

# BCH Academy for Teaching, Educational Innovation & Scholarship

## *Effective Lecturing/ Enhanced Learning*

(How to Give a Stellar  
Presentation to Your Learners)

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12/06/2022



To receive credit  
for today's BCH  
Academy Session:

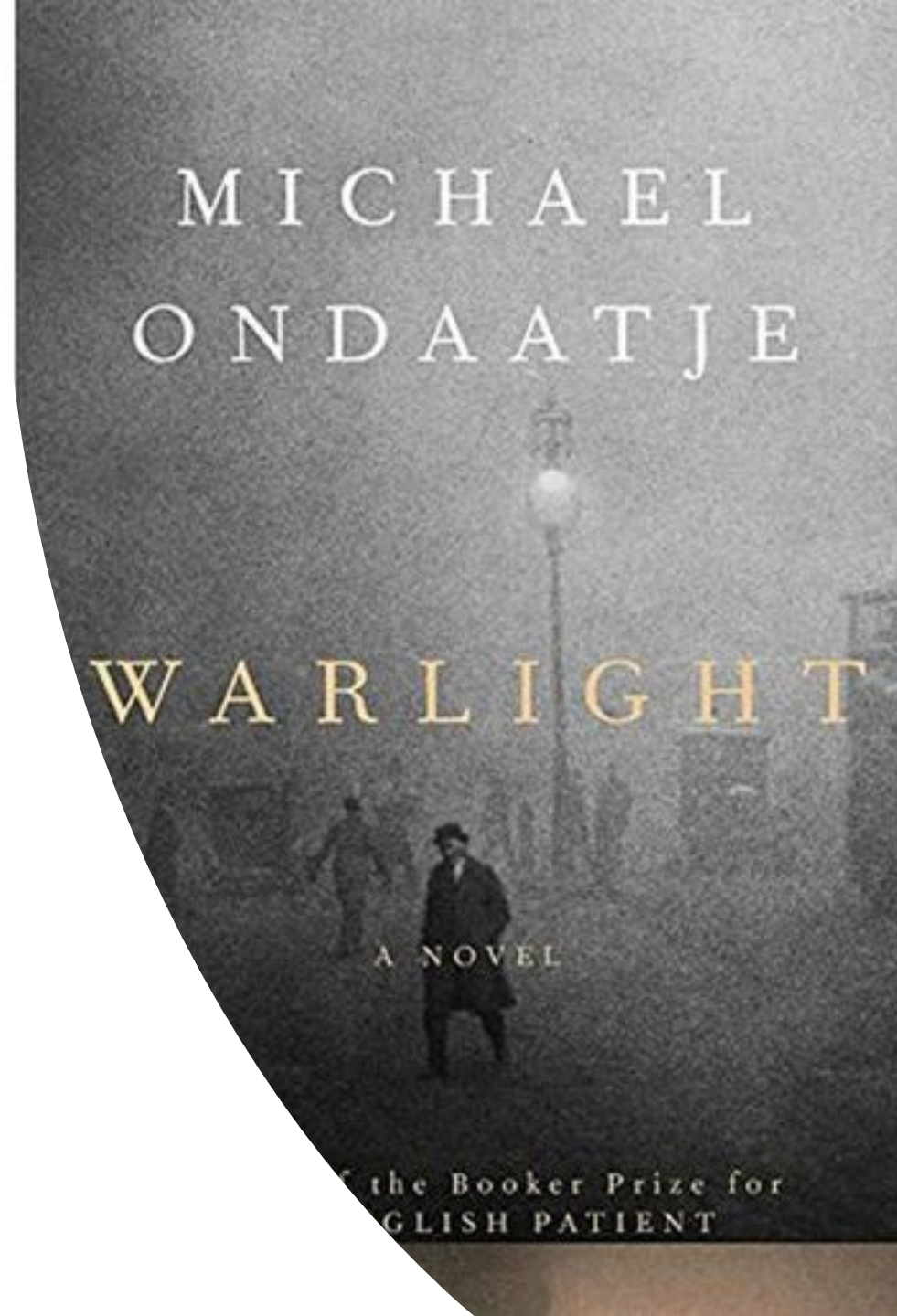
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to disclose

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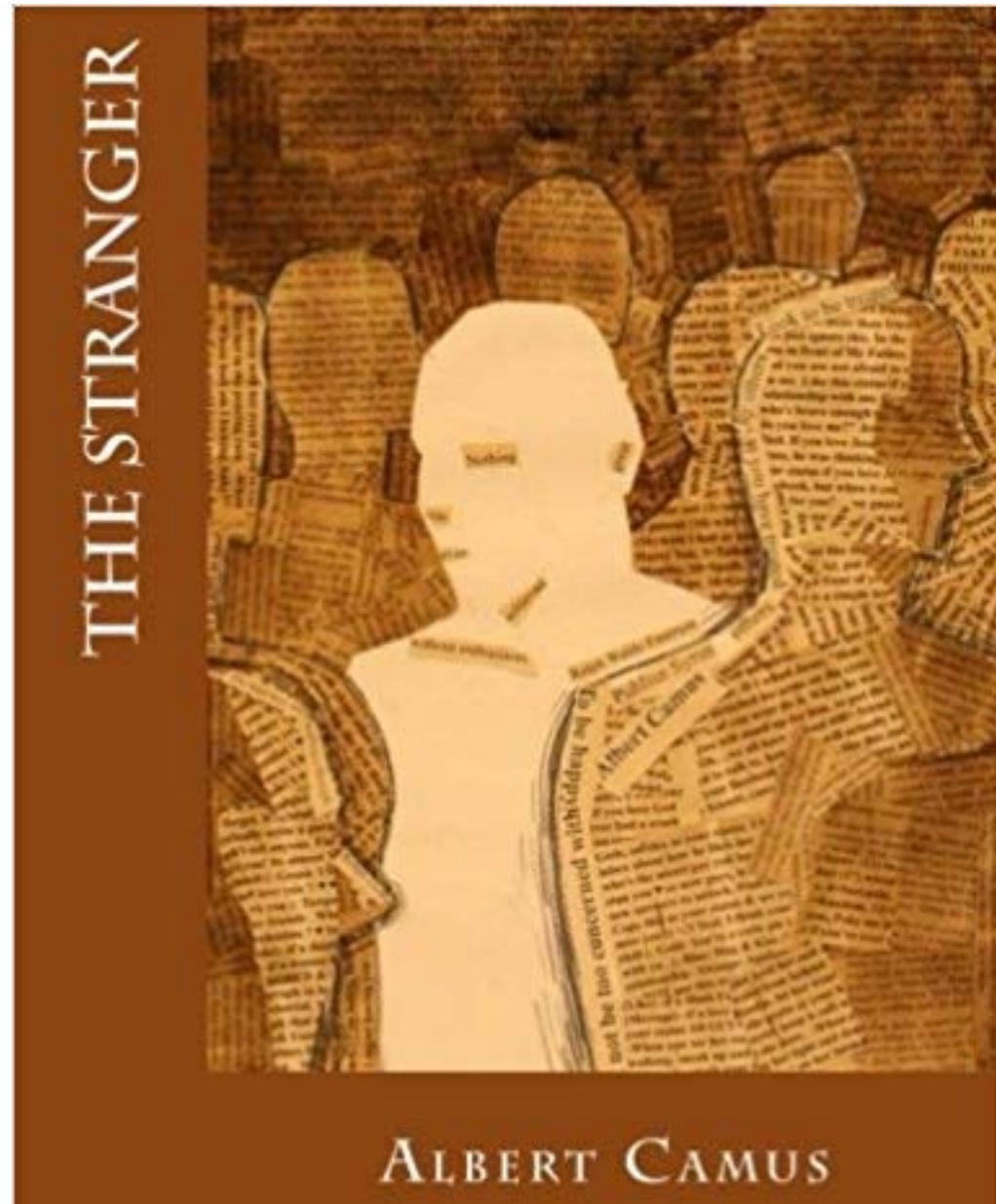


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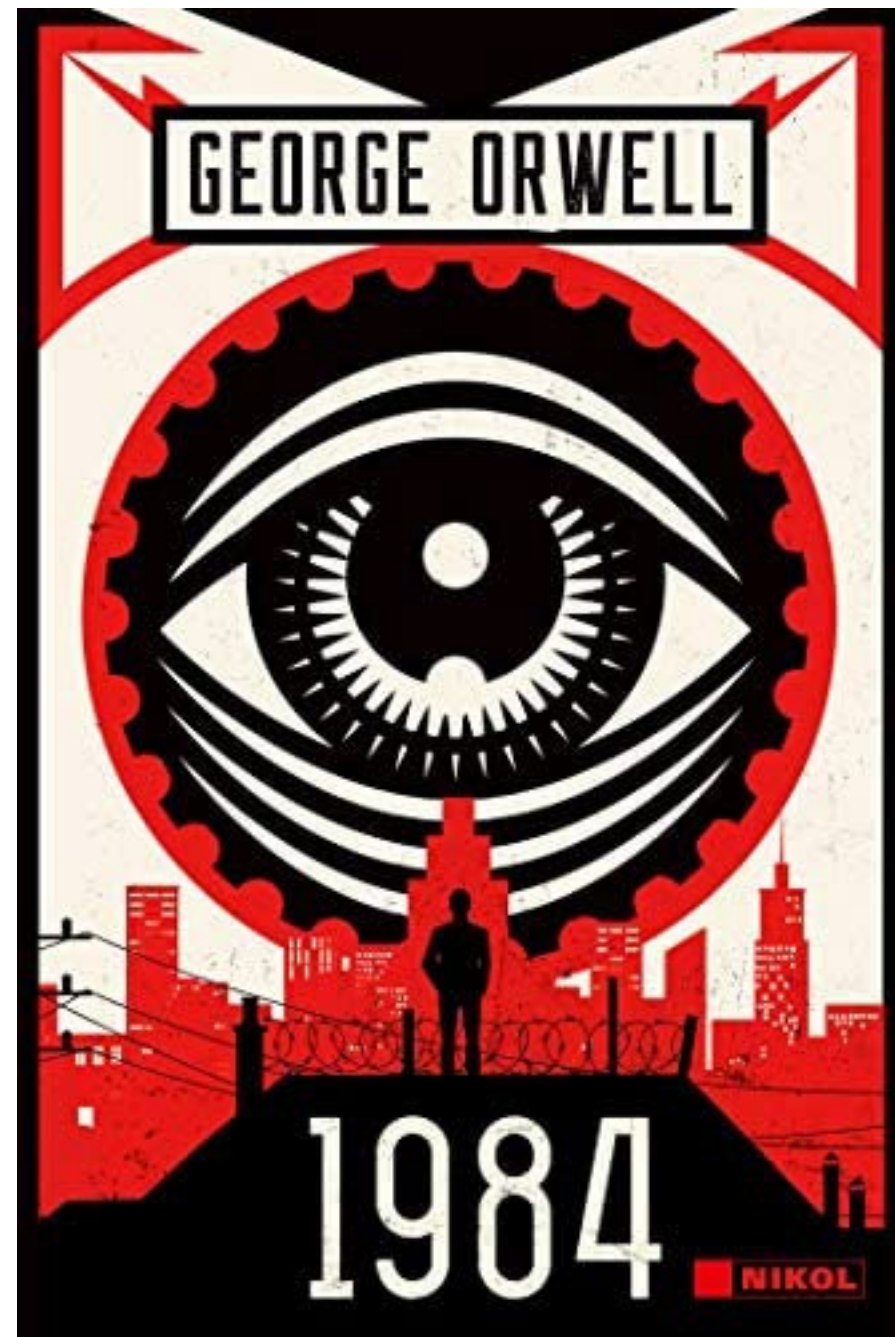
*“In 1945 our parents went away and left us in the care of two men who may have been criminals.”*



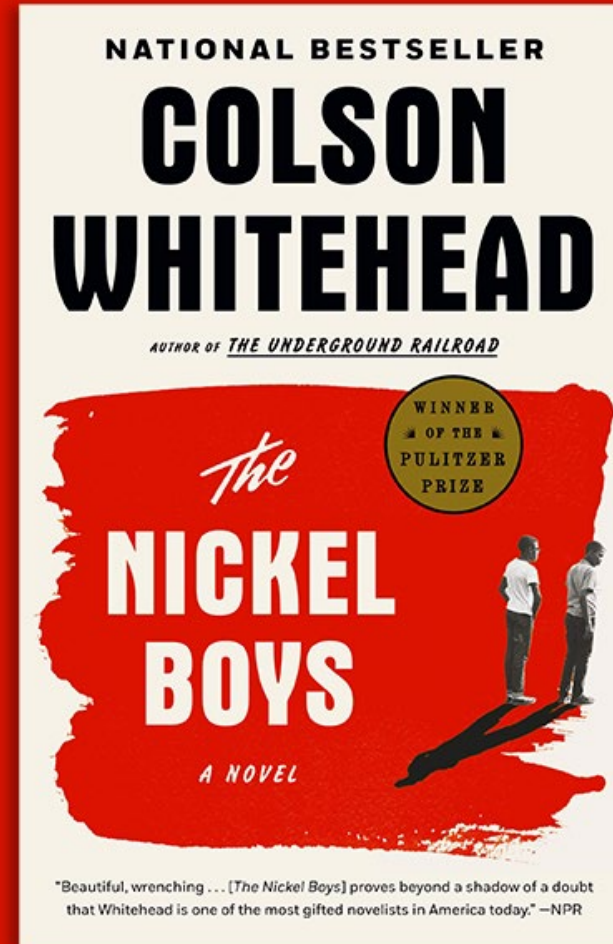
*“Mother  
died today.  
Or  
yesterday  
maybe,  
I don’t  
know.”*



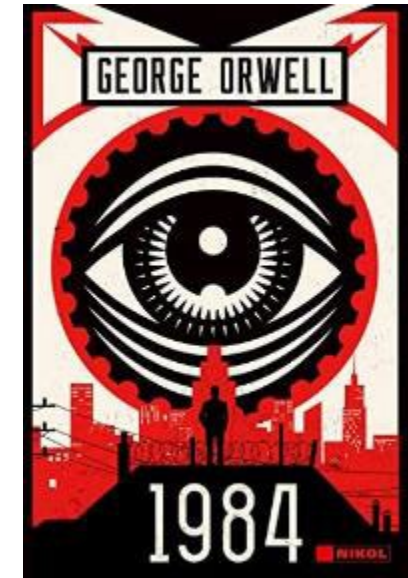
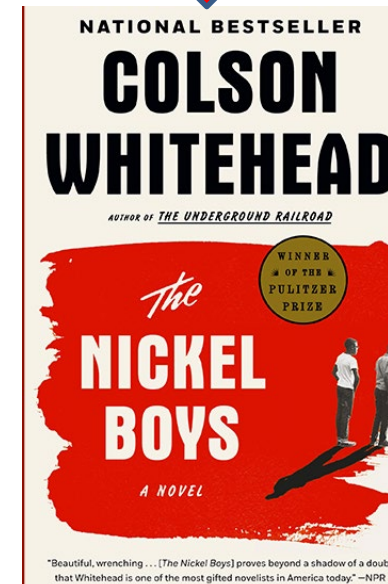
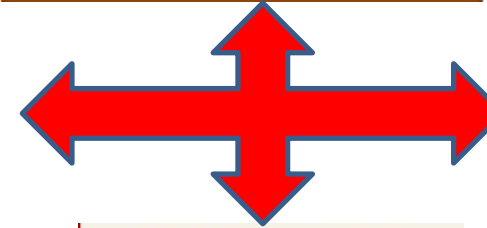
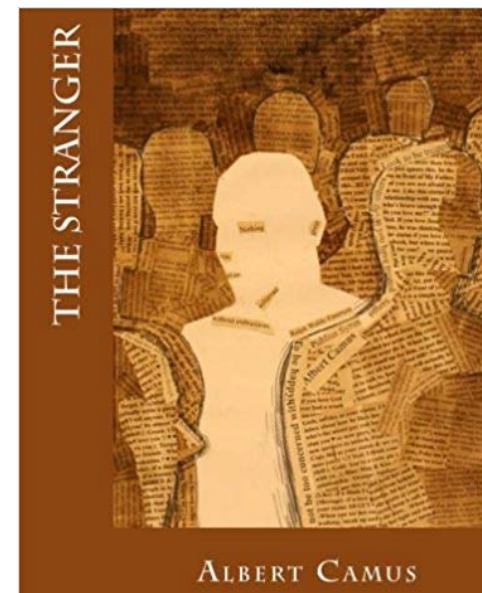
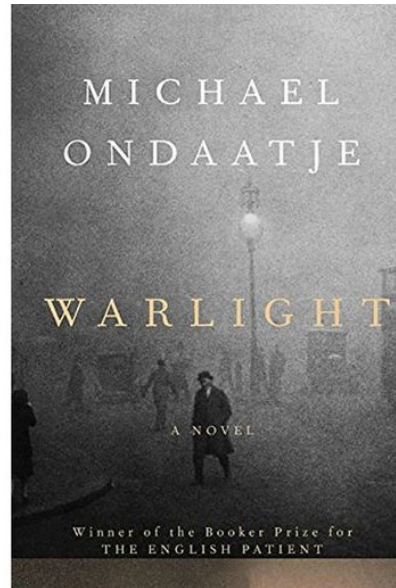
*“It was a bright  
cold day in April,  
and the clocks  
were striking  
thirteen.”*



*“Even in death the boys were trouble.”*

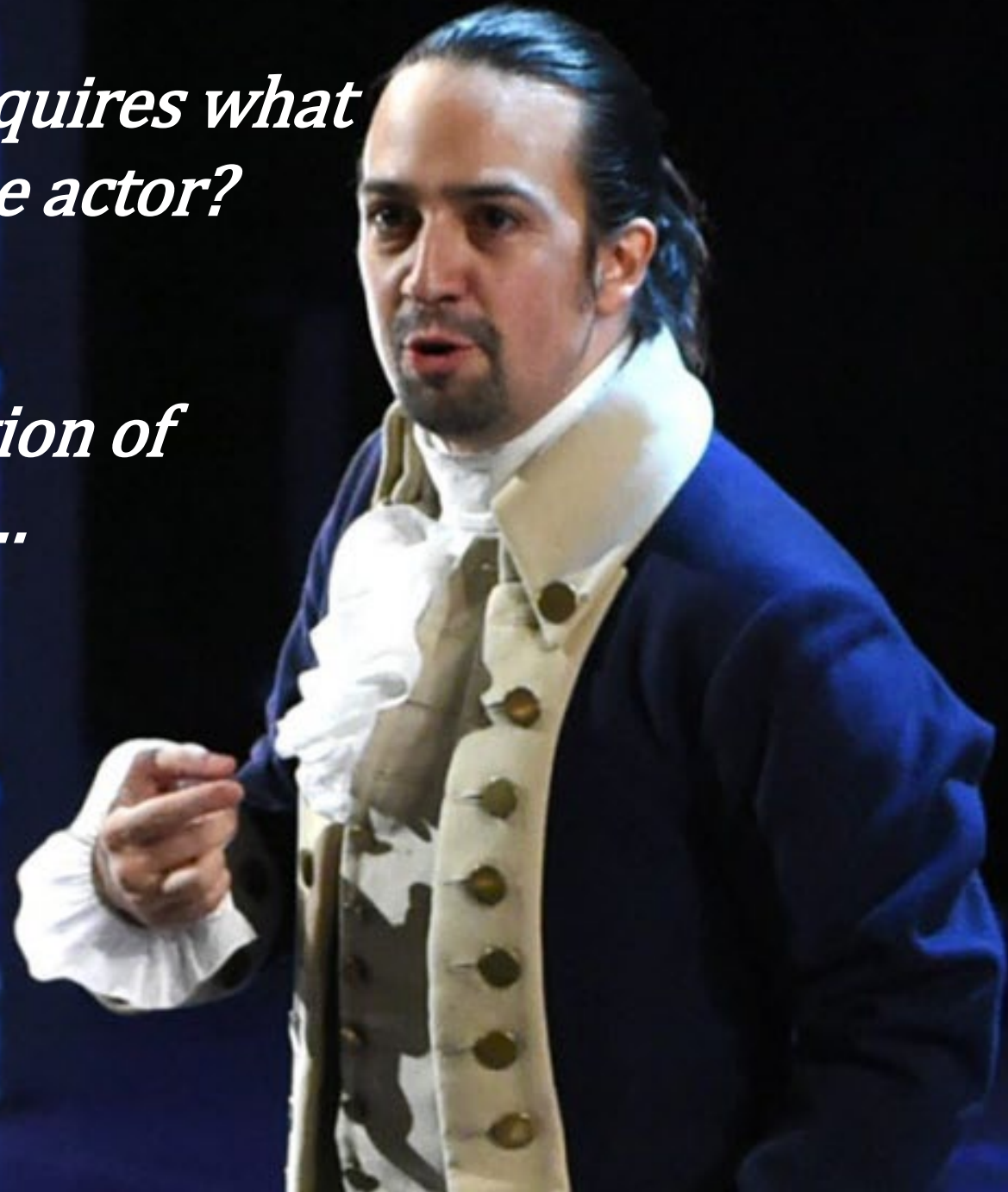


*What do the opening sentences in these novels have in common?*



*Effective communication requires what  
2 necessary things of the actor?*

*--capturing attention of  
the audience and...  
then keeping it.*





# Goals of the Journey

- Encourage the use of proven strategies for effective lecturing & enhanced learning
- Discuss your questions about effective lecturing
- Reflect on the content and process of this presentation
- Motivate you to rethink and refine your presentations

# *Key Steps for Effective Lecturing and Enhanced Learning*

1. Know your audience & attend to logistical details of in person as well as web-based teaching
2. Begin at the end
3. Prepare thoroughly & practice<sup>x3</sup>



# *Key Steps for Effective Lecturing and Enhanced Learning*

4. Employ multimedia research findings and insights from cognitive psychology to enhance learning

5. Engage teaching as a performing art

6. Get feedback from self-reflection, the audience and peers



# *Key Steps for Effective Lecturing and Enhanced Learning*

7. Use Q&A as integral part of the lecture and its revision
8. Summarize the key points of your presentation
9. Finish on a high note
10. *Never* give the same talk twice



## Apps for Effective Lecturing & Enhanced Learning



Caveats



Questions



The Basics



Start @ End



Slide Primer



Learning



Strategies



Finishing

# Apps for Effective Lecturing & Enhanced Learning



Caveats



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The Basics



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Learning



Strategies

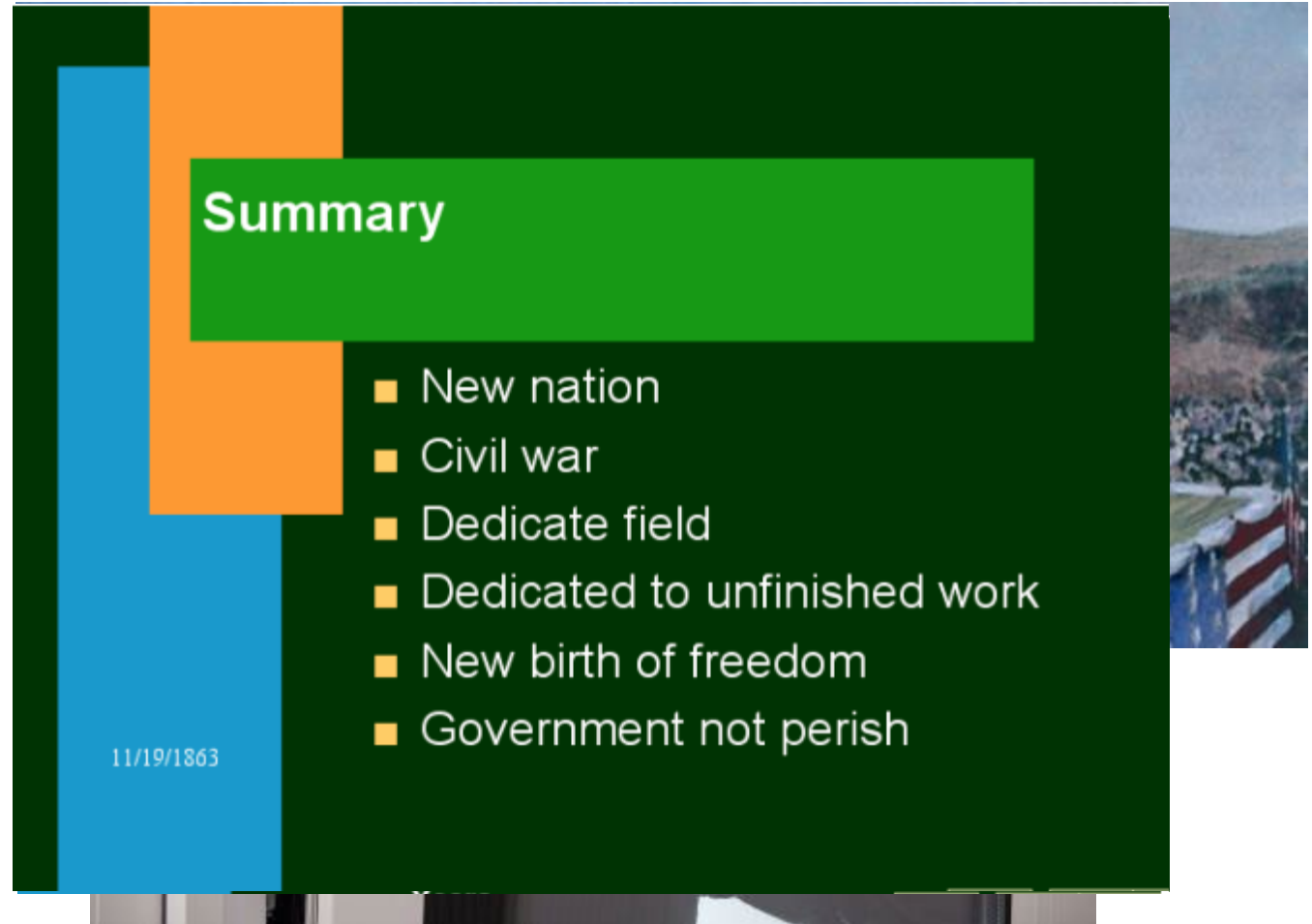


Finishing

# PowerPoint Caveat #1: Avoid educational felonies



‘Gettysburg Address’  
by Peter Norvig  
Stanford Institute for  
Human-Centered AI.



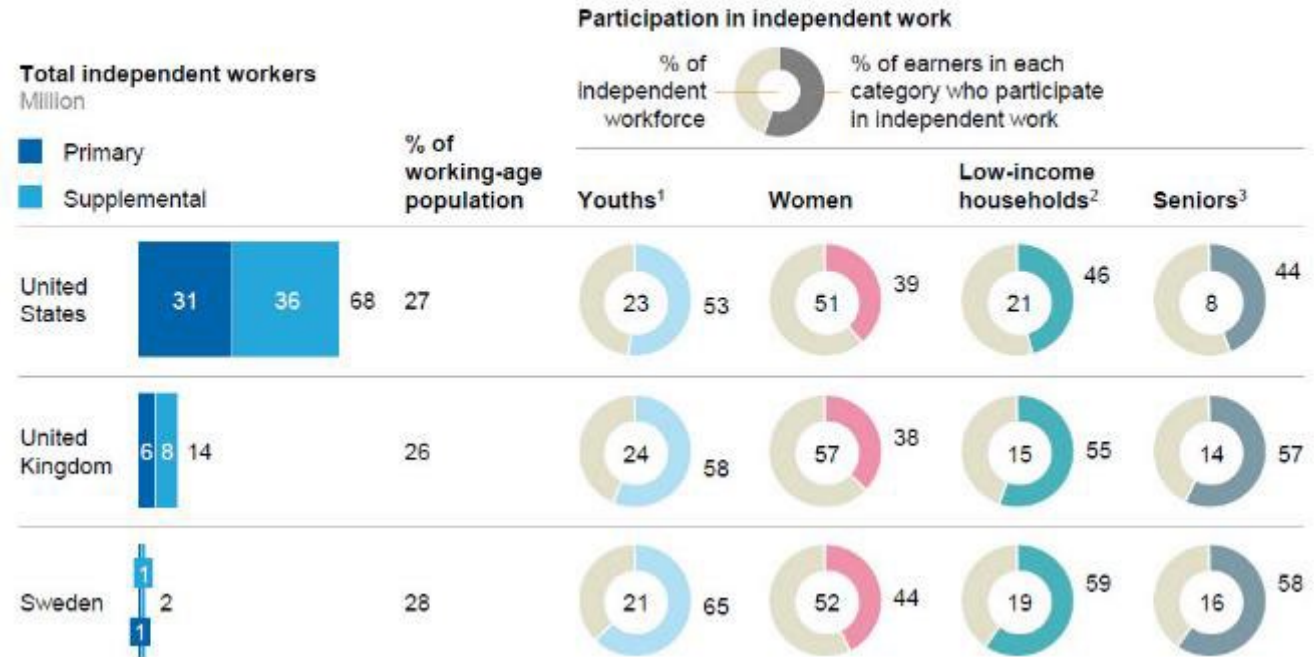
# PowerPoint Caveat #2: Avoid the "tyranny of content"\*

## Chilean Exports

- Fresh fruit leads Chile's export mix - Chile emerges as major supplier of fresh fruit to world market due to ample natural resources, consumer demand for fresh fruit during winter season in U.S. and Europe, and incentives in agricultural policies of Chilean government, encouraging trend toward diversification of exports and development of nontraditional crops - U.S. Dept. of Agriculture, Economic Research Service Report
- Chile is among the developing economies taking advantage of these trends, pursuing a free market economy. This has allowed for diversification through the expansion of fruit production for export, especially to the U.S. and Western Europe. Chile has successfully diversified its agricultural sector to the extent that it is now a major fruit exporting nation. Many countries view Chile's diversification of agriculture as a model to be followed.
- Meanwhile, the U.S. remains the largest single market for Chile's fruit exports. However, increasing demand from the EC and Central and East European countries combined may eventually surpass exports to the U.S., spurring further growth in Chile's exports.
- If you've read this far, your eyes probably hurt and you've been reading this tedious long-winded text instead of listening to me. I'm insulted- can't you see I'm doing a presentation up here? Look at me! Congratulations, however, on having such good eyesight.

## Independent workers span all demographic groups

### Responses from MGI Survey



\*Jason N.. Adsit. *Designing and Delivering Effective Lectures* <https://www.iiitd.edu.in>

\*\*"Chilean Exports" slide from *Quite Possibly The World's Worst PowerPoint Presentation Ever*. <https://www.apa.org>

\*\*\*"Independent Workers" slide from <https://www.consultantsmind.com/2017/04/10/bad->

Significant  
overlap of  
presentation  
strategies



Derek Bok Center for Teaching and Learning  
<https://bokcenter.harvard.edu/teaching-remotely>

# zoom

## Basics

*Do a dry  
run*

1. Appearance/stand
2. Audio
3. Lighting
4. Camera position
5. "What's behind you?"
6. Virtual backgrounds
7. Computer & settings
8. Minimize interruptions
9. Hydration
10. Follow presentation guidelines offered here

# Major themes of your submitted (168) questions:\*

- Strategies of giving a presentation
- Designing a presentation
- How to *engage* an audience and maintain interest

\*Compiled by Joseph Fournier, M.Ed./BCH



# Apps for Effective Lecturing & Enhanced Learning



Caveats



Questions



The Basics



Start @ End



Slide Primer



Learning



Strategies



Finishing

The 'basics' for  
your presentation:

*WIIFT*

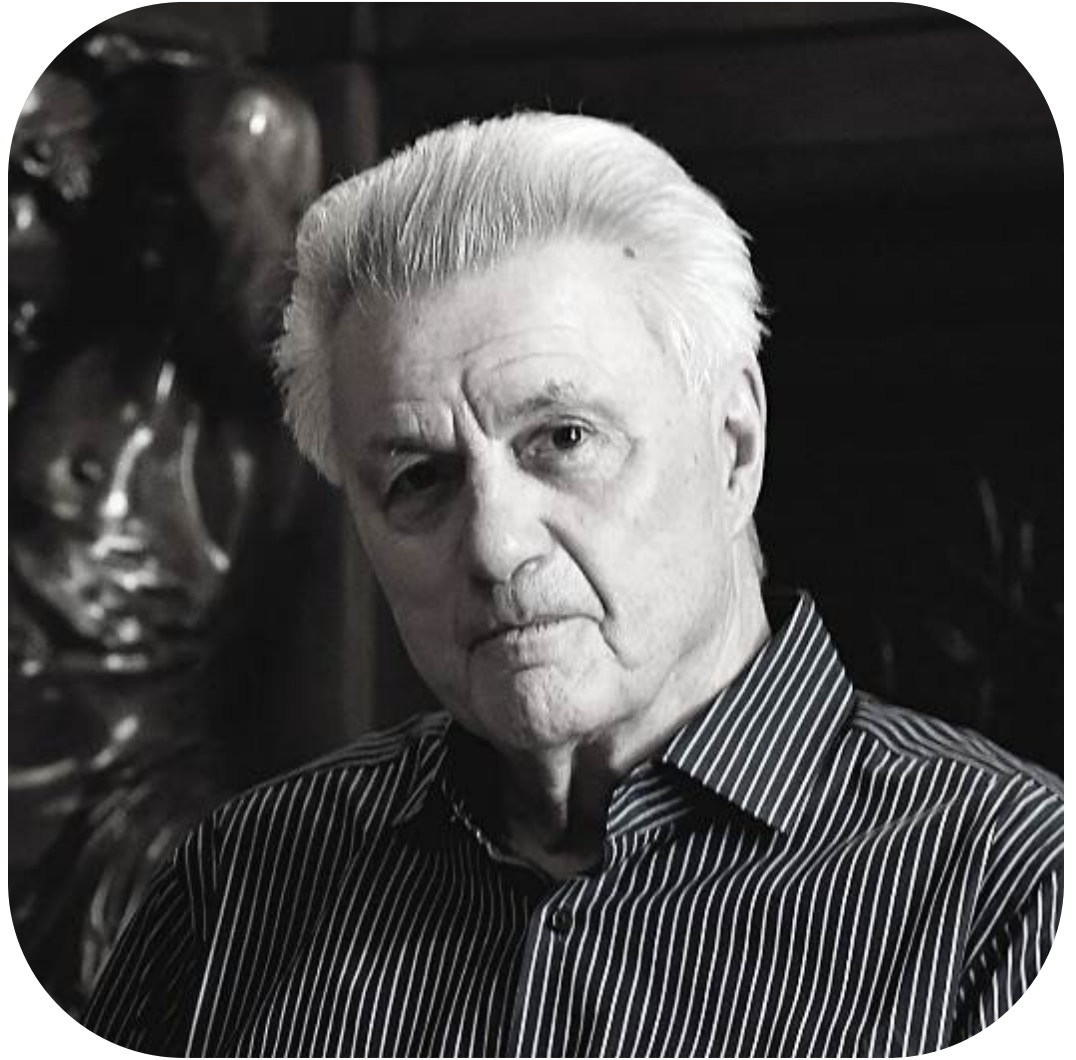
*Know your audience*



*What are their needs?*

# Preparing Draft #1: *Begin at the End*

*As a writer—  
John Irving  
writes the last  
sentence of the  
novel before he  
writes the first  
sentence.\**



**John Irving**  
**Canadian-American Novelist**

\*<https://www.cheatsheet.com/entertainment/stephen-king-and-john-grisham-disagree-on-how-to-write-books.html/>

# Preparing Draft #1: *Begin at the End*

*What's your 'last sentence'?  
Remember WIIFT.*

*My 'last sentence' today at  
journey's end is to help you  
create lectures that reflect:*

*Thorough preparation,  
Simplicity in design &  
Effective presentation*



# Apps for Effective Lecturing & Enhanced Learning



Caveats



Questions



The Basics



Start @ End



Slide Primer



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Strategies



Finishing



# Structure & Function of Engaging PowerPoint Presentations



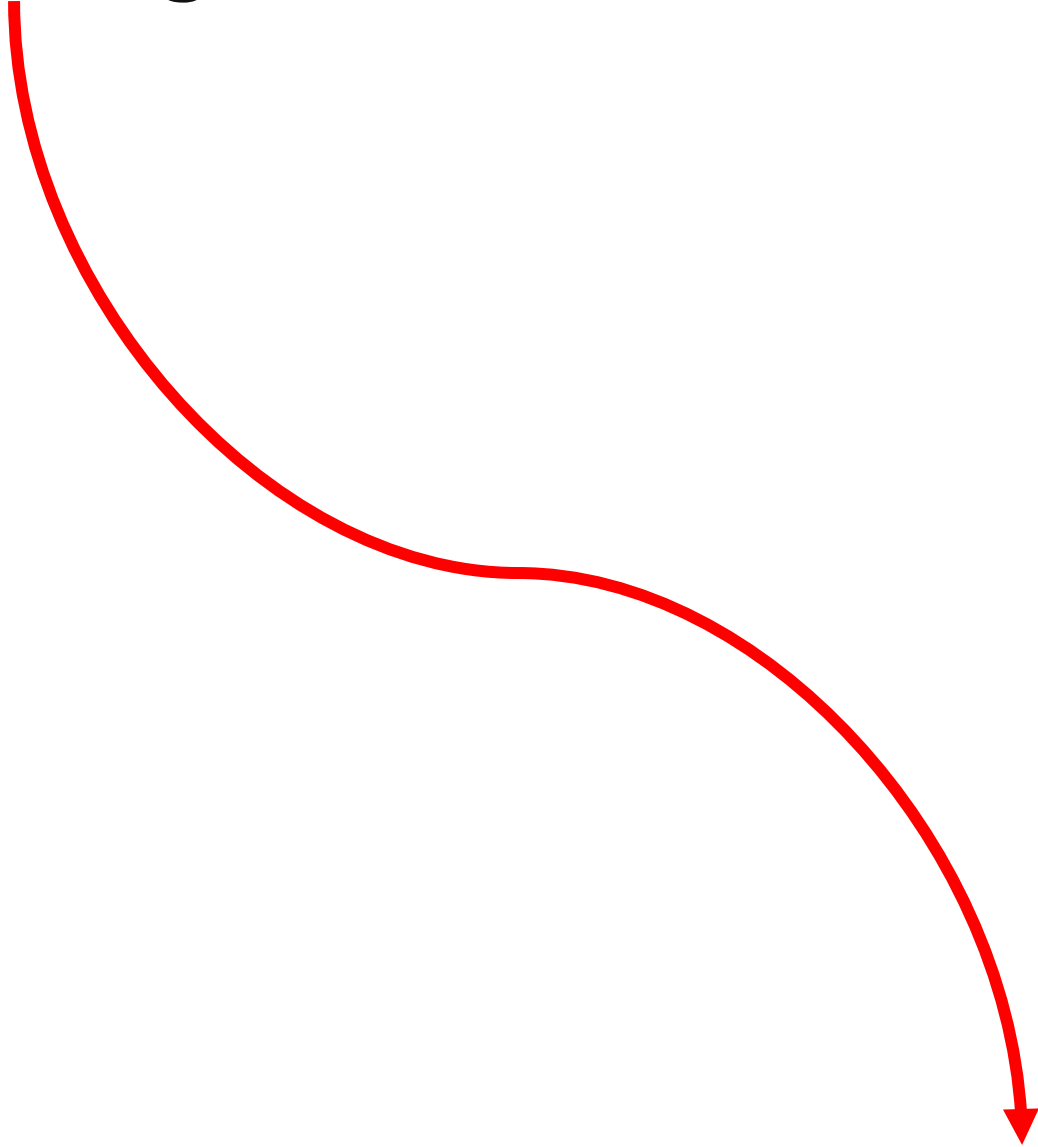
How to lecture most effectively to enhance learning?

1. How do we process presented content in a lecture?
2. How can we use this knowledge in constructing slides?
3. What are the key elements of effective slides?
4. What are the guidelines of *Fair Use Doctrine*?



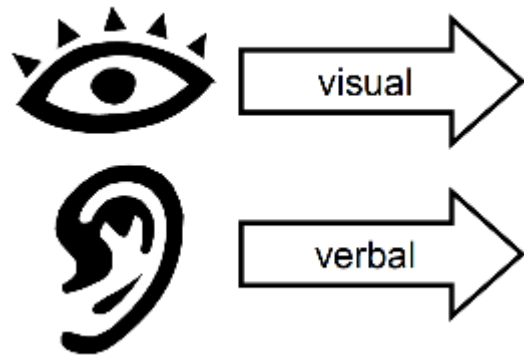
**1. How do we process presented content in a lecture?**

# 3-stage model of human memory\*

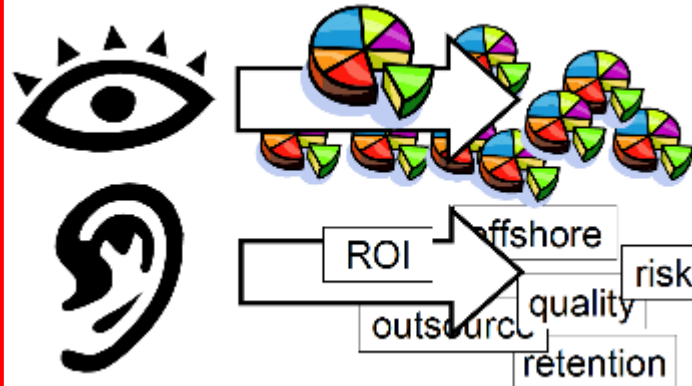


\*Atkinson, R.C.; Shiffrin, R.M. (1968). "Chapter: Human memory: A proposed system and its control processes". In Spence, K.W.; Spence, J.T. (eds.). *The psychology of learning and motivation*. 2. New York: Academic Press. pp. 89–195.

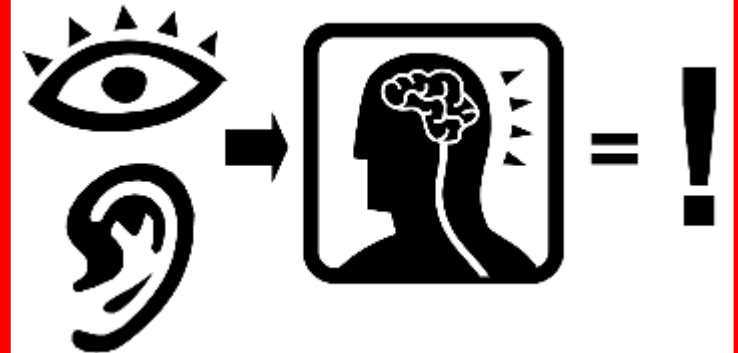
## *“One Mind, Two Channels”\**



## *“Limited Capacity”\**



## *“Active Processing”\**





**2. How can we use this knowledge  
in constructing slides?**

1 2 3 4 5

# Five ways to reduce PowerPoint overload

by Cliff Atkinson and Richard E. Mayer

\*Slide adapted from: Atkinson C, Mayer R. *Five ways to reduce PowerPoint overload*

<https://johnsonedl7200.weebly.com/five-ways-to-reduce-powerpoint-overload-by-cliff-atkinson-and-richard-e-mayer.htm>

1. Write a clear headline that explains the main idea of every slide

1. Write a clear headline that explains the main idea of every slide

**Research finding:**

***People learn better when the material is organized with clear outlines and headings.***

\*Slide adapted from: Atkinson C, Mayer R. *Five ways to reduce PowerPoint overload*

<https://johnsonedl7200.weebly.com/five-ways-to-reduce-powerpoint-overload-by-cliff-atkinson-and-richard-e-mayer.html>



2. Break up your story into digestible bites in the Slide Sorter view

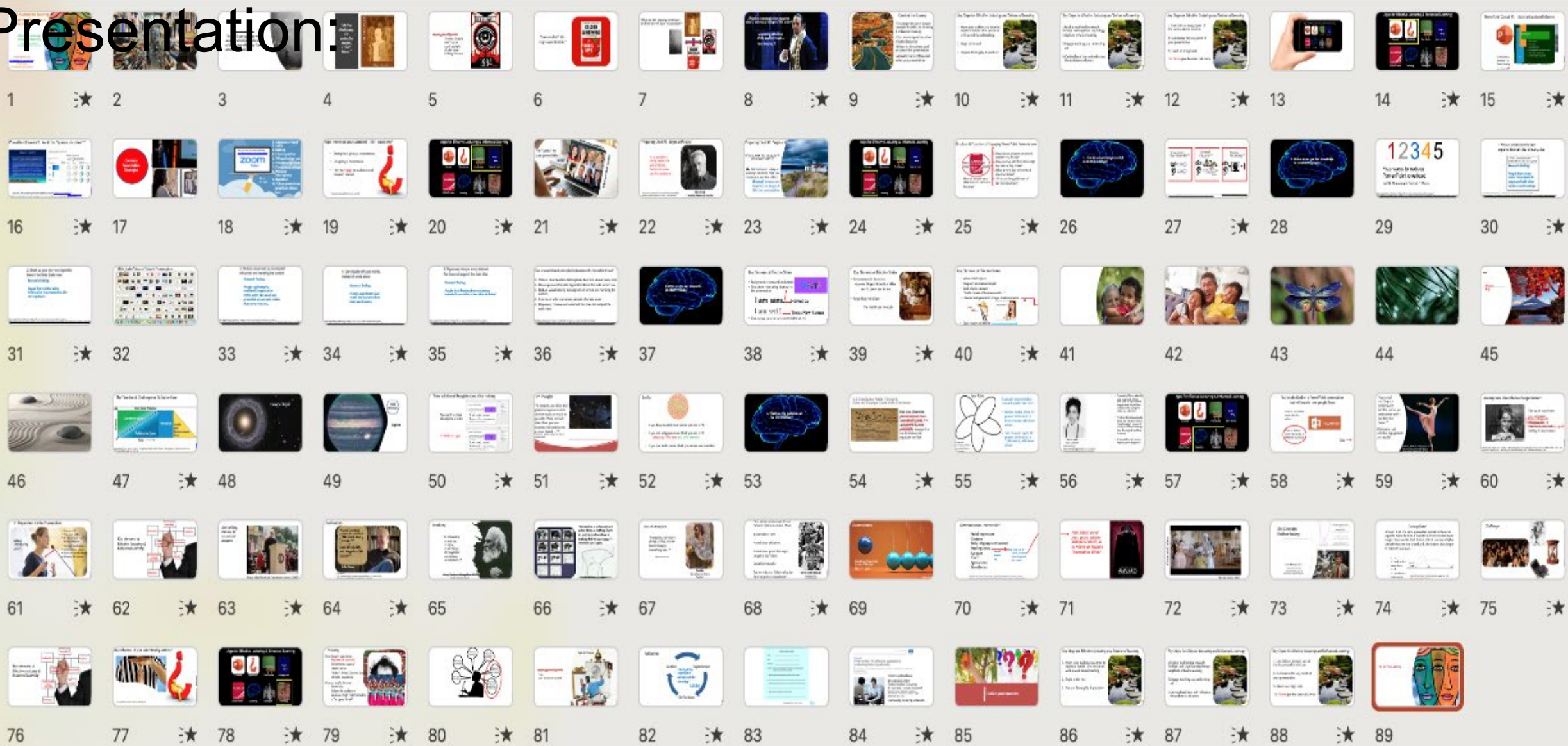
**Research finding:**

***People learn better when information is presented in bite-size segments.***

\*Slide adapted from: Atkinson C, Mayer R. *Five ways to reduce PowerPoint overload*

<https://johnsonedl7200.weebly.com/five-ways-to-reduce-powerpoint-overload-by-cliff-atkinson-and-richard-e-mayer.htm>

# Presentation



3. Reduce visual load by moving text off-screen and narrating the content

**Research finding:**

***People understand a multimedia explanation better when the words are presented as narration rather than on-screen text.***

---

\*Slide adapted from: Atkinson C, Mayer R. *Five ways to reduce PowerPoint overload*

<https://johnsonedl7200.weebly.com/five-ways-to-reduce-powerpoint-overload-by-cliff-atkinson-and-richard-e-mayer.html>

4. Use visuals with your words,  
instead of words alone

**Research finding:**

***People learn better from  
words and pictures than  
from words alone.***

5. Rigorously remove every element that does not support the main idea

**Research finding:**

***People learn better when extraneous material is excluded rather than included.***

\*Slide adapted from: Atkinson C, Mayer R. *Five ways to reduce PowerPoint overload*

<https://johnsonedl7200.weebly.com/five-ways-to-reduce-powerpoint-overload-by-cliff-atkinson-and-richard-e-mayer.htm>

# Five research-based principles help reduce the PowerPoint load\*:

1. Write a clear headline that explains the main idea of every slide
2. Break up your story into digestible bites in the slide sorter view
3. Reduce visual load by moving text off-screen and narrating the content
4. Use visual with your words, instead of words alone
5. Rigorously remove every element that does not support the main idea

\*Findings adapted from: Atkinson C, Mayer R. *Five ways to reduce PowerPoint overload*

<https://johnsonedl7200.weebly.com/five-ways-to-reduce-powerpoint-overload-by-cliff-atkinson-and-richard-e-mayer.html>



**3. What are the key  
elements of effective  
slides?**

# Key Elements of Effective Slides

- Background: clean and uncluttered
- Pick a font—I'm using 'Optima' in this presentation



**I am sans.** → Helvetica

**I am serif.** → Times New Roman

- Slide design ratio of 16:9 (these slides) vs. 4:3

# Key Elements of Effective Slides

- Be consistent in font sizes:
  - I prefer 36 point font for titles and 32 point font for text
- Regarding # of slides:

*The Goldilocks Principle*





# Key Elements of Effective Slides

- Value empty space
- Keep any animation simple
- Spell check: caveats –  
*"In the coarse of human events..."*
- Choose well-pixelated images and cite  
source



- Save images of interest



10  
pt.  
font







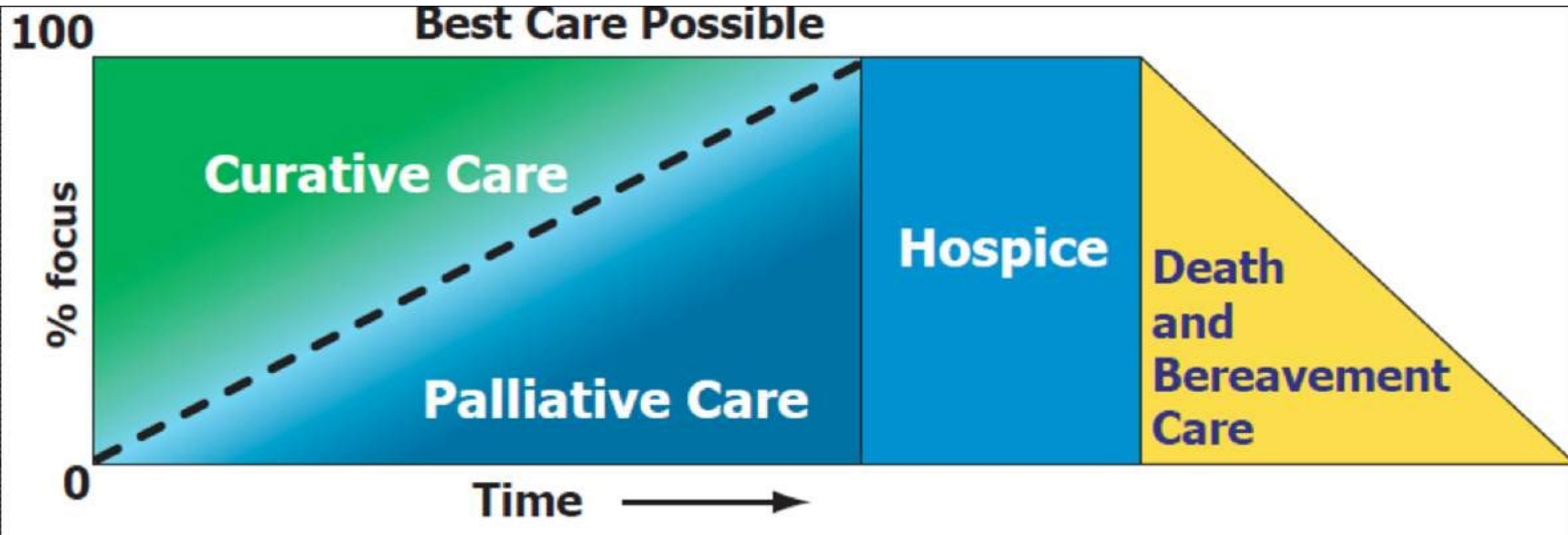


# Mount Fuji





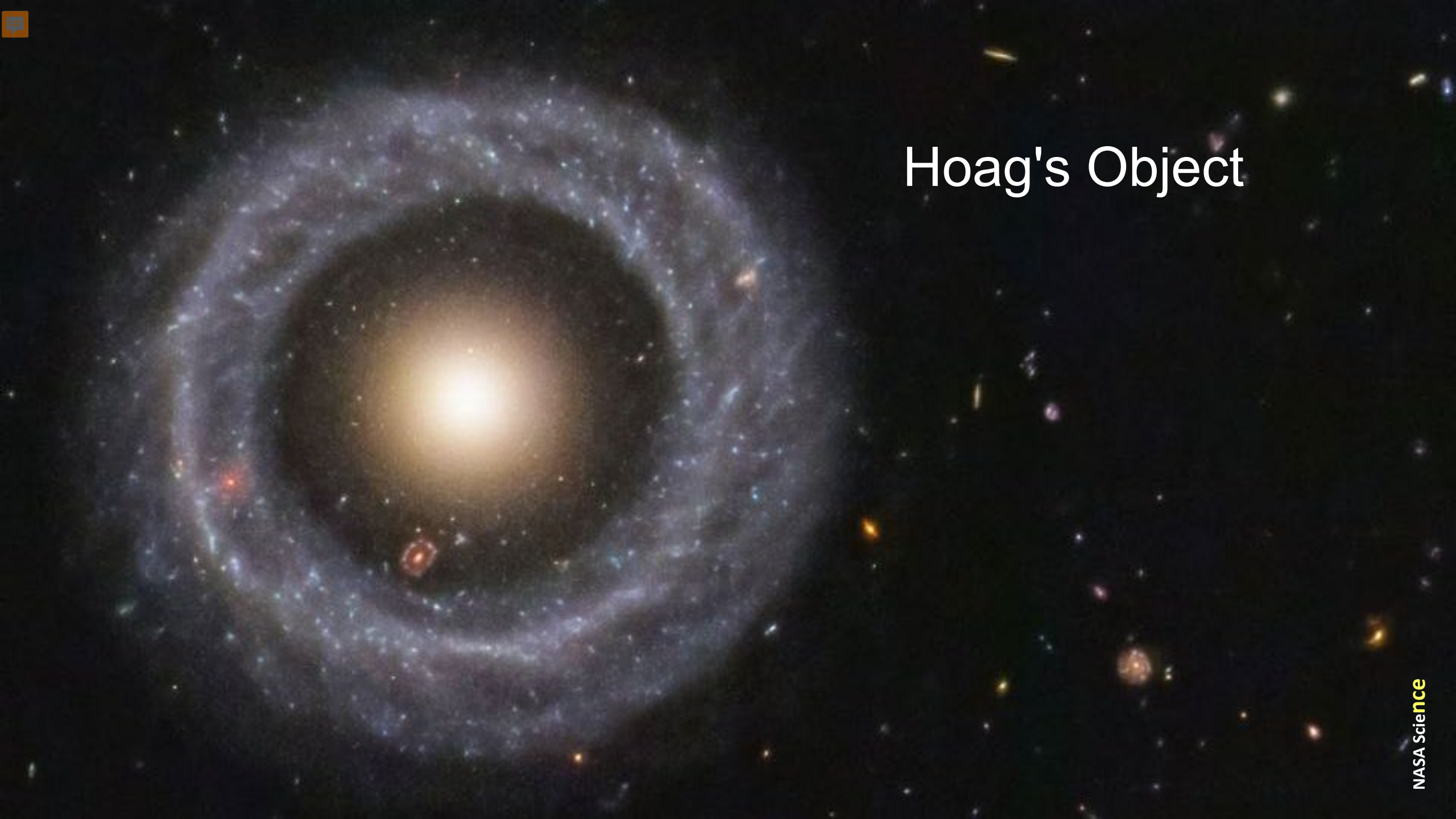
# The Timeline & Challenges of Palliative Care



\*Image adapted from: Lynn, J. (2005). *“Living long in fragile health: The new demographics shape end of life care.”* Hastings Cent Rep Spec No: S13-18.



# Hoag's Object





**Webb  
Telescope**

**Jupiter**

# Three additional thoughts about slide making

You want to make changes to a slide:

1<sup>st</sup> Make a copy!

The image is a composite of three parts related to PowerPoint slide creation:

- Top Panel:** A screenshot of a PowerPoint slide titled "Elements of Effective Slides". It contains a bulleted list with numbered annotations (1-6) pointing to specific elements:
  - 1. Background: clean and uncluttered
  - 2. Pick a font—I'm using 'Optima' in this presentation
  - 3. I am sans. Helvetica
  - 4. I am serif. Times New Roman
  - 5. Slide design ratio of 16:9 (these slides) vs. 4:3A purple box with the word "FONTS" is also visible.
- Bottom Panel:** A screenshot of the PowerPoint application interface. The "Home" tab is active, and the "Duplicate Slide" option in the "Slide" group is highlighted. The status bar at the bottom indicates "12.06.2022 BCH Acesturi".
- Right Panel:** A partial view of the "Animations" pane, showing a list of animations for the slide, including "Background: clean and u...", "Pick a font—I'm using 'O...", "Picture 4", "Yellow Slice", "Picture 5", "Straight Arrow Connecto...", "Helvetica", "Picture 7", "Straight Arrow Connecto...", "Times New Roman", and "Slide design ratio of 16:9...".

## 2<sup>nd</sup> Thought:

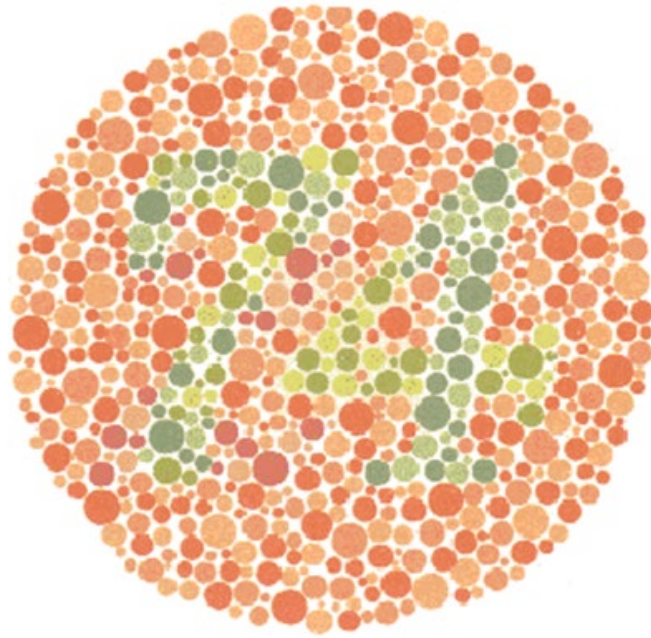
*"In lectures, use slides and graphical representations of information as much as possible. Think carefully about how you can translate information into a visual format —"*\*

\*Pourret O, Saillet E. *Nature* | Vol 586 | 22 October 2020.

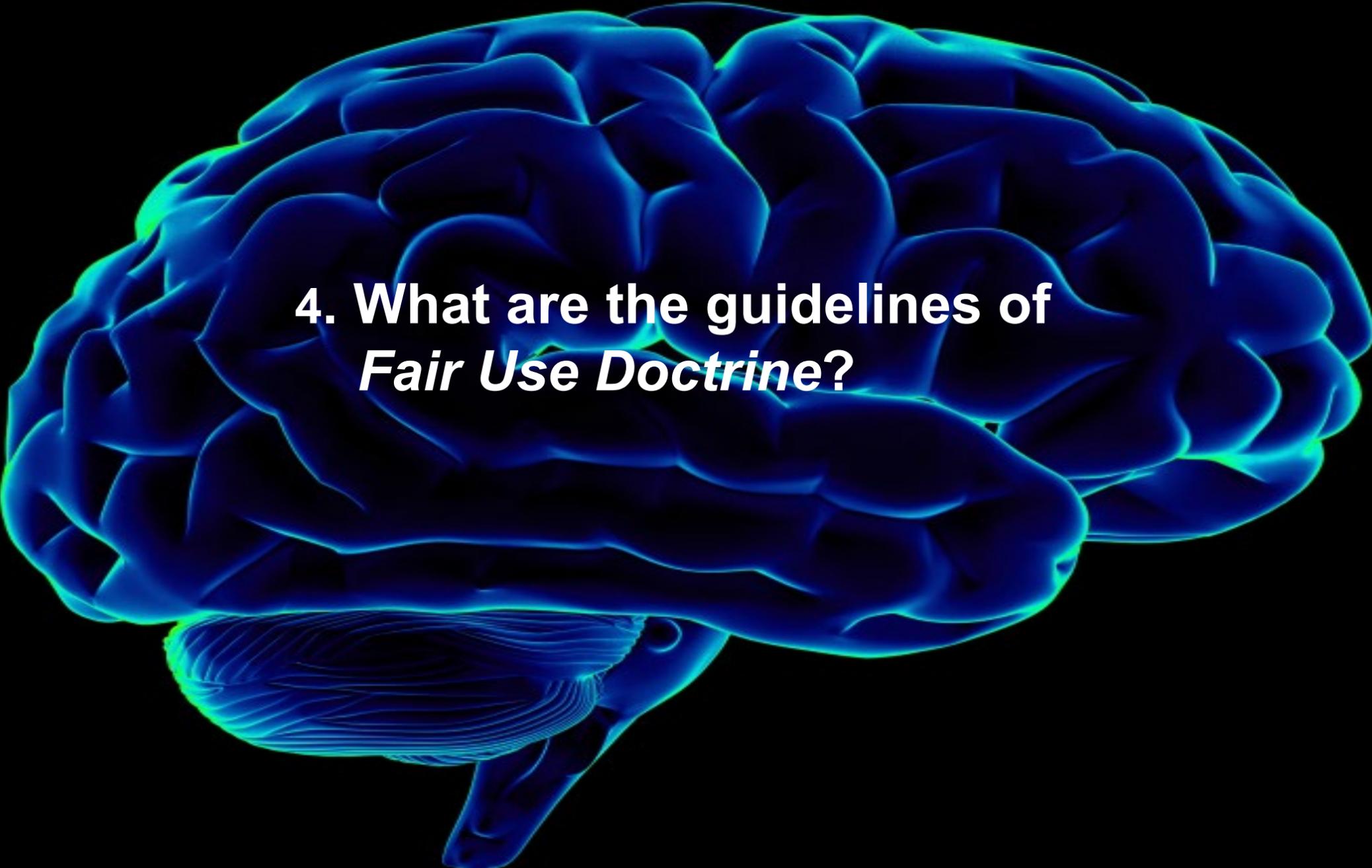
ENY ORR/SLOMBERG/GETTY



Lastly:



- If you have normal color vision, you see a 74.
- If you are red/green color blind, you see a 21.  
(affecting ~8% men and <1% women)
- If you are totally color blind, you do not see a number.



**4. What are the guidelines of  
*Fair Use Doctrine*?**

# U.S. Constitution, Article 1/Section 8: *Patent and Copyright Clause of the Constitution.*



Fair Use Doctrine  
Because it's on the web doesn't mean  
that it doesn't fall  
under copyright.  
permits anyone to use  
copyrighted works,  
without the owner's  
permission, in ways that  
are fundamentally  
equitable and fair.

# Fair Use

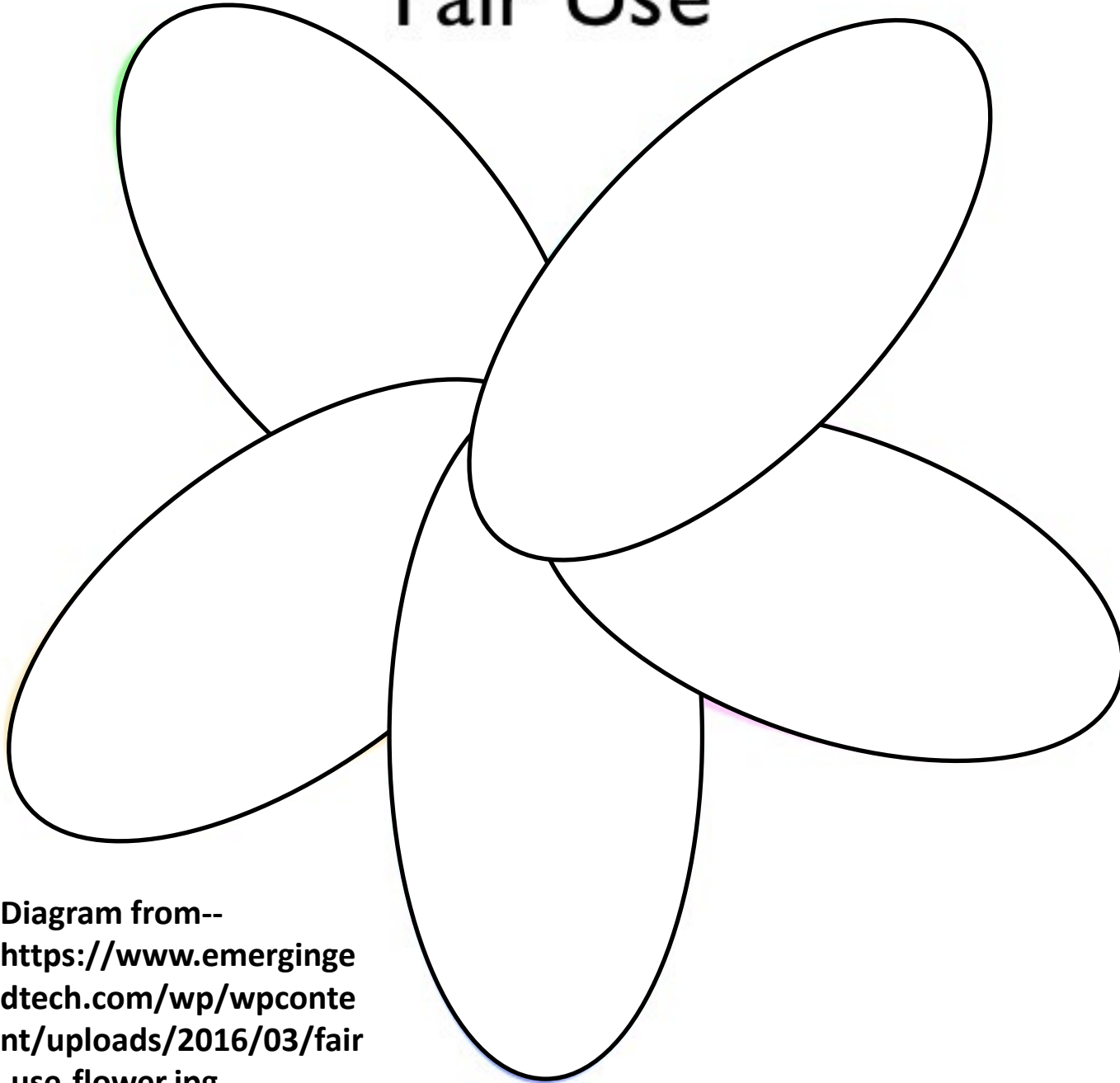


Diagram from--  
<https://www.emergingedtech.com/wp/wpcontent/uploads/2016/03/fair-use-flower.jpg>

Examples of permissible amounts under 'Fair Use':

- Motion media: Up to 10 percent of the total or three minutes, whichever is less.
- Text material: Up to 10 percent of the total or 1,000 words, whichever is less.



**Prince (1981)**  
**Lynn Goldsmith**

\*Nina Totenberg-  
[https://www.npr.org/2022/10/12/1127508725/  
prince-andy-warhol-supreme-court-copyright](https://www.npr.org/2022/10/12/1127508725/prince-andy-warhol-supreme-court-copyright)

- A portrait of Prince taken by Lynn Goldsmith (left) in 1981 and 16 silk-screened images Andy Warhol later created (1984) using the photo as a reference.
- A federal district court judge found that Warhol's series is "transformative" because it conveys a different message from the original, and thus is fair use.
- A Second Circuit Court of Appeals panel disagreed.\*

# Apps for Effective Lecturing & Enhanced Learning



Caveats  
End



Questions



The Basics



Start @



Slide Primer



Learning



Strategies



Finishing

# You've decided on a PowerPoint presentation that will match how people learn

How to create the most effective slides?

How to lecture most effectively to enhance learning?



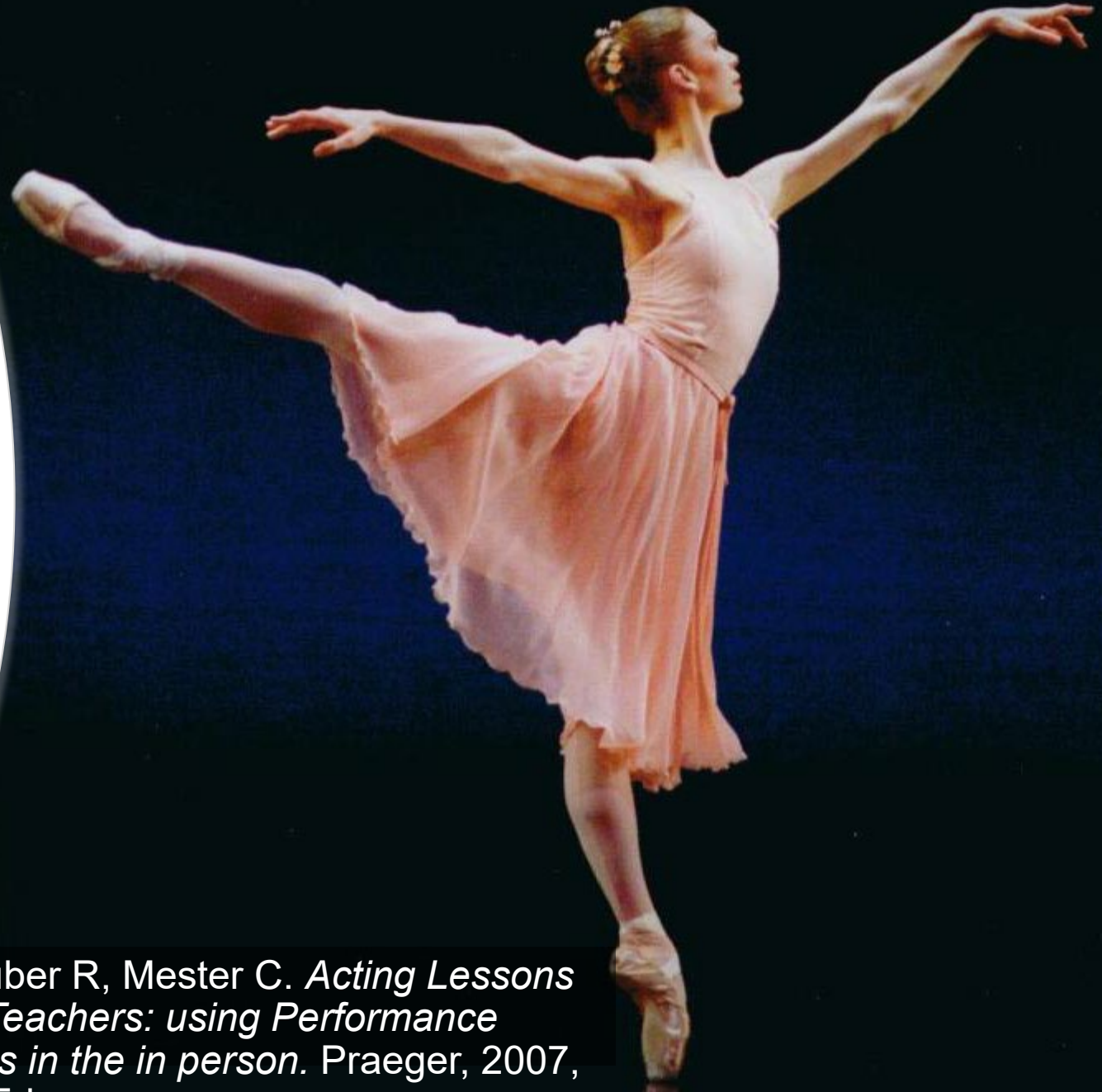
First,  
consider



*“Successful teaching is a performance and the sooner we make peace with that fact, the better.”\**

Relevance and affective engagement are crucial.

*\*Tauber R, Mester C. Acting Lessons for Teachers: using Performance Skills in the in person. Praeger, 2007, 2nd Edition.*



# Assumptions about the teacher/performer\* :



*“ Can students make the same assumptions about their teachers?”\**

She wants to perform

Has rehearsed

Will give her all,  
Is there enthusiasm/Ενθουσιασμός  
--“*inspired, possessed by a god*”?  
filled with personal  
feeling & involvement

\*Timpson W, Burgoyne S. *Teaching & Performing: Ideas for Energizing Your Classes*. Atwood Publ., 2002. 2<sup>nd</sup> Ed. P.42.  
\*Sarason S. *Teaching As A Performing Art*. Teachers College Press, Columbia University. 1999.

# In Preparation for the Presentation:

Who's  
introducing  
you?

- Come early
- Test your slides
- If videos: use your own computer
- Turn off notifications
- Microphone usage
- Have lecture backups
- Identify AV person



# *Key elements of Effective Lecturing & Enhanced Learning*



*Storytelling:  
the key to  
successful  
lectures*



Steve Jobs/Stanford Commencement

# Authenticity

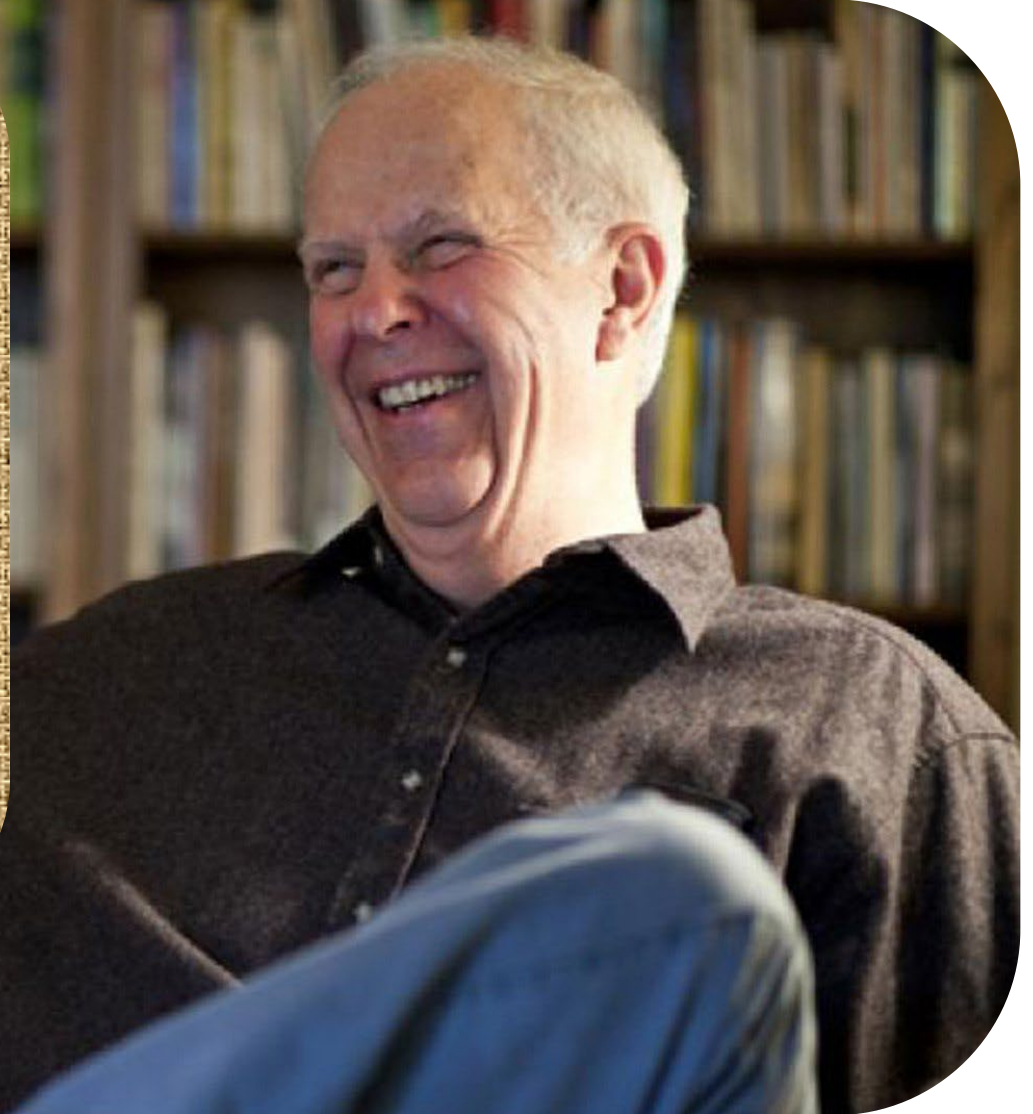
***“Good teaching  
cannot be reduced  
to a technique.  
We teach  
who we are.”\*\*  
Good teaching  
comes from the  
identity and  
integrity of the  
teacher.”\****

**Parker Palmer**

**Parker Palmer:**

**\* *The Courage to Teach: Exploring the inner Landscape of a Teacher’s Life.***

**\*\**The Heart of a Teacher Identity and Integrity in Teaching.***

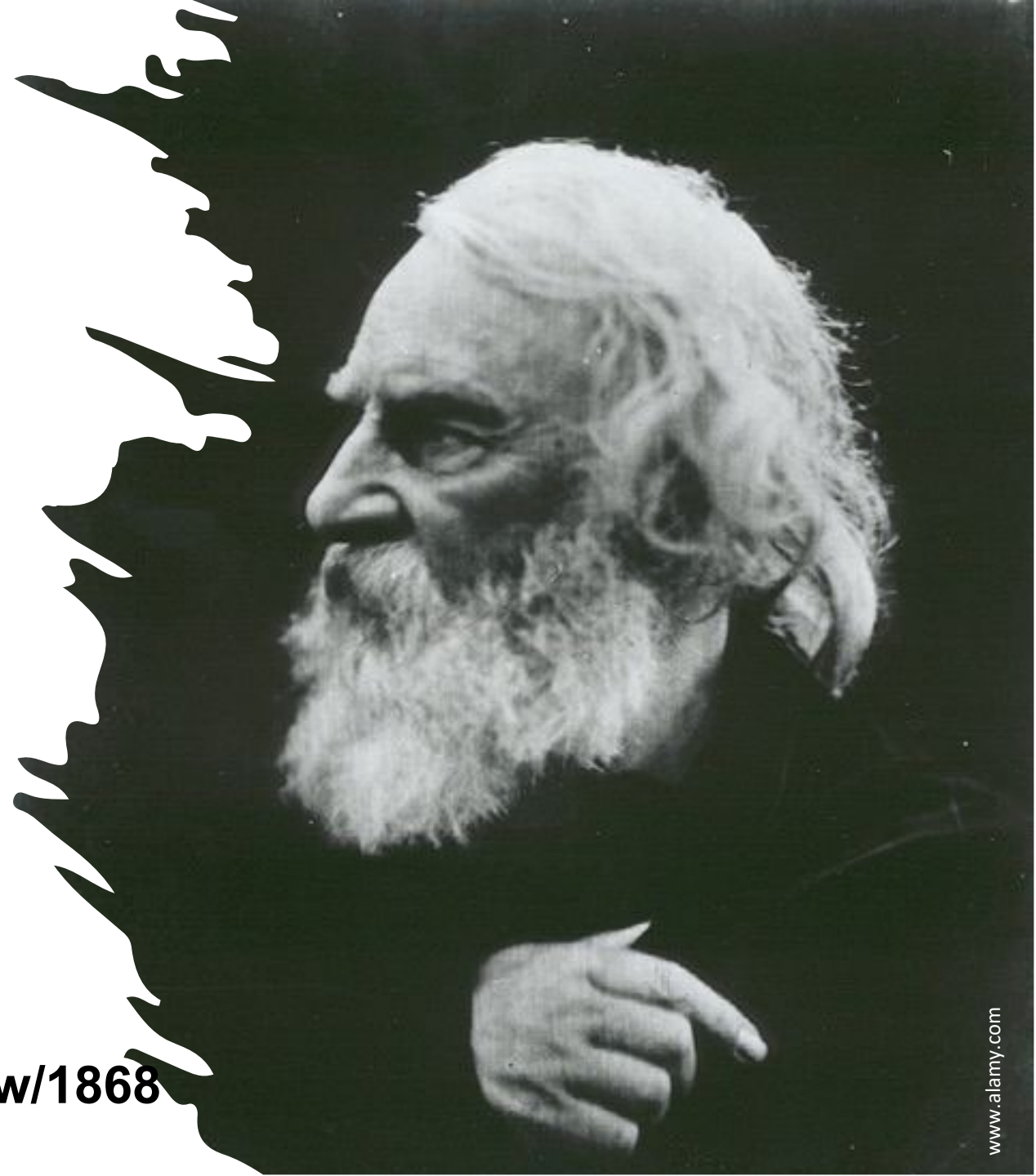


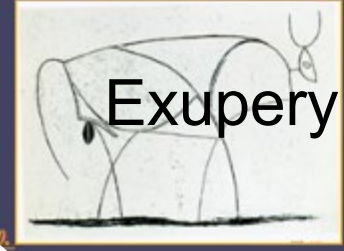
# *Simplicity*

*“In character,  
in manner,  
in style,  
in all things,  
the supreme  
excellence  
is simplicity.”\**

**\*Henry Wadsworth Longfellow/1868**

Julia Margaret Cameron



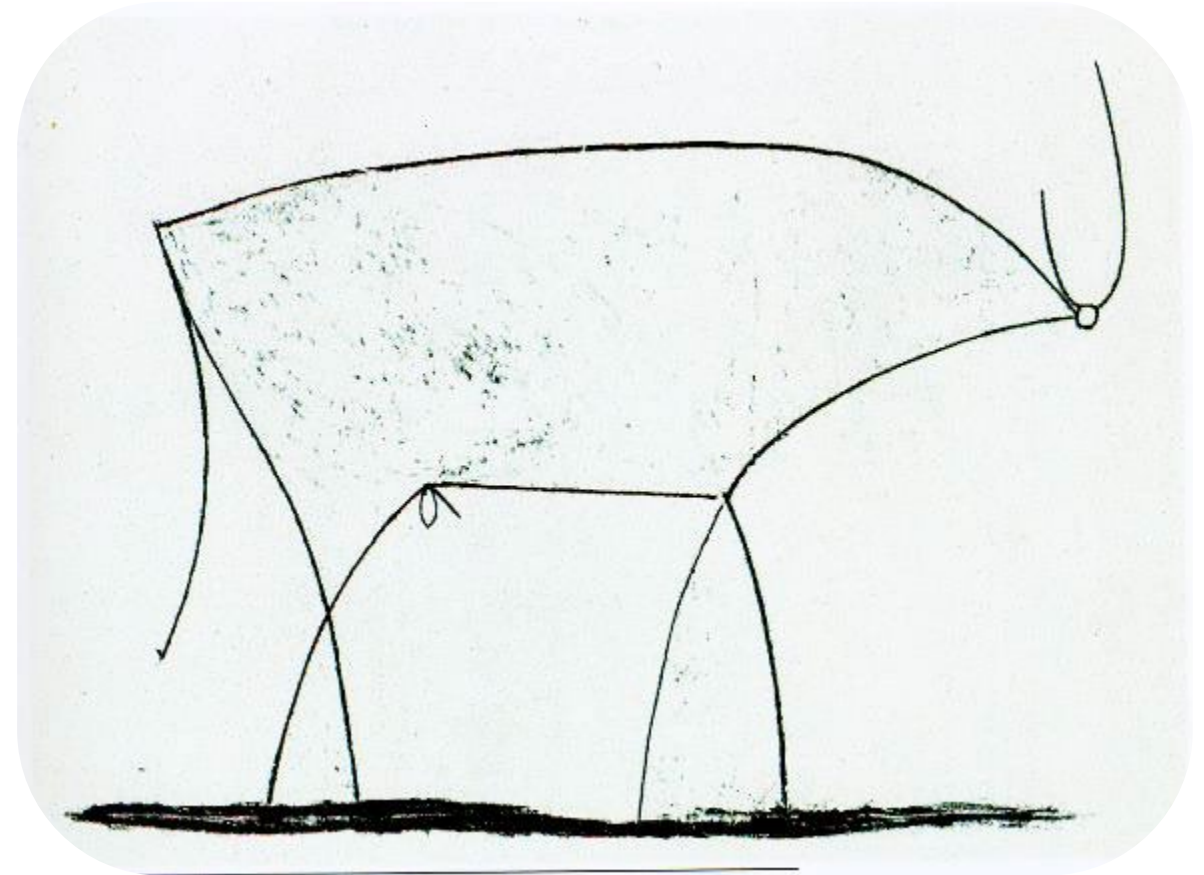


*"Perfection is achieved,  
not when there is nothing  
more to add, but when  
there is nothing left to  
take away."*

Antoine de Saint-

Exupery

**Pablo  
Picasso**

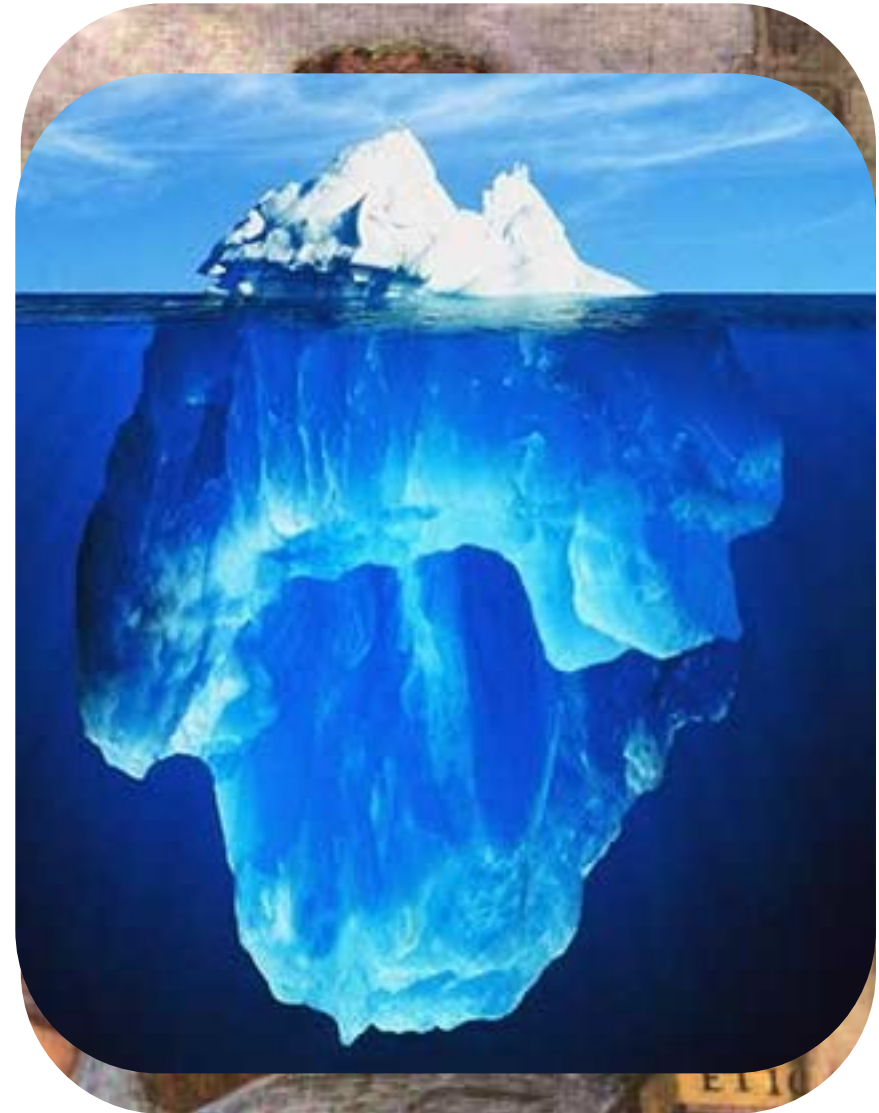


**Pablo Picasso**  
***The Bull***

# Use of Metaphor

*“Metaphor consists  
“Metaphor is powerful, because  
it forms a bridge between the  
abstract and the concrete,  
using images and ideas  
that are culturally accessible.”\**

\*Haidet P, Jarecke J, Yang C, Teal C, Street R, Stuckey H.  
*Using Jazz as a Metaphor to Teach Improvisational  
Communication Skills.* Healthcare (Basel). 2017 Aug  
4;5(3):41.



**Aristotle**  
*The School of Athens*  
Raphael

*“In a sense we've come to our nation's capital to cash a check.*

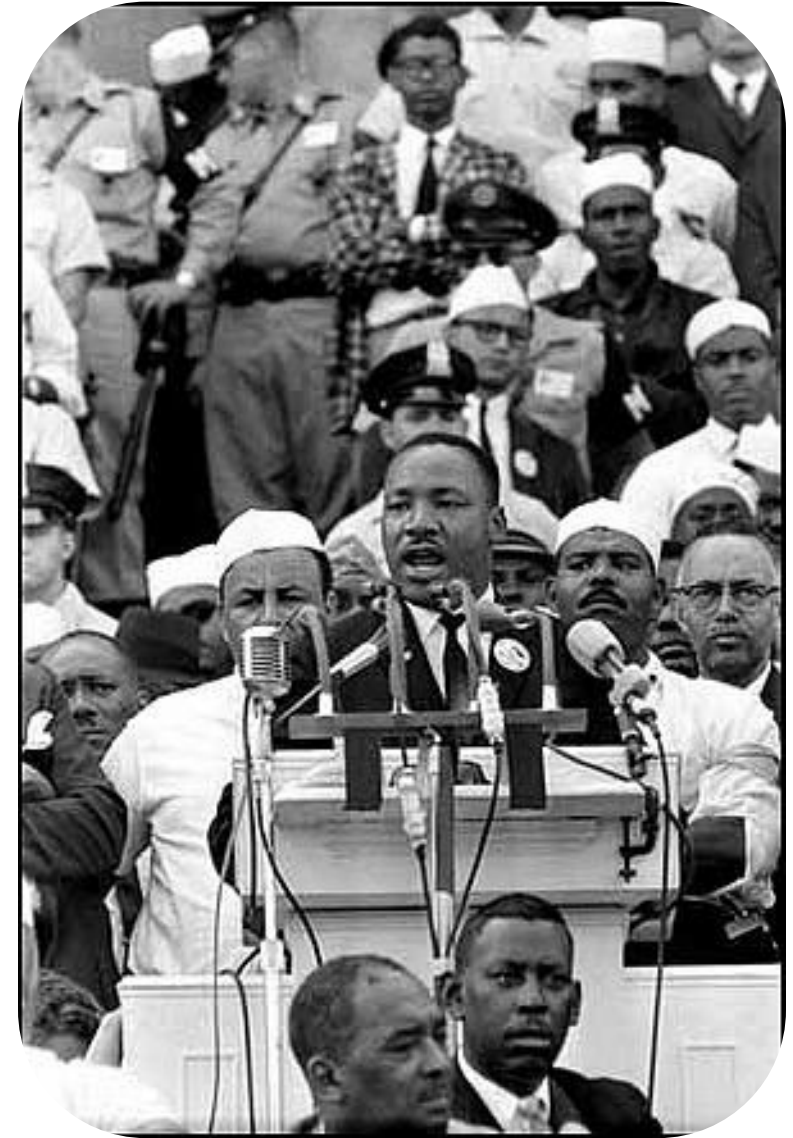
*a promissory note*

*America has defaulted*

*America has given the Negro people a bad check*

*‘insufficient funds.’*

*But we refuse to believe that the bank of justice is bankrupt.”*



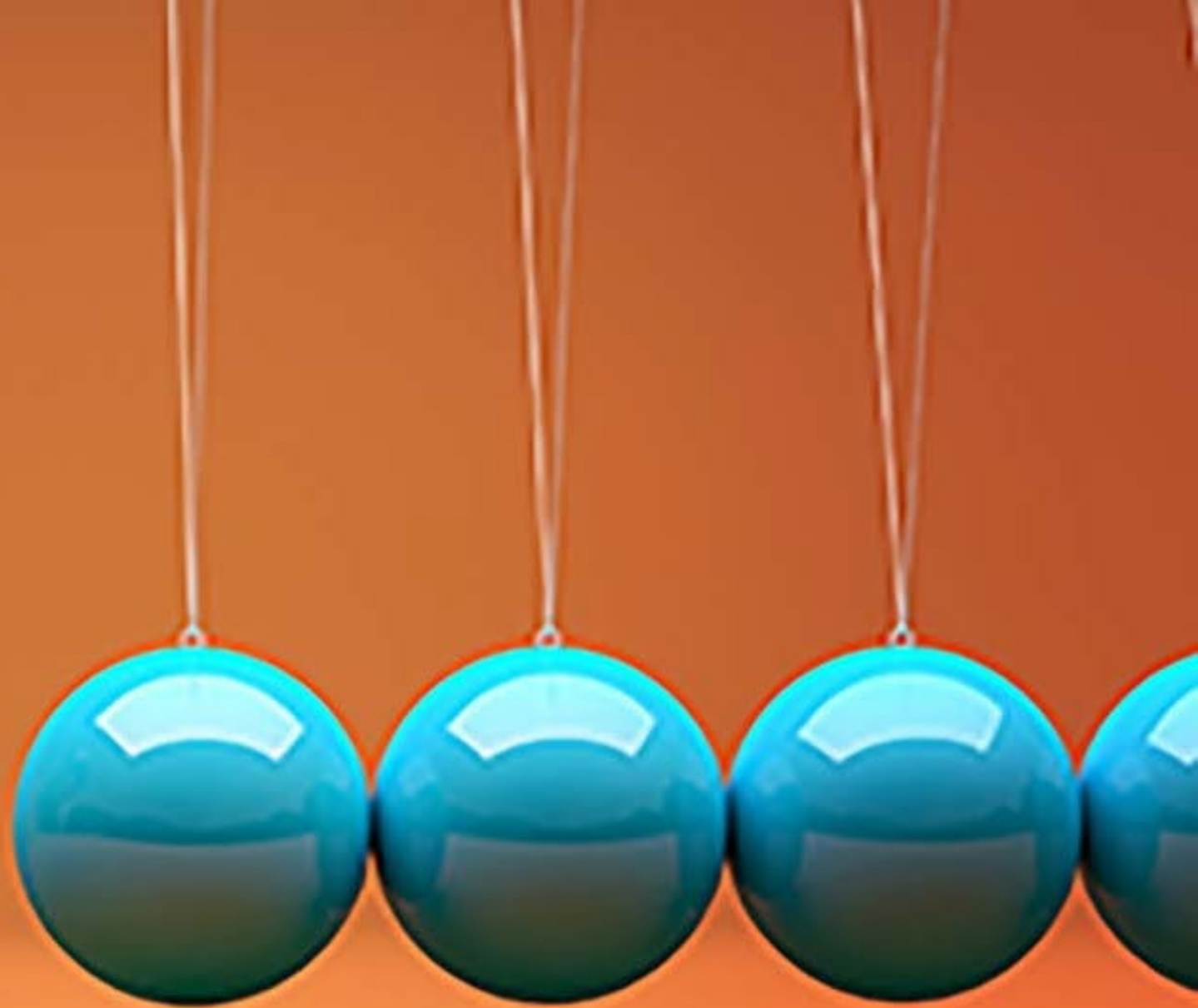
**Martin Luther King,  
Jr.**

August 28, 1963



# *Demonstration*

Teaching Newton's  
Laws of Motion:  
The 3<sup>rd</sup> Law



# *Communication--Nonverbal:\**

Facial expression

Gestures

Body language & posture

Paralinguistics

Eye gaze

Touch

Appearance

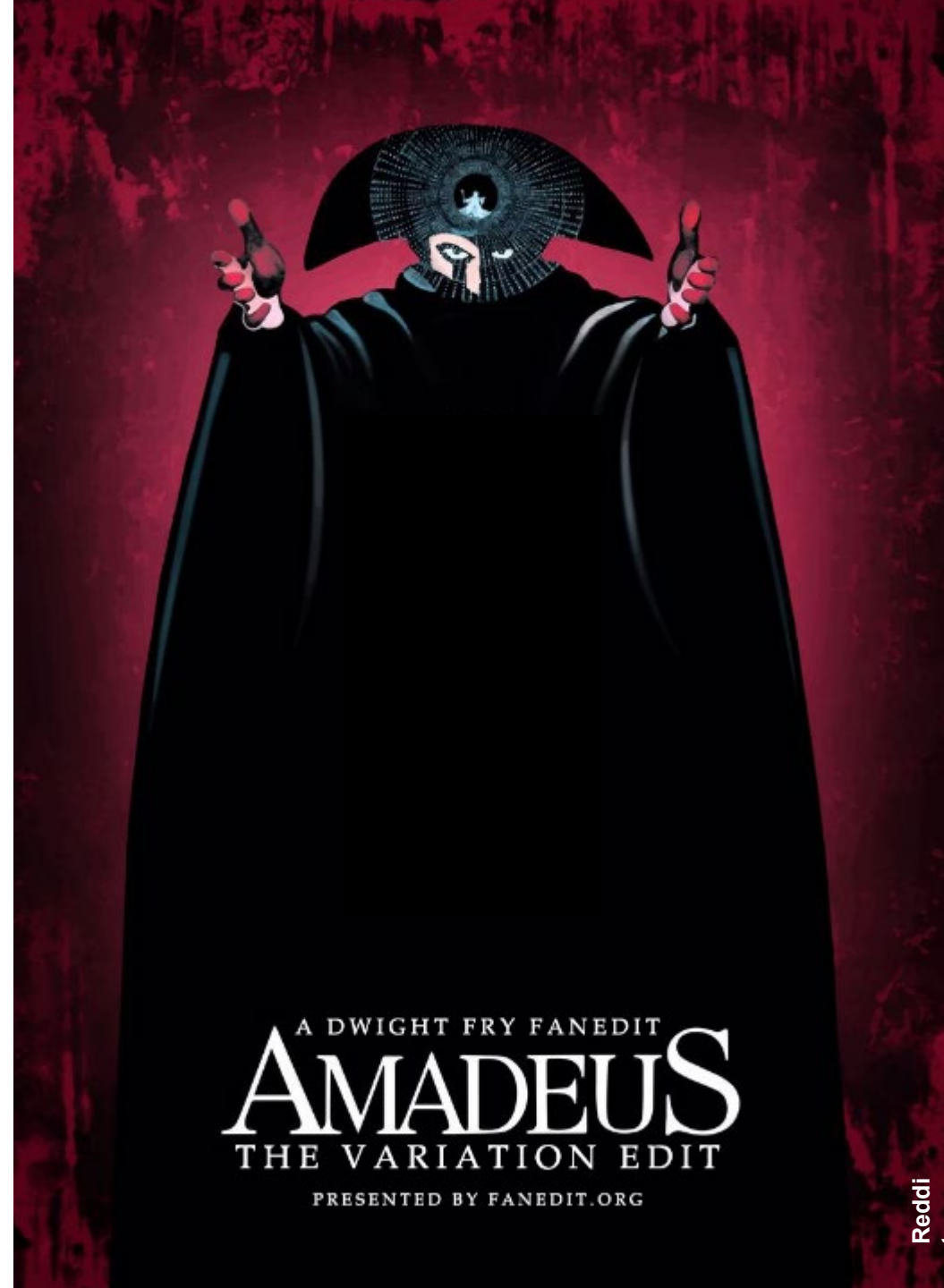
Kinesthetics

**Vocal  
warm  
up**

***How you say it:***  
*pitch, volume,  
rate of  
speech,  
the pause*

\*modified from Kendra Cherry, *Types of Nonverbal Communication: 8 Major Nonverbal Behaviors* <http://psychology.about.com/od/nonverbalcommunication/a/nonverbaltypes.htm>

→ *Note Salieri's use of pitch, pause, volume, and rate of speech, as he reflects on Mozart's "Serenade for Winds"*





# Communication



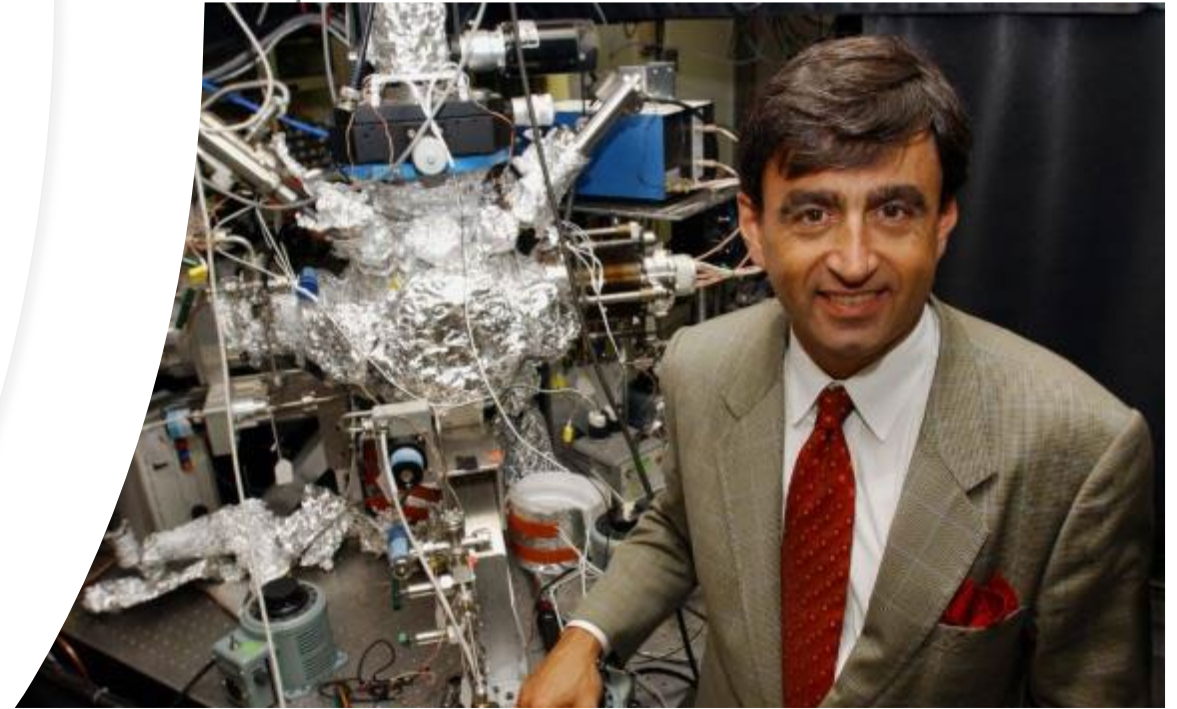
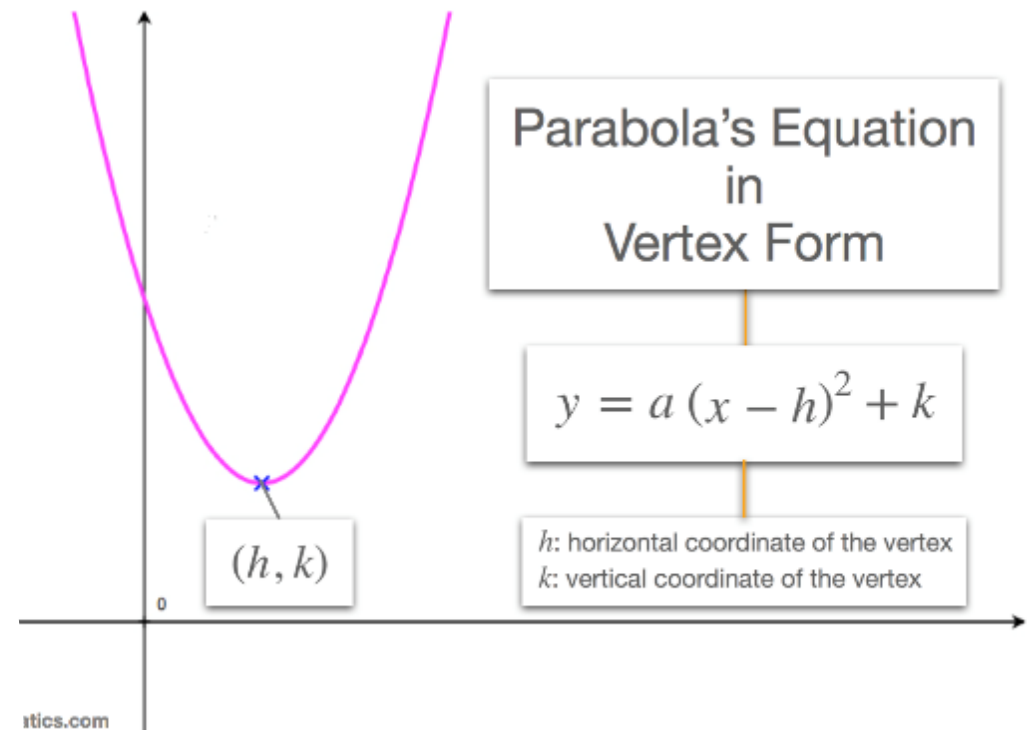
Video clip: *Amadeus* (1984)

# Test Concepts: Problem Solving

## “Parabolas”

Eric Mazur, PhD

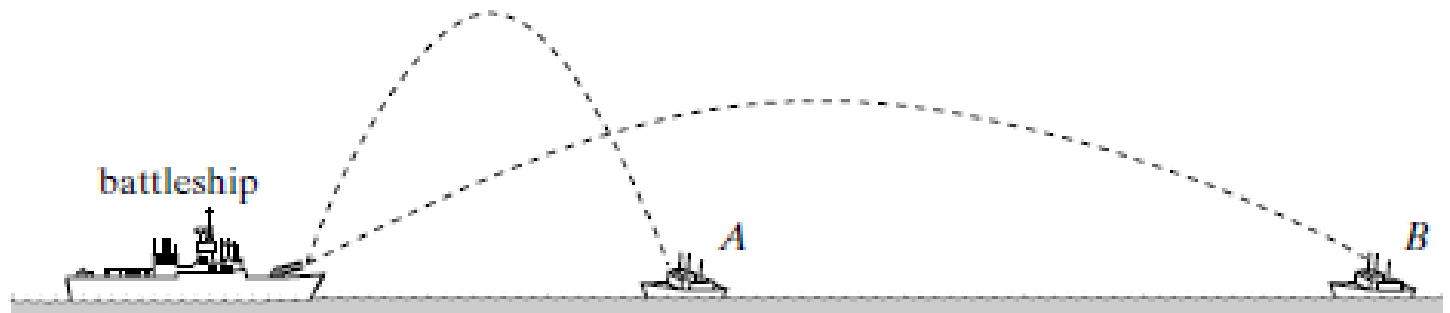
Harvard University  
Balkanski Professor of  
Physics & Applied  
Physics



## ConceptTests\*

Answer: 3. B. The time a projectile spends in the air is equal to twice the time it takes to fall from its maximum height. Because the shell fired at ship A reaches a higher altitude than the one aimed at B, the former takes longer to return to sea level.

1. A
2. both at the same time
3. B
4. need more information



\*Mazur E. *Peer Instruction*. Prentice Hall, New Jersey 1997.

<http://mazur.harvard.edu/>



# Challenges



# *Key elements of Effective Lecturing & Enhanced Learning*



# Major themes of your submitted questions:\*



\*Compiled by Joseph Fournier, M.Ed./BCH

# Apps for Effective Lecturing & Enhanced Learning



Caveats



Questions



The Basics



Start @ End



Slide Primer



Learning



Strategies



Finishing

# Finishing

## Post-lecture questions:

- *Repeat the question*
- Reframe for sake of clarification
- “I don’t know”/crowd source
- Hostile questions

## How to end a lecture:

- Summary
- Salute the audience
- End on a high note/consider a ‘scripted finish’



**What am I  
teaching?**

**Where am I  
teaching?**

**Who am I  
teaching?**

**How will I  
facilitate  
learning?**

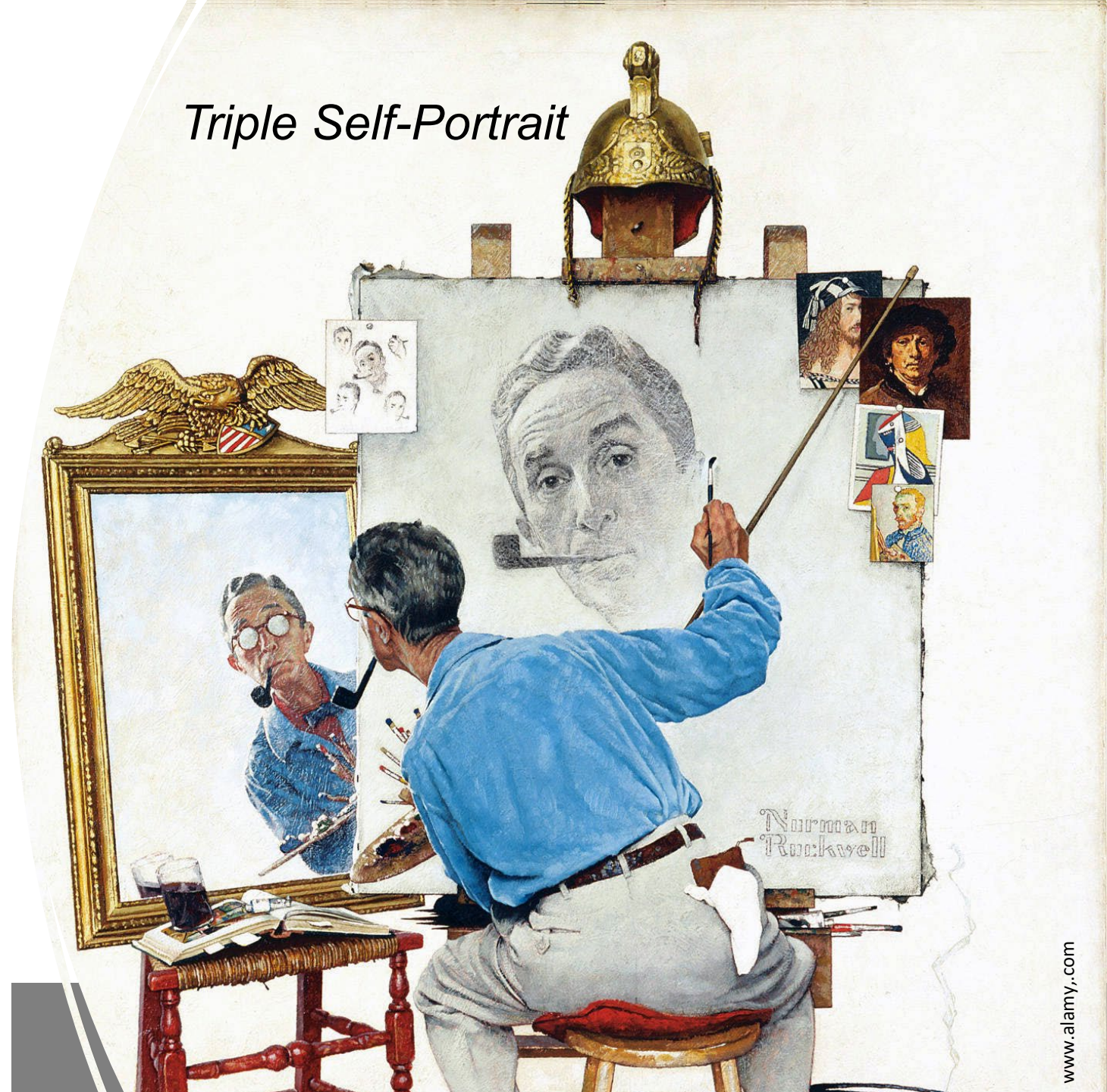
**How will I  
know how  
I've done?**

**How will I  
know what's  
understood?**

## *Triple Self-Portrait*

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*First,  
take a look at yourself*





# Reflection



### **"One-minute" paper worksheet**

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Lecture title: \_\_\_\_\_

Directions: Take a moment to think about the lecture you have just attended,  
and then answer the following questions.

1. What was the most important thing you learned in today's lecture?

\_\_\_\_\_

2. What question remains uppermost in your mind at the end of today's lecture?

\_\_\_\_\_

3. What was the "muddiest point" in today's lecture?

\_\_\_\_\_

WEB PAPER

# Peer review: An effective approach to cultivating lecturing virtuosity

PETER MCLEOD, YVONNE STEINERT, RADAN CAPEK, COLIN CHALK, JAMES BRAWER, VALERIE RUHE  
& BONNIE BARNETT

McGill University, Canada



## Receiving feedback *Developing a Peer Assessment of Lecturing Instrument: Lessons Learned.*

Newman L, Lown B, Jones R, Johansson A,  
Schwartzstein R. Academic Medicine. August  
2019; 94(8):1111–1116.

cultivating lecturing virtuosity



Collect good questions

# *Key Steps for Effective Lecturing and Enhanced Learning*

1. Know your audience & attend to logistical details of in person as well as web-based teaching
2. Begin at the end
3. Prepare thoroughly & practice<sup>x3</sup>



# *Key Steps for Effective Lecturing and Enhanced Learning*

4. Employ multimedia research findings and insights from cognitive psychology to enhance learning
5. Engage teaching as a performing art
6. Get feedback from self-reflection, the audience and peers



# *Key Steps for Effective Lecturing and Enhanced Learning*

7. Use Q&A as integral part of the lecture and its revision
8. Summarize the key points of your presentation
9. Finish on a high note
10. *Never* give the same talk twice



*Be of two minds...*



# BCH Academy for Teaching, Educational Innovation & Scholarship

## *Effective Lecturing/ Enhanced Learning*

(How to Give a Stellar  
Presentation to Your Learners)  
Charles Hatem, MD

[chatem@mah.harvard.edu](mailto:chatem@mah.harvard.edu)

12/06/2022

