

Agnomancy

Conjuring Doubt, Confusion, Ignorance—and Belief

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“If all the evidence in the universe turned against creationism, I would be the first to admit it, but I would still be a creationist because that is what the Word of God seems to indicate”

- Kurt P. Wise
- PhD in geology from Harvard University
- Studied under Stephen Jay Gould

Conventional wisdom is that people hold false beliefs because they lack information

- “Ignorance” is merely absence of knowledge (the void before knowing)
- From Latin *ignorâre* (*in* = not, *gnoscerere* = to know, more specifically to be acquainted, recognize, perceive—as being present to the senses)
- Alternative term “nescience” (from Latin *scire* = to know, to understand, to grasp with the mind)

Difference between perceiving and comprehending is supplemented by passive or active ignorance

- “To ignore”
- Suggests a lack of attention or a deliberate turning away from facts
- A refusal to know or to allow knowledge to affect your thinking
- Clark Chinn and William Brewer 1993: how do learners deal with “anomalous data”—information that contradicts existing beliefs or conclusions?

Learners display seven strategies to cope with disconfirming evidence

- Ignoring, rejecting, excluding (irrelevant to the question or belief), delaying (not dealing with it now), reinterpreting, marginalizing...
- Only *one* of the seven reactions is relinquishing prior false knowledge/belief
- Rather, learners “typically resist giving up their pre-instructional beliefs. Instead of abandoning or modifying their pre-instructional beliefs in the face of new, conflicting data and ideas, students **often staunchly maintain the old ideas** and reject or distort the new ideas”

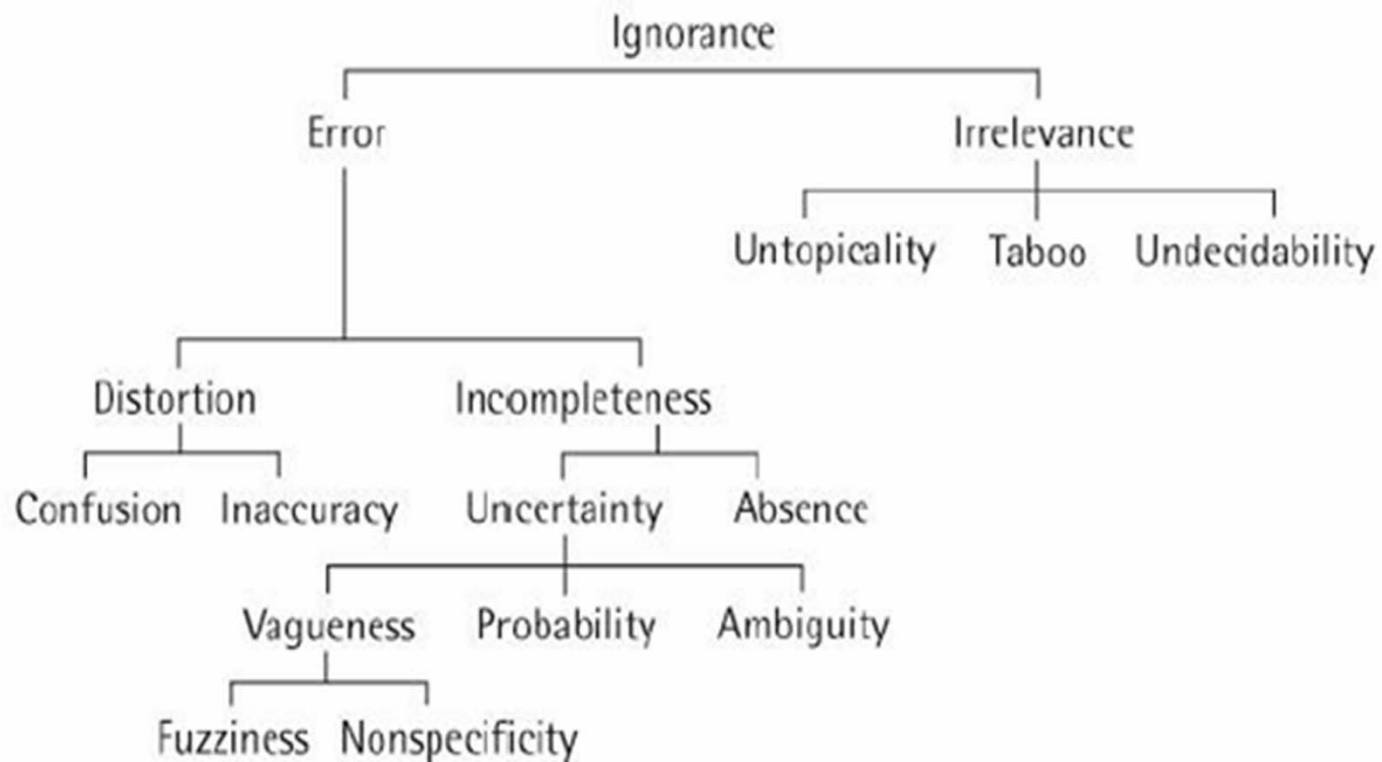
Ignorance and false belief are not mere absence of knowledge but are often actively maintained—and actively created and fostered

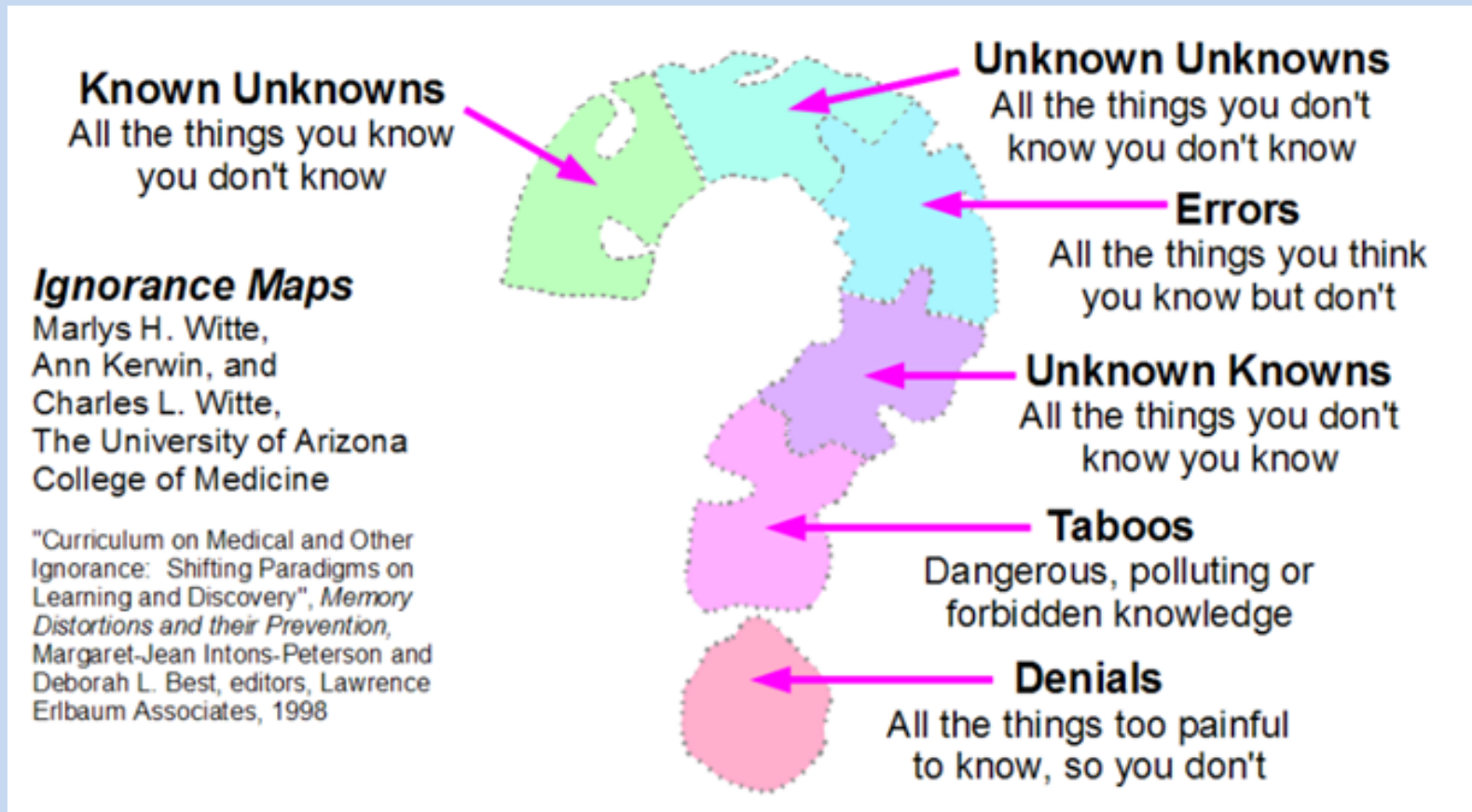
He must be very ignorant, for he answers every question he is asked--
Voltaire

- James Frederick Ferrier (1808-64) noticed that lack-of-knowledge needs to be studied along with knowledge (epistemology)
- **agnoiology**
- Michael Smithson 1989 *Ignorance and Uncertainty: Emerging Paradigms*
- Robert Proctor and Londa Schiebinger 2008 ***Agnotology: The Making and Unmaking of Ignorance***

Smithson's taxonomy of ignorance or "unknowns"

Different kinds of unknowns (after Smithson, 1989):





- Proctor and Schiebinger: ignorance “overlaps in myriad ways with—as it is generated by—secrecy, stupidity, apathy, censorship, disinformation, **faith**, and forgetfulness”

Agnotology: The Cultural Production of Ignorance

October 7th and 8th, 2005
9 am – 5:30 pm

Levinthal Hall, Stanford Humanities Center
424 Santa Teresa Street
Stanford University



The workshop will explore a new theoretical perspective and methodology —agnotology, the cultural production of ignorance— in interdisciplinary science studies. Workshop participants will explore how ignorance is produced or maintained in diverse settings, through (for example) media neglect, corporate or governmental secrecy and suppression, document destruction, and myriad forms of inherent or avoidable culturological selectivity, inattention, and forgetfulness. The point is to develop a taxonomy of understandings and uses of ignorance, but also tools for understanding how and why diverse forms of knowledge do not or did not "come to be" or are delayed or neglected at different points in history.

Organizers: Londa Schiebinger, Barbara D. Finberg Director, IRWG, and Professor of History of Science, Stanford University and Robert N. Proctor, Professor of History of Science, Stanford University

Agnotology is the study of **agnomancy**

- A-gnosis-mancy (no—knowledge—divination/magic/conjuring)
- The more or less intentional and strategic creation and perpetuation of non-knowing and/or false knowing
- Includes many factors and tactics like exploiting cognitive bias, secrecy, ambiguity, uncertainty, resistance, denial and suppression, counter-knowledge, lying, conspiracy theory, framing, forgetting, and co-opting or corrupting language

Without using the term, agnomancy has been a major subject of attention for a decade

It is the business of rulers of the city, if it is anybody's, to tell lies, deceiving both its enemies and its own citizens for the benefit of the city; and no one else must touch this privilege—Plato

- David Michaels *Doubt is Their Product: How Industry's Assault on Science Threatens Your Health* 2008
- Phil Mirowski *Never Let a Serious Crisis Go to Waste* 2008
- Naomi Oreskes and Erik Conway *Merchants of Doubt: How a Handful of Scientists Obscured the Truth about Issues from Tobacco to Global Warming* 2010
- Gerald Markowitz and David Rosner *Deceit and Denial: The Deadly Politics of Industrial Pollution* 2013
- Shannon Sullivan and Nancy Tuana *Race and Epistemologies of Ignorance* 2007

So what have we learned?

- Ignorance (not-knowing and wrong-knowing) is not a passive absence but a dynamic process and social construction
- Non-knowers are *not a blank slate*
- There are many kinds of ignorance—not all bad
- **Positive ignorance** = when not-knowing is beneficial to judgment
- e.g. “blind justice” or “double blind” experimental method
- Science proceeds on the basis of its own ignorance (“specified ignorance”)

Not-knowing may also be socially appropriate

- Some kinds of knowledge are impolite (therefore indirect speech, hedging, privacy)
- Some kinds of knowledge are the prerogative of certain kinds of people or of specific social roles (e.g. expert knowledge, distributed knowledge, secrets)
- Other kinds of knowledge are simply impossible (ontological ignorance = things that are unknowable in principle), because of unavailability, choice, indeterminacy/chance, or chaos

Then there is bad ignorance, deliberate ignorance, or “guerilla ignorance”

- Attack the source of knowledge
- 1. Claim that there is a lack of scientific consensus
- 2. Challenge the quality or truth of the facts (“fake news”)
- 3. Stress that because they were wrong in the past, they may be wrong now
- 4. Exaggerate disagreement or inconclusiveness on small matters while ignoring agreement or conclusiveness on big matters
- 5. Conduct and offer your own “research” by your own “experts”—that is, offer “alternative facts”

- 6. Accuse bearers of facts of bias (“liberal media,” self-interested scientists)
- 7. Repeat false claims over and over (fluency and confirmation bias)
- 8. Establish false equivalencies (e.g. insist that schools or media present “both sides” of the issue)
- 9. Don’t be afraid to lie—even big lies and conspiracy theories
- 10. Instill fear: people, especially conservatives, are more likely to accept false statements when they feel threatened

David Michaels: understand “that the public is in no position to distinguish good science from bad. Create doubt, uncertainty, and confusion. Throw mud at the [real] research under the assumption that some of it is bound to stick. And buy time, lots of time, in the bargain.”

- 11. Exploit “motivated reasoning” = people are inclined to accept the claims that they want to accept, because of emotion, interest, or identity

In 1923, as Warren G. Harding toured the country, a critic pointed out to him that Paul Revere had been captured by the British and never made the ride that Longfellow immortalized in verse. Unfazed, Harding told a crowd, “Suppose he did not; somebody made the ride and stirred the minutemen of the colonies to fight the battle of Lexington, which was the beginning of independence in the new Republic of America. I love the story of Paul Revere whether he rode or not.”

- 12. Use “destructive updating” of memory to overwrite old knowledge with new: Elizabeth Loftus showed that people can easily come to accept misinformation and adopt it faithfully as their own

Implications of sustained systematic agnomancy

The recipe for perpetual ignorance is: Be satisfied with your opinions and content with your knowledge.
—Elbert Hubbard

- Ignorance is not only emptiness of knowledge but sometimes fullness of non-knowledge (false claims, beliefs, and tools for “handling” disconfirming facts)
- Ignorance is resilient and self-repairing
- It has tactics, groups, institutions, and often political power to fend off challenges
- Non/false knowledge acts as “threshold concepts”

A threshold concept is the door or lens through which subsequent knowledge/facts must pass

- It is transformative: it changes how people see and understand later experience
- It is persistent and difficult to unlearn
- It is difficult for the possessor to see
- It is “troublesome”: it renders other knowledge alien, incomprehensible, overly complex, or inert
- As much a door, it is a boundary or barrier against knowledge: the potential learner remains “defended” and does not wish to change

Because ignorant people often already think that they know, they are susceptible to the Kruger-Dunning effect

- Justin Kruger and David Dunning 1999
- “People tend to hold overly favorable views of their abilities in many social and intellectual domains”
- They lack the cognitive skills to recognize their ignorance and to accurately evaluate new information
- They are “unskilled and unaware”

After decades of assault on knowledge, it is difficult to know what is true

- Many observers conclude that we live in a “post-truth” world
- OED: post-truth describes a situation “in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief”
- Lee McIntyre *Post-Truth* 2018: it not so much that truth does not exist as that facts are subordinate to our pre-existing point of view

People cannot distinguish between truth and “truthiness”

- “truth effect”
- Lisa Fazio et al. 2015: “Knowledge does not protect against illusory truth”
- Jean Baudrillard: “hyperreality”
- Virtual reality, Photoshop, bots, Fox News and talk radio, disinformation campaigns (e.g. Facebook)
- Some scholars like McIntyre blame postmodernism and sociology of science for death of truth

Very significantly, McIntyre never blames religion

- The literature on agnotology makes essentially no mention of religion
- Religion is the original agnomancer
- Tertullian: “What has Jerusalem to do with Athens, the Church with the Academy? After Jesus we have no need of speculation, after the Gospel no need of research”
- Martin Luther: “Reason is a whore, the greatest enemy that faith has; it never comes to the aid of spiritual things, but more frequently than not struggles against the divine Word”

Religion is both an effect and a cause of the erosion of knowledge

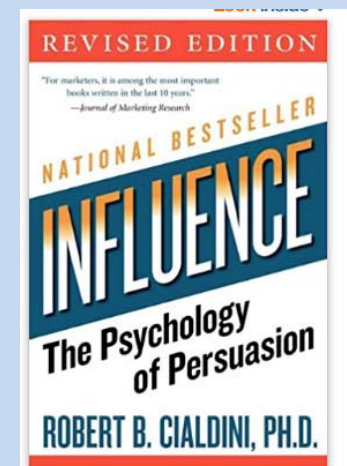
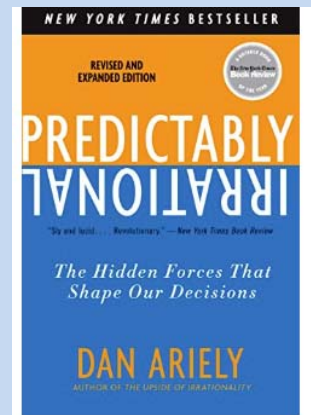
- Religion promotes alternative (false) knowledge, establishes institutions and authority, builds groups, and promises rewards and punishments
- Religion employs all of the tricks and tactics of agnomancy—long before corporations and governments existed
- Religion habituates minds to non-knowledge while defending minds against challenges to its non-knowledge

Lessons for secularists and freethinkers:

- Arguing and presenting facts is not the best way to (de)convert religious believers
- We should think of deconversion not as apologetics or debunking—and certainly not ridicule—but as learning and persuasion
- 1. We should take advantage of the latest research on learning theory, attitude change, and social movements
- 2. We should recognize that humans do not always make decisions based on facts and reason
- [“Trump trades on something psychologists and political scientists have known for years — that people don’t necessarily make decisions based on facts.” —Belluz and Resnick, Vox.com]

For example, “behavioral economics”

- Dan Ariely: humans are “predictably irrational”
- Scott Brophy: “Predictable Irrationality” (<https://www.youtube.com/watch?v=KFw5SPFtUnE>)
- 3. We should also use the best knowledge and practices of persuasion and influence—even marketing!
- e.g. Robert Cialdini *Influence: The Psychology of Persuasion*

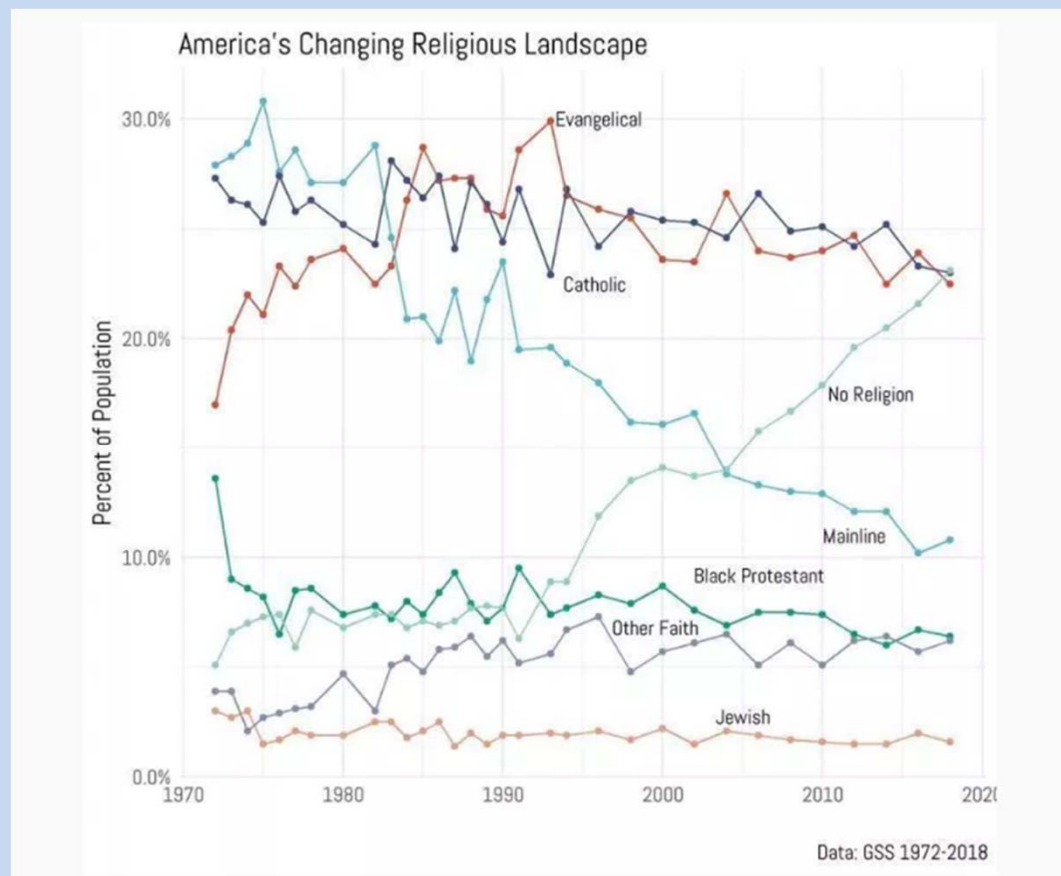


Cialdini's Six Principles of Persuasion

- Reciprocity—don't just take something away but give something
- Liking—before people want to be like you, they must like you
- Consistency—encourage action, give them small things to do, get them invested in future action, and above all avoid setting negative examples, such as statements that they will not want to back down from



- Consensus/social proof—make it appear like your position is already popular or increasing, offer positive testimonials and personal examples, and use (sparing) statistics



The final two are hardest for secularists to achieve

- Demonstrate authority, including qualifications, personal display, and center of attention
- Create a sense of urgency or scarcity—and propose clear and specific actions to take
- 4. Ideally, exercise political power
- 5. In the meantime, build institutions, organizations, and community



Secular Hub

The Secular Hub is a place to meet secular people for a broad range of activities that encourage learning, critical thinking, altruism, and fellowship. We are a chapter of the American Humanist Association (AHA). Support the Hub by joining or contributing to our Building Fund.

