



Three-Minute Research Workshop

About the 3MR Competition

- Provides an opportunity to practice and demonstrate your ability to effectively explain your research to a general audience.
- Pacific's competition is open to all graduate and professional students.
- Opportunity to win a cash prize!
- The 2021 3MR competition is completely virtual.

3MR Rules

- ✓ A single static PowerPoint slide
- ✓ No additional electronic media (e.g. sound and video files)
- ✓ No additional props (e.g. costumes, musical instruments, laboratory equipment)
- ✓ No edits
- ✓ Presentations are limited to 3 minutes
- ✓ Presentations are to be spoken word (e.g. no poems, raps or songs).

3MR Judging Criteria

- ✓ Provide some background and explain significance.
- ✓ Present to a non-specialist audience and follow a clear and logical sequence.
- ✓ Describe the key results, if applicable.
- ✓ Convey enthusiasm for research and make the audience want to know more!
- ✓ Have “stage” presence!

The Rhetorical Situation

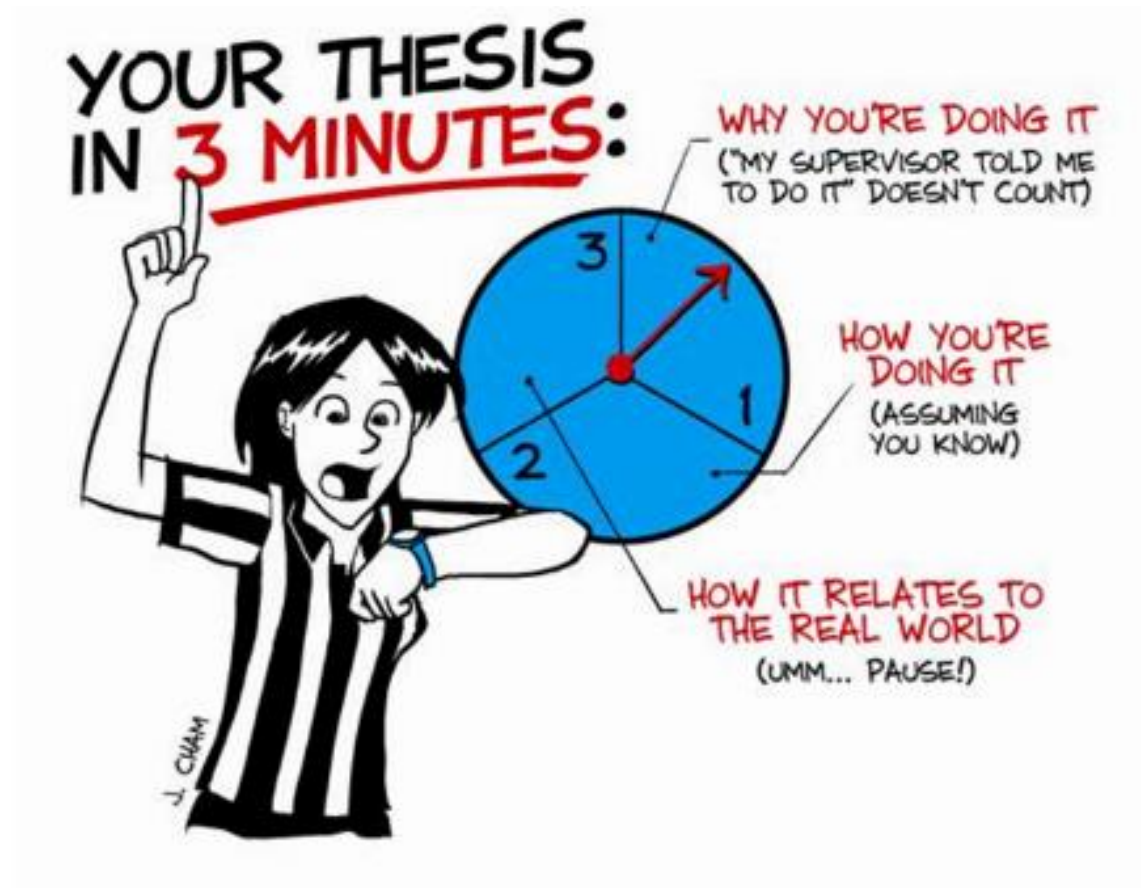
Rhetorical Situation = the situation that shapes the argument and the potential of the argument

- What's in that situation?
 - ✓ Audience
 - ✓ Speaker/author
 - ✓ Purpose
 - ✓ Constraints (word limit, medium, etc.)
 - ✓ The particular moment

Audience

- For 3MR – knowledgeable, academic, cross-disciplinary
 - So what does that mean about how to talk to them?

Constraints



Constraints

- ✓ One slide, no animation
- ✓ 3 minutes
- ~~✓ One take~~

Purpose

- What is your purpose in these three minutes?
 - Explain?
 - Persuade?

Make them remember – pique their curiosity.

Why are some presentations bad?



What other students have said...

Too technical

Too much on each slide

No structure to talk

Reading from notes

Unclear speech

Nervous speaker

Too simple

Weird body language

Small font / wacky fonts / yellow font on white background

Busy backgrounds

A good 3MR presentation...

Doesn't try to say too much

Is delivered slowly.

Has expression (pauses, rises, falls and stresses)

Includes a story, metaphor or emotional element

Gives concrete examples

Doesn't 'telegraph'

Tells you things you didn't expect to hear about the topic

Anything else?

Simple Rules for Success

1. Change the world
2. Make me care
3. Be passionate

Simple Rules for Success

1. Change the world

- ✓ Start with the big picture, a broad context
- ✓ Help your audience see that there is a problem (even if the problem isn't at the top of their list)
- ✓ THEN explain how you are contributing to a solution

Simple Rules for Success

2. Make me care

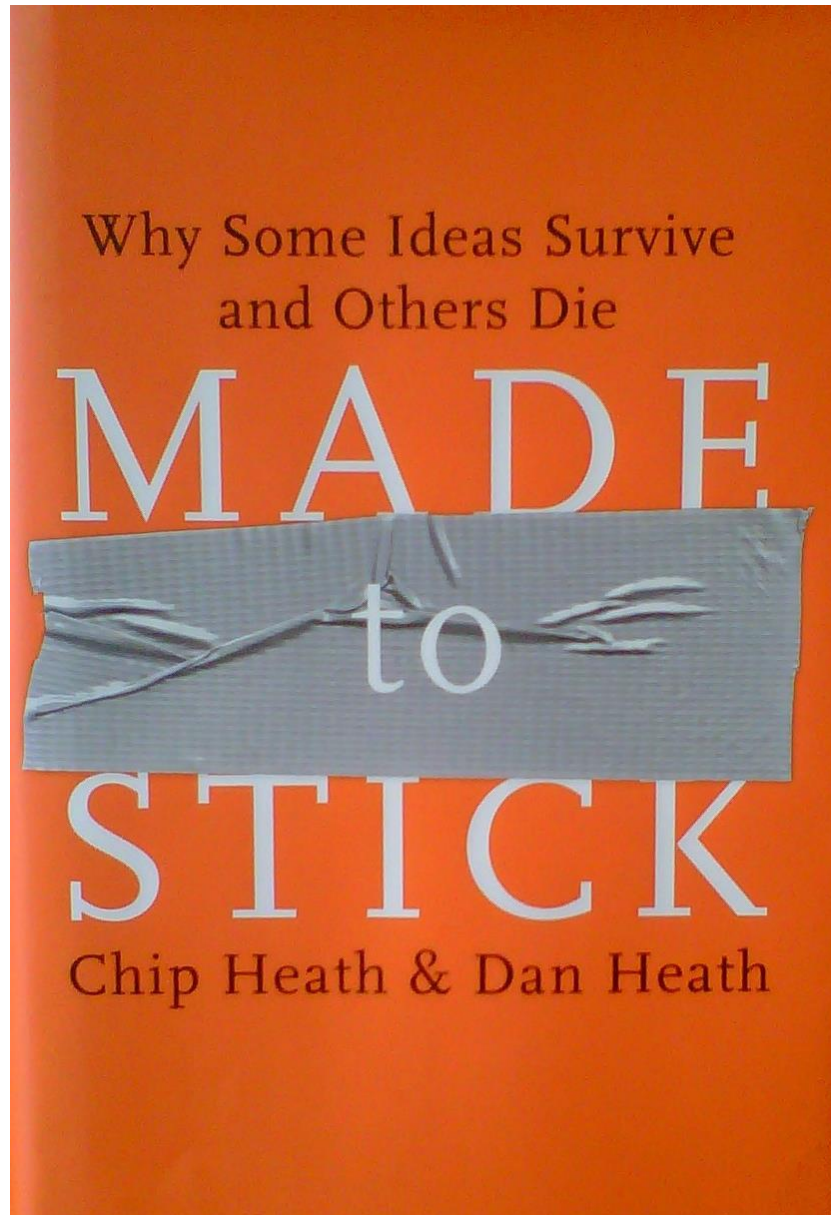
- ✓ The audience needs to relate to the issue in order to follow the delivery
- ✓ Your audience has a broad capacity for caring—but you have to help develop it



Simple Rules for Success

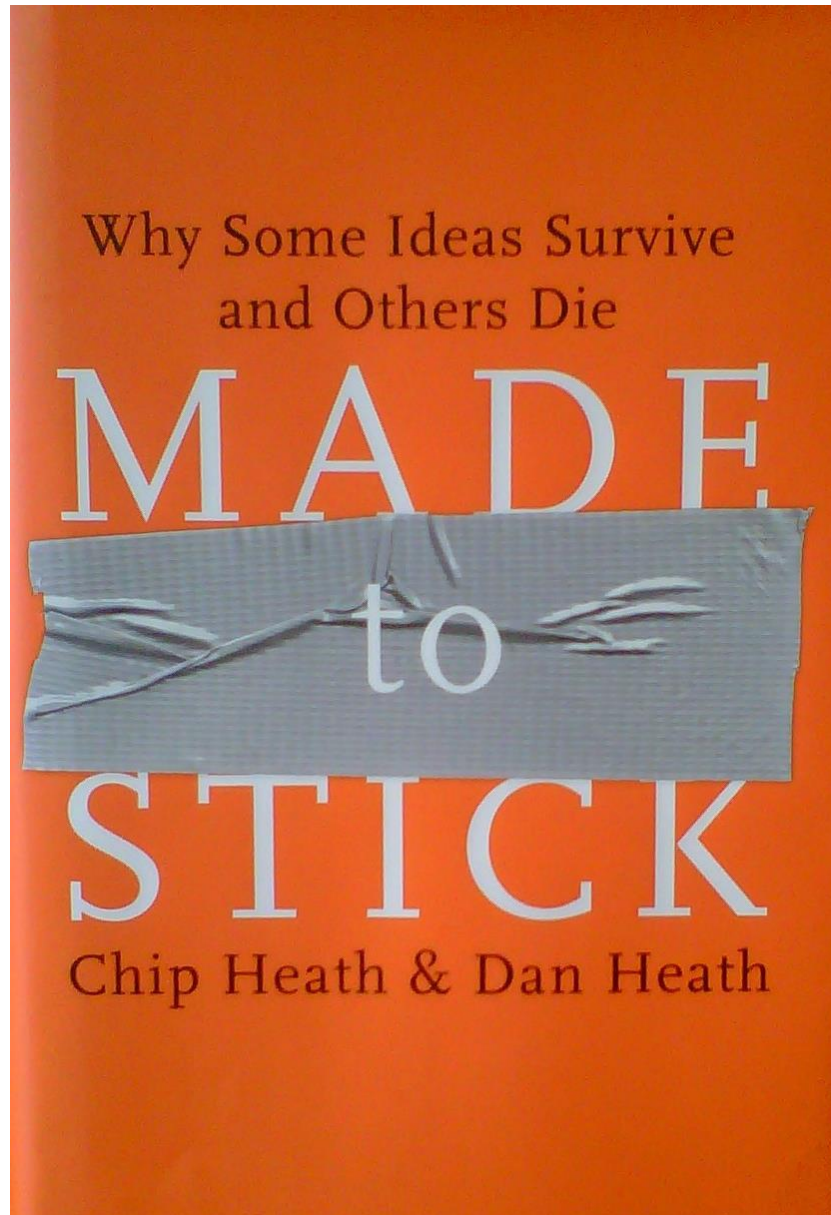
3. Be passionate

- ✓ If you aren't excited, why should I be?



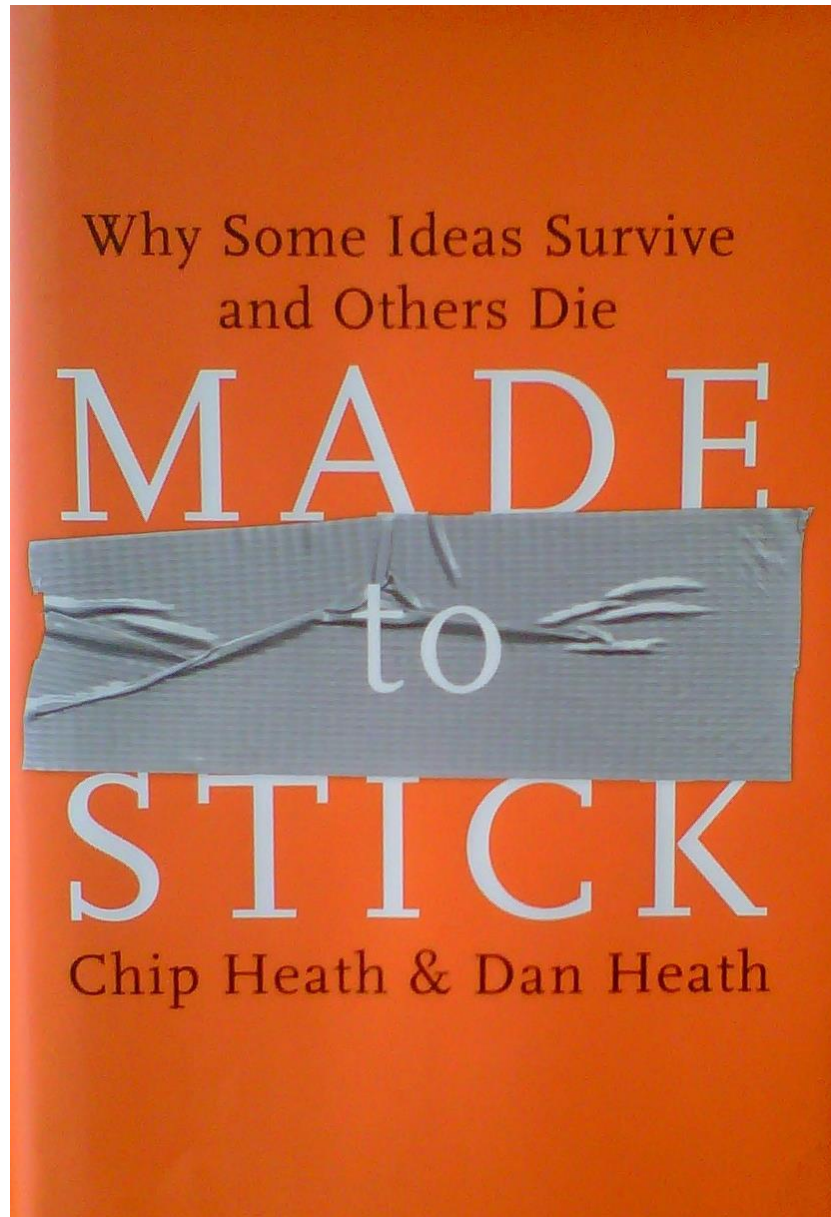
Center for Science in the Public Interest & movie popcorn

A medium sized movie popcorn contains 37 grams of saturated fat, twice the recommended daily amount of saturated fat.



Center for Science in the Public Interest & movie popcorn

**“A medium-sized ‘butter’
popcorn at a typical
neighborhood movie
theater contains more
artery-clogging fat than a
bacon-and-eggs
breakfast, a Big Mac and
fries for lunch, and a
steak dinner with all the
trimmings—combined!”**



Made to Stick

- 1. Simple**
- 2. Unexpected**
- 3. Concrete**
- 4. Credible**
- 5. Emotional**
- 6. Stories**

Simple

- Not simplistic, not dumbed down. But the CORE of your idea.
 - Limited, focused
 - Often, you have to know the complex idea to make it simple (but not to make it dumb).

Complex

v.

Simple

Our recent work demonstrates that ALD films are a promising technique to prevent damage from the corrosion process, and subsequent polishing, for silver cultural heritage objects. Our previous results find that 20 nm Al₂O₃ ALD films protect silver from tarnishing nearly 15 times longer than microns-thick nitrocellulose films: this amounts to a potential ambient effective film lifetime of 150 years.

I found that the ceramic ALD films lasted about 15 times longer than the plastic coatings.

Complex

v.

Simple

Moreover, determination of the primary source of nutrition for *Varroa* would change our understanding of the etiology of this parasite and could potentially lead to the development of novel—and of active interest—more effective treatment strategies (e.g., systemic pesticide formulations, interfering RNA, and so forth). To that aim, we conducted a three-tiered study asking the following questions: (i) Do so called phoretic *Varroa* feed primarily or exclusively in proximity to the fat body?

“ . . .the goal was to figure out what varroa is eating. I started with the question where do they feed? If they can feed anywhere on a bee, the way that a tick can on you, then they’re probably feeding on blood. However, if they feed only in one spot maybe they’re eating a tissue specific to that location.

The Unexpected

- “Instead of sucking out your blood, it’s liquefying one of your internal organs.”
- “We are covered with microbes”

The Unexpected

- There's probably something so familiar to you that you have forgotten it's interesting.
- Tell a neighbor the most interesting thing about your research.

Abstract/Concrete

- What in your work is abstract? Should it and could it be more concrete?
- What in your work is very concrete, specific, maybe even applicable in only one situation? Can you discuss it in more abstract, or broadly applicable, terms?

Abstract/Concrete

- Effective speakers “climb up and down the ladder of abstraction”

Roy Peter Clark [Writing Tools: 50 Essential Strategies for Every Writer.](#)

ABSTRACTION LADDER

Start reading from the bottom *UP*



WEALTH



LIVESTOCK



BESSIE, MY COW

8. "wealth"

8. The word "wealth" is at an extremely high level of abstraction, omitting *almost* all reference to the characteristics of Bessie.

7. "asset"

7. When Bessie is referred to as an "asset," still more of her characteristics are left out.

6. "farm assets"

6. When Bessie is included among "farm assets," reference is made only to what she has in common with all other salable items on the farm.

5. "livestock"

5. When Bessie is referred to as "livestock," only those characteristics she has in common with pigs, chickens, goats, etc., are referred to.

4. "cow"

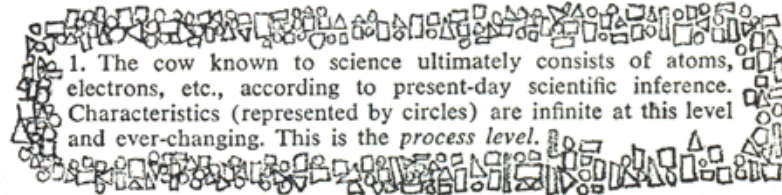
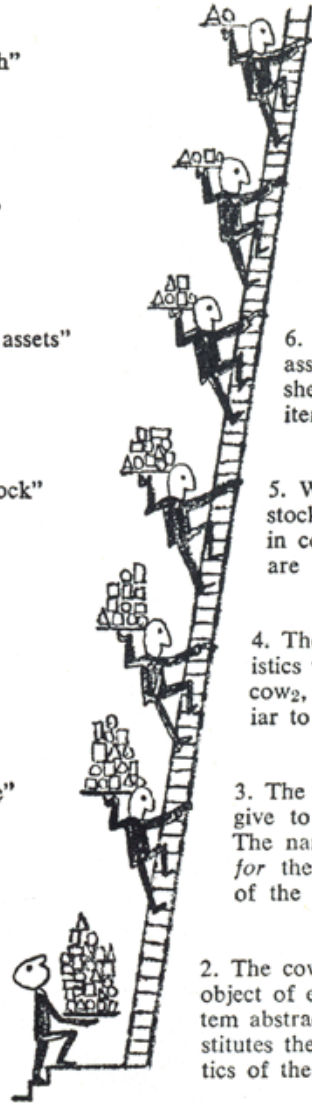
4. The word "cow" stands for the characteristics we have abstracted as common to cow₁, cow₂, cow₃ . . . cow_n. Characteristics peculiar to specific cows are left out.

3. "Bessie"

3. The word "Bessie" (cow₁) is the *name* we give to the object of perception of level 2. The name *is not* the object; it merely *stands for* the object and omits reference to many of the characteristics of the object.

2.

2. The cow we perceive is not the word, but the object of experience, that which our nervous system abstracts (selects) from the totality that constitutes the process-cow. Many of the characteristics of the process-cow are left out.



1. The cow known to science ultimately consists of atoms, electrons, etc., according to present-day scientific inference. Characteristics (represented by circles) are infinite at this level and ever-changing. This is the *process level*.

Making concepts more concrete

- Sequencing an explanation
 - Explaining how a phenomenon occurs/occurred
 - How did it start?
 - What happens/happened next?
 - And what happens/happened after that/what results?
 - Explaining HOW something works
 - What is it used for?
 - What does each part do?
 - How do parts work together?

METAPHORS make ideas more concrete

- Explaining the aerospace research that took place at NACA during World War II, before NASA existed.
- Long before a plane was sent into production, it was tested at NACA for “drag cleanup.”
- The concern was about uneven wing geometry.
- Explain why that would be a problem? You’ve all flown. . . .
- “Did the plane roll unexpectedly? Did it stall? Was it hard to maneuver, **resisting the pilot like a shopping cart with a bad wheel.**”

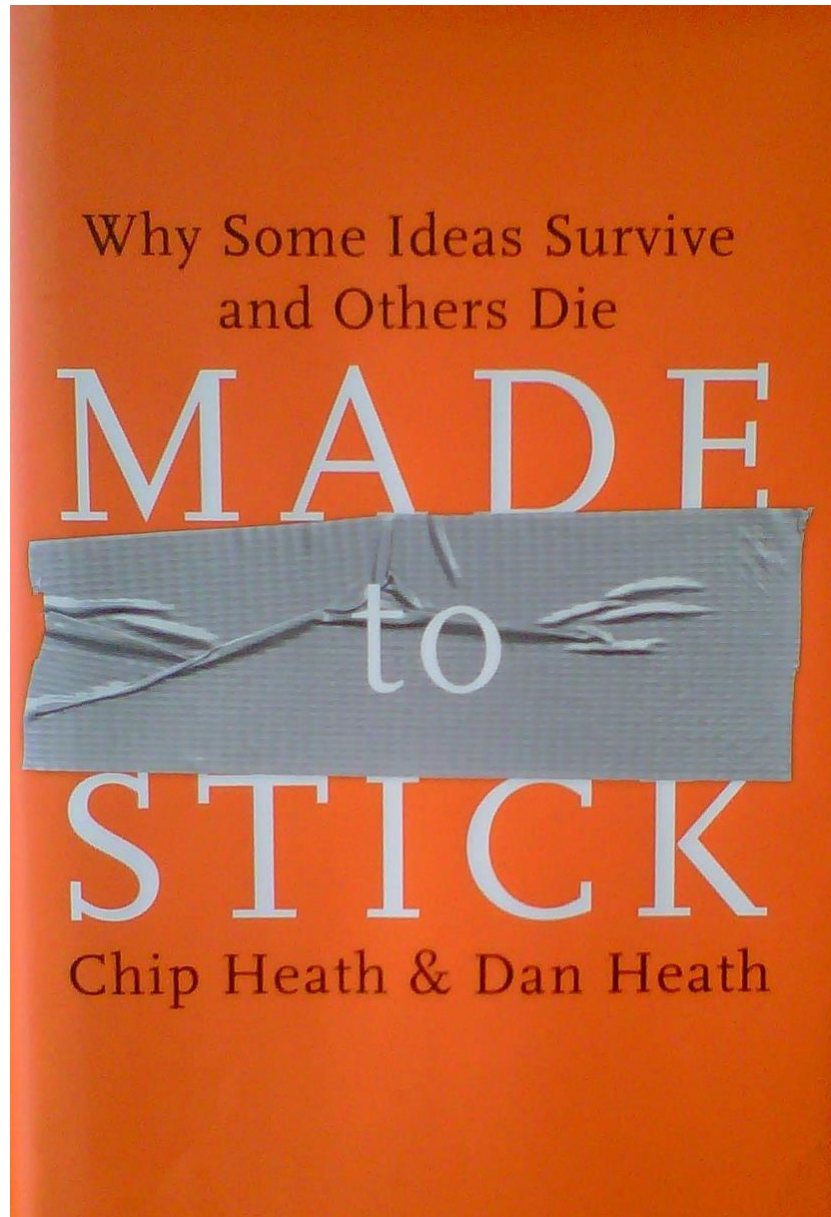


Emotional

- Emotions ≠ tears
 - *Pathos – appeal to the concerns of the audience*
 - *Why should your audience CARE?*

Stories

- Characters/actors (not necessarily human)
- Challenges/a quest
- Some kind of tension about whether the characters will succeed or fail in the challenges
- A beginning, middle, end

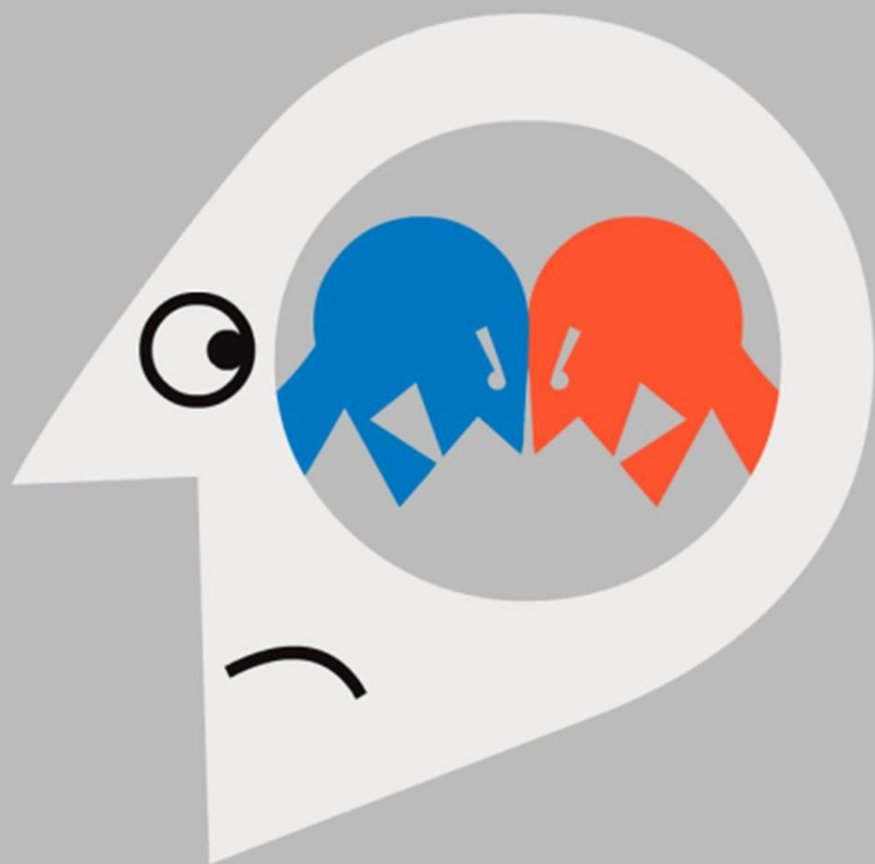


Made to Stick

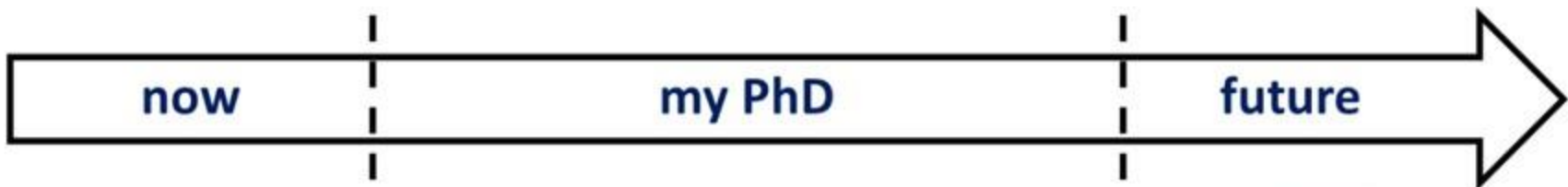
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The Slide

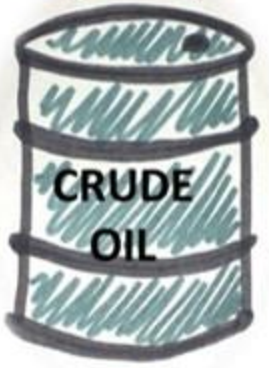
- **Persuade** with the **image**: what do you need to explain that your words can't fully convey
 - Illustrate
 - Explain a process
 - Offer data – graphic representation of results
 - Offer analysis or causality
 - Tie things together



Olutson



plastics medicines



other goods

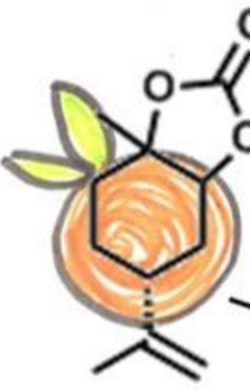


limonene

hydrogen peroxide



CO₂



nitrogen containing compounds



polyurethanes





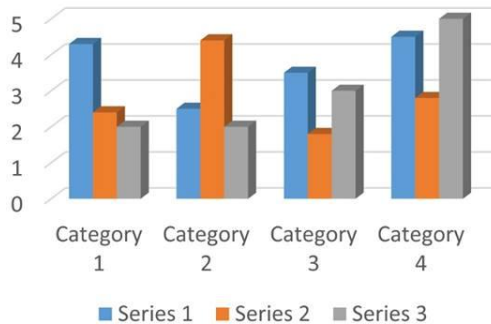
Things to avoid....

*Fakey McFakeson
School of Awesome
Madeup University*



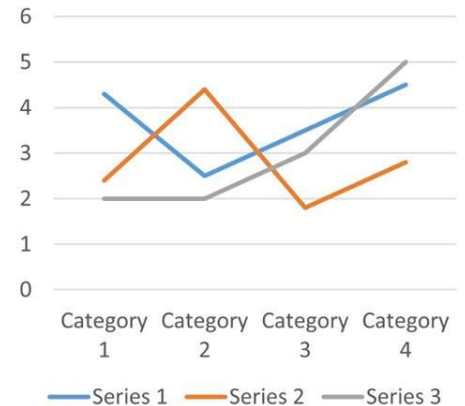
“Why Having a Really Long and /or Complex 3MT Title is Not a Good Idea and the Reasons Why You Should Stick With Something Short, Sharp, Punny and Memorable.”

This Is A Chart

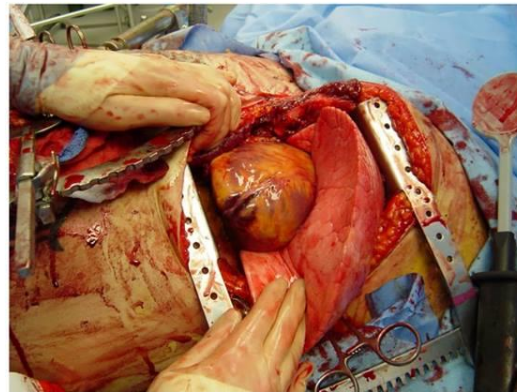


MORE WORDS. SO MANY WORDS. DID YOU KNOW A TYPICAL THESIS IS AROUND 80,000 WORDS? WOW. THAT'S A LOT OF WORDS.

This Is Another Chart



Here's a lot of text with a lot of numbers like 15,698 & 103,774. Who likes percentages? I do! 24% of 33 years olds reading this agree that 118% of this part of the slide should go.



Questions?

