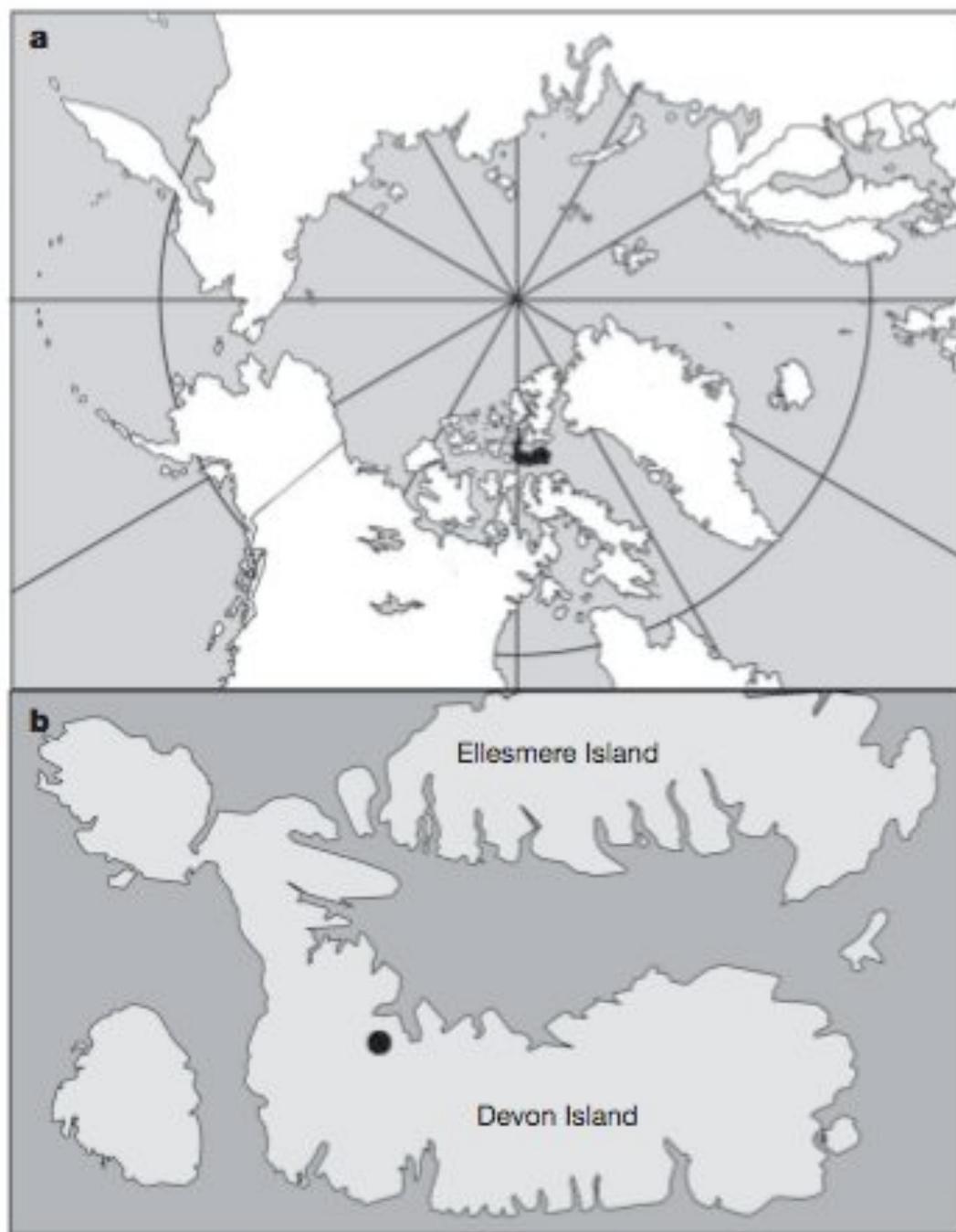
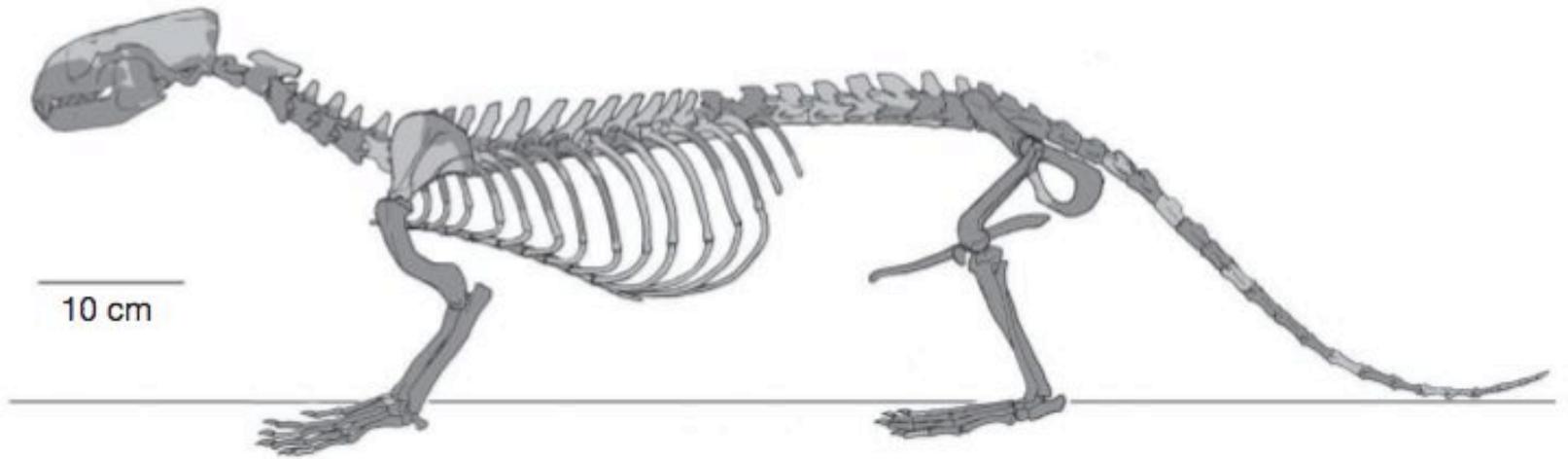


# Final Assignment

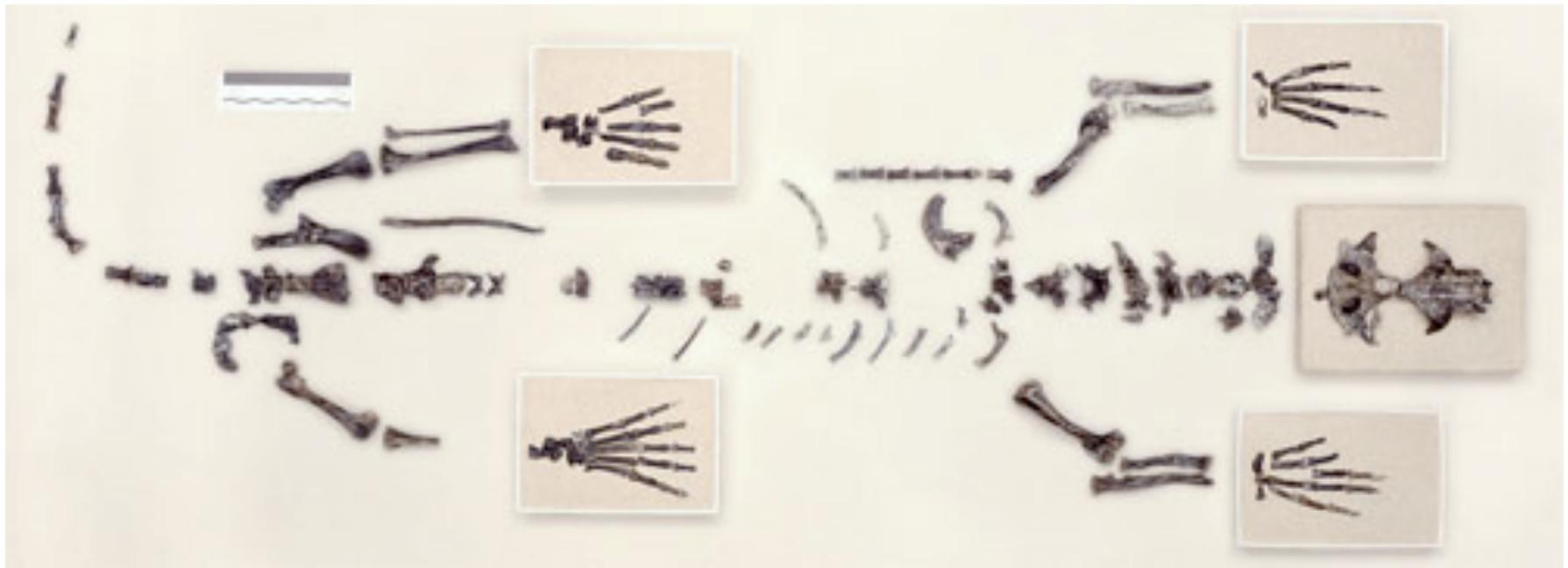
An easy 5%

- ▶ **Prompt:** What have you taken from this course that has changed the way you think about science, evolution and/or creationism? Why has that affected you?
- ▶ **Length:** Minimum of 500 words; maximum of 600; all must fit into one page, single-spaced. Word count at bottom.
- ▶ **Deadline:** Due at the beginning of the final exam. No late assignments will be accepted and no electronic submission.

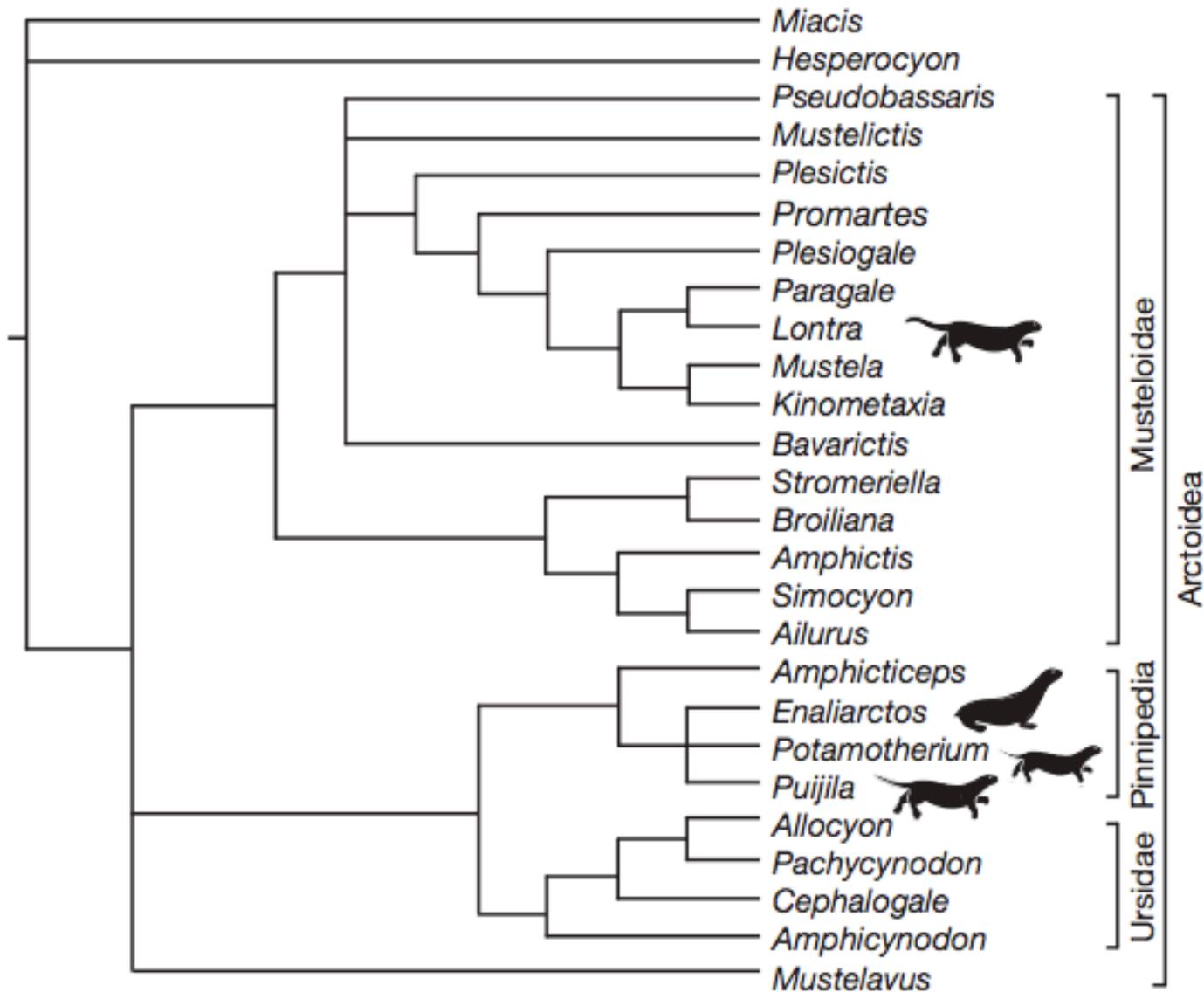




| ***Puijila darwini* skeleton (NUFV 405, holotype).** Reconstruction of skeleton showing preserved bones in dark grey.







**Figure 4 | Phylogenetic position of *Puijila* within Arctoidea.** Strict consensus cladogram of the eight most parsimonious trees. See Methods and Supplementary Information for additional details.

## LETTERS

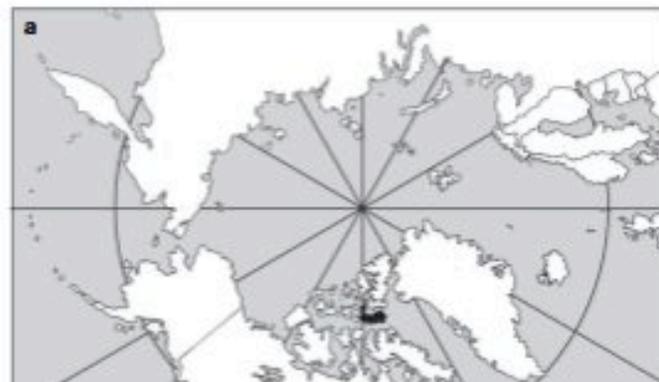
## A semi-aquatic Arctic mammalian carnivore from the Miocene epoch and origin of Pinnipedia

Natalia Rybczynski<sup>1</sup>, Mary R. Dawson<sup>2</sup> & Richard H. Tedford<sup>3</sup>

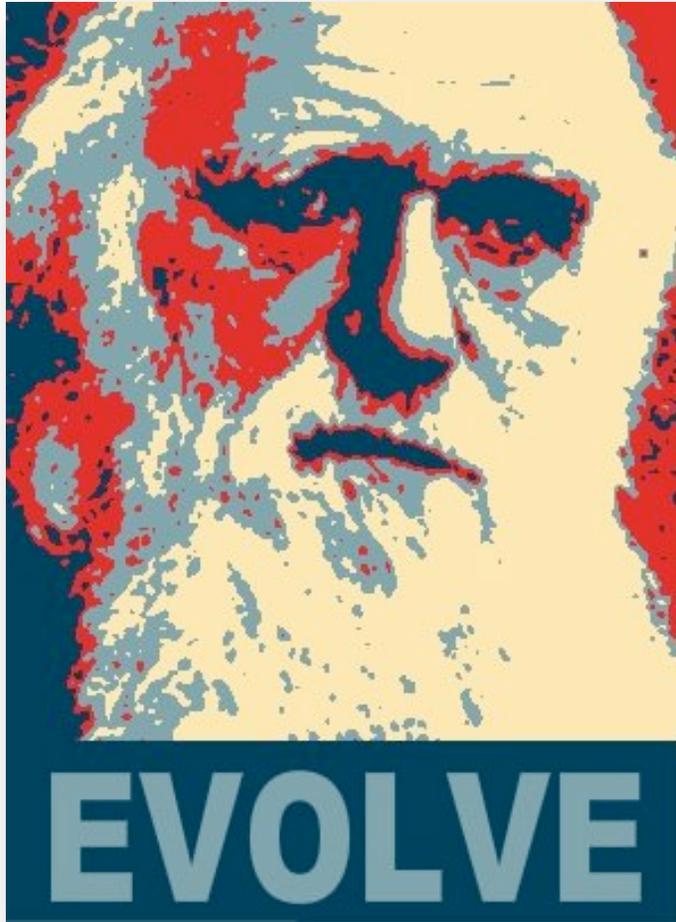
Modern pinnipeds (seals, sea lions and the walrus) are semi-aquatic, generally marine carnivores the limbs of which have been modified into flippers. Recent phylogenetic studies using morphological and molecular evidence support pinniped monophyly, and suggest a sister relationship with ursoids<sup>1,2</sup> (for example bears) or musteloids<sup>3-7</sup> (the clade that includes skunks, badgers, weasels and otters). Although the position of pinnipeds within modern carnivores appears moderately well resolved, fossil evidence of the morphological steps leading from a terrestrial ancestor to the modern marine forms has been weak or contentious. The earliest well-represented fossil pinniped is *Enaliarctos*, a marine form with flippers, which had appeared on the northwestern shores of North America by the early Miocene epoch<sup>8,9</sup>. Here we report the discovery of a nearly complete skeleton of a new semi-aquatic carnivore from an early Miocene lake deposit in Nunavut, Canada, that represents a morphological link in early pinniped evolution. The new taxon retains a long tail and the proportions of its fore- and hindlimbs are more similar to those of modern terrestrial carnivores than to modern pinnipeds. Morphological traits indicative of semi-aquatic adaptation include a forelimb with a prominent deltopectoral ridge on the humerus, a posterodorsally expanded scapula, a pelvis with relatively short ilium, a shortened femur and flattened phalanges, suggestive of webbing. The new fossil shows evidence of pinniped affinities and similarities to the early Oligocene *Amphicticeps* from Asia and the late Oligocene and Miocene *Potamotherium* from Europe. The discovery suggests that the evolution of pinnipeds included a freshwater transitional phase, and may support the hypothesis that the Arctic was an early centre of pinniped evolution.

Nunavut, Canada (Fig. 1). *Puijila* is a morphological intermediate in the land-to-sea transition of pinnipeds and provides new evidence concerning the evolution and biogeography of the earliest pinnipeds.

The Haughton Formation, located within the Haughton impact structure at 75° 22' N, 89° 40' W, consists of post-impact lake deposits that accumulated in the crater. The formation is up to 48 m thick, and is mainly within the western half of the impact crater. Fission-track and <sup>40</sup>Ar–<sup>39</sup>Ar furnace step-heating dating of the structure yielded an impact age between 24 and 21 Myr, that is, late Oligocene epoch to early Miocene epoch<sup>11</sup>, although another <sup>40</sup>Ar–<sup>39</sup>Ar analysis of the structure favoured a late Eocene age of 39 Myr (ref. 12). The previously reported vertebrate fauna from the lake deposits includes at least two taxa of freshwater teleost fishes, one bird and four mammalian taxa (shrew, rabbit, rhinoceros and small artiodactyl). An early Miocene (Aquitanian/late Arikarean) age for this fauna is



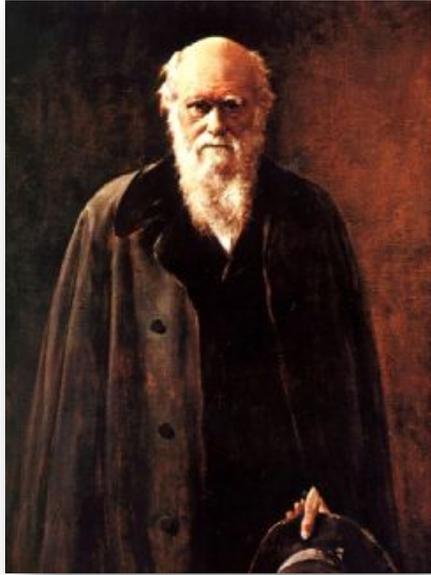
# Charles Darwin



“A strictly terrestrial animal, by occasionally hunting for food in shallow water, then in streams or lakes, might at last be converted into an animal so thoroughly aquatic as to brave the open ocean.”

(Origin, 6<sup>th</sup> Edn)





## One Long Argument

“it may be convenient to the reader to have the leading facts and inferences briefly recapitulated.”

# Question

Is evolution an unchallengeable orthodoxy within science?

# *Evolution*

Implications

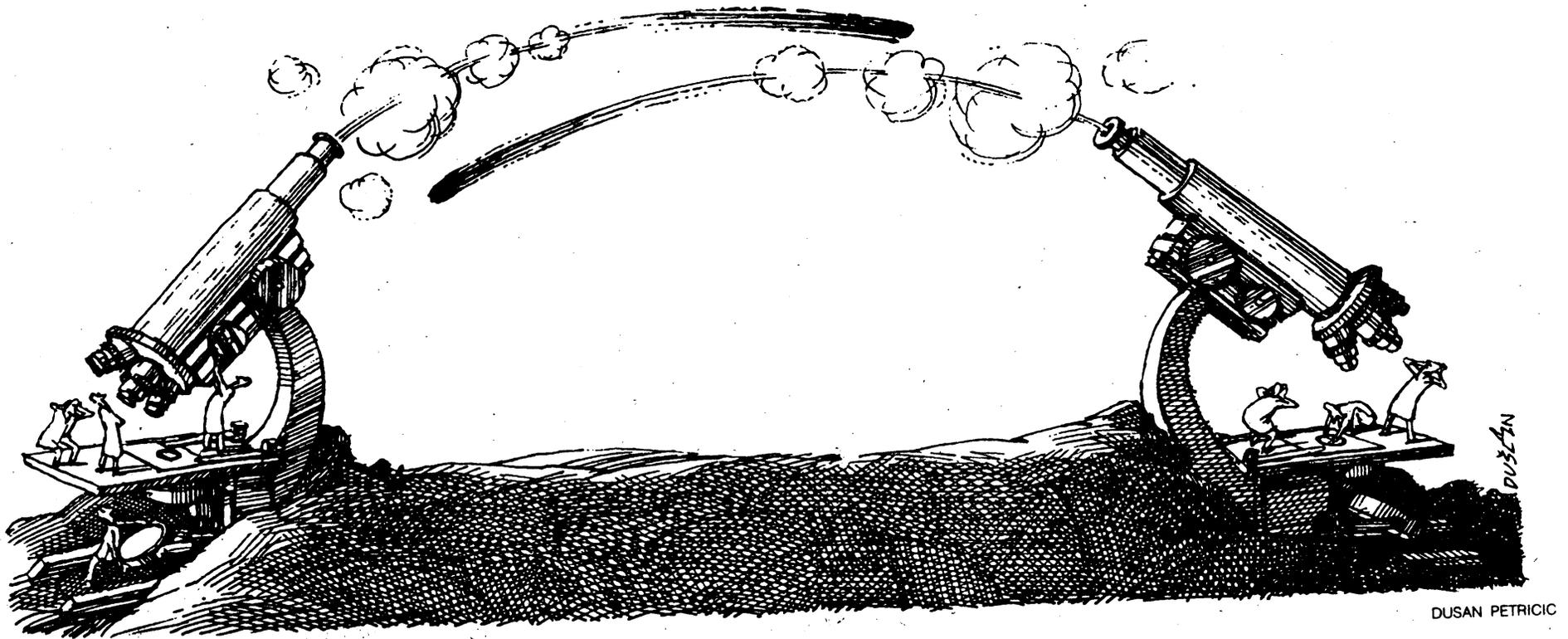
Mechanism

Pathway

Fact

# “Non-Darwinian” Textbook Science

- ▶ Mendelianism (1900)
- ▶ Cladistics (1950)
- ▶ Transposons (1950)
- ▶ Neutral mutation (1968)
- ▶ Endosymbiosis (1970)
- ▶ Punctuated Equilibrium (1973)
- ▶ Horizontal Gene Transfer (1977)

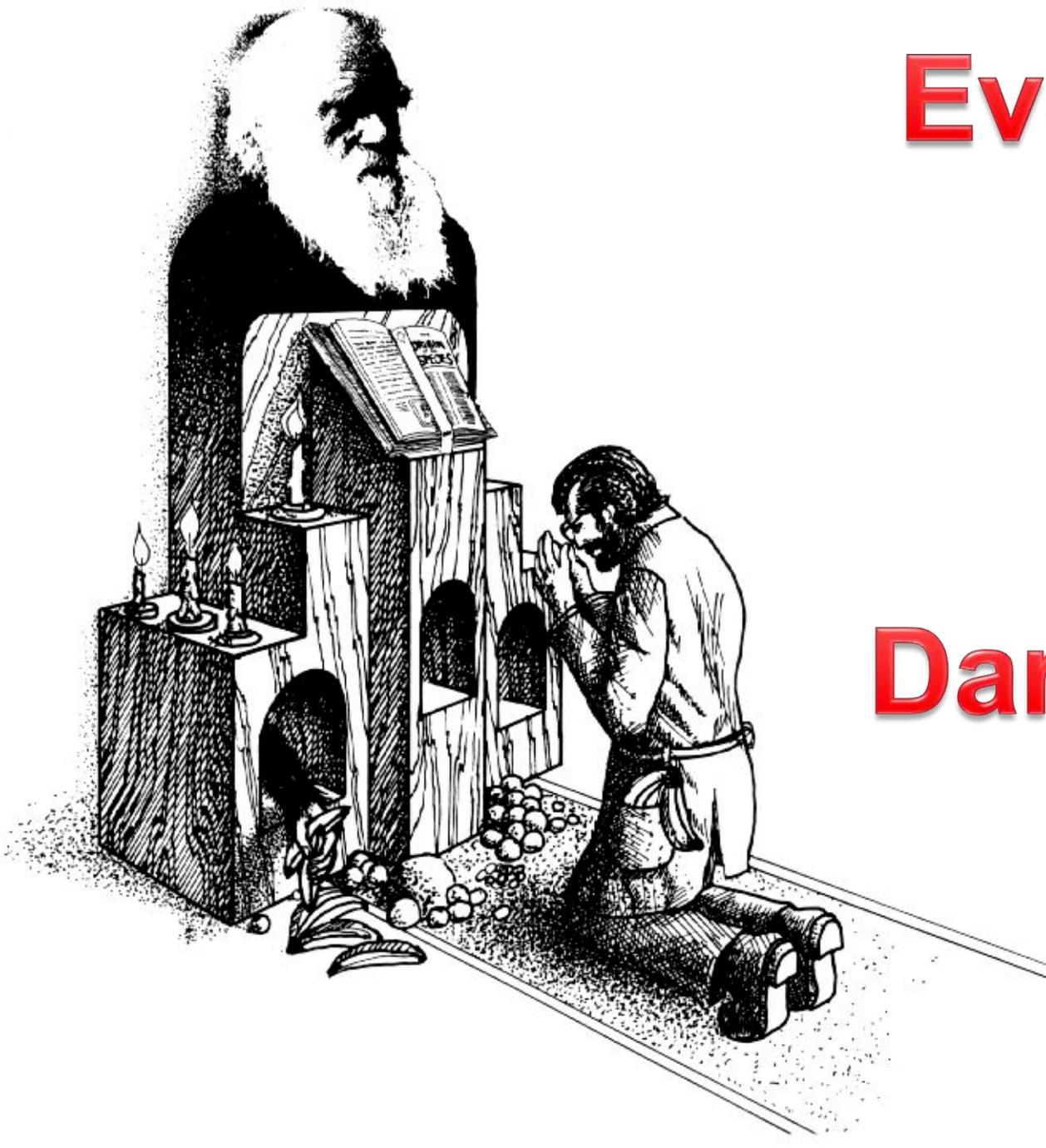


- ▶ neutralism versus selectionism in molecular evolution;
- ▶ adaptationism;
- ▶ group selection;
- ▶ punctuated equilibrium;
- ▶ The power of “evo-devo”;
- ▶ mass extinctions;
- ▶ sympatric speciation;
- ▶ sexual selection;
- ▶ the evolution of sex itself;
- ▶ evolutionary psychology;
- ▶ Darwinian medicine;
- ▶ selfish genetic elements

# Evolution

≠

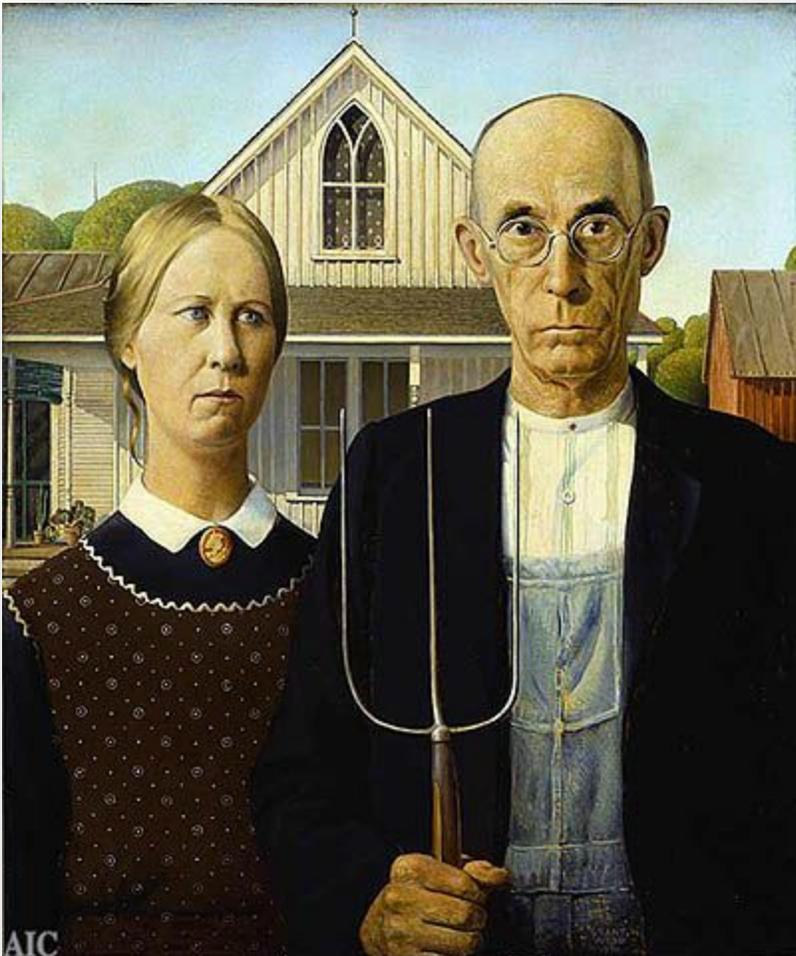
# Darwinism



# What have we learned ...

- ▶ The Scientific Revolution saw the acceptance of methodological naturalism among individuals who rejected philosophical naturalism.
- ▶ As scientific endeavors, both Biblical literalism and the design argument were effectively nullified in the Nineteenth century.
- ▶ There is no scientific support for the two major claims of YEC: that the Earth is young and that discontinuities in nature illuminate the *Genesis* “kinds”.
- ▶ American YEC arose out of cultural concerns regarding Modernism in all its manifestations. It received its death blow in *Edwards v. Aguillard* (1987) as YEC is clearly of religious intent and therefore is not admissible to science classes
- ▶ This led to the development of Intelligent Design (what the Discovery Institute has termed “a new science for a new century”)

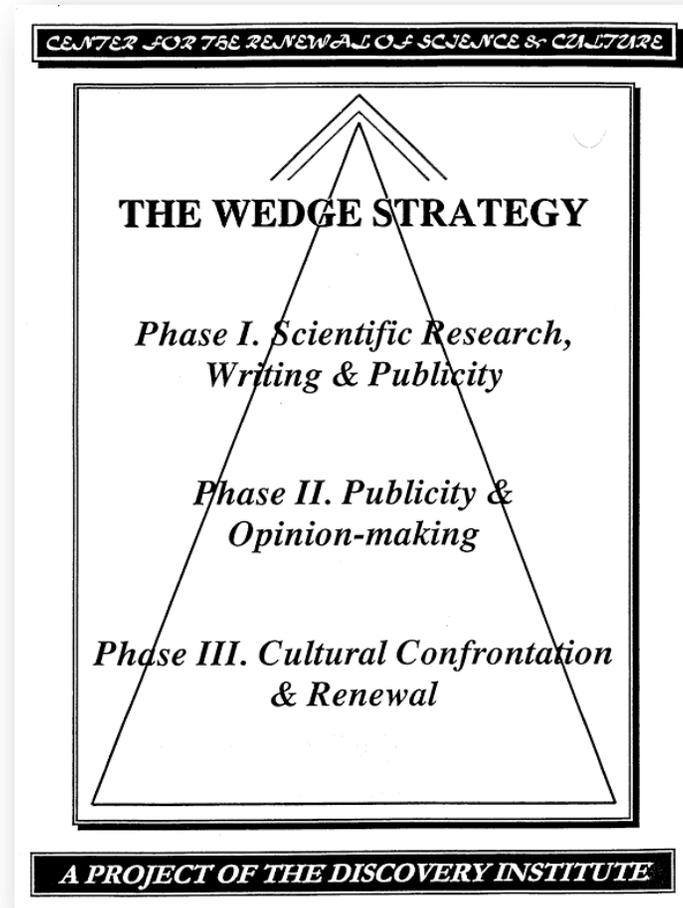
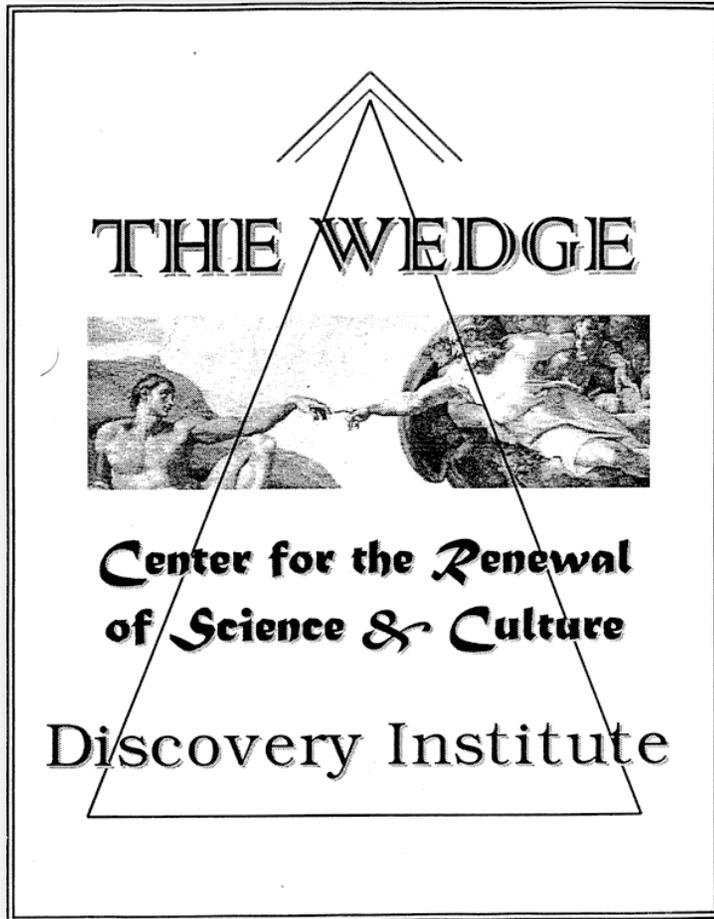
# 3 Prongs of Intelligent Design



- ❑ Life is complex and cannot be explained by naturalistic mechanisms. A scientific theory of design can explain the complexity
- ❑ Evolution as taught in public schools is fraudulent and leaves out evidence against evolution. This evidence should be taught.
- ❑ Naturalistic thinking has bad consequences



# The Wedge Document



**Intelligent Design**

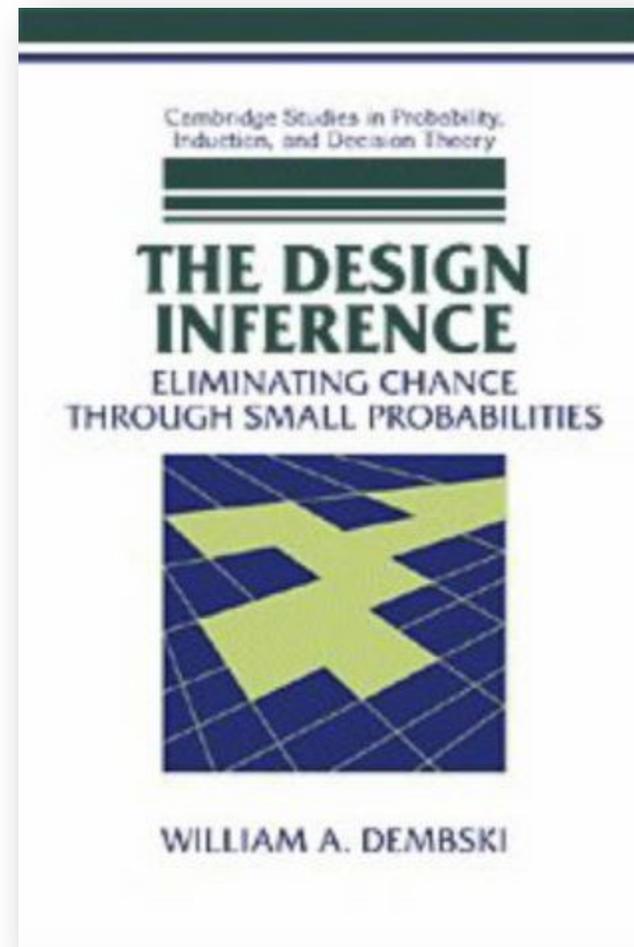
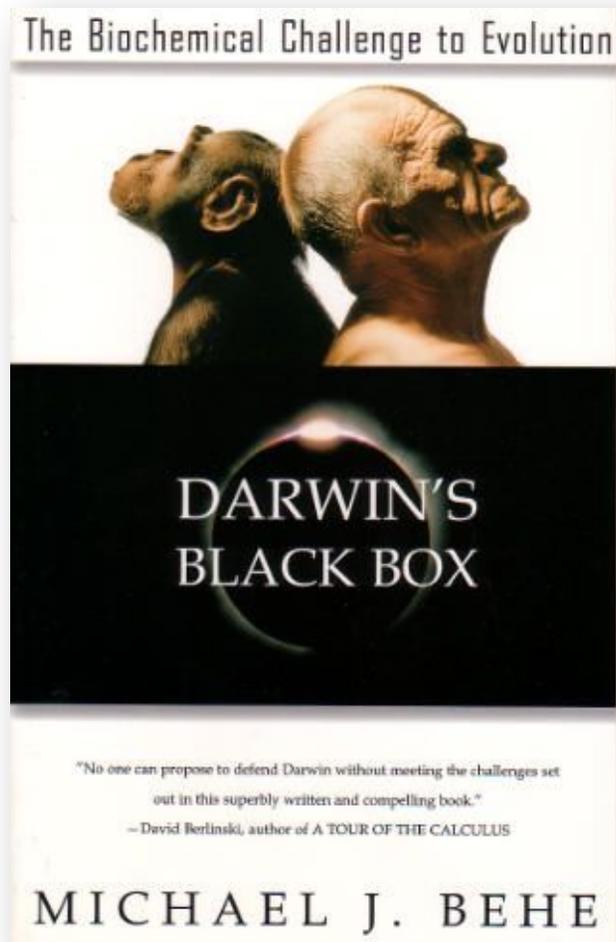
Implications

Identity

Mechanism

Detection

# Detection



# Mechanism



“ID is not a mechanistic theory, and it’s not ID’s task to match your pathetic level of detail in telling mechanistic stories. If ID is correct and an intelligence is responsible and indispensable for certain structures, then it makes no sense to try to ape your method of connecting the dots.”

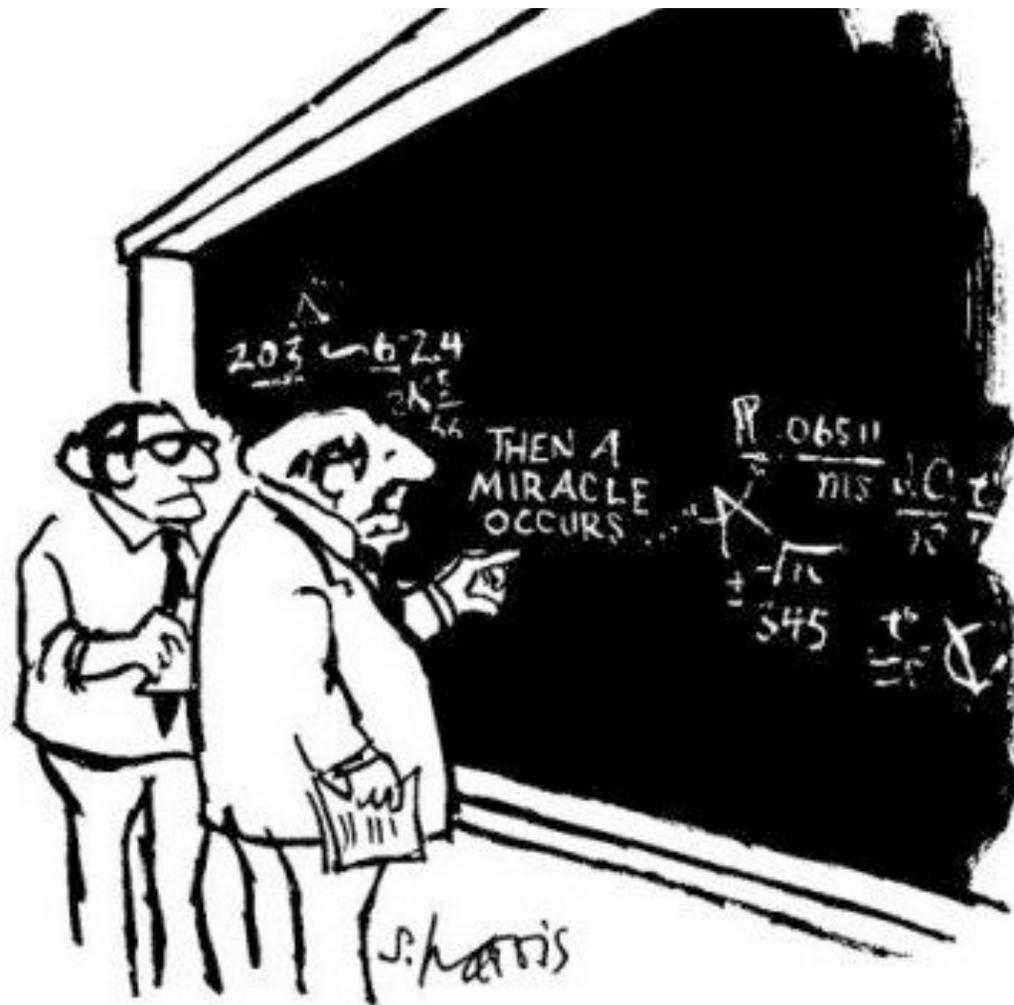
William Dembski, 2001

# Jonathan Wells



“I don't think I'm obligated to propose an alternate theory. I don't pretend to have an alternate theory that explains the history of life.”

**Why not?  
What does ID “explain” then?  
Is it science?**



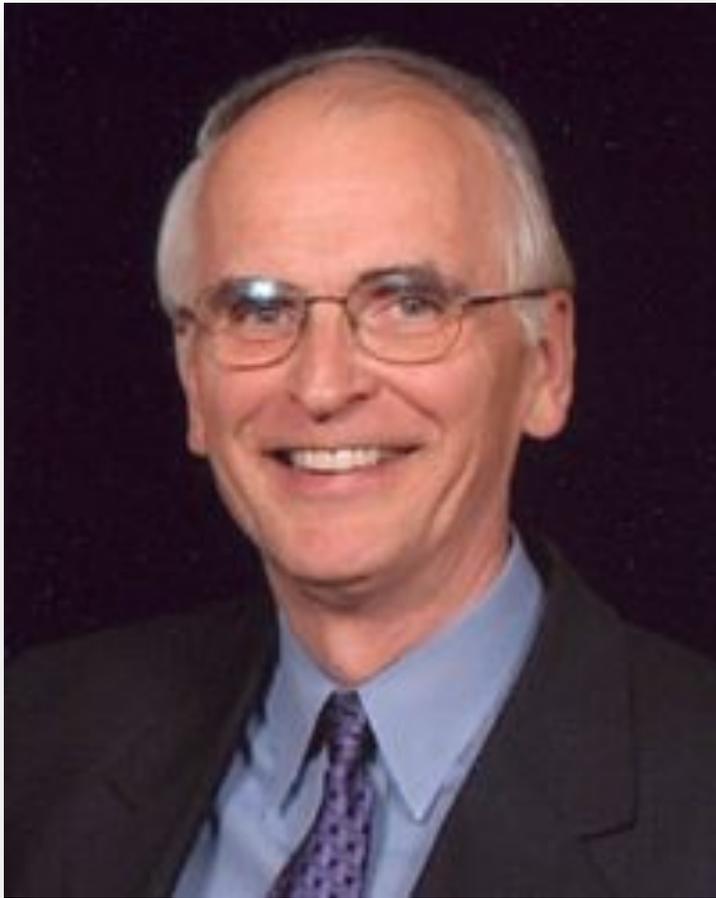
"I THINK YOU SHOULD BE MORE EXPLICIT HERE IN STEP TWO."

# *New York Times*

21<sup>st</sup> August 2005

“Since its founding in 1996, the [Center for Science and Culture] has spent 39% of its \$9.3 million [i.e. ~ \$3.6 million] on research, Dr. Meyer said, underwriting books or papers, or often just paying universities to release professors from some teaching responsibilities so that they can ponder intelligent design.”

# Bruce Chapman



“If I were to carry around Discovery fellows' **peer-reviewed science journal articles** on Darwinian theory and intelligent design I would need a suitcase, not a coat pocket.”

# CSC Fellows Playing the Game of Science

ID-relevant publications (1991 to 2009)

- ▶ Truth
- ▶ American Spectator
- ▶ Metaviews
- ▶ First Things
- ▶ Cosmic Pursuit
- ▶ Crisis
- ▶ Boston Review
- ▶ Forbes
- ▶ Commentary
- ▶ The Real Issue
- ▶ Origins & Design
- ▶ Intercollegiate Review
- ▶ Commercial Appeal
- ▶ Faith & Philosophy
- ▶ World
- ▶ Human Events
- ▶ Jubilee
- ▶ Touchstone
- ▶ New York Times
- ▶ Washington Times

- ▶ Philosophy of Science
- ▶ British Journal for the Philosophy of Science
- ▶ Princeton Theological Review
- ▶ Perspectives on Science & Christian Faith
- ▶ Biology & Philosophy
- ▶ Utah Law Review
- ▶ San Diego Law Review

**The “peer-reviewed science journal articles.”**

- Proceedings of the Biological Society of Washington
- Protein Science
- Rivista di Biologia

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# Simulating evolution by gene duplication of protein features that require multiple amino acid residues

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MICHAEL J. BEHE<sup>1</sup> AND DAVID W. SNOKE<sup>2</sup>

<sup>1</sup>Department of Biological Sciences, Lehigh University, Bethlehem, Pennsylvania 18015, USA

<sup>2</sup>Department of Physics and Astronomy, University of Pittsburgh, Pittsburgh, Pennsylvania 15260, USA

(RECEIVED April 8, 2004; FINAL REVISION June 17, 2004; ACCEPTED June 17, 2004)

Actually shows complex systems can evolve through natural selection, even when study is “fixed”.

absence of selection the population would be expected to contain one or more duplicated alleles coding for the feature, the time to fixation in the population hovers near the inverse of the point mutation rate, and varies sluggishly with the  $\lambda^{\text{th}}$  root of  $1/N$ , where  $\lambda$  is the number of nucleotide positions that must be mutated to produce the feature. At smaller population sizes, the time to fixation varies linearly with  $1/N$  and exceeds the inverse of the point mutation rate. We conclude that, in general, to be fixed in  $10^8$  generations, the production of novel protein features that require the participation of two or more amino acid residues simply by multiple point mutations in duplicated genes would entail population sizes of no less than  $10^9$ .

**Keywords:** gene duplication; point mutation; multiresidue feature; disulfide bonds; ligand binding sites

Jonathan Wells

*Do Centrioles Generate a Polar Ejection Force?*

---

A data-free paper whose hypothesis was quickly disproved.

*Abstract. A microtubule-dependent polar ejection force that pushes chromosomes away from spindle poles during prometaphase is observed in animal cells but not in the cells of higher plants. Elongating microtubules and kinesin-like motor molecules have been proposed as possible causes, but neither accounts for all the data. In the hypothesis proposed here a polar ejection force is generated by centrioles, which are found in animals but not in higher plants. Centrioles consist of nine microtubule triplets arranged like the blades of a tiny turbine. Instead of viewing centrioles through the spectacles of molecular reductionism and neo-Darwinism, this hypothesis assumes that they are holistically designed to be turbines. Orthogonally oriented centriolar turbines could generate oscillations in spindle microtubules that resemble the motion produced by a laboratory vortexer. The result would be a microtubule-mediated ejection force tending to move chromosomes away from the spindle axis and the poles. A rise in intracellular calcium at the onset of anaphase could regulate the polar ejection force by shutting down*

*Rivista di Biologia / Biology Forum* 98 (2005), pp. 71-96.

PROCEEDINGS OF THE BIOLOGICAL SOCIETY OF WASHINGTON  
117(2):213–239. 2004.

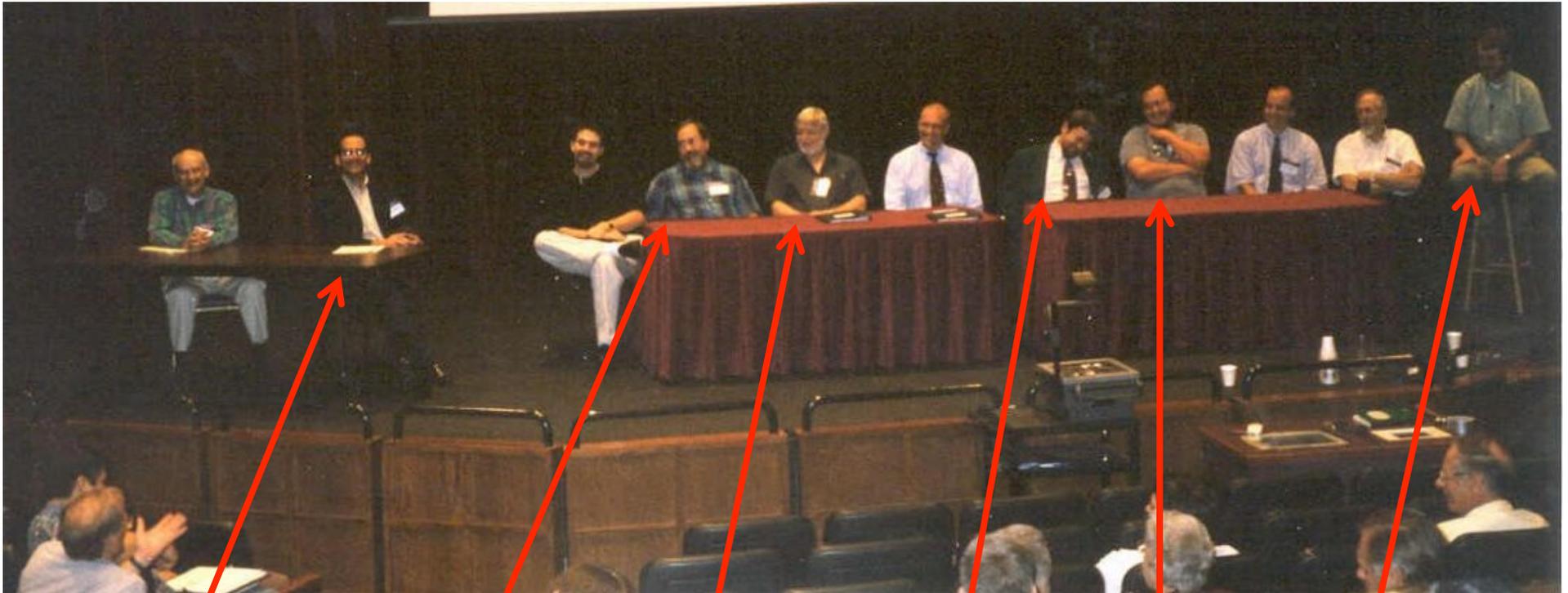
**The origin of biological information and the  
higher taxonomic categories**

Stephen C. Meyer

Palm Beach Atlantic University, 901 S. Flagler Dr., West Palm Beach, Florida 33401  
e-mail: [stevemeyer@discovery.org](mailto:stevemeyer@discovery.org)

A review article that was demonstrated to be erroneous in fact and interpretation and has been found to have misused the peer-review process.

# Baraminology 1999



Richard Sternberg

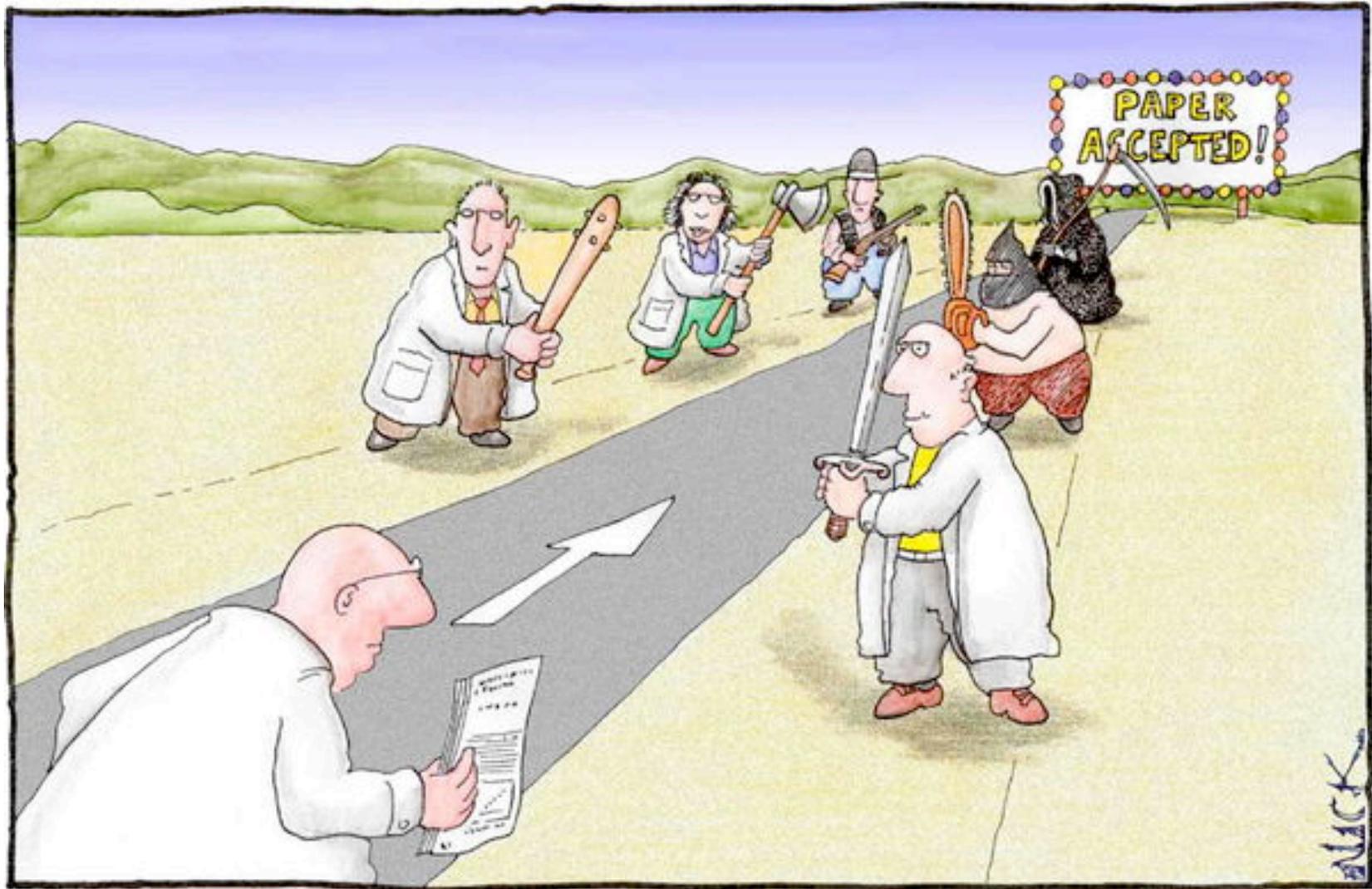
Jonathan Wells

Charles Thaxton

Kurt Wise

Paul Nelson

Todd Wood



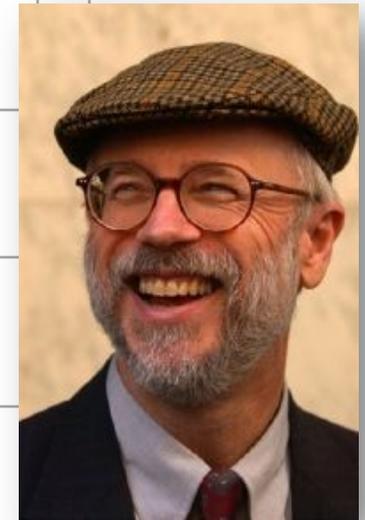
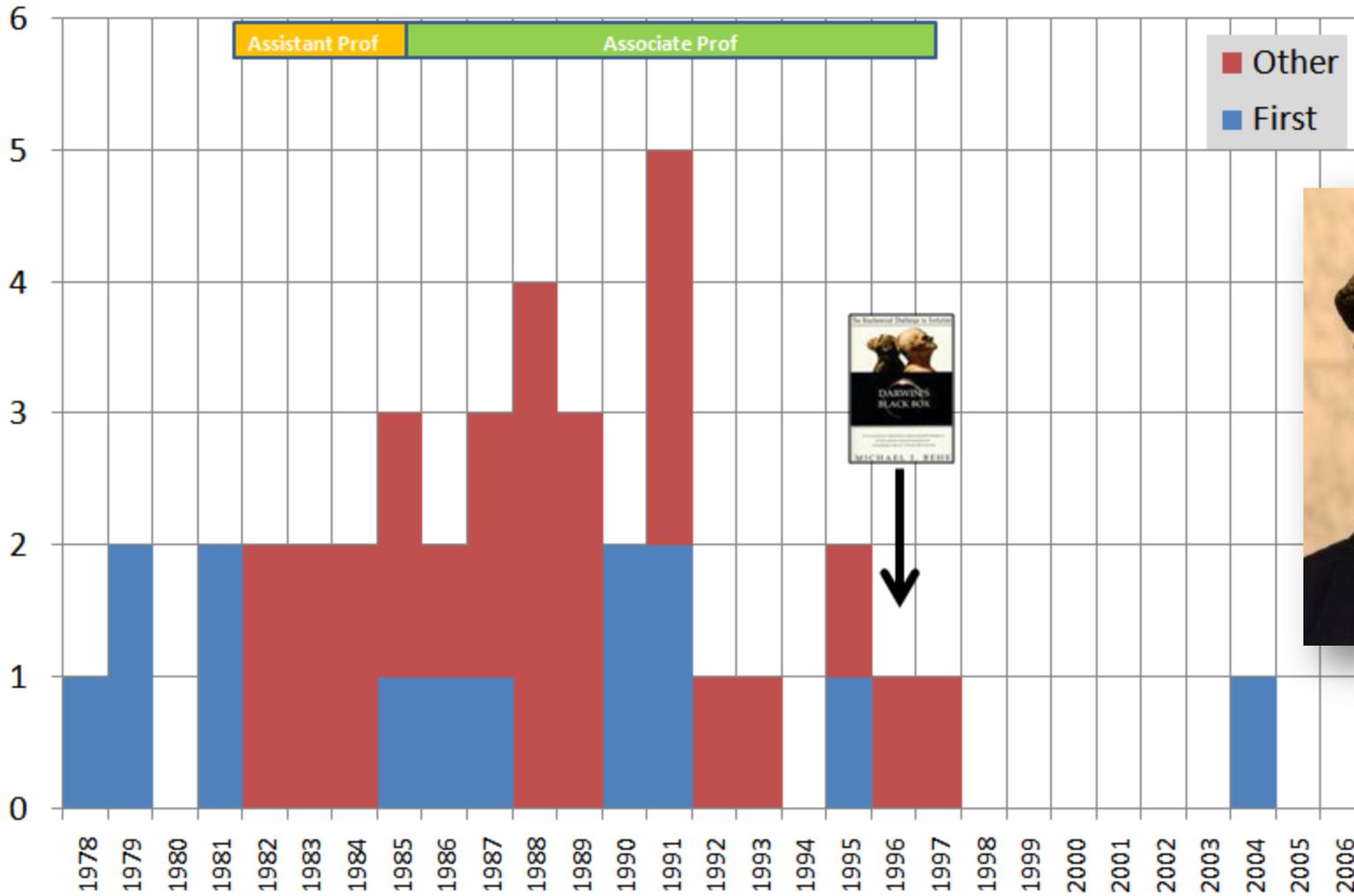
Most scientists regarded the new streamlined peer-review process as 'quite an improvement.'

# Dembski on peer review



“I’ve gotten kind of blasé about submitting things to journals where you often wait two years to get things into print. And I find I can actually get the turnaround faster by writing a book and getting the ideas expressed there. My books sell well. I get a royalty. And the materials gets read more.”

[2002]



'91: Defends Johnson

'92: Attends SMU ID conference

'94: First ID publication



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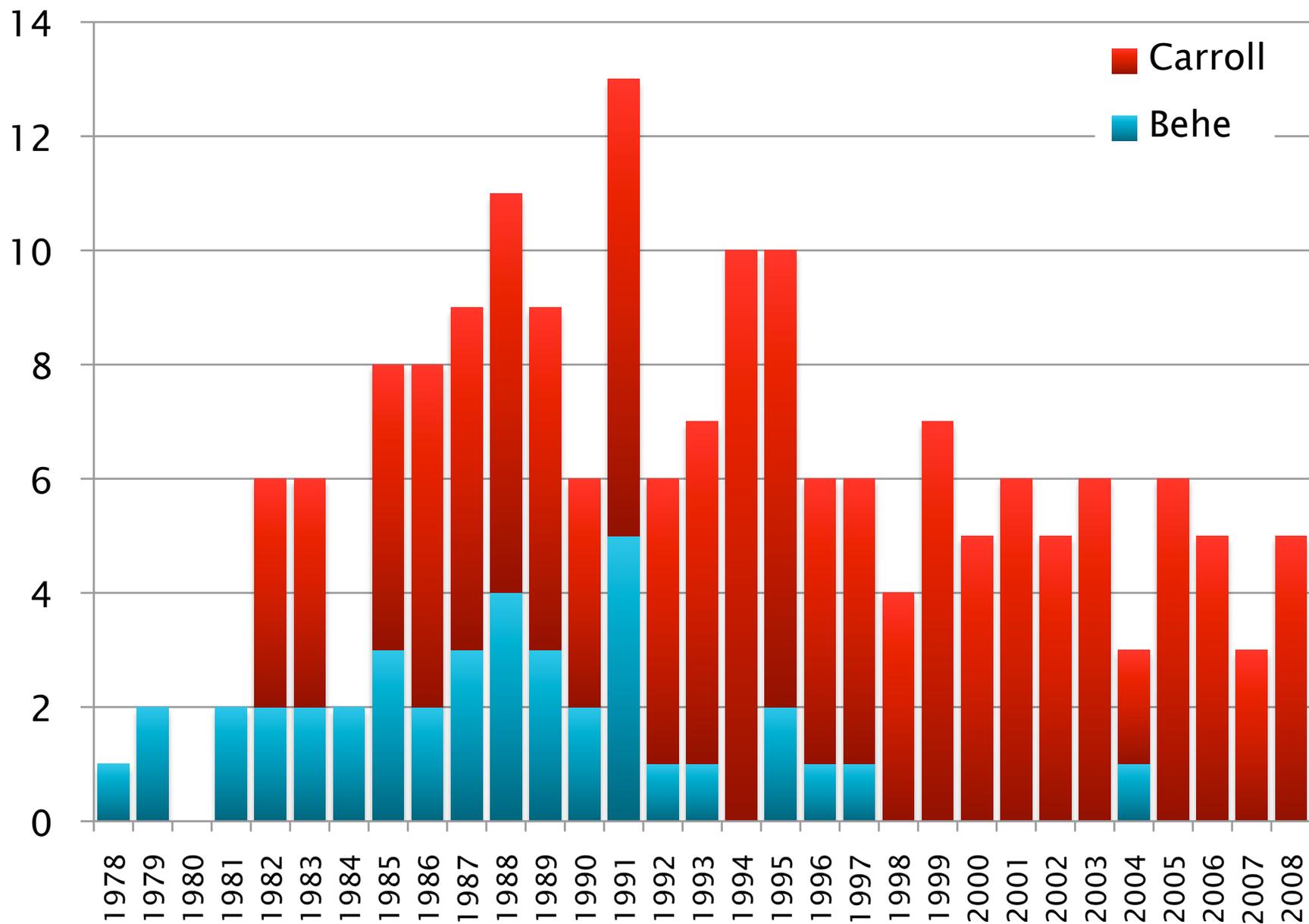
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## Department Position on Evolution and "Intelligent Design"

The faculty in the Department of Biological Sciences is committed to the highest standards of scientific integrity and academic function. This commitment carries with it unwavering support for academic freedom and the free exchange of ideas. It also demands the utmost respect for the scientific method, integrity in the conduct of research, and recognition that the validity of any scientific model comes only as a result of rational hypothesis testing, sound experimentation, and findings that can be replicated by others.

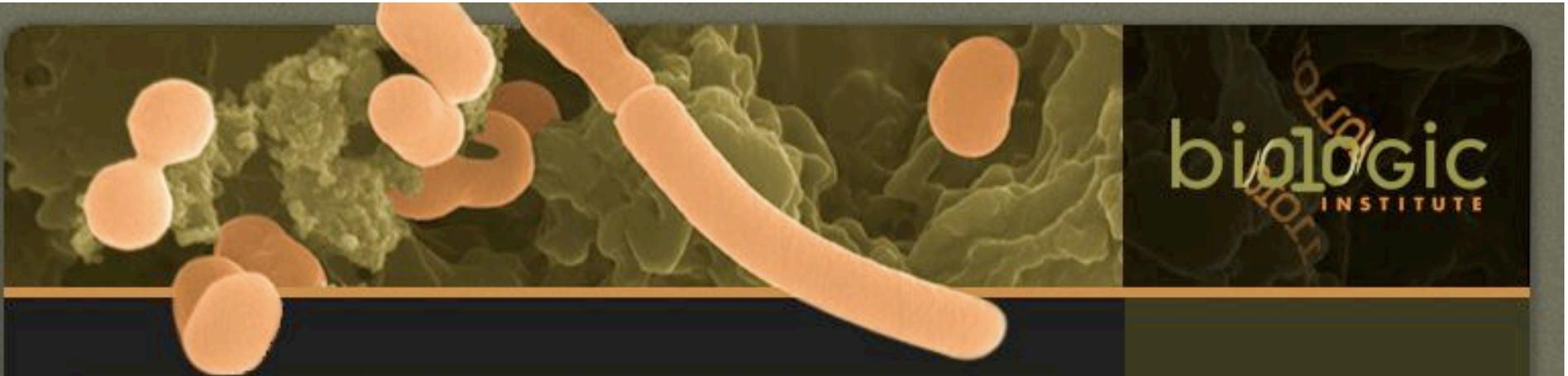
The department faculty, then, are unequivocal in their support of evolutionary theory, which has its roots in the seminal work of Charles Darwin and has been supported by findings accumulated over 140 years. The sole dissenter from this position, Prof. Michael Behe, is a well-known proponent of "intelligent design." While we respect Prof. Behe's right to express his views, they are his alone and are in no way endorsed by the department. It is our collective position that intelligent design has no basis in science, has not been tested experimentally, and should not be regarded as scientific.



# Peer-reviewed Research Publications Within Area of Expertise Since 1996

- ▶ Behe (biochemistry) – 4 (2004)
  - Productivity before 1994 was 2.44 per year
  - Productivity since 1998 is 0.09 per year.
- ▶ Wells (cell & molecular biology) – 3 (2005)
- ▶ Nelson (philosophy of biology) – 1 (1996)
- ▶ Meyer (history & philosophy of science) – 0
- ▶ Dembski (mathematics) – 0

# 2005



biologic  
INSTITUTE

## *Intelligent Science...*

Biologic Institute brings together scientists with diverse expertise, unified by the realization that a revolution in biology—with far reaching implications—is well under way. Like many revolutionary ideas, this one is powerful in its simplicity:

*The more we learn about the organization of life,  
the more clearly it reveals design.*

When you realize that living cells store, transmit, and process information, the similarities with human technology are unavoidable. But when you get a glimpse of the remarkable sophistication of the cellular processes—and the almost unbelievably small scale of the molecular systems performing them—you begin to realize that humans are novices when it comes to complex design.

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# Members

- ▶ Douglas Axe (Chemical engineering)
- ▶ Lisanne D'Andrea-Winslow (Invertebrate immunology)
- ▶ Ann Gauger (Developmental biology)
- ▶ Guillermo Gonzalez (Astronomy)
- ▶ David Keller (Chemistry)
- ▶ Robert J Marks III (Electrical engineering)
- ▶ Richard von Sternberg (Molecular evolution)
- ▶ Philip Lu (Lab technician)
- ▶ Brendan Dixon (Programmer)

# Brendan Dixon

- ▶ Ex-Microsoft
- ▶ President Lifeworks Foundation (2006)
  - \$700,000 donation to the Center for Science and Culture
  - \$30,000 donation to Robert J Marks for him to employ Dembski as a post-doc at Baylor.

# Publications 2006 – 2009



- Gonzalez
  - Marks
  - Axe
  - Sternberg
  - D'Andrea
- N = 11

# 2008

- ▶ D'Andrea–Winslow L, Novitski AK (2008) Active bleb formation is abated in *Lytechinus variegatus* red spherule coelomocytes after disruption of acto–myosin contractility. *Integrative Zoology*
- ▶ Axe DD, Dixon BW, Lu P (2008) Stylus: A system for evolutionary experimentation based on a protein/proteome model with non–arbitrary functional constraints. *PLoS ONE*
- ▶ Sternberg RV (2008) DNA codes and information: Formal structures and relational causes. *Acta Biotheoretica*
- ▶ Gonzalez G (2008) Parent stars of extrasolar planets – IX. Lithium abundances. *Monthly Notices of the Royal Astronomical Society*

# 2007

- ▶ Duren RW, Marks II RJ, Reynolds PD, Trumbo ML (2007) Real-time neural network inversion on the SRC-6e reconfigurable computer. IEEE Transactions on Neural Networks
- ▶ Gonzalez G, Laws C (2007) Parent stars of extrasolar planets VIII. Chemical abundances for 18 elements in 31 stars. Monthly Notices of the Royal Astronomical Society 378: 1141–1152
- ▶ Gravagne IA, Marks II RJ (2007) Emergent behaviors of protector, refugee and aggressor swarms. IEEE Transactions on Systems, Man and Cybernetics, Part B: Cybernetics
- ▶ Weinschenk JJ, Combs WE, Marks II RJ (2007) On the avoidance of rule explosion in fuzzy inference engines. International Journal of Information Technology and Intelligent Computing.

# 2006

- ▶ Gonzalez G (2006) Condensation temperatures trends among stars with planets. Monthly Notices of the Royal Astronomical Society: Letters
- ▶ Gonzalez G (2006) The sun's interior metallicity constrained by neutrinos. Monthly Notices of the Royal Astronomical Society: Letters
- ▶ Gonzalez G (2006) The chemical compositions of stars with planets: A review. Publications of the Astronomical Society of the Pacific

# Boston “Secret” Meeting

June 2007

- ▶ Meyer, Behe, Dembski, Minnich, Nelson, Wells
- ▶ Doug Axe – “The Language of Proteins – Revisiting a Classic Metaphor with the Benefit of New Technology.”
- ▶ Richard von Sternberg – “Genomes, Formal Causes and Taxa.”
- ▶ Robert Marks – “The Need for Active Information in Evolutionary Search.”
- ▶ Ann Gauger – “Assessing the difficulty of pathway evolution: an experimental test.”

# Dan Brooks

“[Gauger] was then prompted by one of her colleagues to regale us with some new experimental finds. She gave what amounted to a second presentation, during which she discussed ‘leaky growth’ in microbial colonies at high densities, leading to horizontal transfer of genetic information, and announced that under such conditions she had actually found **a novel variant that seemed to lead to enhanced colony growth**. Gunther Wagner said, ‘So, a beneficial mutation happened right in your lab?’ at which point the moderator halted questioning. We shuffled off for a coffee break with the admission hanging in the air that **natural processes could not only produce new information, they could produce beneficial new information.**”

# Paul Nelson



“Easily the biggest challenge facing the ID community is to develop a fully-fledged theory of biological design. **We don't have such a theory right now, and that's a problem.** Without a theory, it's very hard to know where to direct your research focus. Right now, we've got **a bag of powerful intuitions, and a handful of notions** ... but, as yet, no general theory of biological design.”

*Touchstone Magazine* 7/8 (2004), pp. 64

# Bruce Gordon



“[D]esign–theoretic research has been hijacked as part of a larger cultural and political movement. In particular, the theory has been prematurely drawn into discussions of public science education where it has no business making an appearance without broad recognition from the scientific community that it is making a worthwhile contribution to our understanding of the natural world.”

*(Research News, January 2001, p. 9)*

# Francis Beckwith



“[I]t is not a good idea to teach ID in public schools at the present time because its publication record in the biological sciences is thin. ... However, one could conceivably include some ID-type material in the sections of a textbook that deal with philosophy and history of science.” [2004]

# Johnson on ID “Theory” (2006)



“I also don’t think that there is really a theory of intelligent design at the present time to propose as a comparable alternative to the Darwinian theory, which is, whatever errors it might contain, a fully worked out scheme. There is no intelligent design theory that’s comparable. Working out a positive theory is the job of the scientific people that we have affiliated with the movement. Some of them are quite convinced that it’s doable, but that’s for them to prove...**No product is ready for competition in the educational world.**”

# Paul Nelson



“There is something deeply dissatisfying about establishing the bona fides of one theory by debunking another. **Design simply must put novel predictions of its own on the blackboard.**”

# Friendly Advice to ID Supporters

- ▶ Dembski's stand on peer review positively hurts any hope that ID has in becoming accepted among the larger scientific community. **Publish papers.**
- ▶ Publish in peer-reviewed journals in philosophy, statistics, mathematics, complexity theory, and **evolutionary biology** while working on the “theory of design.”
- ▶ Generate testable hypotheses that come from the design perspective. **Make sure these hypotheses can differentiate between evolutionary and design predictions.** Test them using observation or experiment. Rinse. Repeat.

# What we have learned ...

- ▶ ID clearly arose in response to *Edwards* as a means by which to reframe YEC. While ID is not perhaps **explicitly** of religious intent, it is (minimally) **implicitly** so and thus risks failing under *Edwards*.
- ▶ ID currently consists of “[a] bag of powerful intuitions, and a handful of notions” – there is no ID **theory** – and it thus cannot be taught in K–12 Science classes.
- ▶ This leaves the strategy of “teach the controversy”. However, there is no valid scientific controversy suitable to be taught at the K–12 level.

# Leah Ceccarelli on “manufactroversies”

Modern-day sophists skillfully invoke values that are shared by the scientific community and the public, such as free speech, skeptical inquiry and the revolutionary force of new ideas against a repressive orthodoxy. It is difficult to argue against someone who draws on these values without seeming unscientific or un-American.

# Modern Day Sophists exploit

- ▶ the gap between the technical and public spheres. Scientific experts who can't spare the time for public communication are then surprised when the public distrusts them.
- ▶ a public misconception about what science is, portraying it as a structure of complete consensus built from the steady accumulation of unassailable data. Any dissent is cited as evidence that there's no consensus, and thus that truth must not have been discovered yet.

# A Scientific Dissent From Darwinism

“We are skeptical of claims for the ability of **random mutation** and **natural selection** to account for the complexity of life. Careful examination of the evidence for Darwinian theory should be encouraged.”

## A SCIENTIFIC DISSSENT FROM DARWINISM

Public TV programs, educational policy statements, and science textbooks have asserted that Darwin's theory of evolution fully explains the complexity of living things. The public has been assured, most recently by spokespersons for PBS's *Evolution* series, that "all known scientific evidence supports [Darwinian] evolution" as does "virtually every reputable scientist in the world."

The following scientists dispute the first claim and stand as living testimony in contradiction to the second. There is scientific dissent to Darwinism. It deserves to be heard.

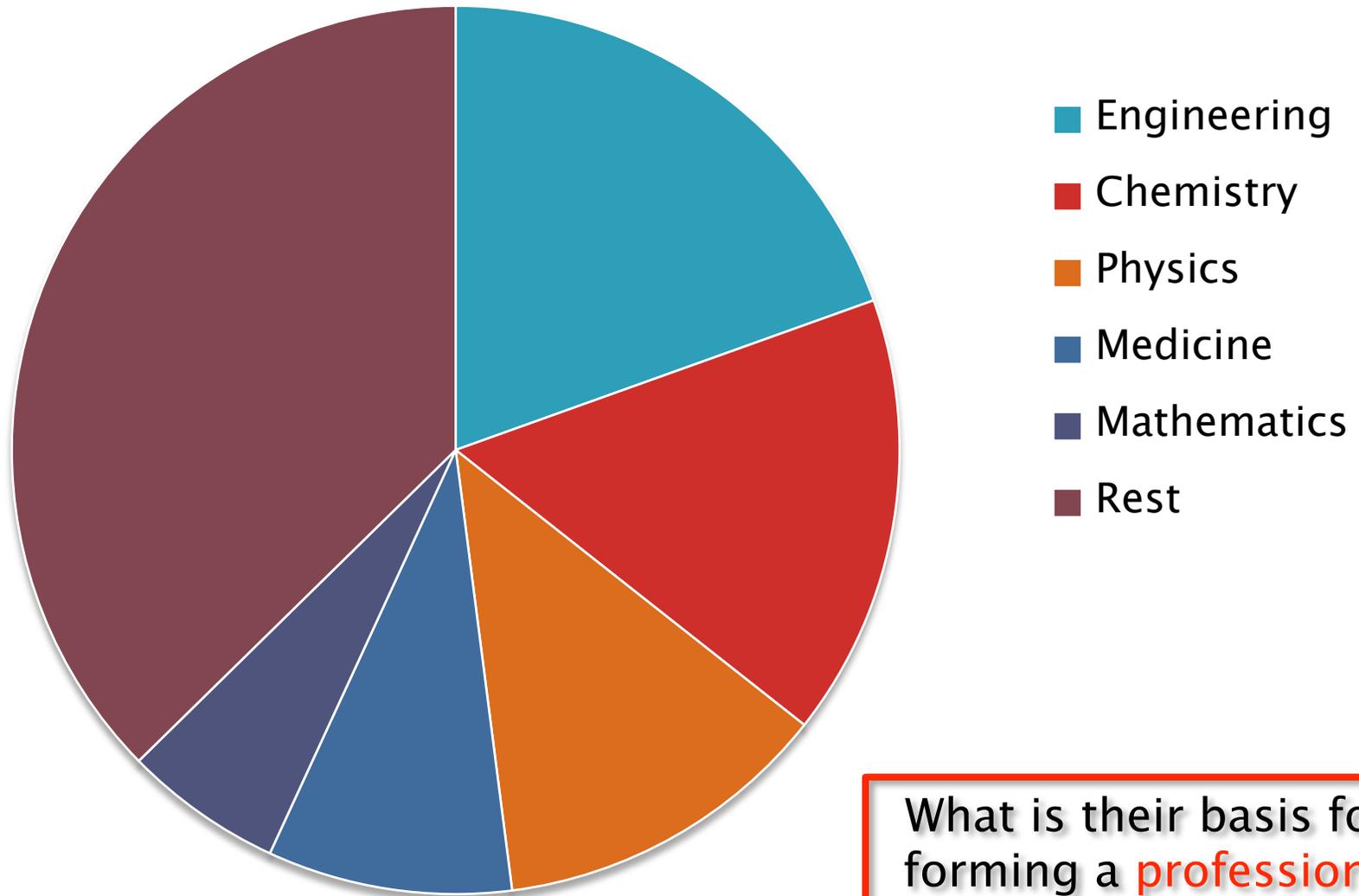
Henry F. Schaefer, Nobel Nominee, Director of Center for Computational Quantum Chemistry, U. of Georgia • Fred Sigworth, Prof. of Cellular & Molecular Physiology, Yale Grad. School • Philip S. Skellam, Emeritus Prof. of Chemistry, NAS member • Frank Tipler, Prof. of Mathematical Physics, Tulane U. • Robert Katz, Plasma Physics Lab, Princeton • Michael Behe, Prof. of Biological Science, Lehigh U. • Walter Hearn, PhD Biochemistry-U. of Illinois • Tony Meggs, Assoc. Prof. of Chemistry, Whitworth College • Dean Kenyon, Prof. Emeritus of Biology, San Francisco State • Marko Horb, Researcher, Dept. of Biology & Biochemistry, U. of Bath • Daniel Kuebler, Asst. Prof. of Biology, Franciscan U. of Steubenville • David Keller, Assoc. Prof. of Chemistry, U. of New Mexico • James Kweiling, Prof. of Mathematics, U. of Florida • Roland F. Hirsch, PhD Analytical Chemistry-U. of Michigan • Robert Neivamat, PhD Astrophysics-Cornell U. • Carl Kowal, Prof. Chemistry & Biochemistry, U. of Colorado • Tony Jelama, Prof. of Biology, Dornet College • William A. Dembski, PhD Mathematics-U. of Chicago • George Lebo, Assoc. Prof. of Astronomy, U. of Florida • Timothy G. Standish, PhD Environmental Biology, George Mason U. • James Keener, Prof. of Mathematics & Adjunct of Bioengineering, U. of Utah • Robert J. Marks, Prof. of Signal & Image Processing, U. of Washington • Carl Poppe, Senior Fellow, Lawrence Livermore Laboratories • Siegfried Scherer, Prof. of Microbial Ecology, Technische Universität München • Gregory Shearer, Postdoc. Researcher Internal Medicine, U. C. Davis • Joseph Atkinson, PhD Organic Chemistry-M.I.T., American Chemical Society member • Lawrence H. Johnston, Emeritus Prof. of Physics, U. of Idaho • Scott Minnich, Prof. Dept. of Microbiology, Molecular Biology & Biochemistry, U. of Idaho • David A. DeWitt, PhD Neuroscience-Case Western U. • Theodor Liis, PhD Chemistry-M.I.T. • Bracon Alfred, Emeritus Prof. of Anthropology, U. of British Columbia • Walter Bradley, Prof. Emeritus of Mechanical Engineering, Texas A & M • Paul D. Brown, Asst. Prof. of Environmental Studies, Trinity Western (Canada) • Marvin Fritzier, Prof. of Biochemistry & Molecular Biology, U. of Calgary, Medical School • Theodore Sato, Project Manager, Lawrence Livermore Laboratories • Muzaffar Iqbal, PhD Chemistry-U. of Saskatchewan, Center for Theology and the Natural Sciences • S. William Pelletier, Emeritus Distinguished Prof. of Chemistry, U. of Georgia • Keith Delaplane, Prof. of Entomology, U. of Georgia • Ken Smith, Prof. of Mathematics, Central Michigan U. • Clarence Fouché, Prof. of Biology, Virginia Intermont College • Thomas Mince, Asst. Prof. of Biomedical Engineering, U. of Texas, Austin • Brian J. Miller, PhD Physics-Duke U. • Paul Nesselroade, Assoc. Prof. of Psychology, Simpson College • Donald F. Calbreath, Prof. of Chemistry, Whitworth College St. Luke's Hospital, Kansas City • Moarad Alexanian, Prof. of Physics, U. of North Carolina, Wilmington • Donald Ewert, Director of Research Administration, Wistar Institute • Joseph W. Francis, Assoc. Prof. of Biology, Cedarville U. • Thomas Saleska, Prof. of Biology, Concordia U. • Ralph W. Seeke, Prof. & Chair of Dept. of Biology & Earth Sciences, U. of Wisconsin, Superior • James G. Humm, Assoc. Chair, Dept. of Chemistry & Biochemistry, Texas Tech U. • Lemart, Miller, Prof. of Environmental Medicine, Karolinska Inst., U. of Stockholm • Raymond G. Bohm, PhD Molecular & Cell Biology-U. of Texas • Fazale R. Rana, PhD Chemistry, Ohio U. • Michael Atkinson, Prof. of Biochemistry, U. of Pennsylvania, Vet. School • William S. Harris, Prof. of Basic Medical Sciences, U. of Missouri • Rebecca W. Keller, Research Prof., Dept. of Chemistry, U. of New Mexico • Terry Morrison, PhD Chemistry-Syracuse U. • Robert F. DeHaan, PhD Human Development-U. of Chicago • Matti Lesola, Prof., Laboratory of Bioprocess Engineering, Helsinki U. of Technology • Bruce Evans, Assoc. Prof. of Biology, Huntington College • Jim Gibson, PhD Biology-Loma Linda U. • David Ness, PhD Anthropology-Temple U. • Bijan Nemati, PhD Physics, Senior Engineer, Jet Propulsion Lab (NASA) • Edward T. Peltzer, Senior Research Specialist, Monterey Bay Research Institute • Stan E. Lennard, Clinical Assoc. Prof. of Surgery, U. of Washington • Rafe Payne, Prof. & Chair, Dept. of Biological Sciences, Biola U. • Phillip Savage, Prof. of Chemical Engineering, U. of Michigan • Pattle Pun, Prof. of Biology, Wheaton College • Jed Macosko, Postdoc. Researcher Molecular Biology, U.C. Berkeley • Daniel Dix, Assoc. Prof. of Mathematics, U. of South Carolina • Ed Karlow, Chair, Dept. of Physics, LaSierra U. • James Harbrecht, Clinical Assoc. Prof., U. of Kansas Medical Center • Robert W. Smith, Prof. of Chemistry, U. of Nebraska • Robert DiSaverio, PhD Biochemistry, Texas A & M • David Prentice, Prof., Dept. of Life Sciences, Indiana State U. • Wai-Kiang Stang, Assoc. Prof. of Mathematics, Biola U. • Jonathan Wells, PhD Molecular & Cell Biology-U.C. Berkeley • James Tour, Chao Prof. of Chemistry, Rice U. • Todd Watson, Asst. Prof. of Urban & Community Forestry, Texas A & M • Robert Walter, Assoc. Prof. of Biology, Bethany College • Vincente Villa, Prof. of Biology, Southwestern U. • James Tumlin, Assoc. Prof. of Medicine, Emory U. • Charles Thaxton, PhD Physical Chemistry-Iowa State U. • Stephen C. Meyer, PhD Philosophy of Science-Cambridge • Paul Nelson, PhD Philosophy of Biology-U. of Chicago • Richard Sternberg, Invertebrate Zoology, National Museum of Natural History, Smithsonian Institution

(Scientists listed by doctoral degree or current position)

“WE ARE SKEPTICAL OF CLAIMS FOR THE ABILITY OF RANDOM MUTATION AND NATURAL SELECTION TO ACCOUNT FOR THE COMPLEXITY OF LIFE. CAREFUL EXAMINATION OF THE EVIDENCE FOR DARWINIAN THEORY SHOULD BE ENCOURAGED.”

DISCOVERY INSTITUTE [www.discovery.org](http://www.discovery.org)

## 700 Dissenters from Darwinism



What is their basis for forming a **professional** opinion on evolution?

“Few challenges facing America and the world are more urgent than combating climate change. The science is beyond dispute and the facts are clear.”

— PRESIDENT-ELECT BARACK OBAMA, NOVEMBER 19, 2008

# With all due respect Mr. President, that is not true.

We, the undersigned scientists, maintain that the case for alarm regarding climate change is grossly overstated. Surface temperature changes over the past century have been episodic and modest and there has been no net global warming for over a decade now.<sup>1,2</sup> After controlling for population growth and property values, there has been no increase in damages from severe weather-related events.<sup>3</sup> The computer models forecasting rapid temperature change abjectly fail to explain recent climate behavior.<sup>4</sup> Mr. President, your characterization of the scientific facts regarding climate change and the degree of certainty informing the scientific debate is simply incorrect.

SYUN AKUSOFU, Ph.D.  
UNIVERSITY OF ALASKA

ARTHUR G. ANDERSON, Ph.D.  
DIRECTOR OF RESEARCH, IBM (RETIRED)

CHARLES R. ANDERSON, Ph.D.  
ANDERSON MATERIALS EVALUATION

J. SCOTT ARMSTRONG, Ph.D.  
UNIVERSITY OF PENNSYLVANIA

ROBERT ASHWORTH  
CLEARSTACK LLC

ISMAEL BAHY, Ph.D.  
UNIVERSITY OF KANSAS

COLIN BARTON  
CSIRO (RETIRED)

JOHN FERGUSON, Ph.D.  
UNIVERSITY OF NEWCASTLE  
UPON TYNE (RETIRED)

EDUARDO FERREYRA  
ARGENTINIAN FOUNDATION FOR  
A SCIENTIFIC ECOLOGY

MICHAEL FOX, Ph.D.  
AMERICAN NUCLEAR SOCIETY

GORDON FULKS, Ph.D.  
GORDON FULKS AND ASSOCIATES

LEE GERHARD, Ph.D.  
SENIOR GEOLOGIST, KANSAS (RETIRED)

GERHARD GERLICH, Ph.D.  
TECHNISCHE UNIVERSITÄT BRAUNSCHWEIG

IVAR GJAEVER, Ph.D.

JOEL KAUFFMAN, Ph.D.  
UNIVERSITY OF THE SCIENCES,  
PHILADELPHIA (EMERITUS)

DAVID KEAR, Ph.D.  
FORMER DIRECTOR-GENERAL,  
NZ DEPT. SCIENTIFIC AND  
INDUSTRIAL RESEARCH

RICHARD KEEN, Ph.D.  
UNIVERSITY OF COLORADO

DR. KELVIN KEMM, Ph.D.  
LIEUTENANT ACHIEVERS AWARD,  
NATIONAL SCIENCE AND TECHNOLOGY  
FORUM, SOUTH AFRICA

MADHAV KHANDEKAR, Ph.D.  
FORMER EDITOR, CLIMATE RESEARCH

ROBERT S. KNOX, Ph.D.  
UNIVERSITY OF ROCHESTER (RETIRED)

DECK MORGAN, Ph.D.  
EXETER UNIVERSITY (EMERITUS)

NILS-AXEL MÖRNER, Ph.D.  
STOCKHOLM UNIVERSITY (EMERITUS)

DAVID NOWELL, D.L.C.  
FORMER CHAIRMAN, NATO  
METEOROLOGY CANADA

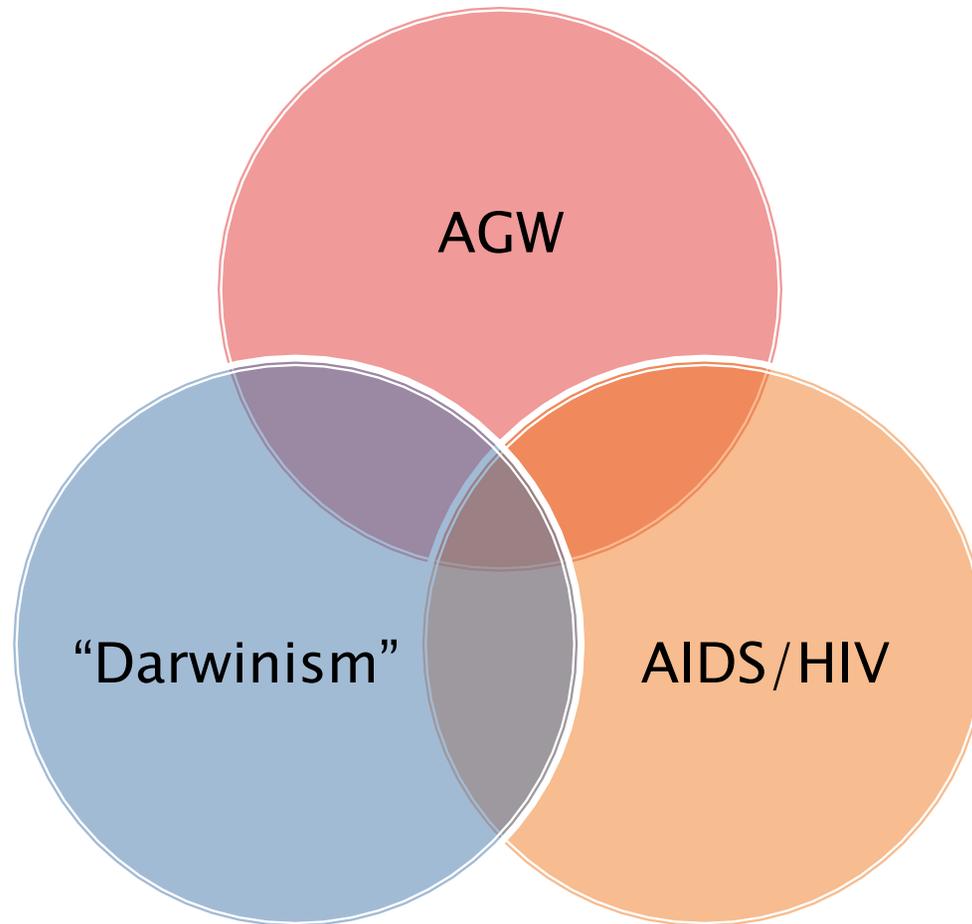
CLIFF OLLIER, D.Sc.  
UNIVERSITY OF WESTERN AUSTRALIA

GARTH W. PALTRIDGE, Ph.D.  
UNIVERSITY OF TASMANIA

ALFRED PECKAREK, Ph.D.  
ST. CLOUD STATE UNIVERSITY

DR. ROBERT A. PERKINS, P.E.  
UNIVERSITY OF ALASKA

# Shared Denialism



# Discovery Institute and HIV/AIDS Denial



- ▶ Robert W. Bass
- ▶ Bruce D Evans
- ▶ Mae-Wan Ho
- ▶ Jonathan Wells
- ▶ Philip Johnson

# James Inhofe's Deniers of AGW Consensus

Five individuals are also on DI list

1. Edward Blick, Professor Emeritus of the Mewbourne School of Petroleum and Geological Engineering, University of Oklahoma.
2. David Deming, Associate Professor of Geosciences, University of Oklahoma.
3. Guillermo Gonzalez, former Associate Professor of Astronomy, Iowa State University.
4. Robert Smith, Professor of Chemistry, University of Nebraska, Omaha
5. James Wanliss, Associate Professor of Physics, Embry–Riddle University

# James Inhofe's Deniers of AGW Consensus

Five are HIV/AIDS denialists

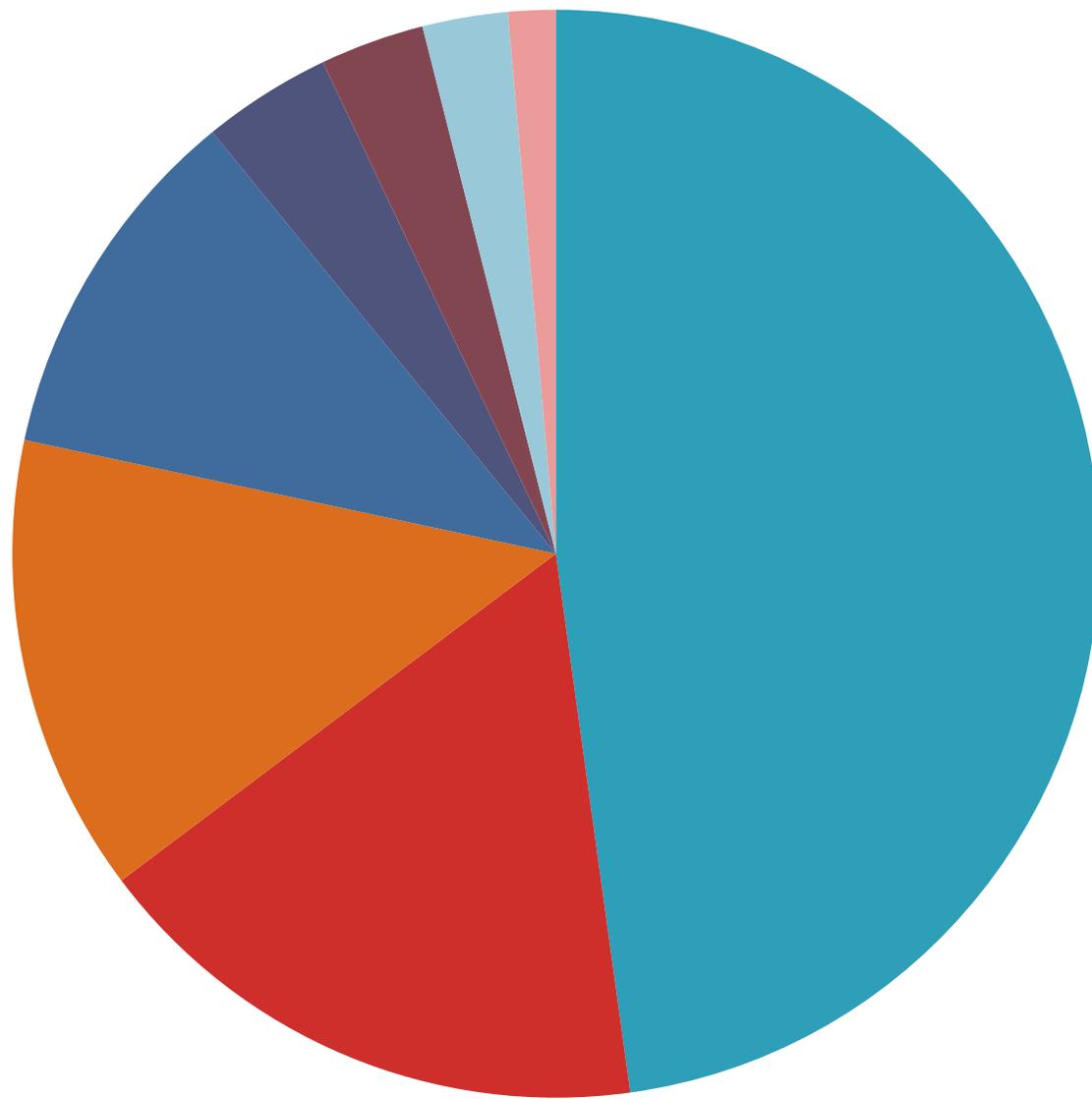
1. Eduardo Ferreyra. President of the Argentine Foundation for a Scientific Ecology
2. Dr. James DeMeo. Director, Orgone Biophysical Research Lab.
3. Joel Kauffman. Emeritus Professor of Chemistry, University of the Sciences in Philadelphia
4. Michael R. Fox, Heartland Institute
5. Justin Loew. Meteorologist, WAOW-TV

# “The Global Warming Petition Project”

- ▶ Claim:
  - There is no convincing scientific evidence that the human release of carbon dioxide and other gases is causing harmful atmospheric heating and climate change
  - The U.S. government should reject the Kyoto Agreement and any other similar proposals.
- ▶ 31,072 signatories who had “obtained formal educational degrees at the level of Bachelor of Science or higher in **appropriate scientific fields**”

# Breakdown

- ▶ Engineers – 49%
- ▶ Chemistry – 15%
- ▶ Earth science – 12%
- ▶ Medicine – 10%
- ▶ Biology – 9%
- ▶ Computer science & mathematics – 3%
- ▶ Biochemistry – 3%
- ▶ Meteorology – 1%
- ▶ Atmospheric scientists & climatologists – 0.50%



- Engineering
- Mechanical
- Electrical
- Chemical
- Aerospace
- Environmental
- Metallurgy
- Nuclear
- Agricultural

# Arthur B. Robinson

- ▶ Biochemist with claimed area of expertise in “deamidation of peptides and proteins ... the development of home schooling techniques ... public dissemination of information on civil defense.”
- ▶ Cofounded the Oregon Institute of Science and Medicine (1981)
- ▶ Collaborated with Gary North (Christian reconstructionist / Dominionist)
- "Teach your children to teach themselves and to acquire superior knowledge as did many of America's most outstanding citizens in the days before socialism in education.”
- Curriculum “for Bible & Trinity-believing, God-fearing, 'Jesus-Plus-Nothing-Else' Christian families”
- ▶ Signatory of the Dissent from Darwinism

# OISM Faculty

- ▶ Arthur B. **Robinson**
- ▶ Noah E. **Robinson** – Ph.D. in chemistry; "Professor of Chemistry".
- ▶ Zachary W. **Robinson** – Doctor of veterinary medicine; "Professor of Veterinary Medicine."
- ▶ Fred Westall – former director of laboratory work for the Salk Institute. "Professor of Biochemistry".
- ▶ Carl Boehme – B.S. and M.S. in Electrical Engineering; "Professor of Electrical Engineering."
- ▶ Jane Orient – Tucson M.D.; "Professor of Medicine".

# Jane Orient

“Evolution meaning change over time indisputably occurs, but evolution meaning the origin of all species from a common ancestor is a wild and fanciful speculation and should not be taught as science, much less as fact. Schools should teach mathematics, logic, and scientific methods. Students should make careful observations and learn to design and carry out experiments. Darwin’s theory of evolution is more a topic for history or philosophy.”

# Anthropogenic Global Warming

- ▶ “Human activity is a significant contributing factor in changing mean global temperatures”
- ▶ Gallup Poll (public): 58%
- ▶ American Geophysical Union (earth scientists): 82%
  - climatologists who “listed climate science as their area of expertise and who also have published more than 50% of their recent peer-reviewed papers on the subject of climate change”: 97.4%

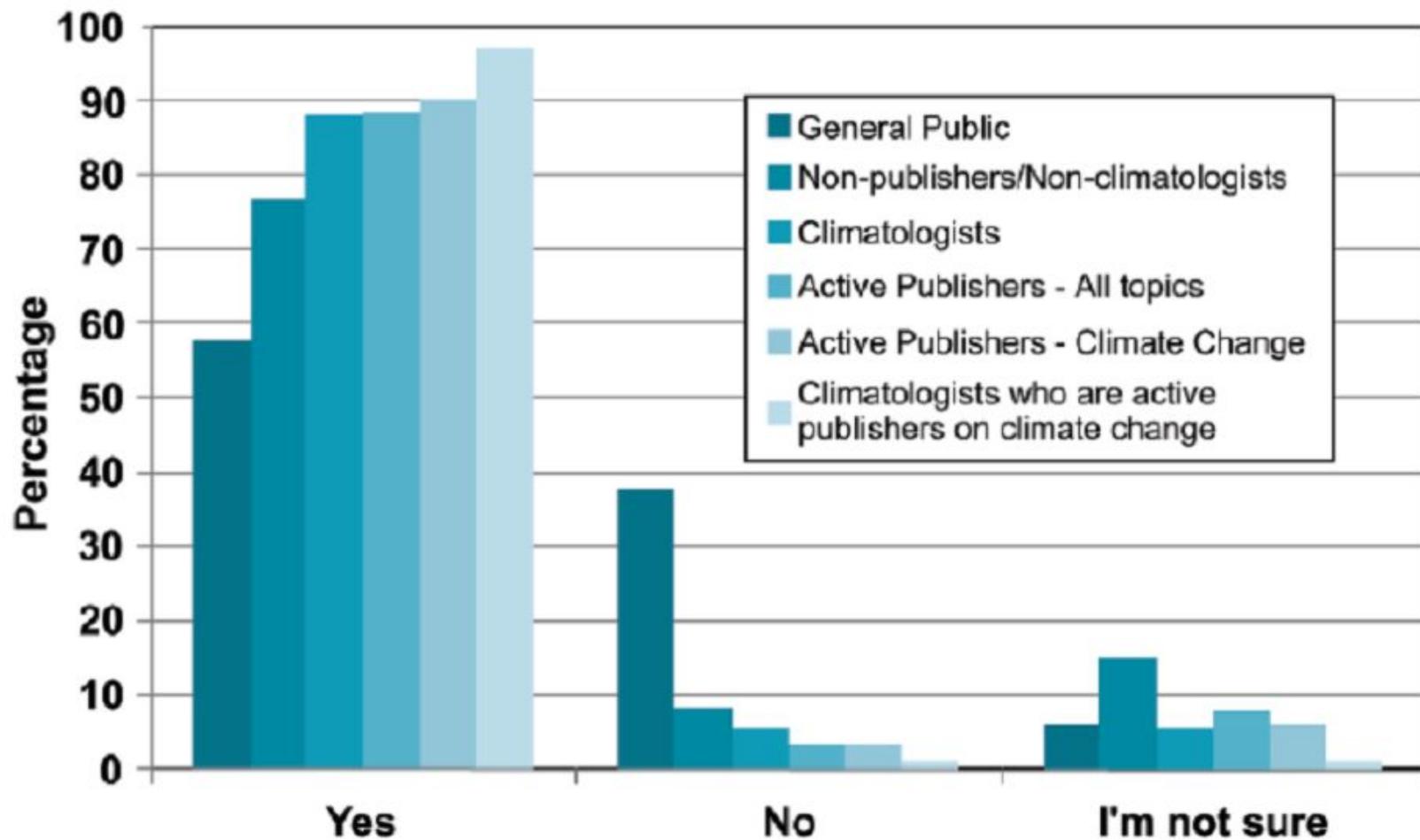
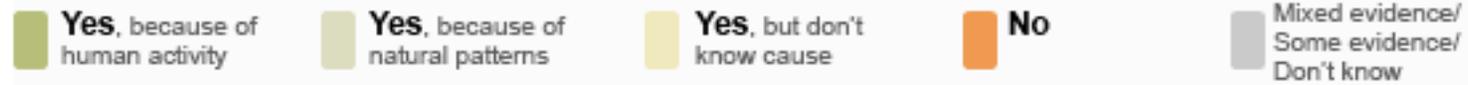
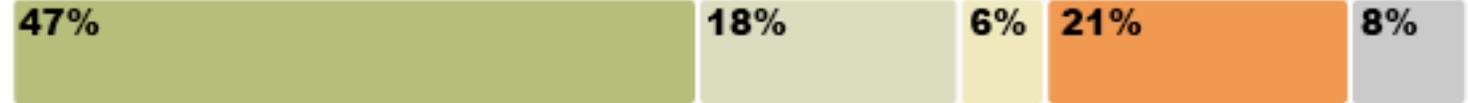


Fig. 1. Response distribution to our survey question 2. The general public data come from a 2008 Gallup poll (see <http://www.gallup.com/poll/1615/Environment.aspx>).

## Is there solid evidence the earth is warming?



Total U.S. population



*Unaffiliated*



*White mainline Protestants*



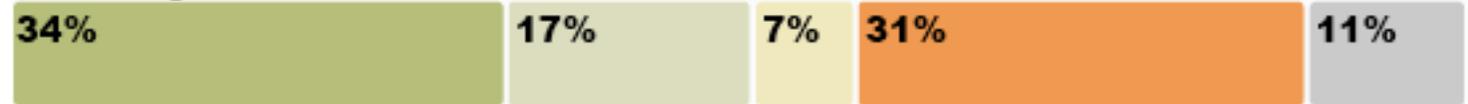
*White non-Hispanic Catholics*



*Black Protestants*

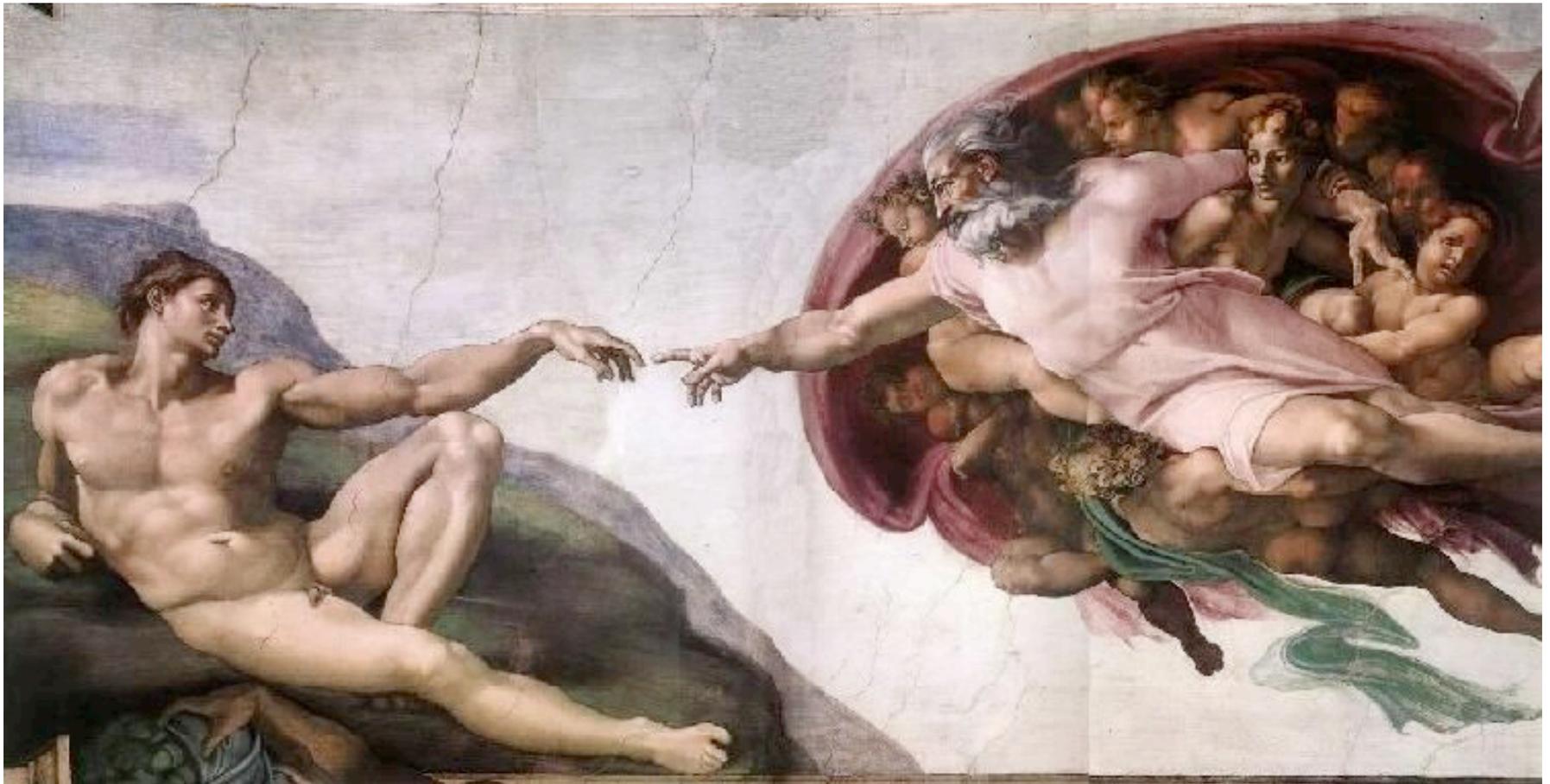


*White evangelical Protestants*



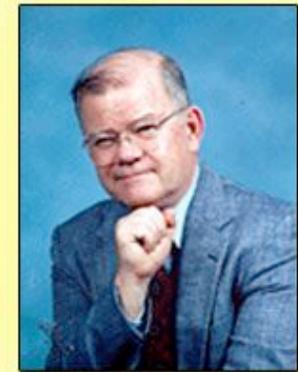
# *Edwards* and Anti-Evolutionism

- ▶ Even if anti-evolutionist arguments have mostly religious supporters and are beneficial to religious interests, *Edwards* requires them to be religious **in intent** for them to be excluded.
  - This was illustrated in *Kitzmiller v. Dover* (2005).
- ▶ However, *Edwards* does not need to be invoked if opposing ideas do not count as **scientific**. If they are not scientific, they cannot be taught in **public school science** classes.
  - This also was illustrated in *Kitzmiller v. Dover* (2005).

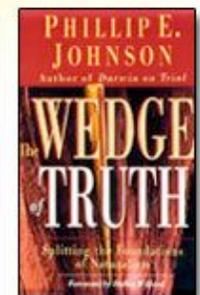
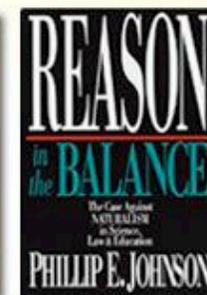
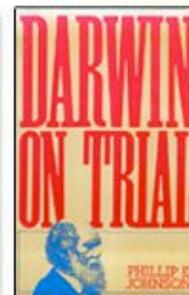
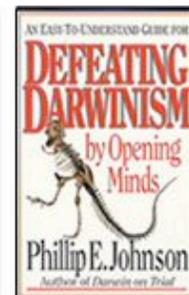
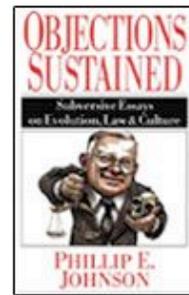


“Intelligent design is just the **Logos theology of John’s Gospel** restated in the idiom of information theory” (William Dembski, 1999)

“Our strategy has been to change the subject a bit so that we can get the issue of intelligent design, which really means the reality of God, before the academic world and into the schools.”

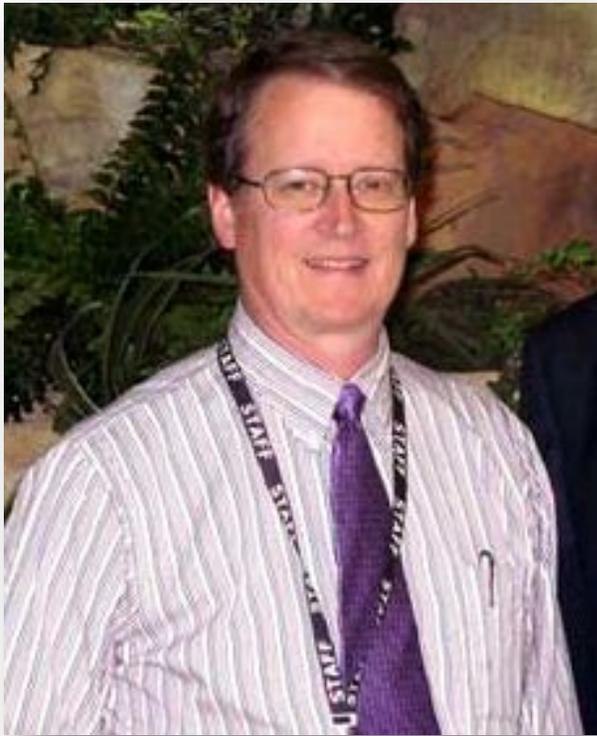


Philip E. Johnson



	<b>Evolution</b>	<b>Young Earth Creationism</b>	<b>Intelligent Design</b>
<b>Historical Narrative</b>	Common Ancestry	Special Creation	<b>?</b>
<b>Pattern</b>	Tree of Life	Orchard of Life	<b>?</b>
<b>Process</b>	Observable Natural Processes.	Direct Intervention	<b>?</b>

# Terry Mortenson (YEC) on ID



**Mechanism:** “ID cannot stand on its own feet and is not a science of origins because it has no history to explain when and how the ‘intelligent designer’ worked.”

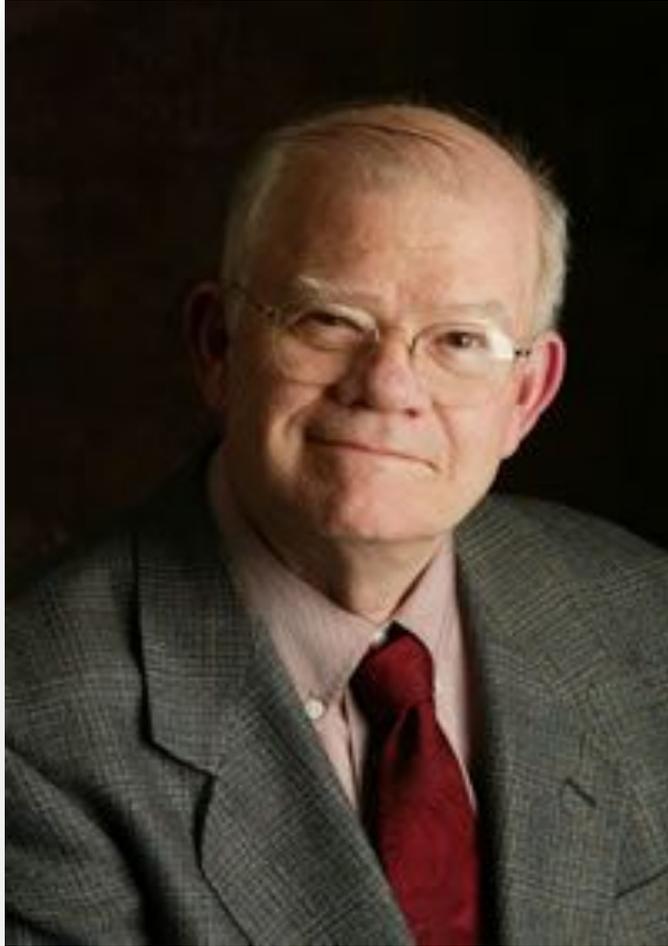
**Identity:** “How can ID destroy the atheistic legacy of Darwinism when its arguments do not and cannot identify the ‘intelligent designer’ as God and many of the ID leaders accept so much of the evolutionary view of history?”

**Agenda:** “[T]he evolutionists are right to suspect a hidden religious and moral agenda behind the IDM, even though it is religiously vague and eclectic”

# Answers in Genesis on ID

“YECism is definitely competing with both evolution and the IDM. The IDM biological arguments (regarding design and complexity in living things) and paleontological arguments (with respect to gaps in the fossil record) against Darwinism are essentially the same as those used by YECists; **only YECists were using such arguments long before the IDers.** To be sure, the IDers have contributed to the sophistication of the design and information arguments, for which YECists are very appreciative. We are also grateful for the IDM’s exposure of the control of naturalism in the biological sciences. But YECists have also amassed a considerable amount of geological evidence for a young earth and global Flood, which IDers show little or no evidence of even being willing to consider, much less try to refute.”

# “A Marvelous Argument”



“I want to develop a challenge to materialistic evolution. Let’s unite around the Creator. After that we can have a marvelous argument about the age of the earth.”

Johnson, Interview in *Christianity Today*, 1997

# Positions

- ▶ **Naturalistic Evolution:** “God does not exist, or if He does, He does nothing in the natural world investigated by science.” (science = methodological naturalism)
- ▶ **Theistic Evolution (1):** “God exists, but evidence of his activity cannot be detected scientifically.” Seen as equivalent to Naturalistic Evolution

- ▶ **Theistic evolution (2):** God set conditions, designed natural laws so that “their ordinary operation has resulted in *the intended outcome*. One might call this ‘frontloaded’ design.”

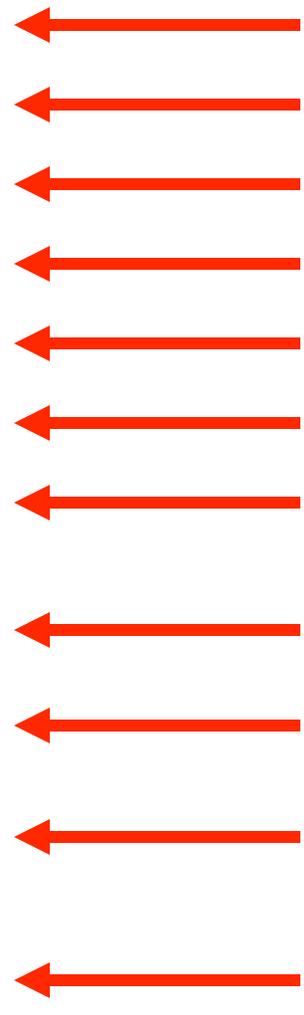
- ▶ **Old-age or Progressive Creation:** God designed laws but also guided process “and/or injected information at key stages in the development of the universe and of life to design new forms of organization that are beyond the powers of chance and law.”

- ▶ **Young-age Creation:** Special creation, 6 days, 10,000 years, Flood geology

## The Big Tent

# Intelligent Design = Progressive Creationism

Cenozoic	Quaternary Modern humans	Holocene	0.01	
		Pleistocene	2	
	Tertiary Mammals diversify; early hominids	Neogene	Pliocene	5
			Miocene	25
		Paleogene	Oligocene	34
	Eocene		55	
	Paleocene		65	
Mesozoic	Cretaceous Flowering plants common; major extinction including dinosaurs & ammonoids		144	
	Jurassic	Early birds & mammals; abundant dinosaurs	206	
	Triassic	Abundant coniferous trees, first dinosaurs; first mammals	250	
Paleozoic	Permian	Mass extinction of many marine animals including trilobites	290	
	Carboniferous Fern forests; insects; first reptiles; crinoids; sharks; large primitive trees	Pennsylvanian	314	
		Mississippian	360	
	Devonian	Early tetrapods, ammonoids, & trees	409	
	Silurian	Early land plants & animals	459	
	Ordovician	Early Fish	500	
	Cambrian	Abundant marine invertebrates; trilobites dominant	540	
"Precambrian"	Proterozoic	Single-celled and, later, multi-celled, soft-bodied organisms; first invertebrates	2,500	
	Archean	Oldest fossils; bacteria & other single-celled organisms	3,800	
Oldest known fossils			3,800	



Design theory requires multiple creative (creation) events over natural history

Vertebrate Clotting

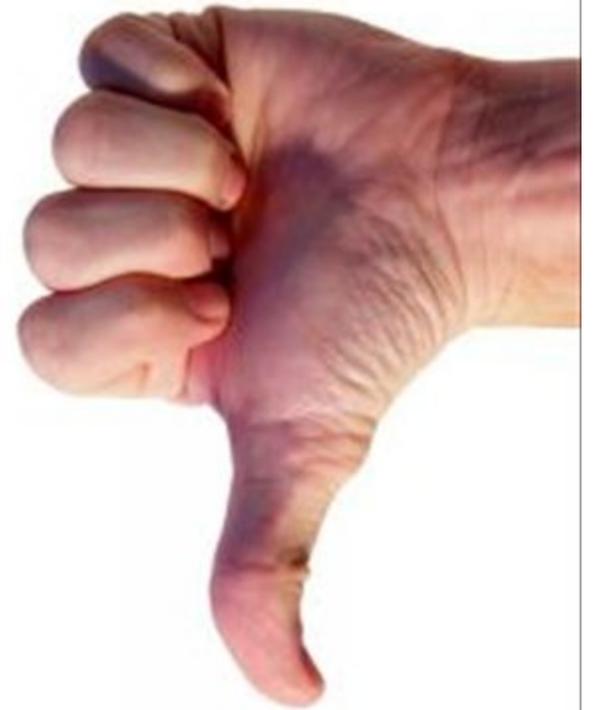
Cambrian Explosion

Eukaryotic cilium

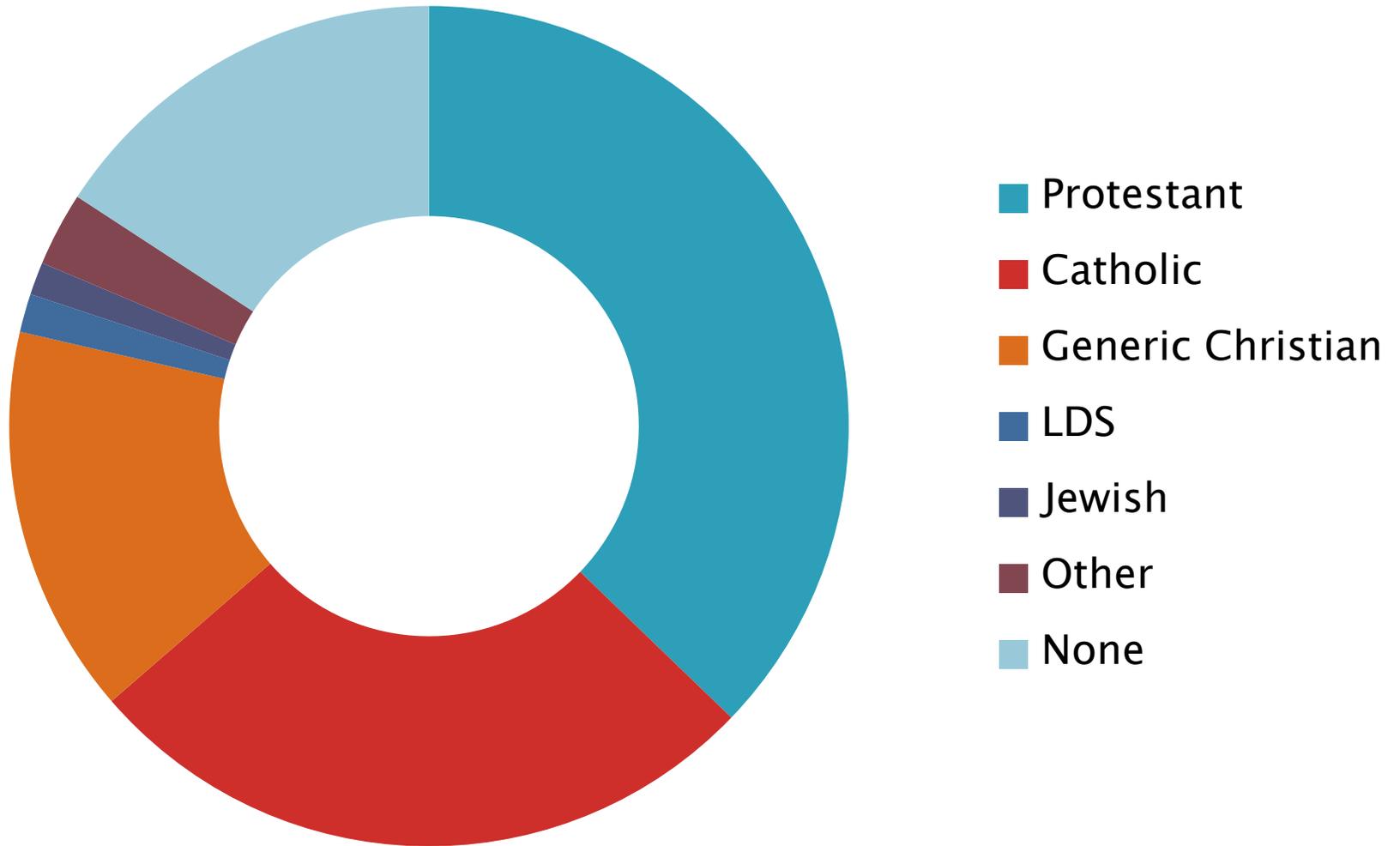
Bacterial flagellum

# Why reject YEC and ID

1. Their primary claims are demonstrably false.
2. They do not provide a productive scientific framework.
3. They are demonstrably religious in intent.
4. They are bad theology.

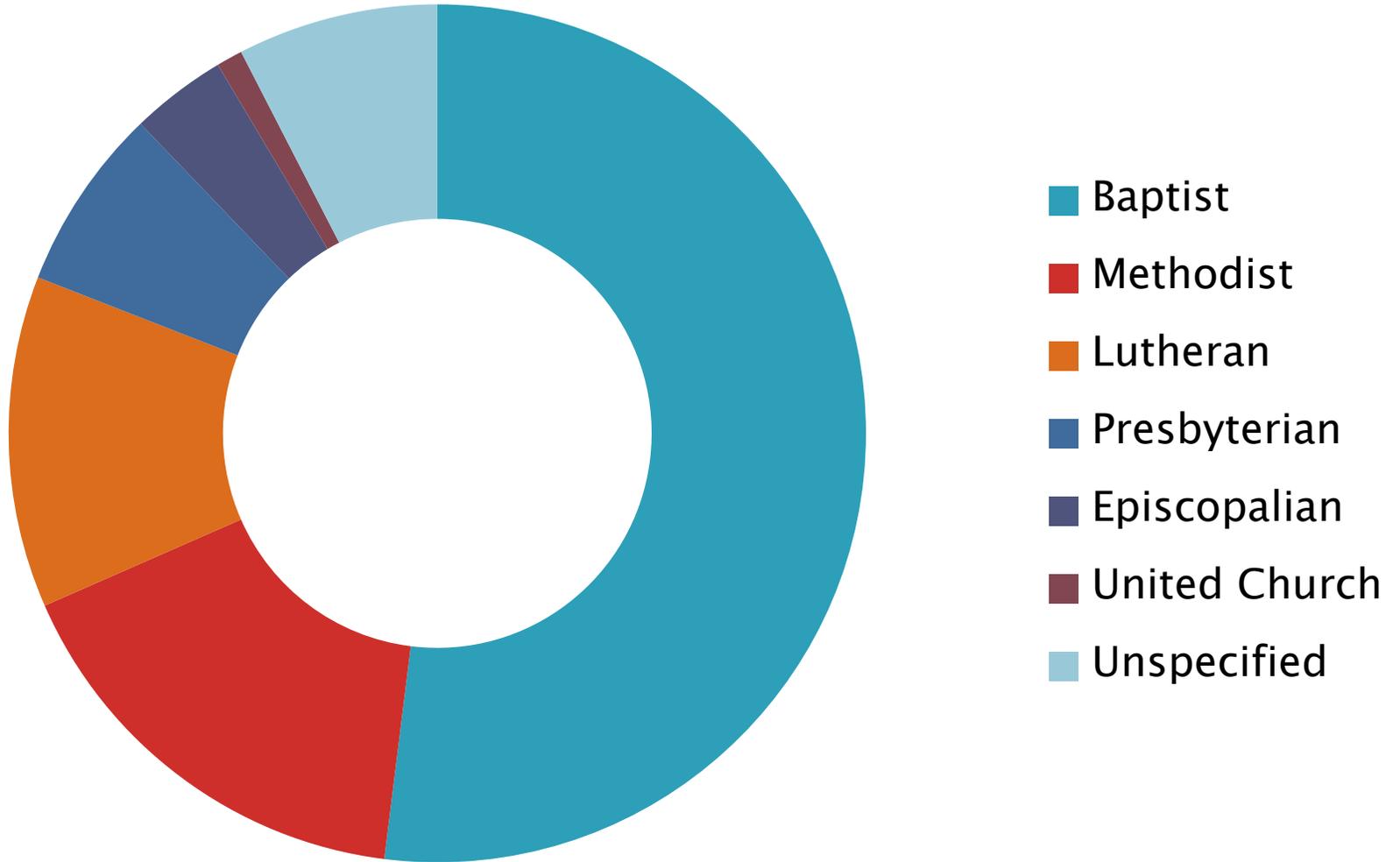


# 2008 American Religious Identification Survey



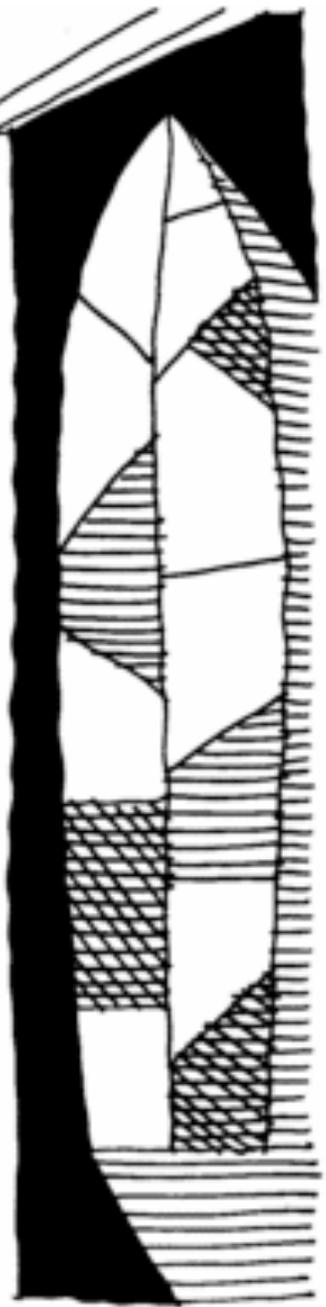
<http://b27.cc.trincoll.edu/weblogs/AmericanReligionSurvey-ARIS/>

## 2008 Protestant Sects



FITZSIMMONS®  
THE ARIZONA DAILY STAR  
2005

Hi, there.  
With your interest  
in public education so keen  
we were wondering if we  
could come into your  
Sunday school class-  
rooms and teach  
evolution?



# Clergy Letter Project

“Within the community of Christian believers there are areas of dispute and disagreement, including the proper way to interpret Holy Scripture. While virtually all Christians take the Bible seriously and hold it to be authoritative in matters of faith and practice, the overwhelming majority do not read the Bible literally, as they would a science textbook. Many of the beloved stories found in the Bible – the Creation, Adam and Eve, Noah and the ark – convey timeless truths about God, human beings, and the proper relationship between Creator and creation expressed in the only form capable of transmitting these truths from generation to generation. Religious truth is of a different order from scientific truth. Its purpose is not to convey scientific information but to transform hearts.”

Has been signed by 11,891 clergy by April 2009

We the undersigned, Christian clergy from many different traditions, believe that the timeless truths of the Bible and the discoveries of modern science may comfortably coexist. We believe that the theory of evolution is a foundational scientific truth, one that has stood up to rigorous scrutiny and upon which much of human knowledge and achievement rests. To reject this truth or to treat it as “one theory among others” is to deliberately embrace scientific ignorance and transmit such ignorance to our children. We believe that among God’s good gifts are human minds capable of critical thought and that the failure to fully employ this gift is a rejection of the will of our Creator. To argue that God’s loving plan of salvation for humanity precludes the full employment of the God-given faculty of reason is to attempt to limit God, an act of hubris. We urge school board members to preserve the integrity of the science curriculum by affirming the teaching of the theory of evolution as a core component of human knowledge. We ask that science remain science and that religion remain religion, two very different, but complementary, forms of truth.

# Theistic Evolution



- ▶ “It is indeed remarkable that [the theory of evolution] has been progressively accepted by researchers, following a series of discoveries in various fields of knowledge. The convergence, neither sought nor fabricated, of the results of work that was conducted independently is in itself a significant argument in favor of this theory.”
- ▶ “[T]heories of evolution which, in accordance with the philosophies inspiring them, consider the spirit as emerging from the forces of living matter or as a mere epiphenomenon of this matter, are incompatible with the truth about man.”

*Address to the Pontifical Academy of Sciences, Oct 1996*

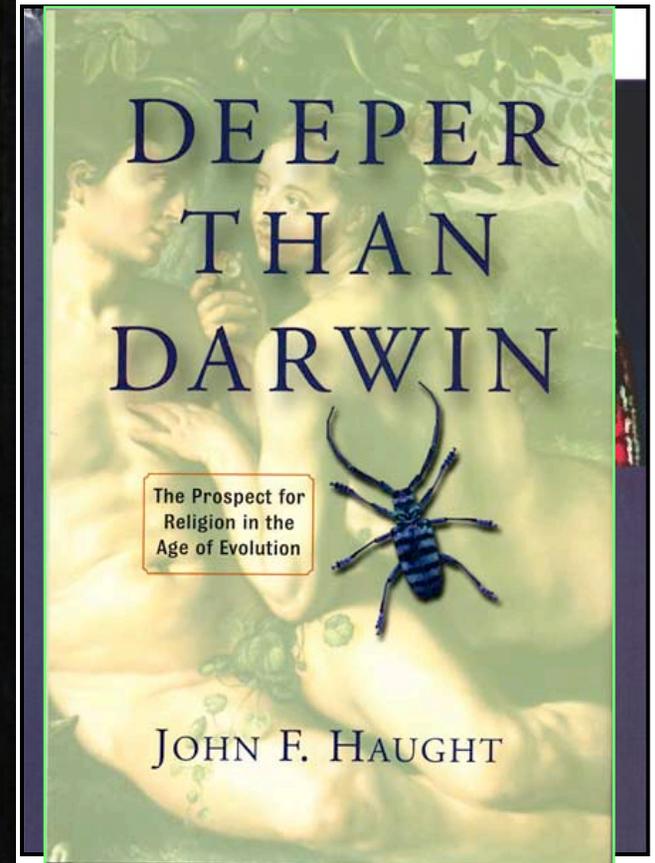
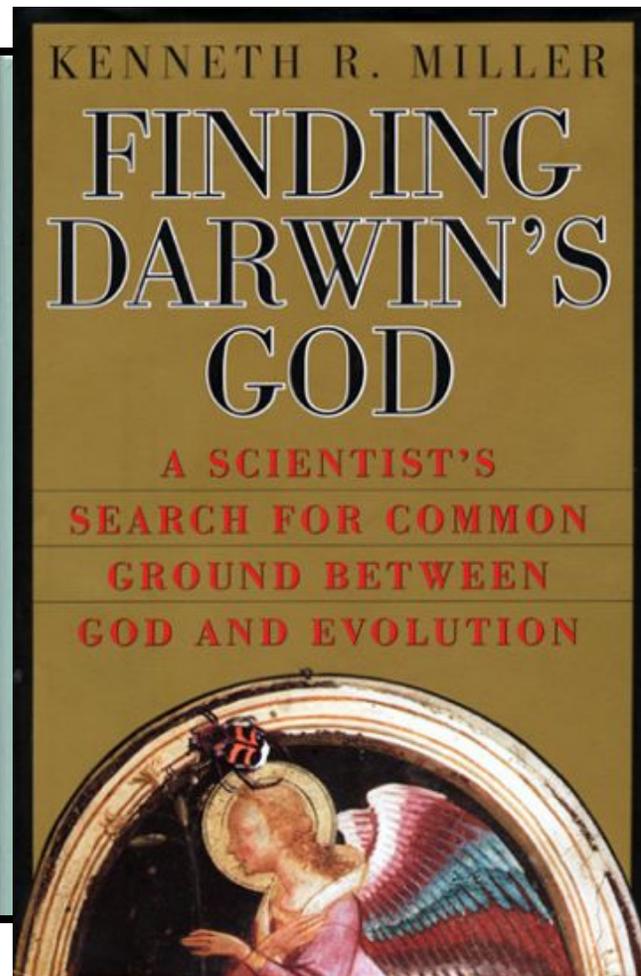
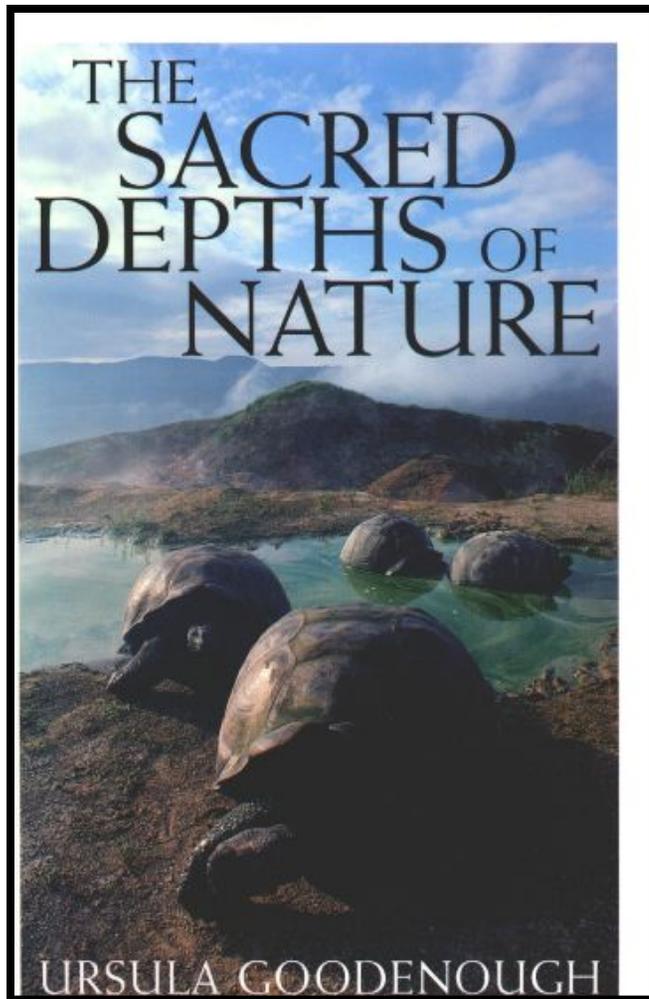
GOD THROWS THE CREATIONISTS A CURVE...



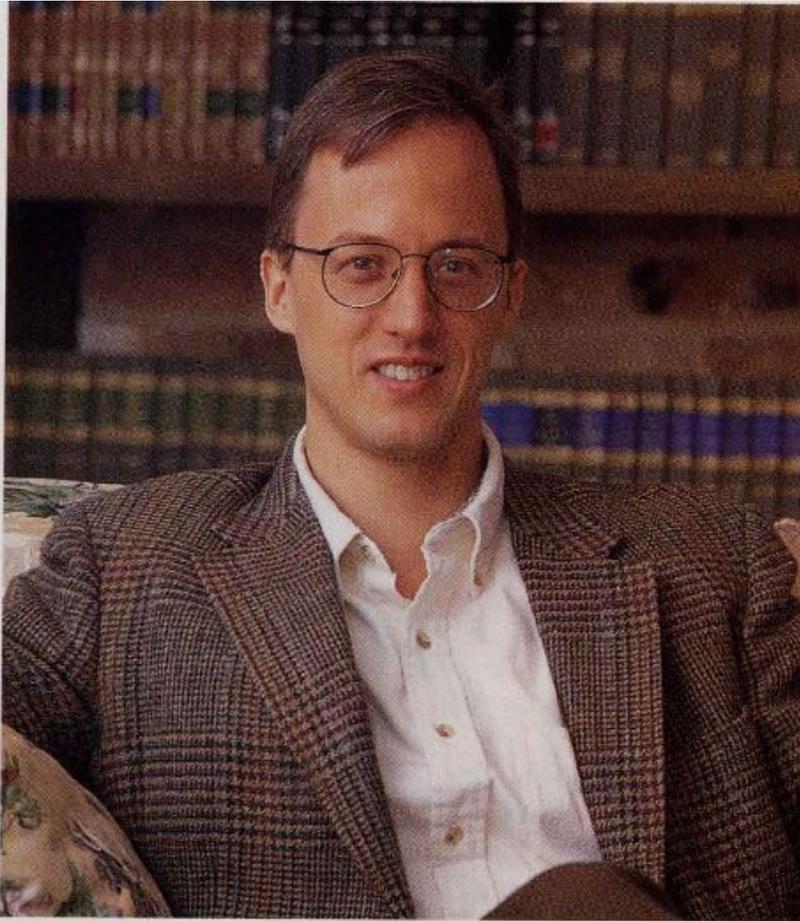
LET THERE BE  
EVOLUTION.

ASTH

# Theistic Evolution



# Theistic Evolution



“Design theorists are no friends of theistic evolution.”

Dembski, 1995.

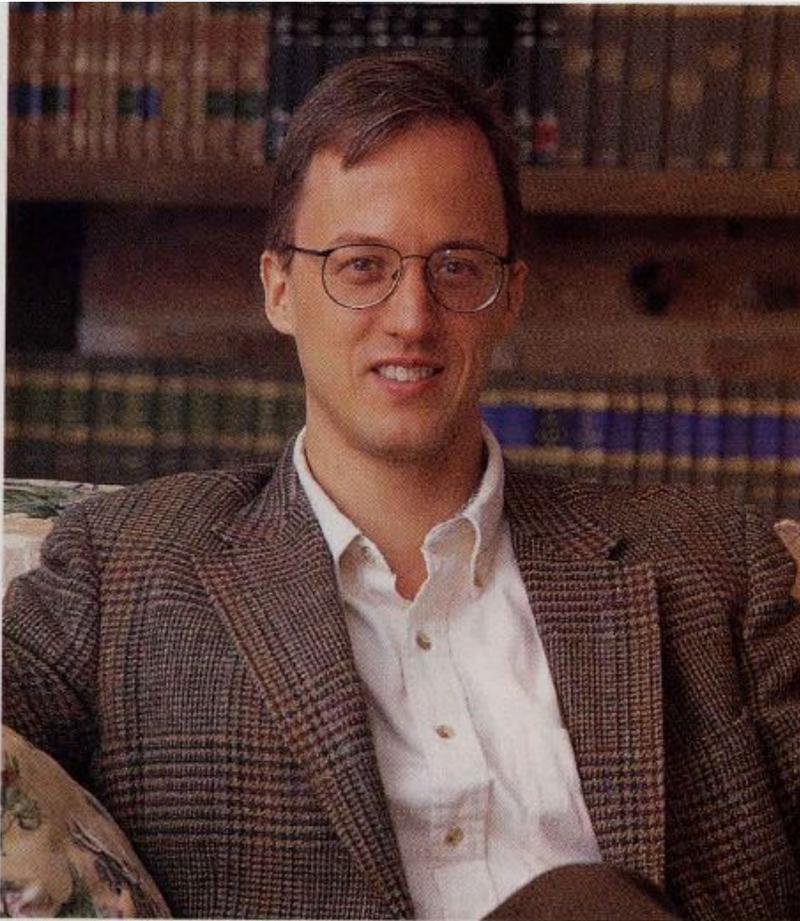
“What every theologian should know about creation, evolution, and design”

*Center for Interdisciplinary Studies Transactions* 3(2):3

*Design theorists are no friends of theistic evolution.* As far as design theorists are concerned, theistic evolution is American evangelicalism's ill-conceived accommodation to Darwinism. What theistic evolution does is take the Darwinian picture of the biological world and baptize it, identifying this picture with the way God created life. When boiled down to its scientific content, theistic evolution is no different from atheistic evolution, accepting as it does only purposeless, naturalistic, material processes for the origin and development of life.

As far as design theorists are concerned, theistic evolution is an oxymoron, something like "purposeful purposelessness." If God purposely created life through the means proposed by Darwin, then God's purpose was to make it seem as though life was created without any purpose. According to the Darwinian picture, the natural world provides no clue that a purposeful God created life. For all we can tell, our appearance on planet earth is an accident. If it were all to happen again, we wouldn't be here. No, the heavens do not declare the glory of God, and no, God's invisible attributes are not clearly seen from God's creation. This is the upshot of theistic evolution as the design theorists construe it.

# William A. Dembski.



## “Academic Experience”

Independent Scholar,  
Center for  
Interdisciplinary Studies,  
Princeton

*research in complexity,  
information, and design,  
1993–1996*

In conjunction with the Trinity Institute, a nonprofit Christian educational foundation based in Dallas, Texas, Dembski and Trinity director James Parker have opened the *Center for Interdisciplinary Studies* (CIS) in Princeton, New Jersey. CIS is intended to help in carrying out the goal of the Trinity Institute, namely, “the support and advancement of the Christian world-view to the thinking community with intellectual integrity and personal sensitivity.”

To fulfill its goal,  
CIS intends

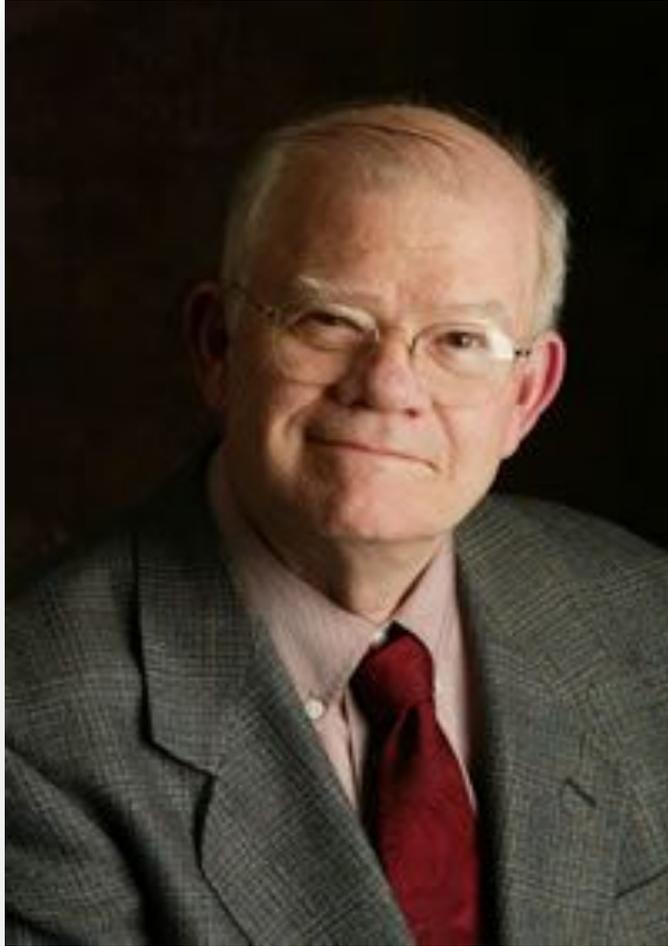
to publish top quality journals, books, and newsletters; set up computer bulletin boards and electronic networks; act as a clearinghouse and data bank on faith-science questions; [and] sponsor conferences here in Princeton and at the Trinity campus in Texas.



66 Witherspoon St.

"suite" 1800

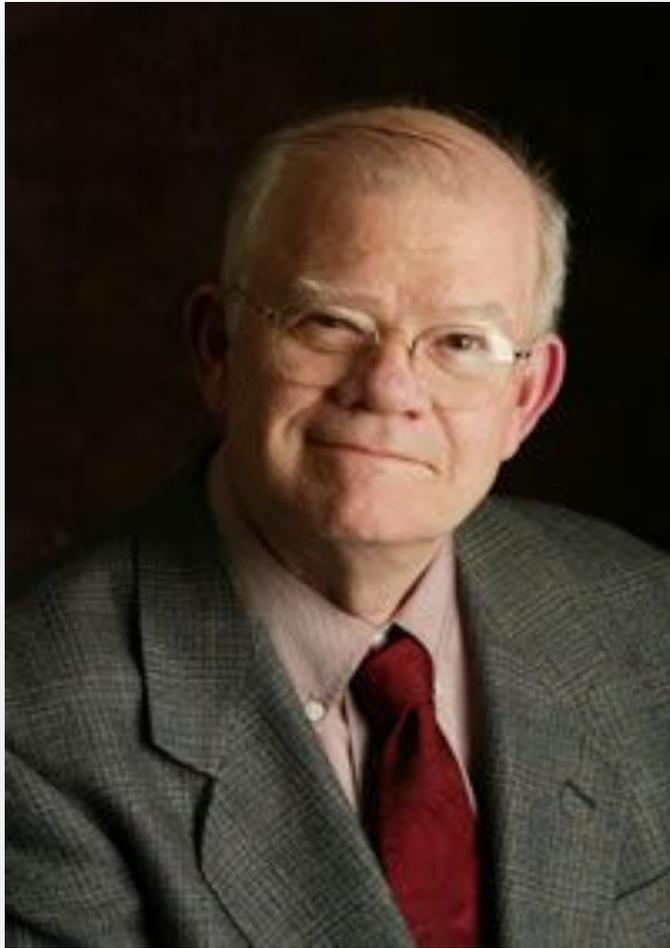
# Theistic Evolution



“Theistic evolution is exactly the same thing as atheistic evolution only with some meaningless, vacuous God-talk spread around. It's not really an intellectually honest position at all; it's a kind of political compromise.”

Phillip Johnson quoted, "Designer genes: Phillip E. Johnson talks to Peter Hastie," *Australian Presbyterian*, 531 (Oct 2001), pp. 4–8.

# Theistic Evolution



“Liberal Christians are worse than atheists because they hide their naturalism behind a veneer of religion.”

Phillip Johnson at Kansas University, 2001

# William Dembski, 2004



“Unlike John Paul II, who seemed to sign off on conventional evolutionary theory save for the divine infusion of souls at the origin of humanity, we can expect Benedict XVI to single out intelligent design for special favors. Indeed, I wouldn’t be surprised to see Michael Behe invited to an audience with the new pope. ... I’m predicting that Bush and Benedict XVI will play much the same role in the distintegration [*sic*] of evolution ... as Reagan and John Paul II did in the disintegration of communism.”

<http://www.uncommondescent.com/index.php/archives/13>

# 2009

- ▶ “Biological Evolution: Facts and Theories”
- ▶ Pontifical Gregorian University & Pontifical Council for Culture
- ▶ <http://www.evolution-rome2009.net/>
- ▶ “Leading scholars from the international scientific community, particularly from the most prominent European and North American academic institutions, will take part in the conference and will guarantee a high scientific level for this symposium.”

2000: “Dogmatic opponents of design ... have met their Waterloo.”

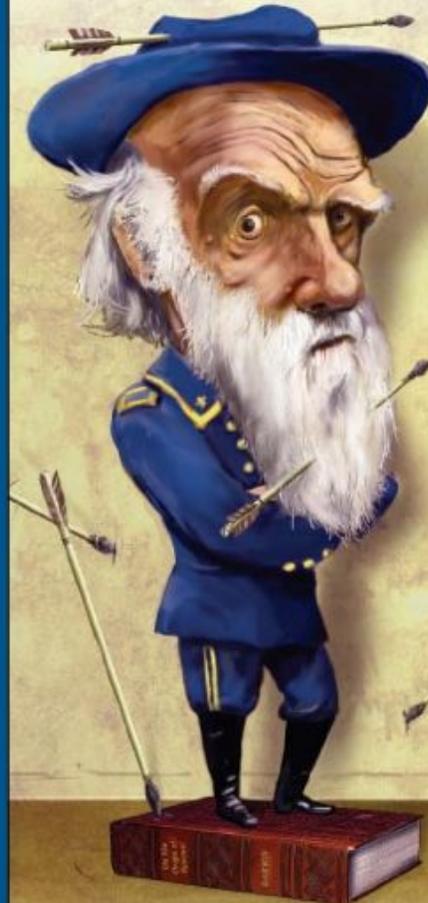


\$6.00

WWW.TOUCHSTONEMAG.COM

# Touchstone

A Journal of Mere Christianity JULY/AUGUST 2004



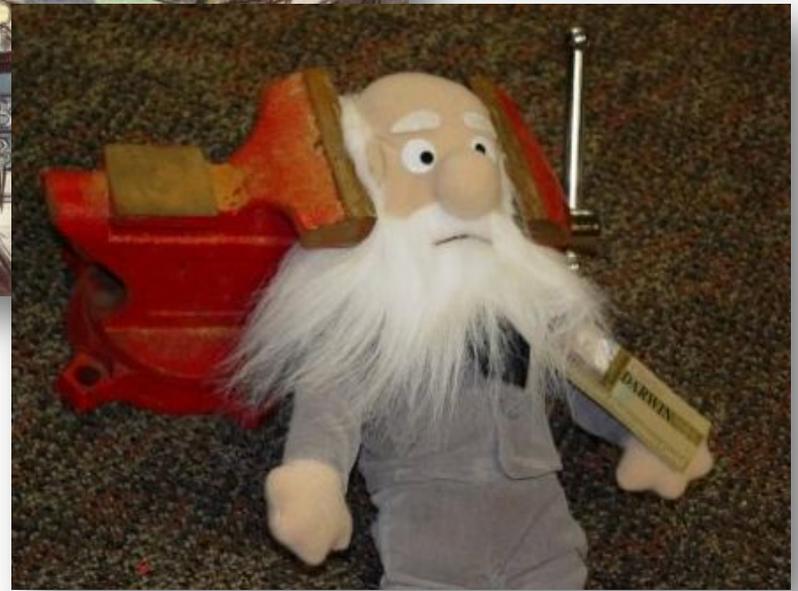
## DARWIN'S LAST STAND?

A  
SPECIAL ISSUE  
ON  
DARWINISM,  
NATURALISM  
& INTELLIGENT DESIGN

PHILLIP E. JOHNSON • WILLIAM A. DEMBSKI  
JAY W. RICHARDS • EDWARD SISSON  
RICHARD WEIKART • JONATHAN WITT  
DAVID MILLS • JAMES M. KUSHNER  
GRAEME HUNTER • CARSON HOLLOWAY

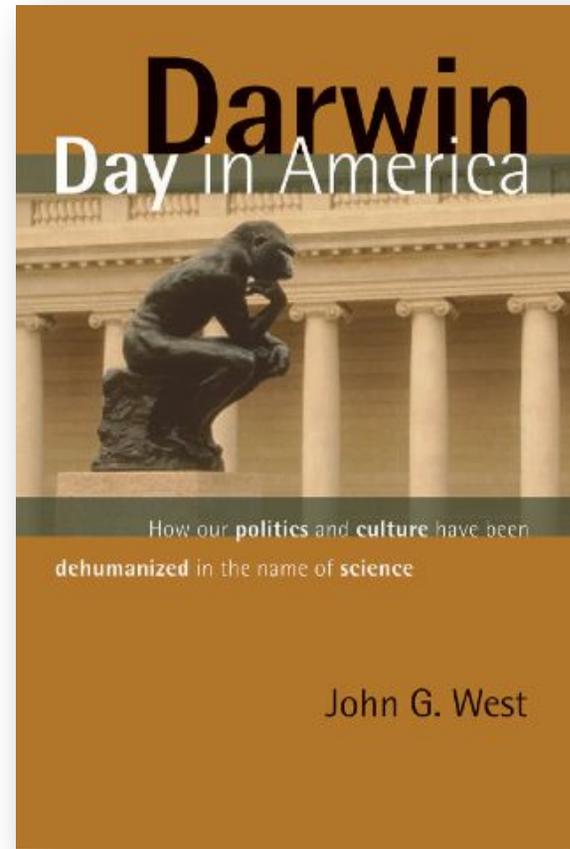


# The Vise Strategy 2005



# Why ID Will Win

1. The affirmation of design is good for science
2. Contrary to the way it is often portrayed, [ID] does not thrive on “gaps” in science but rather on the *growth* of science
3. It incorporates the insights of the high-tech world of information theory.
4. It recovers the unity of truth.
5. It accords with the ideals of **a free and open society.**



## Ancient Materialism

- Democritus / Epicurus

## Darwin

## “Scientific materialism”

- Philosophical naturalism / Atheism

## Effects

- Social Policy
- Education
- Architecture
- Criminal justice
- Business

# Governing Goals



- To defeat scientific materialism and its **destructive moral, cultural and political legacies.**
- To replace materialistic explanations with the **theistic** understanding that nature and human beings are created by **God.**

Rule by scientific experts over democracy

Utopianism

- Creation of “heaven on earth”

Dehumanization

- Nazism / Stalinism / Communism

Relativism

- “evolving standards in politics and morality”

Censorship

# Wells' claim

- ▶ “[Critics] **articles are rejected** by mainstream journals whose editorial boards are dominated by the dogmatists;
- ▶ the critics are **denied funding** by government agencies, who send grant proposals to the dogmatists for **‘peer’ review**;
- ▶ and eventually the critics are **hounded out** of the scientific community altogether.”



# Evidence of ...

- ▶ Unfairly rejected papers?
- ▶ Unfairly rejected grant applications?
- ▶ Denial of tenure?





Dr. Jerry Bergman

---

# Slaughter of the Dissidents

---

The Shocking Truth About Killing  
The Careers Of Darwin Doubters



Ben Stein

~~EXPELLED~~

No  
Intelligence  
Allowed

Big science  
has expelled smart new ideas  
from the classroom

...

What they forgot is that  
every generation has its **Rebel!**

In Theaters Spring 2008  
[www.expelledthemovie.com](http://www.expelledthemovie.com)

Starring Ben Stein

Featuring a CAST OF THOUSANDS. Directed by NATHAN FRANKOWSKI. Written by KEVIN MILLER, WALT RULOFF & BEN STEIN.

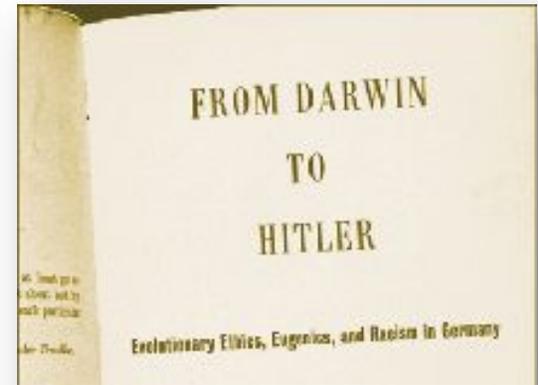
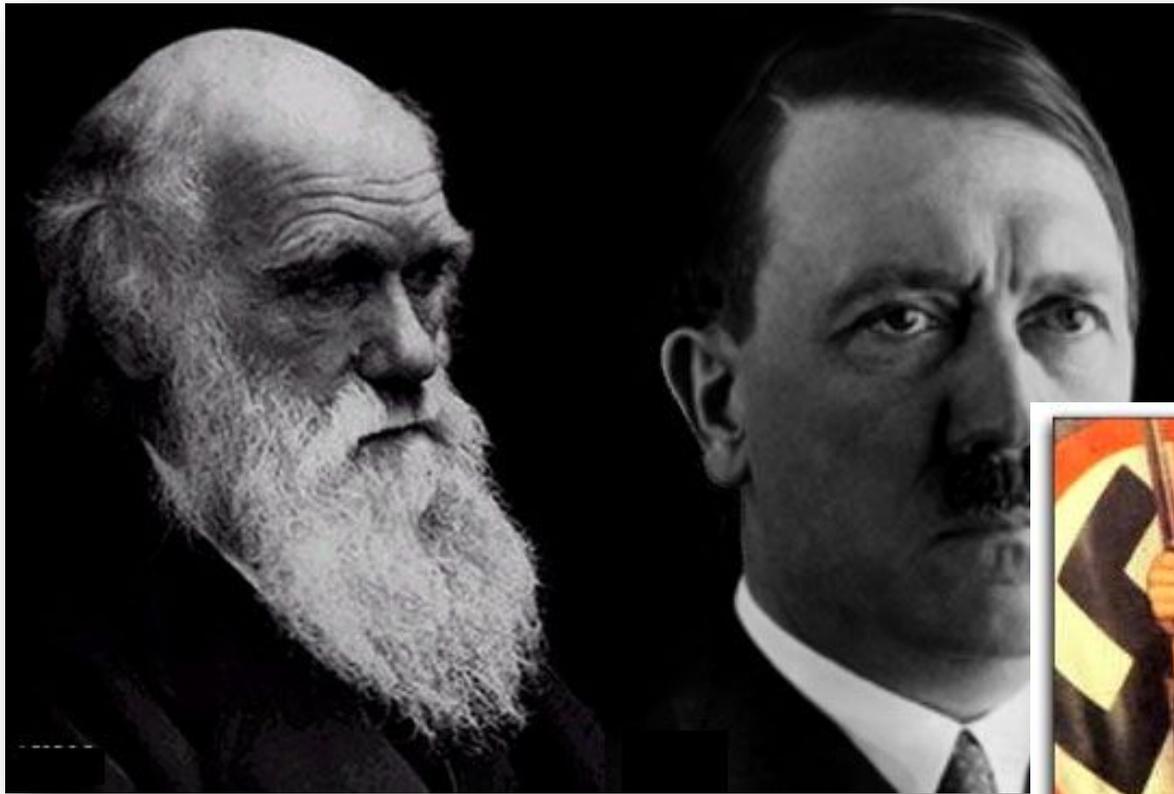
Produced by LOGAN CRAFT, WALT RULOFF & JOHN SULLIVAN. Associate Producer MARK MATIHS

THIS FILM IS  
NOT YET RATED.

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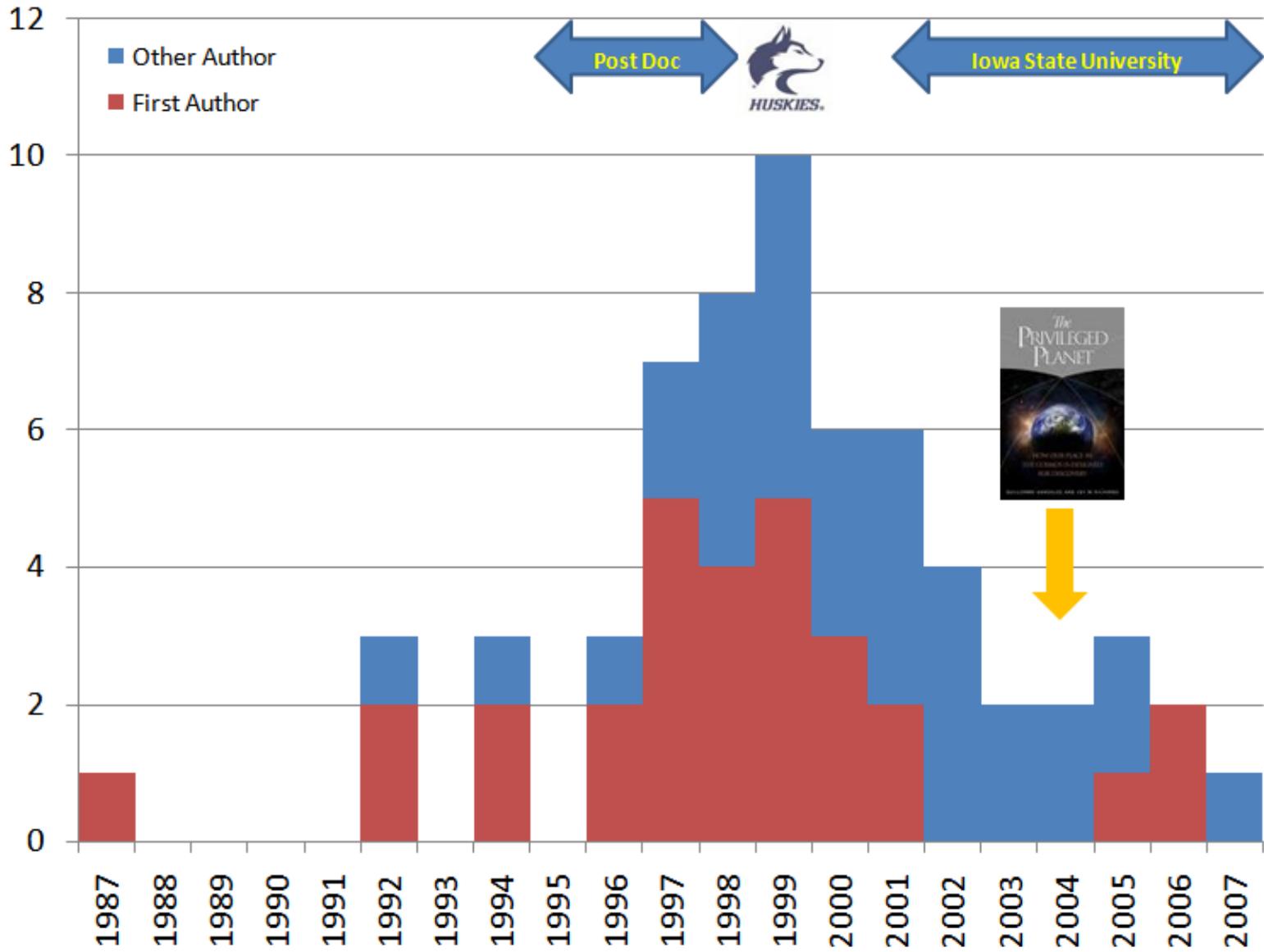
**EXPULSED**

**EXPOSED**

**Flunked, not Expelled:  
What Ben Stein isn't telling  
you about Intelligent Design**



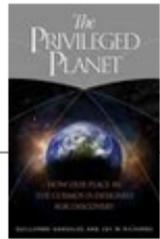
Guillermo Gonzalez



Post Doc



Iowa State University



Positive  
Case

Guillermo  
Gonzalez

Privileged  
Planet

Jonathan  
Witt

A  
Meaningful  
World

Michael  
Behe

Darwin's  
Black Box

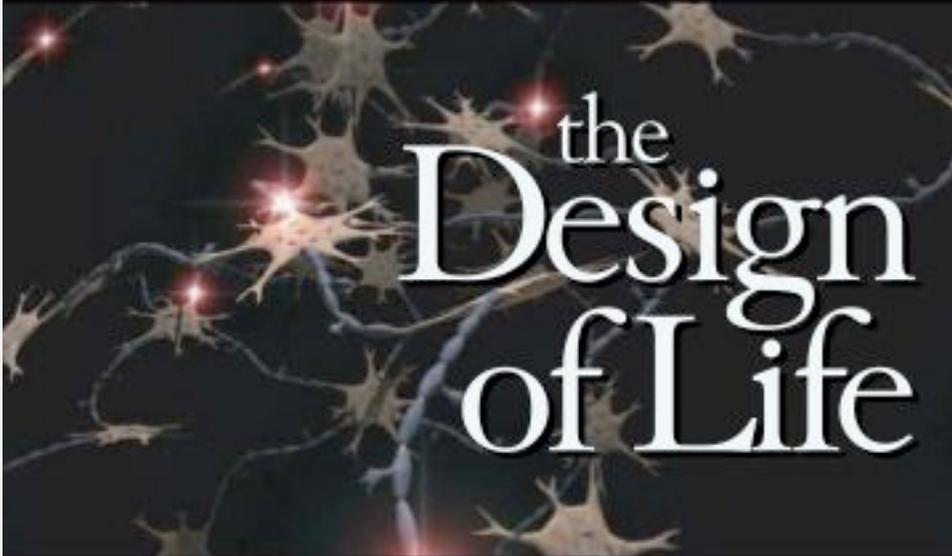
Edge of  
Evolution

William  
Dembski

The Design  
Inference

Design of  
Life

*Discovering Signs of Intelligence  
in Biological Systems*

A central horizontal band featuring a microscopic image of neurons. The neurons are depicted with their characteristic cell bodies and branching processes, set against a dark background. Several points of contact (synapses) are highlighted with bright, glowing light, creating a sense of neural activity and connectivity.

the  
Design  
of Life

*William A. Dembski | Jonathan Wells*

# the Design of Life

*Discovering Signs of Intelligence  
in Biological Systems*

*William A. Dembski | Jonathan Wells  
Editor, William A. Dembski*

*The important thing in science is not so much  
to obtain new facts as to discover new ways of  
thinking about them.*

- Sir William Lawrence Bragg

Foundation for Thought and Ethics, Dallas

# THE DESIGN OF LIFE

---

## *Discovering Signs of Intelligence in Biological Systems*

Michael J. Behe  
Percival Davis  
William A. Dembski  
Dean H. Kenyon  
Jonathan Wells

The important thing in science is not so much to  
obtain new facts as to discover new ways of  
thinking about them.

—Sir William Lawrence Bragg

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## Pandas 1

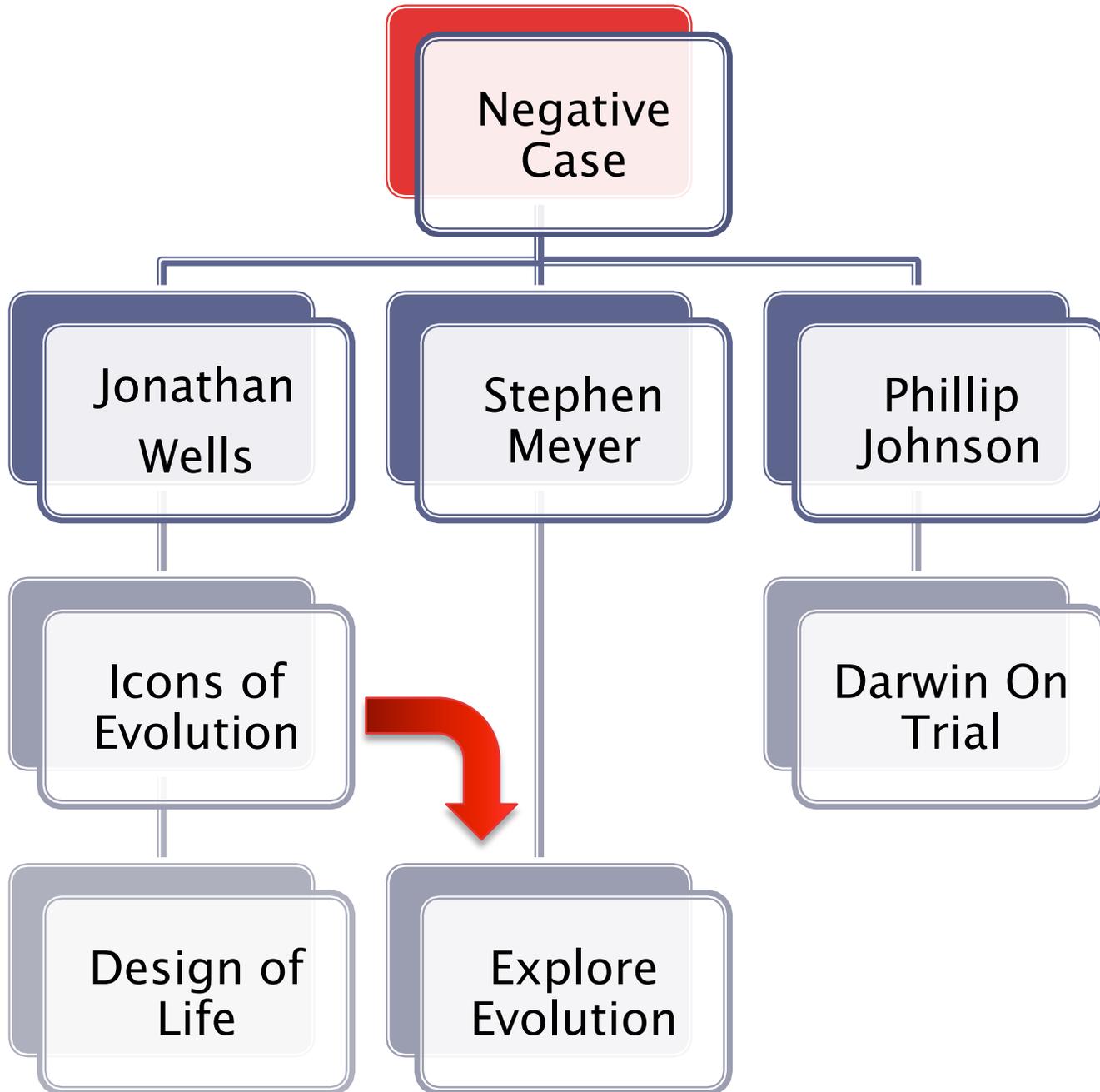
- Percival Davis
- Dean Kenyon
- Charles Thaxton

## Pandas 2

- Percival Davis
- Dean Kenyon
- Charles Thaxton
- (Stephen Meyer)
- (Michael Behe)

## Design of Life

- Michael Behe
- Percival Davis
- **William Dembski**
- Dean Kenyon
- **Jonathan Wells**



# "Culture War"

Phillip  
Johnson

Reason in  
the Balance

John West

Darwin Day  
in America

Richard  
Weikart

From  
Darwin to  
Hitler

Benjamin  
Wiker

Moral  
Darwinism

A  
Meaningful  
World



- ▶ Is there a scientific theory of intelligent design?
- ▶ Is there suppression of dissent?
- ▶ Could there be a theory of intelligent design?
- ▶ Could such a theory become accepted by the scientific community?

**Evolution**



**Investigation**



**Publication**



**Acceptance**



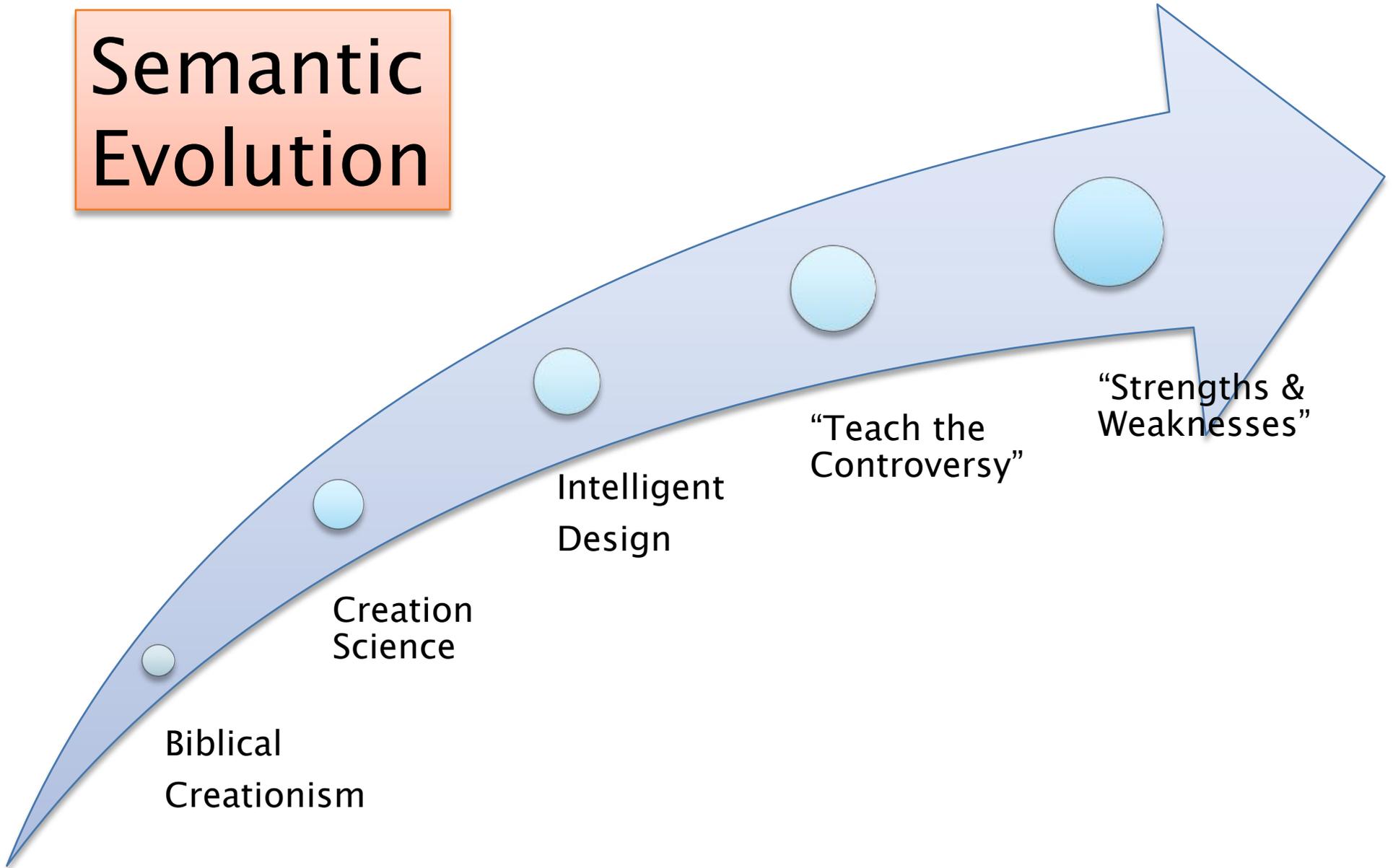
**Education**

**Anti-Evolution**



**Education**

# Semantic Evolution

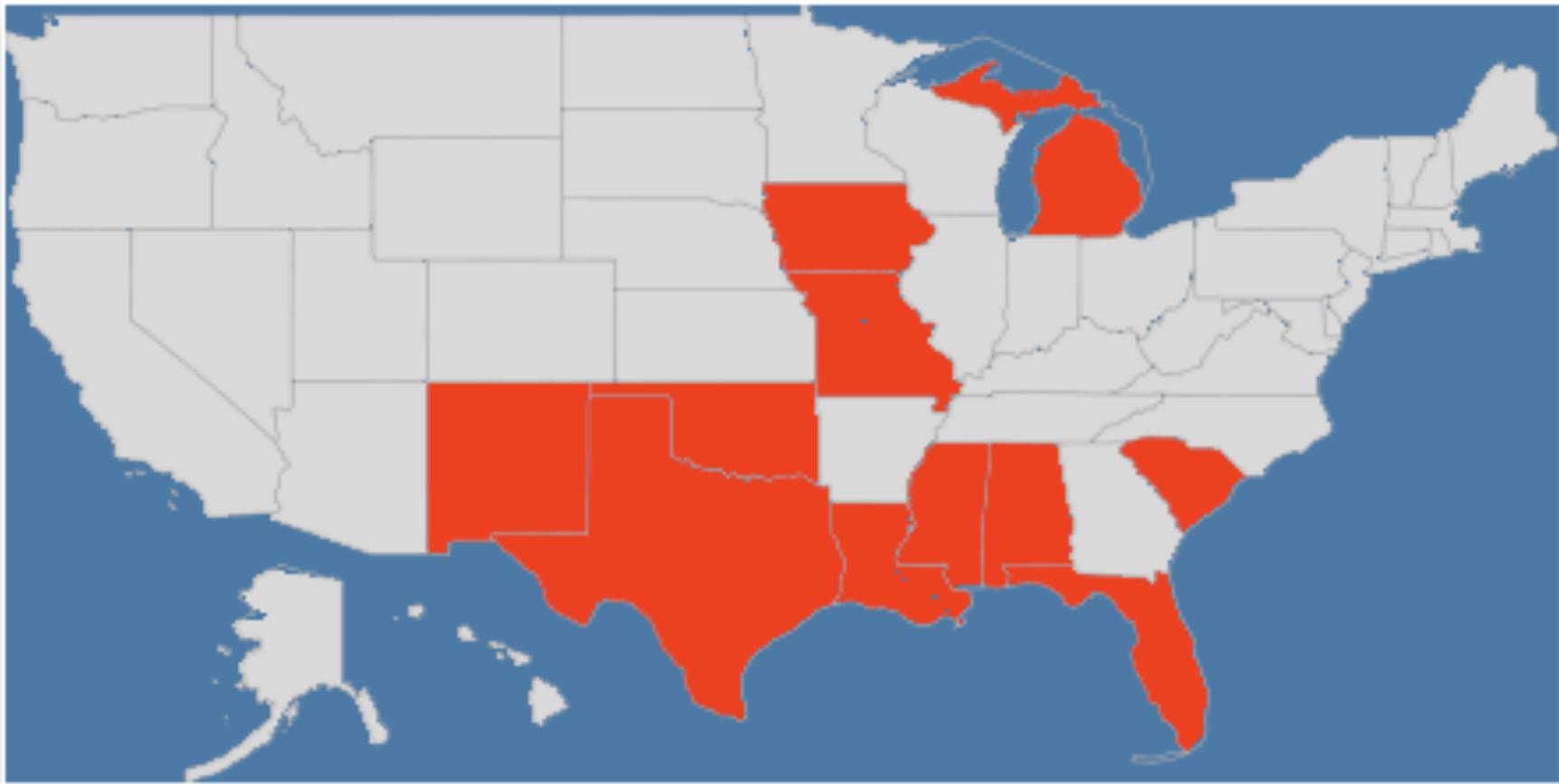


# Louisiana (2008)

[A] The Board “shall allow and assist teachers, principals, and other school administrators to create and foster an environment within public elementary and secondary schools that promotes critical thinking skills, logical analysis, and open and objective discussion of scientific theories being studied including, but not limited to, **evolution, the origins of life, global warming, and human cloning**”

[C] “A teacher shall teach the material presented in the standard textbook supplied by the school system and thereafter may use **supplemental textbooks** and other instructional materials to help students understand, analyze, critique, and review scientific theories in an objective manner”

“strengths and weaknesses” or  
“academic freedom” (2008–09)



# Oklahoma (2009)

- ▶ Science Education and **Academic Freedom** Act
- ▶ “Teachers shall be permitted to help students understand, analyze, critique, and review in an objective manner the **scientific strengths and scientific weaknesses** of existing scientific theories pertinent to the course being taught.”
- ▶ “[N]o student in any public school or institution shall be penalized in any way because the student may subscribe to a particular position on scientific theories.”
- ▶ What theories? “biological evolution, the chemical origins of life, global warming, and human cloning”

# academicfreedompetition



## Sign the Academic Freedom

Title

First\*  Last\*

Address\*

City\*

State\*  Zip\*

Email\*

Verification Code\*

Sign-up for free updates about academic free

## RESOURCES

[Home](#)  
[Academic Freedom Act](#)  
[About](#)  
[Expelled: The Movie](#)  
[IntelligentDesign.org](#)  
[Academic Freedom Day](#)  
[Video & Essay Contest](#)



## SUPPORT ACADEMIC FREEDOM

Do you want to defend the academic freedom of teachers and students to study all of the relevant scientific information relating to evolution?

In many states teachers, students, and even college professors have faced intimidation and retaliation when they attempt to discuss scientific criticisms pertaining to evolution. This assault on academic freedom is antithetical to our traditions as a free society and to the progress of science itself, which depends on robust debate and critical inquiry. It is entirely appropriate for the government to ensure that teachers and students have the right to freely discuss the scientific debates over evolution in an appropriate manner.

Here is a sample academic freedom bill that would protect the rights of teachers and students to study the full range of scientific views on Darwinian evolution.

If you have questions please e-mail Casey Luskin, [cluskin@discovery.org](mailto:cluskin@discovery.org), program officer for public policy and legal affairs at Discovery Institute.

# Academic Freedom Petition

“We, the undersigned American citizens, urge the adoption of policies by our nation's academic institutions to ensure teacher and student academic freedom to discuss the scientific **strengths and weaknesses of Darwinian evolution**. Teachers should be protected from being fired, harassed, intimidated, or discriminated against for objectively presenting the **scientific strengths and weaknesses of Darwinian theory**. Students should be protected from being harassed, intimidated, or discriminated against for expressing their views about the **scientific strengths and weaknesses of Darwinian theory** in an appropriate manner.”

# Texas Board of Education 2009

“[I]n all fields of science, analyze, evaluate and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing including examining all sides of scientific evidence of those scientific explanations so as to encourage critical thinking by the student.”

# Texas: “Analyze and evaluate ...”

- ▶ “natural selection ... mutations ... common ancestry”
- ▶ “scientific explanations concerning any data of sudden appearance, stasis, and sequential nature of groups in the fossil record.”
- ▶ “scientific explanations concerning the complexity of the cell.”
- ▶ “The evidence regarding formation of simple organic molecules and their organization into long complex molecules having information such as the DNA molecule for self-replicating life.””

# Why does the American public agree with the DI's strategy?

- ▶ Sense of “fairness”
- ▶ Attitude to intellectual authority
- ▶ Importance of religious belief in American life and overall aversion to *fideism*
- ▶ Sense of cultural decay
- ▶ Poor understanding of the nature of science and poor scientific literacy among public

FEBRUARY 13, 2006

# TIME



FURY  
OVER  
MUHAMMAD

## IS AMERICA FLUNKING SCIENCE?

Our superiority was once the envy of the world. But we are slacking off just as other countries are getting stronger. What's the formula for a comeback?

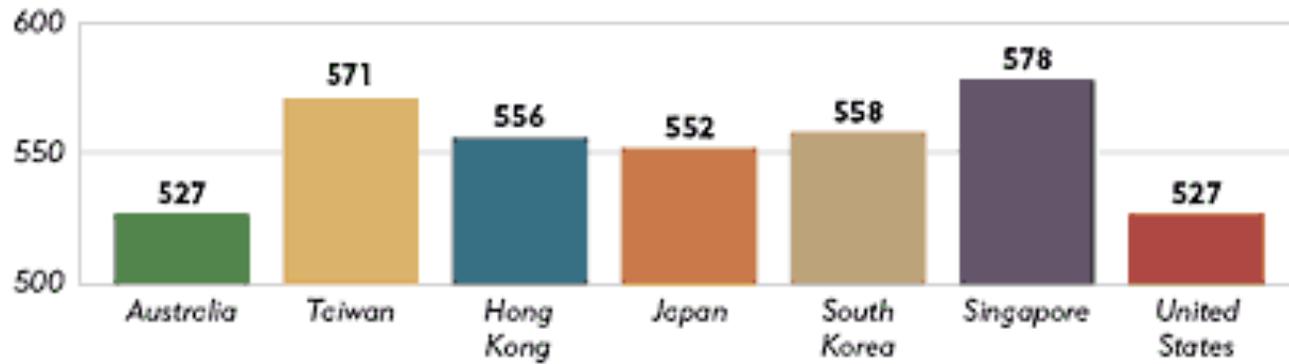
BY MICHAEL D. LEMONICK



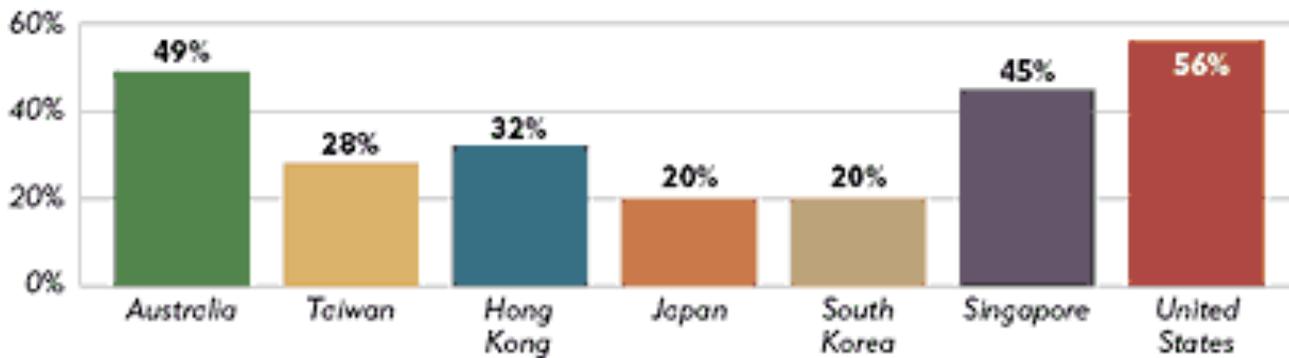
www.time.com AOL Keyword: TIME

# I THINK I CAN

Average 8th-grade science scores (out of 800 points)



Percentage of 8th-grade science students with high self-confidence in learning science



# 2002 NSF Study of Scientific Literacy

- ▶ Cigarette smoking causes lung cancer. True, 94%
- ▶ The continents on which we live have been moving their location for millions of years and will continue to move in the future. True, 79%
- ▶ Does the Earth go around the Sun, or does the Sun go around the Earth?  
Earth around the Sun, 75%  
How long does it take for the Earth to go around the Sun: one day, one month, or one year? (One year, 54%)
- ▶ Human beings, as we know them today, developed from earlier species of animals. (True, 53%)
- ▶ Antibiotics kill viruses as well as bacteria. (False, 51%)
- ▶ Electrons are smaller than atoms. (True, 48%)
- ▶ The earliest humans lived at the same time as the dinosaurs. (False, 48%)
- ▶ The universe began with a huge explosion. (True, 33%)

# 2002 NSF Poll

Belief in extrasensory perception 60%

Belief in UFOs 30%

Scientific validity of astrology 43%

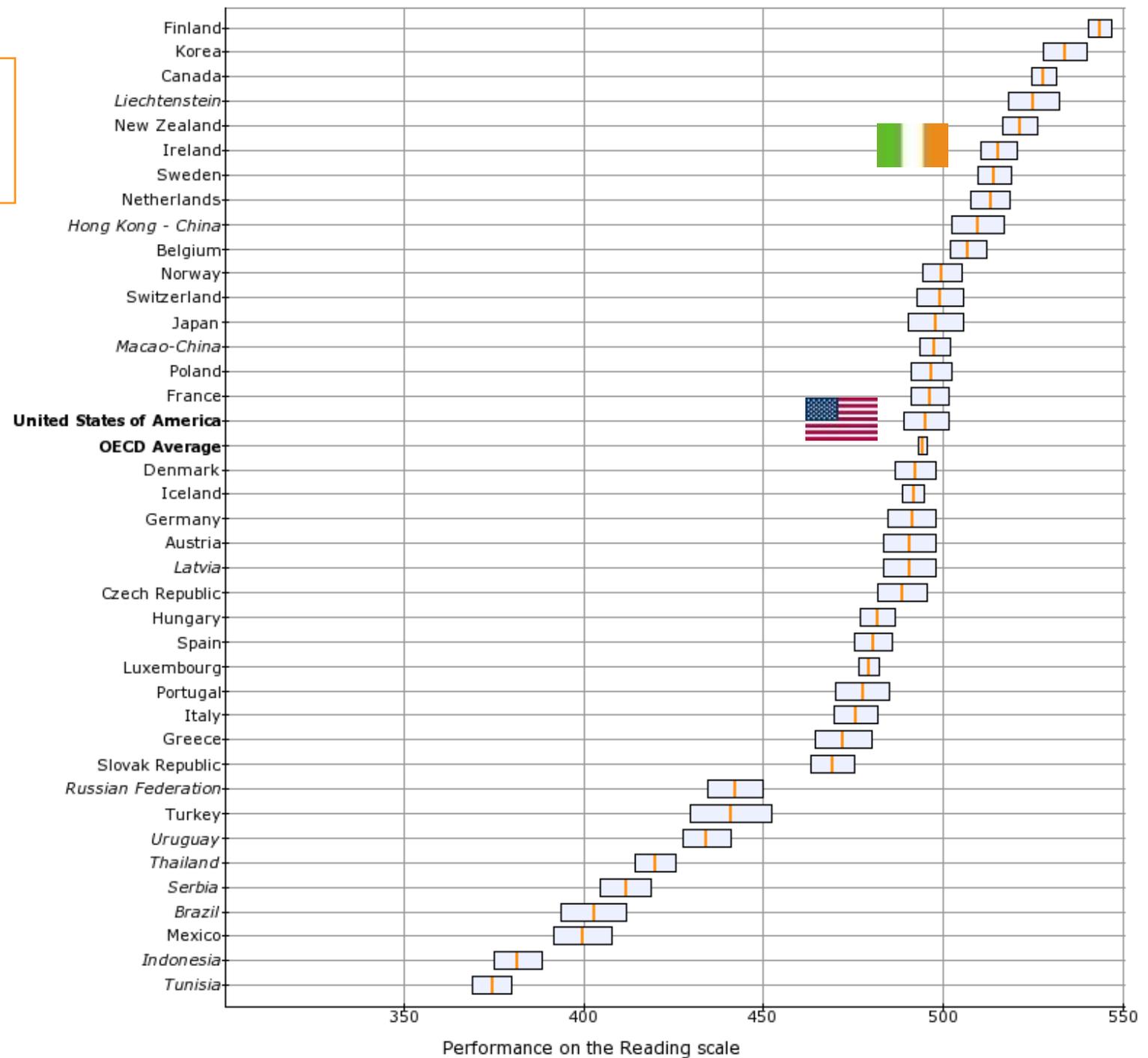
# NSF Indicators, 2008

“If Americans’ performance in answering factual knowledge questions concerning science can be deemed disappointing, the same is true for their performance in other areas of knowledge ... Survey data of varying quality have been interpreted to indicate that Americans, especially the young, do not know enough about **history, civics, geography, and politics**, and are not sufficiently interested in these and other domains of knowledge that, like scientific knowledge, can serve as a foundation for understanding the world around”

# NSF Indicators, 2008

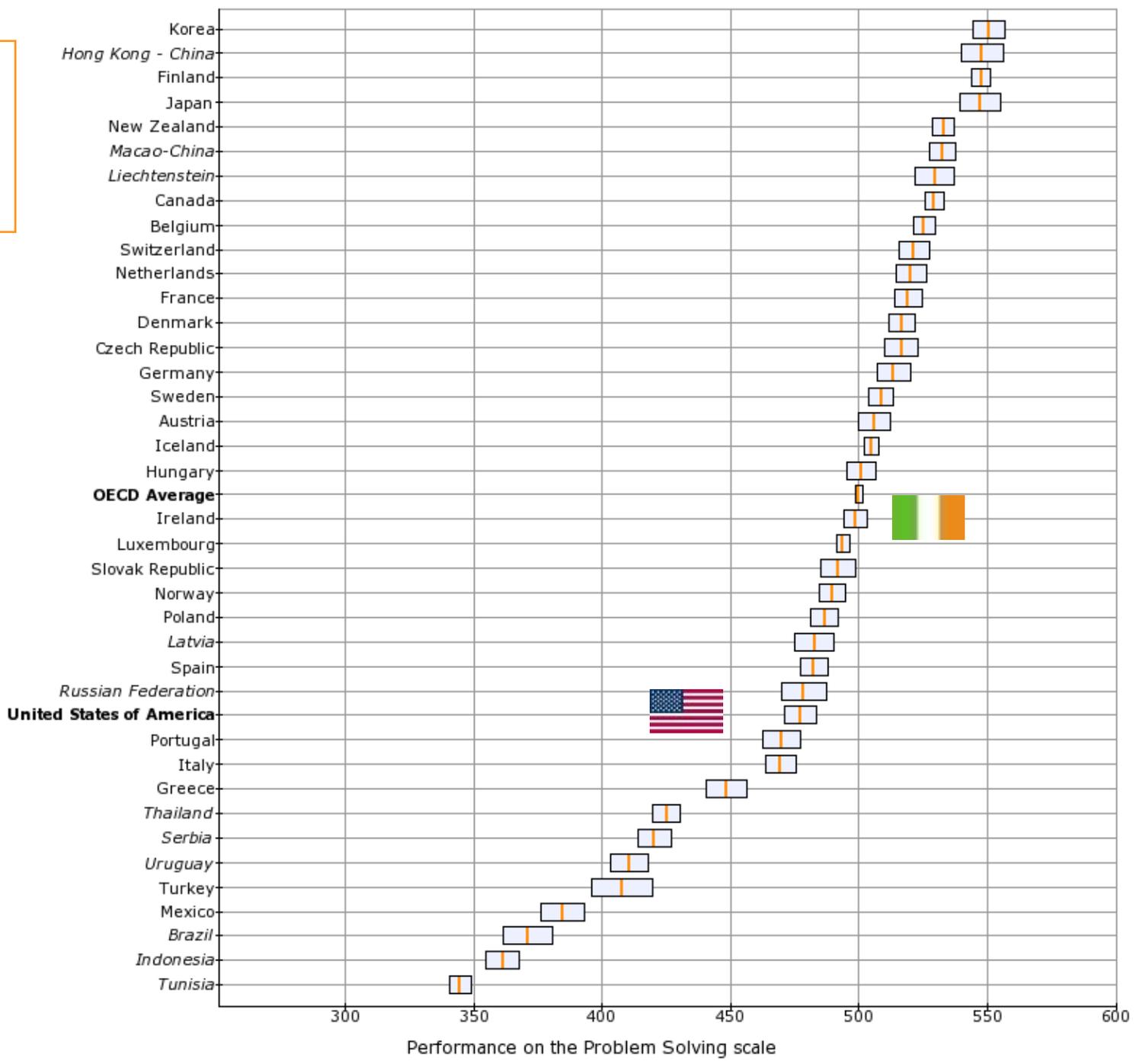
“Science knowledge scores vary considerably across the EU-25 countries ... with northern European countries, led by Sweden, recording the highest total scores on a set of 13 questions. For a smaller set of four items that were administered in both 1992 and 2005 in 12 European countries, each country performed better in 2005 ... in contrast, the U.S. data on science knowledge do not show upward trends over the same period.”

Reading  
OECD/PISA  
2006

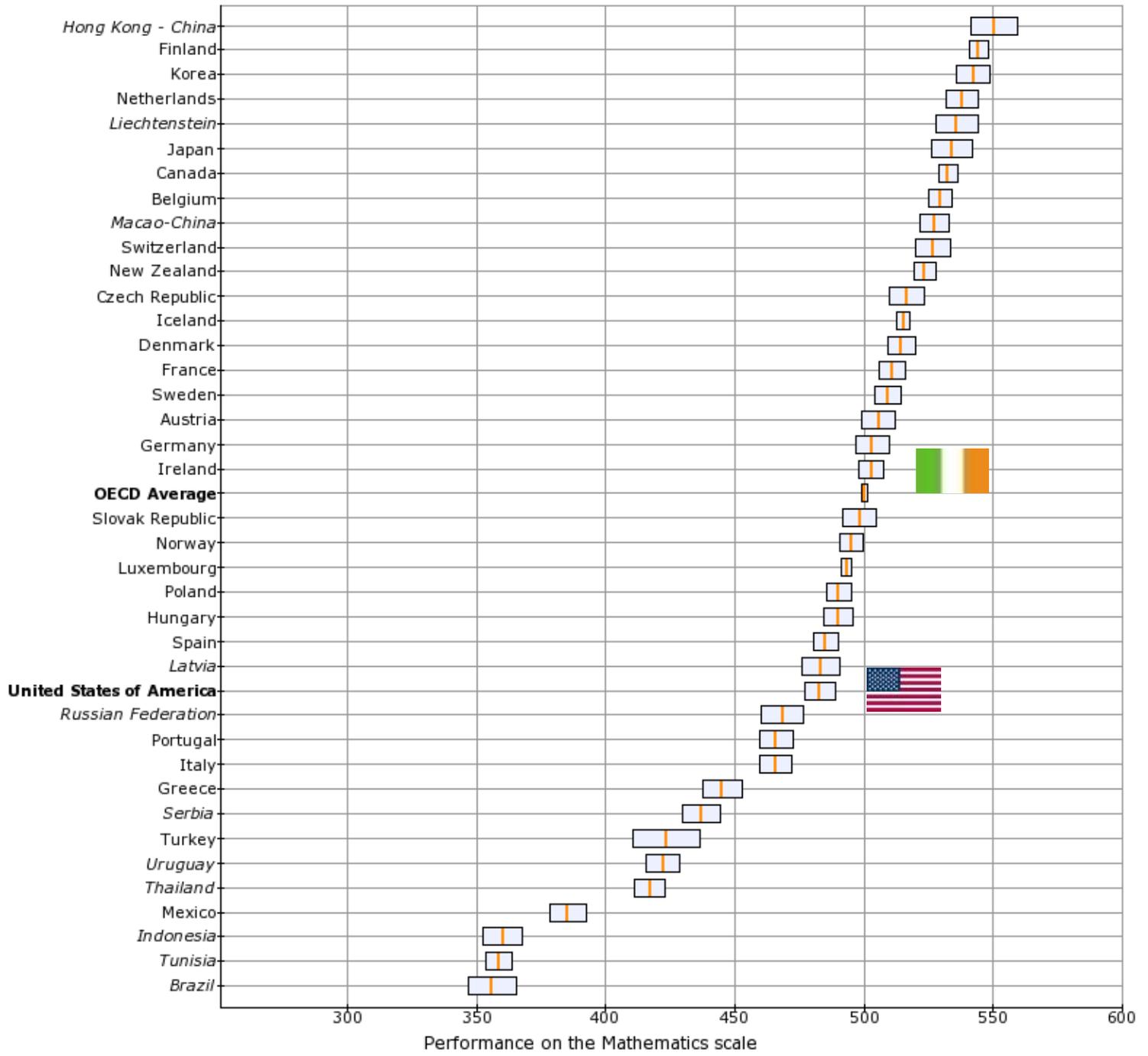


Over  
250,000  
15 year  
-olds from  
41  
countries

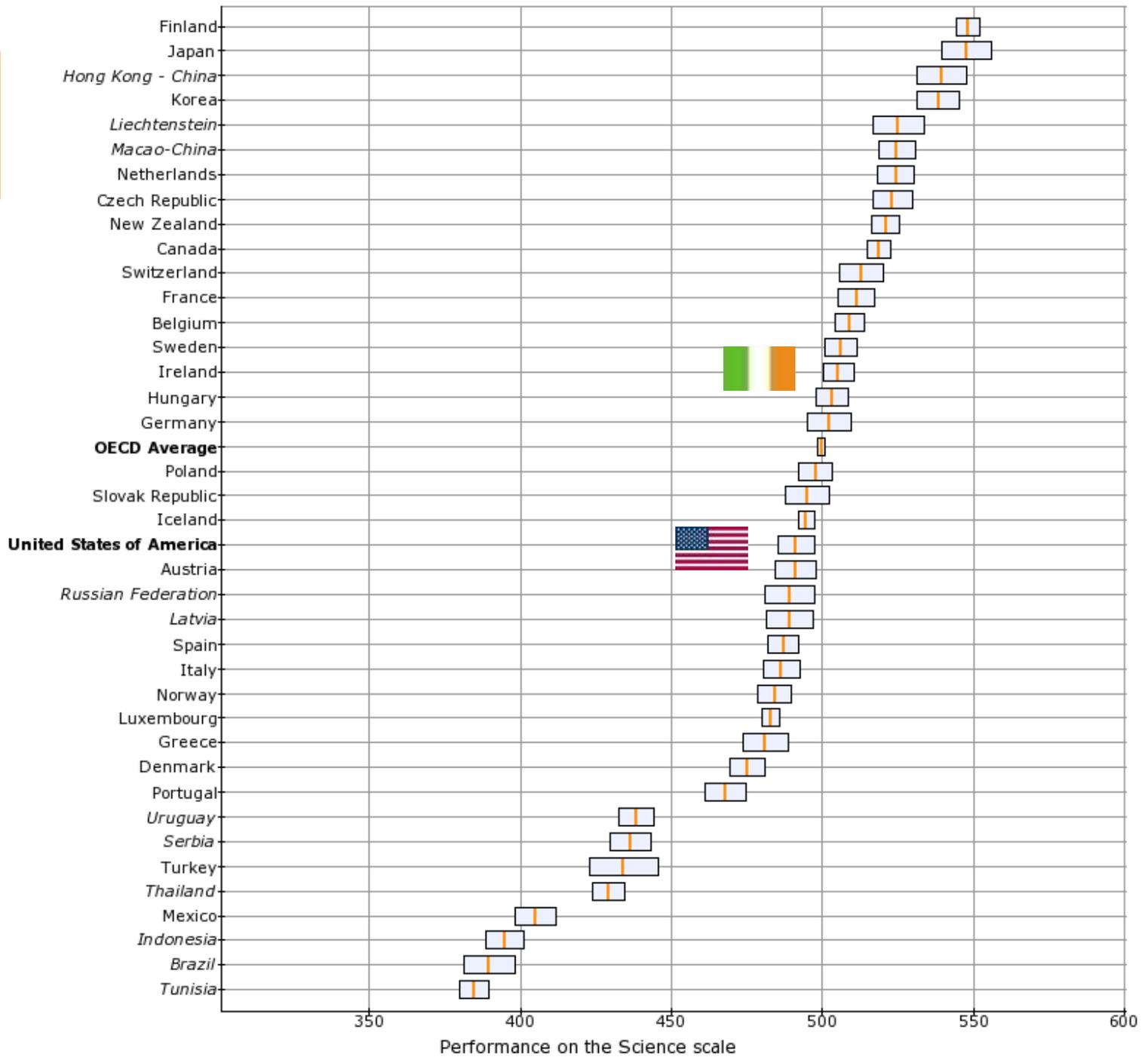
Problem Solving  
OECD/PISA  
2006



Mathematics  
OECD/PISA  
2006



Science  
OECD/PISA  
2006



# Literacy

- ▶ 40% of 4<sup>th</sup> grade students are reading below grade level.
- ▶ Adult literacy ranked 68<sup>th</sup> in the world.
- ▶ “[T]he average Medicaid recipient reads at the fifth-grade level” (2002)
  - Most health material is written at 12<sup>th</sup> grade level.

23% of American adults are ranked at Level 1 Literacy and thus have “difficulty using certain reading, writing, and computational skills considered necessary for functioning in everyday life.”

### Skills of Adults at Level 1

#### Can Usually Perform

Sign one's name

Identify a country in a short article

Locate one piece of information in a sports article

Locate the expiration date information on a driver's license

Total a bank deposit entry

#### Cannot Usually Perform

Locate eligibility from a table of employee benefits

Locate intersection on a street map

Locate two pieces of information in a sports article

Identify and enter background information on a social security card application

Calculate total costs of purchase from an order form

### The Impact of Low Literacy

**Poverty.** Forty-three percent of adults at Level 1 were living in poverty, compared to 4 percent of those at Level 5.\*

**Welfare.** The likelihood of being on welfare goes up as literacy levels go down. Three out of four food stamp recipients performed in the two lowest literacy levels.

**Income.** Adults at Level 1 earned a median income of \$240 per week, compared to \$681 for those at Level 5.\*

**Employment Status.** Adults at Level 1 worked an average of 19 weeks per year, compared to 44 weeks per year for those at Level 5.\*

**Crime.** Seven in 10 prisoners performed in the lowest two literacy levels.

\* These numbers refer to the score on the prose literacy scale. Similar differences occurred using the quantitative and document scales.

A RECENT  
TEST OF  
HIGH SCHOOL  
GRADUATES  
FOUND  
THAT  
JOHNNY  
STILL  
FAILS  
READING.



ALONG  
WITH  
MATH.  
AND  
ENGLISH,  
AND  
SCIENCE.



NOW  
WE'RE  
GOING  
TO FIX  
ALL  
THIS.



BY  
TEACHING  
HIM  
INTELLIGENT  
DESIGN.



