



Knowledge is power

Absolute power corrupts absolutely



- The main reason why knowledge is power, is because knowledge is not distributed equally.
- The more knowledge we have, the more we can use this to our advantage over our peers.
- An advantage over our peers puts us in a place of power.

# Science and Religion

Why talk about this in Geology class?

- This is a prevalent (and HUGE) topic across America. It shapes many outcomes and decisions across our nation.
- Most schools don't talk about religion or require religion classes apart from an introduction to it in history class (despite how enormously influential religion is on human existence)
- Most schools do require science classes
- So if we need to talk about this, it is going to have to come in a science class. (or maybe an anthropology or sociology class)

Science and Religion

**BUT YOU CAN'T TALK ABOUT THIS  
AT A PUBLIC SCHOOL!**

**AND THIS IS A SCIENCE CLASS!**

# Science and Religion

Why talk about this in Geology class?

- This is a prevalent (and HUGE) topic across America. It shapes many outcomes and decisions across our nation. It's a topic in our world too
  - It will continue to be a big topic
  - People you interact with

# Science and Religion

Why talk about this in Geology class?

- Most schools don't talk about religion or require religion classes apart from an introduction to it in history class (despite how enormously influential religion is on human social structures and rituals)

# Science and Religion

- Most schools do require science classes
- So if we need to talk about this, it is going to have to come in a science class. (or maybe an anthropology or sociology class)



# Geology / Paleontology

- Geology, paleontology and evolutionary biology bump heads with a couple religious groups
- Real changes in America and abroad are happening from these changes (Turkey no longer teaches evolution as of this school year)



# My whole class is about looking and thinking.

- Everybody who is in this room is capable of looking and thinking. That's my only agenda for this part.
- I will be trying my very best to present everything in this part of the lecture with no skew towards any choice of religion. Towards any choice of policy. Towards anything except leveling the knowledge plane, and getting everyone to look and think.

# If you want to add something

- Please remember that we are all people in this room.
- We all have feelings, beliefs, thoughts, dreams, etc.
- We also are allowed to think different things.
- (We can use the metric system, or we can use the English system, both is ok as long as the math behind it is correct.)



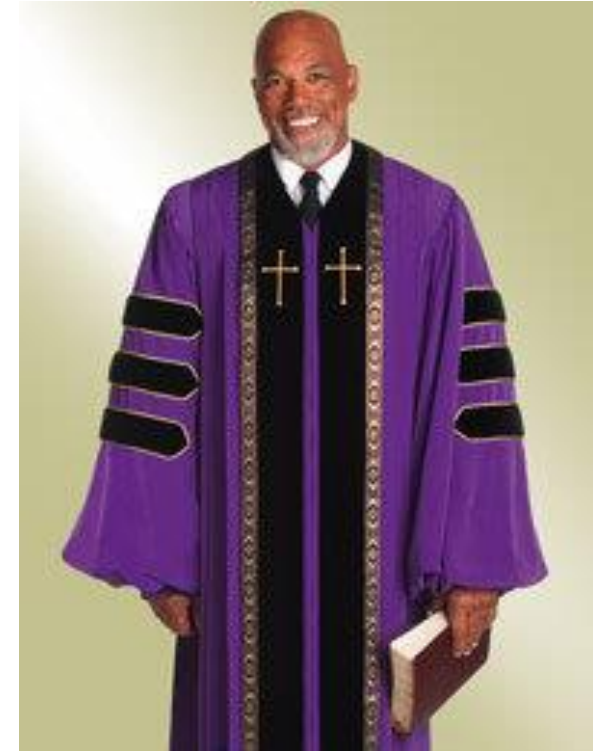
- People think in different ways.
- Thinking in a different way does not automatically make someone stupid.



- Seeing/hearing different evidence may bring someone to a different idea.
- Even with the same evidence, valuing different aspects of life differently will bring people to different ideas. (liking money more than cats is ok, liking cats more than money is also ok)



# Science and Religion have a long intertwined history



# Science

- Specific thinking structure
- Term first defined in 1834
- 1864 people tried to promote science as “free from dogmas”  
The main goal of this was to exclude clergymen from practicing science. (cut down on the competition!)
- Cognitive content, rituals, social structures

# Religion

- Specific thinking structure
- Cognitive content, rituals, social structures



# Science and Religion may not be the best terms.

- Kelly Clark (2014) argues that we can only sensibly inquire into the relationship between a widely accepted claim of science (such as quantum mechanics or findings in neuroscience) and a specific claim of a particular religion (such as Islamic understandings of divine providence or Buddhist views of the no-self)



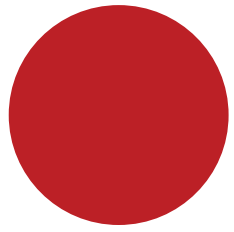
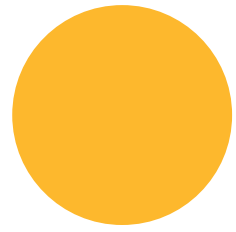
# Learn more: Wikipedia, and link below

- <https://plato.stanford.edu/entries/religion-science/#WhatScieWhatReli>

### 3 Main views we can take about science and religion

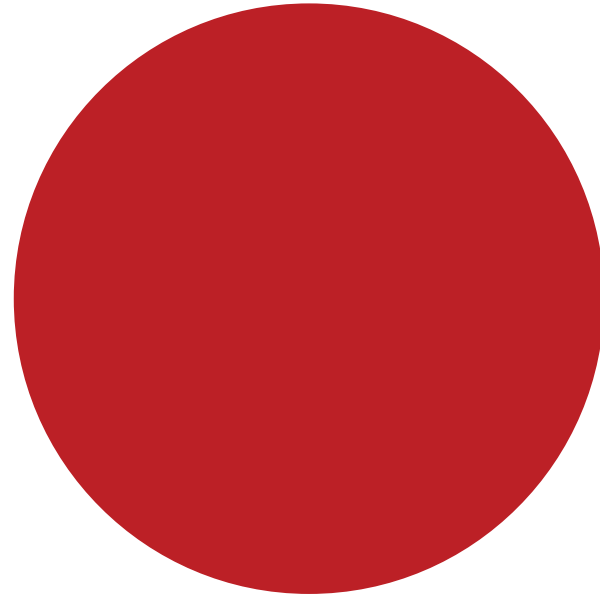
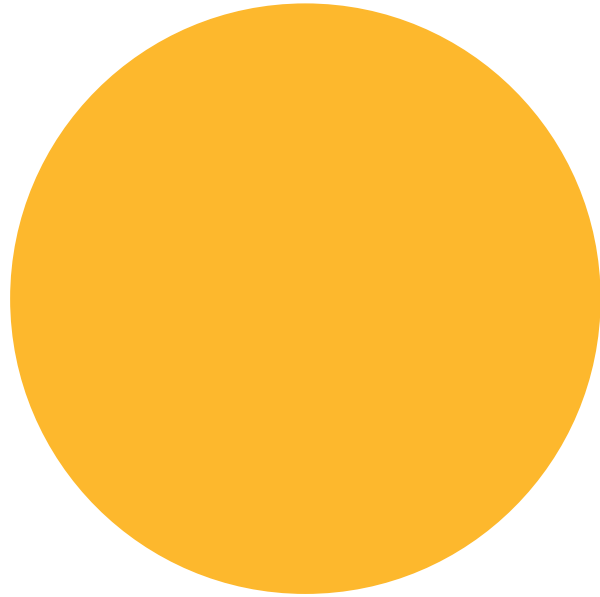
- the independence view (no overlap between science and religion)
- the contact view (some overlap between the fields)
  - Dialogue
  - Integration
- The union of the domains of science and religion

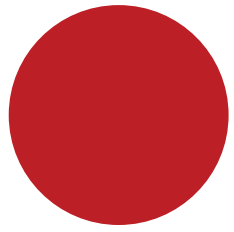
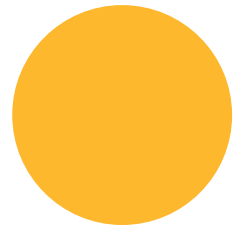
Toolbox for thinking about this:



# Independence: Science, Religion

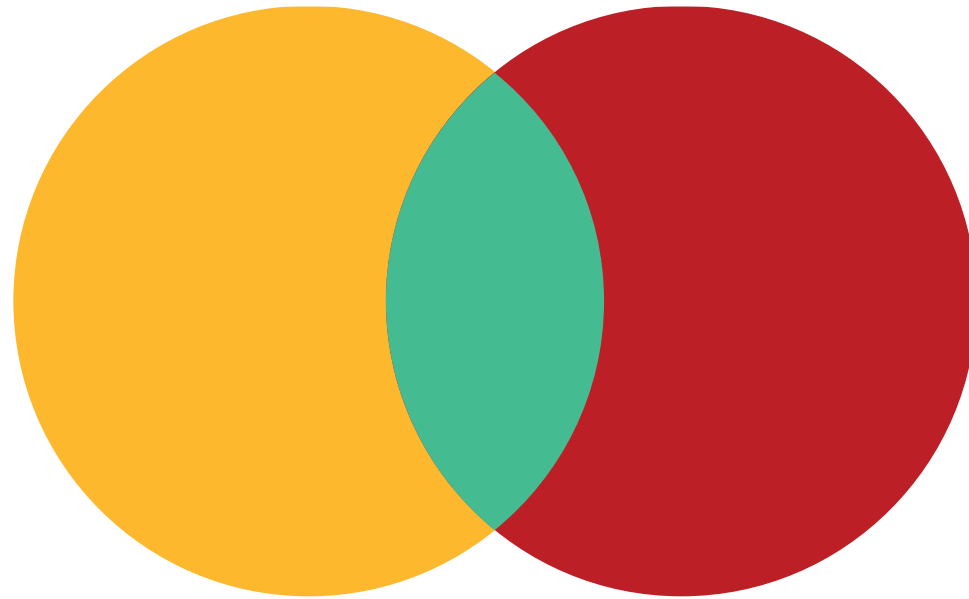
- The independence model holds that science and religion explore separate domains that ask distinct questions.





# Independence: Science, Religion

- Stephen Jay Gould developed an influential independence model with his NOMA principle (“Non-Overlapping Magisteria”):



# Independence: Science, Religion

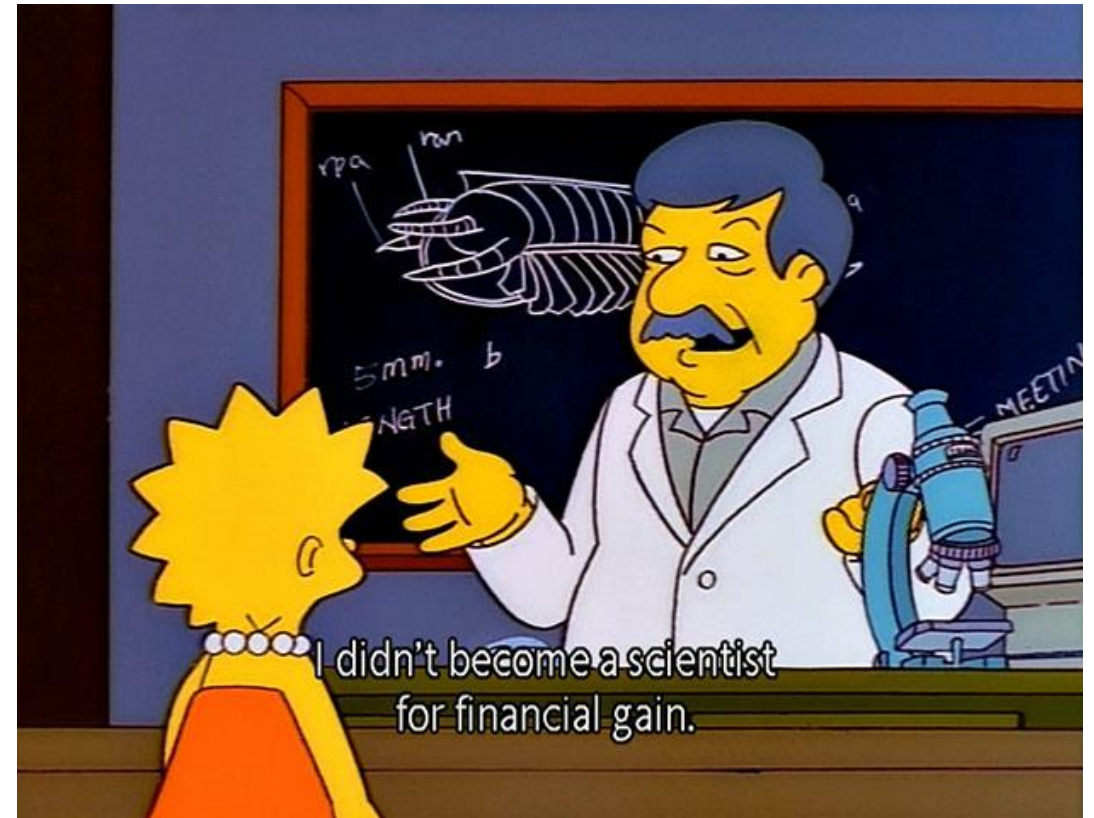
- Stephen Jay Gould developed an influential independence model with his NOMA principle (“Non-Overlapping Magisteria”):



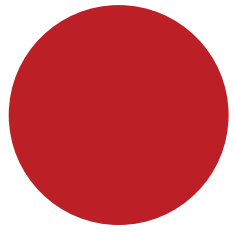
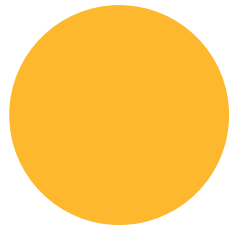


# Independence: Science, Religion

- Stephen Jay Gould developed an influential independence model with his NOMA principle (“Non-Overlapping Magisteria”):







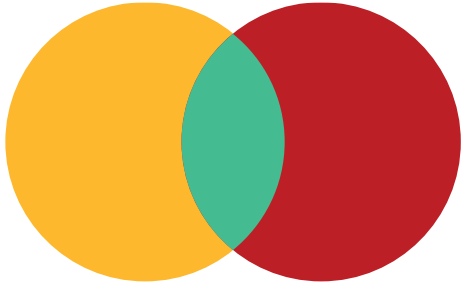
# Independence: Science, Religion

- Ignores the social structures and rituals of both disciplines
- Inhibits religions ability to justify its claims, Such as:  
(Be good to your neighbor because it pleases the creator)



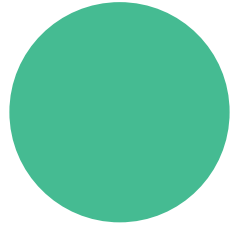
# Dialogue: Science, Religion

- Separate domains which can talk between each other, sharing ideas and methods of thinking.
- Example of dialogue: early scientists believed in orderly creation (intelligent design) which meant that the laws of the universe were reasonable, and could be systematically interpreted and deduced.
- Dialogue not often present in recent times.
- Collaboration/exchange between fields challenging due to the separation of institutions.
- Exchange also challenging due to globalization of religions/sciences



# Integration: Science + Religion

- The two fields can both encompass each other to some degree.
- Difficult to please two masters
- Adding in connections which neither field would have independently identified.



# Union of domains: Science vs. Religion (an old idea)

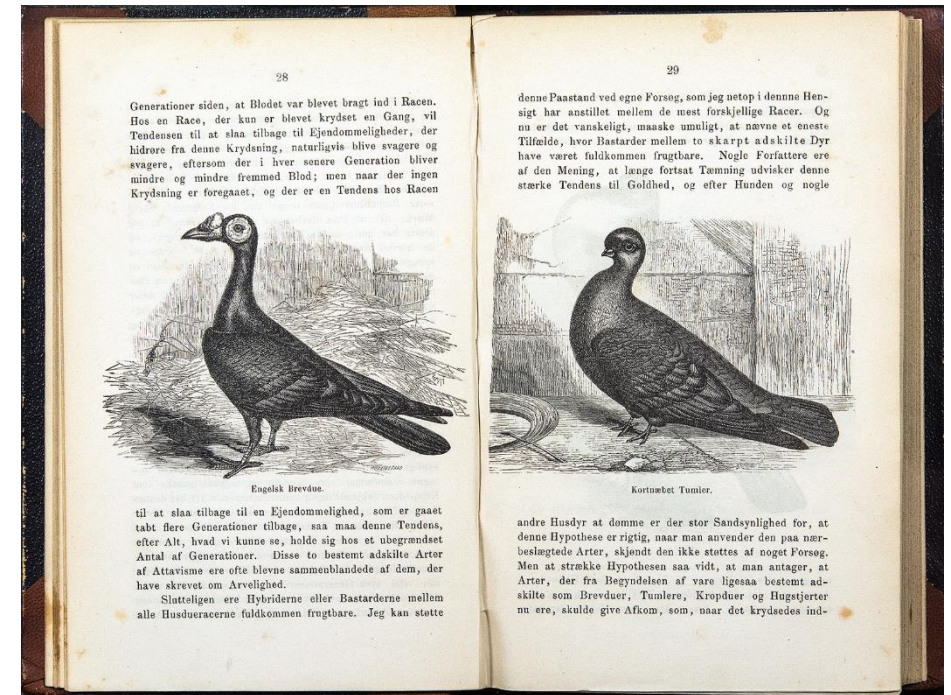
- *History of the Conflict between Religion and Science* by John Draper (1874)
- *A History of the Warfare of Science with Theology in Christendom* White (1896)
- The vast majority of authors in the science and religion field is critical of the conflict model and believes it is based on a shallow and partisan reading of the historical record
- Loved my the media and by extremist of science and religion

# BOTH fields have a big problem

- They are complex.
- They are huge.
- They require great thought to understand.
- Its very tempting to think that the simplified view is the complete view.
- For example Geology 1 presents a simple easier to understand view of the world and how it works. The geology major takes these fields and has a class on each of them... more details but just moving from very simplified to simplified (without the very in front)

# Both fields have long lineages of thought

- So much work has been done thinking about science and religion.
- These long lineages just add to the complexity.
- To progress thought in any of these fields, you have to grasp this extra context on top of the material.
- Majority of scholars specialize



# Its also really tempting to stay on the surface

- James Ussher (1581–1656) used the Bible to date the beginning of creation at 4004 BCE
- Theologians long before Ussher already offered alternative, non-literalist readings of the biblical materials (Augustine 416 AD)
- Classical work on the strength of the upper mantle indicated it was really hard (1960-1980s).
- Modern work by some friends of mine used new tools and retested everything to learn its actually much softer than we thought (2017).



# Science and Politics: People seeking power know all this all too well

- Knowledge is power... All political parties are extremely skilled at using knowledge of religion and science to obtain power.
- They cherry pick facts to gain the confidence of their audiences.
- They focus on issues which evoke emotional responses.
- They assume (and usually get away with it) that their supports will not fact check and raise the issue.
- They may start with noble intentions, they may finish with noble intentions; but during the political campaign they are out to win.



At its core Science is not designed to shift public opinion. Just to learn.

- Autism study
- Non GMO foods



**Don't label GMOs**



# Look and think

- Please dig beneath the surface as often as possible
- Always be willing to look for more information  
(there is a phone right in your pocket!)
- Its OK to think the same thing as everyone else
- Its OK to think differently than everyone else
- Just as long as you are thinking!