN!



dan.wechsler@emory.edu