

Hot Science Cool Talks

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God, Darwin, and Design: Lessons from the Dover Monkey Trial

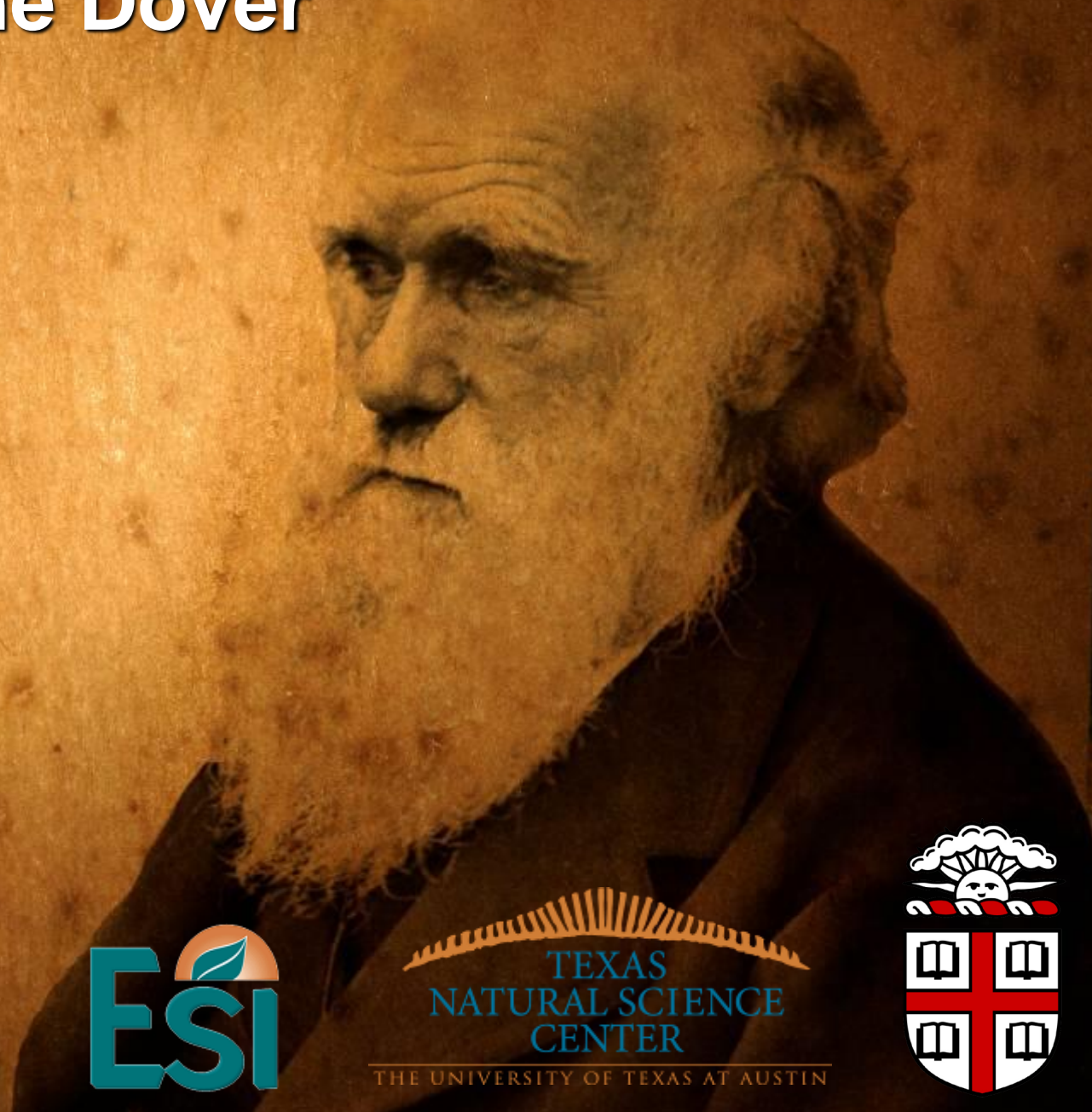
Dr. Kenneth Miller

April 4, 2008

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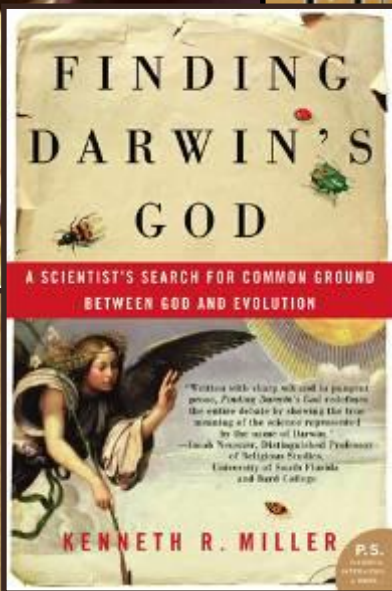
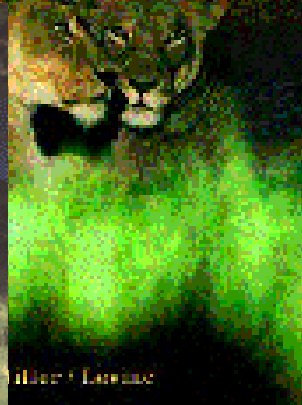
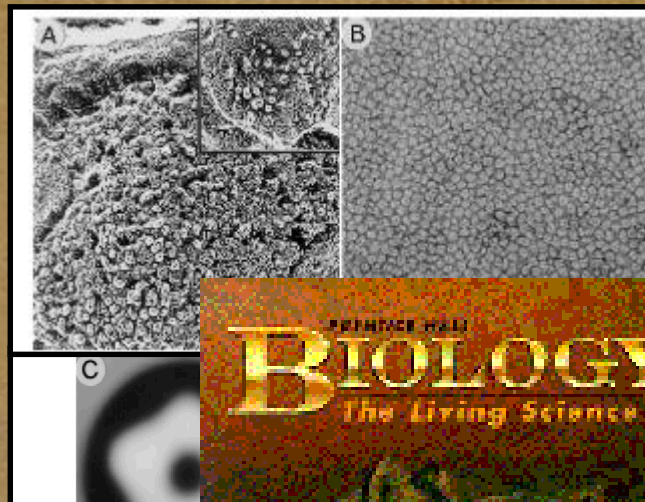
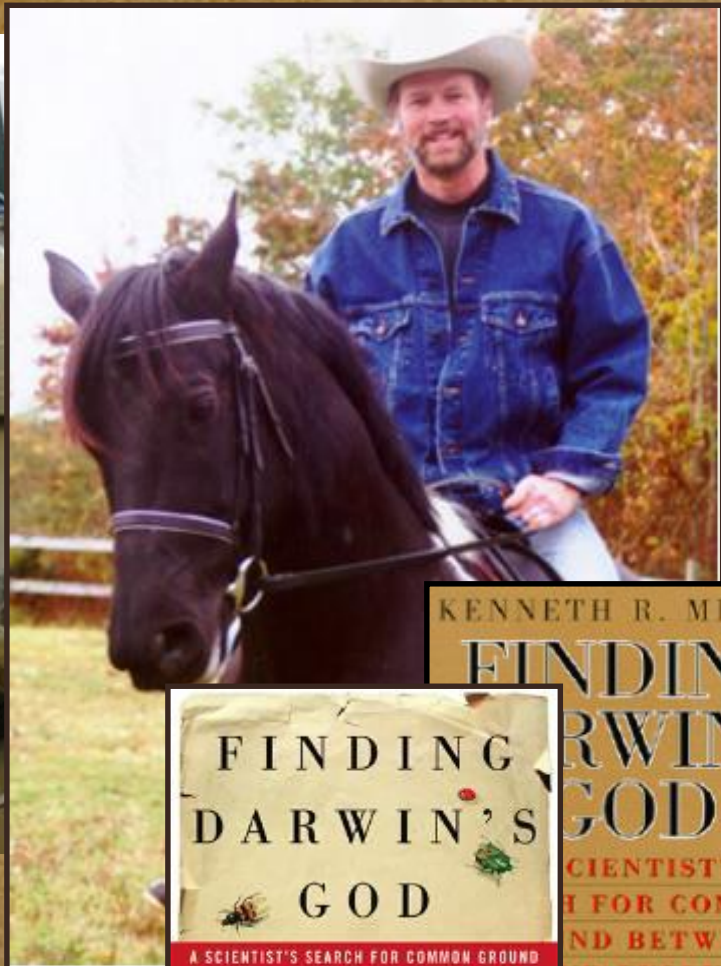
God, Darwin, & Design

Lessons from the Dover Monkey Trial



Ken Miller
Molecular Biology, Cell
Biology, & Biochemistry
Brown University





KENNETH R. MILLER
**FINDING
DARWIN'S
GOD**
A SCIENTIST'S SEARCH FOR COMMON
GROUND BETWEEN
GOD AND EVOLUTION



Sam Brownback
We Live in Extraordinary Times
Mike Huckabee
Tom Tancredo



I'm curious. Is there anybody on the stage that does not believe in evolution?

Poll: Most Republicans Doubt Evolution

By Doug Huntington
Christian Post Reporter
Tue, Jun. 12 2007 07:09 AM ET

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A majority of Republicans do not believe in evolution, according to a Gallup Poll released Monday.

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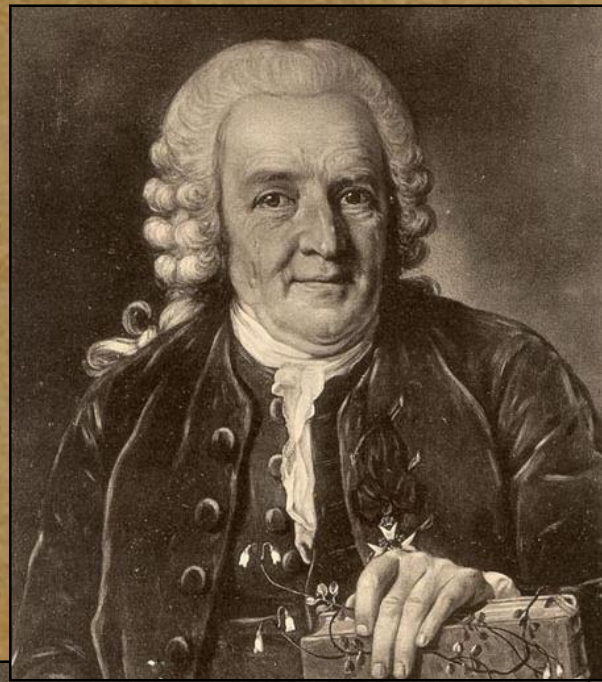


(Photo: AP / Elise Amendola)
Republican presidential hopeful
former Arkansas Gov. Mike

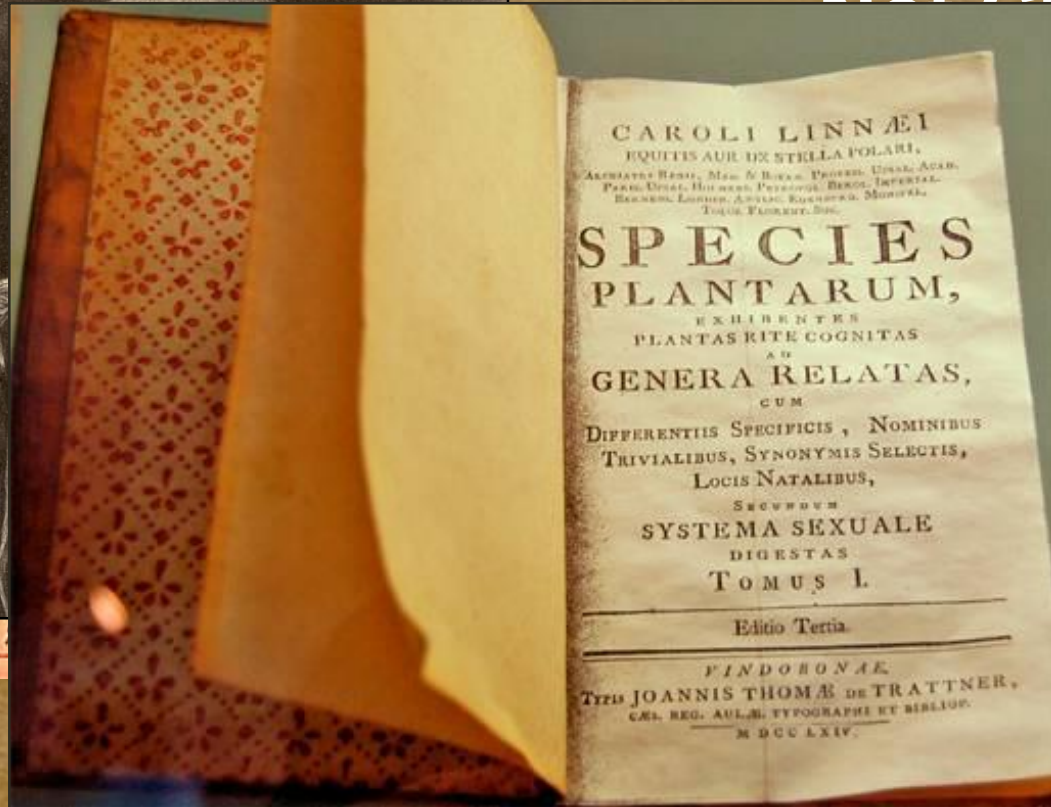
From the poll taken between May 21-24, results showed that 68 percent of Republicans tended to favor the idea that humans were created in their present form within the last 10,000 years ago, while only 27 percent believed that it was an accident and that it just happened all on its own," explained Huckabee, the former Arkansas governor and an ordained Baptist minister, at the Republican debate last Tuesday. "If anybody wants to believe that they are the descendants of a primate, they are certainly welcome to do it."

Mike Huckabee: "If anybody wants to believe that they are the descendants of a primate, they are certainly welcome to do it."

... or believes that it was an accident and that it just happened all on its own," explained Huckabee, the former Arkansas governor and an ordained Baptist minister, at the Republican debate last Tuesday. "If anybody wants to believe that they are the descendants of a primate, they are certainly welcome to do it."



In Linnaeus's original system, genera were grouped into orders, orders into classes, and classes into kingdoms. Thus the kingdom Animalia contained the class Vertebrata, which contained the order Primates, which contained the genus *Homo* with the species *sapiens* -- humanity.



Ordo I.
PRIMATES.
Dentes primores superiores IV paralleli.
Mammæ pectorales, binæ.

I. HOMO nosce Te ipsum.

- H. diurnus. (*) *vagans cultura, loco.*
 - H. rufus, cholericus, rectus. Americanus.
 - H. albus, sanguineus torosus. Europæus.
 - H. luridus, melancholicus rigidus. Atlanticus.
 - H. niger, phlegmaticus, laxus. Afer.
 - H. monstrosus solo (a), vel arte (b. c.)
 - Alpini parvi, agiles, timidi: Patagonici magni, segnes.
 - Monorchides ut minus fertiles: Hottentotti.
Juncæ puellæ abdomine attenuato: Europææ.
 - Macrocephali capite conico. Chineses.
Plagiocephali capite antice compresso. Canadenses.
- Homo nocturnus. Ourang Outang *Bont. jav. 84. t. 84.*
Genus Trogloditæ seu Ourang Outang ab Homine vero diffi-
ciam, adhibita quamvis omni attentione, obtinere non potui, nisi as-
merem notam lubricam, in aliis generibus non constantem. Nec Den-
tes laniarii minime a reliquis remoti; nec Nymphae castre, quibus
carent Stomæ, hunc ad Simias reducere admittebant. Inquirant as-
toptæ in vivo, qua ratione, modo notæ aliquæ existant, ab Hominis
genere separari queat, nam inter Simias versantem oportet esse Si-
miam. Apollodor.

Anti-evolution activity is nationwide

Normally low-profile contest in spotlight

Evolution debate at
of state school board

SCOTT STEPHENS
Plain Dealer Reporter

On his radio talk show last week, Ernie Sanders didn't mention the importance of the debate between State Board of Education member Deborah Owens Fink and challenger, Tom Sawyer.



Fink



Sawyer

But the most important person in the election has been Sawyer for 124 years.



THE PLAIN DEALER

Pro-evolution state school board candidates win

Wednesday, November 08, 2006

Scott Stephens
Plain Dealer Reporter

Ohio's scientists laid down their test tubes and flexed some political muscle Tuesday as four pro-evolution candidates they backed were on their way to capturing or retaining seats on the state Board of Education.

In the race that drew national attention, Tom Sawyer, a former Akron mayor and 16-year congressman, was beating incumbent Deborah Owens Fink nearly 2-1 for a board seat that covers Summit, Ashtabula, Portage and Trumbull counties.

"I believe the state board of education should have a far stronger voice than it had," Sawyer said Tuesday night.

State board races are nonpartisan, but Owens Fink fell victim to a strong Democratic turnout and an opponent with a still-potent name among party faithful.

"In reality, it's a very, very Democratic area and a tough place to be a Republican," she said.

Like the bitter school board battles in Kansas last summer, the Ohio board races produced high drama. Voters were treated to the unusual sight of Kenneth Miller, a nationally renowned biologist, stumping like a ward-heeler for pro-evolution candidates, and Pastor Ernie Sanders, an evangelical radio host, blasting Sawyer as a merchant of sin.



Advocates of
“Design” see the
scientific process as
something best
avoided.

Intelligent Design
“Claimy”

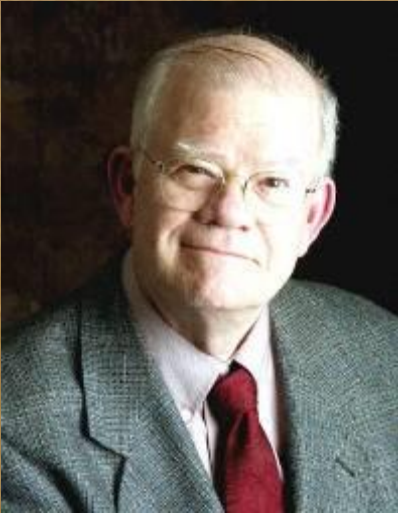
Research

Peer Review

Scientific
Consensus

Classroom &
Textbook

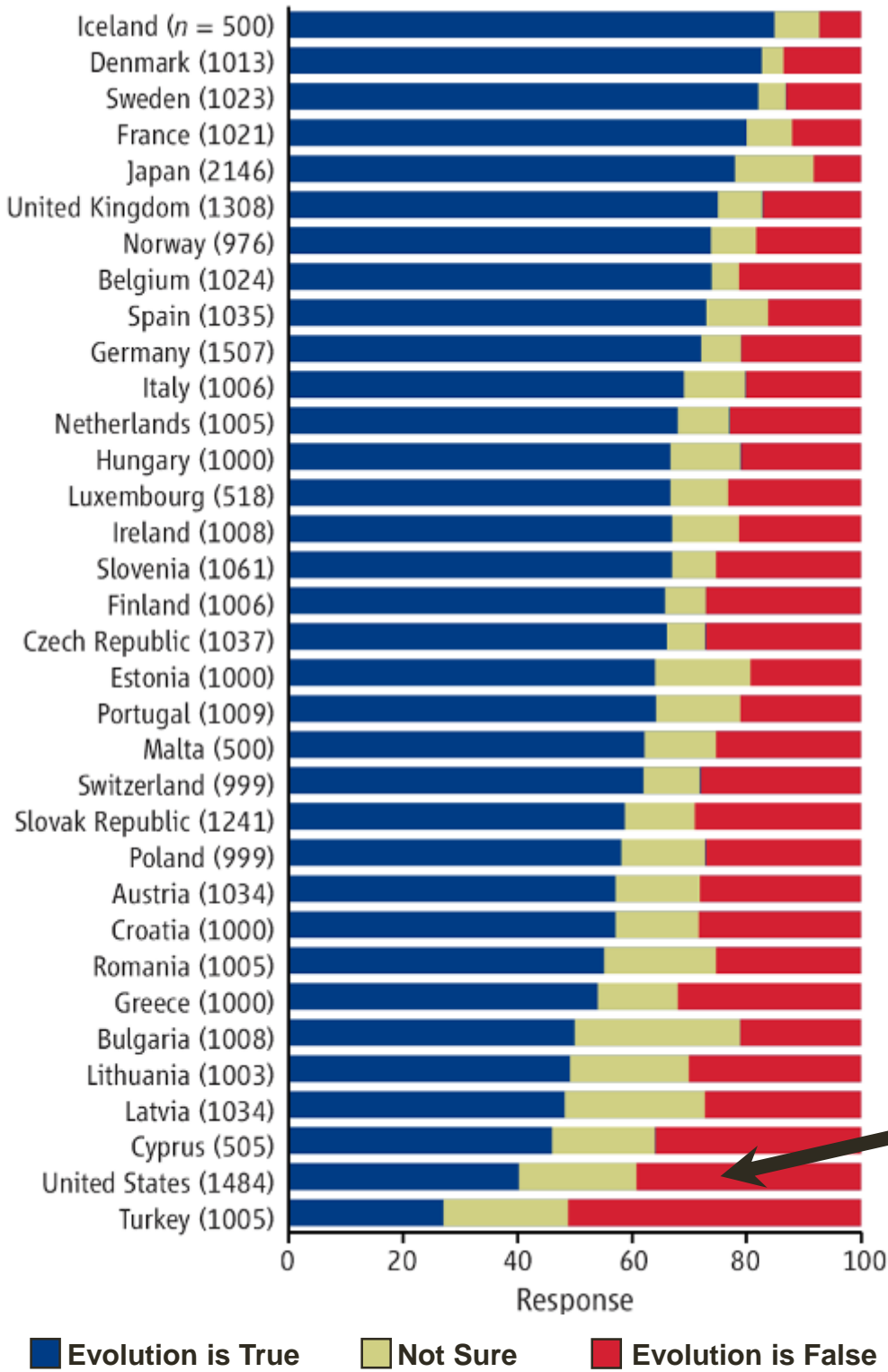
Even its advocates admit that ID is a scientific failure



“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.”

Phillip Johnson in the Berkeley Science Review, Spring 2006

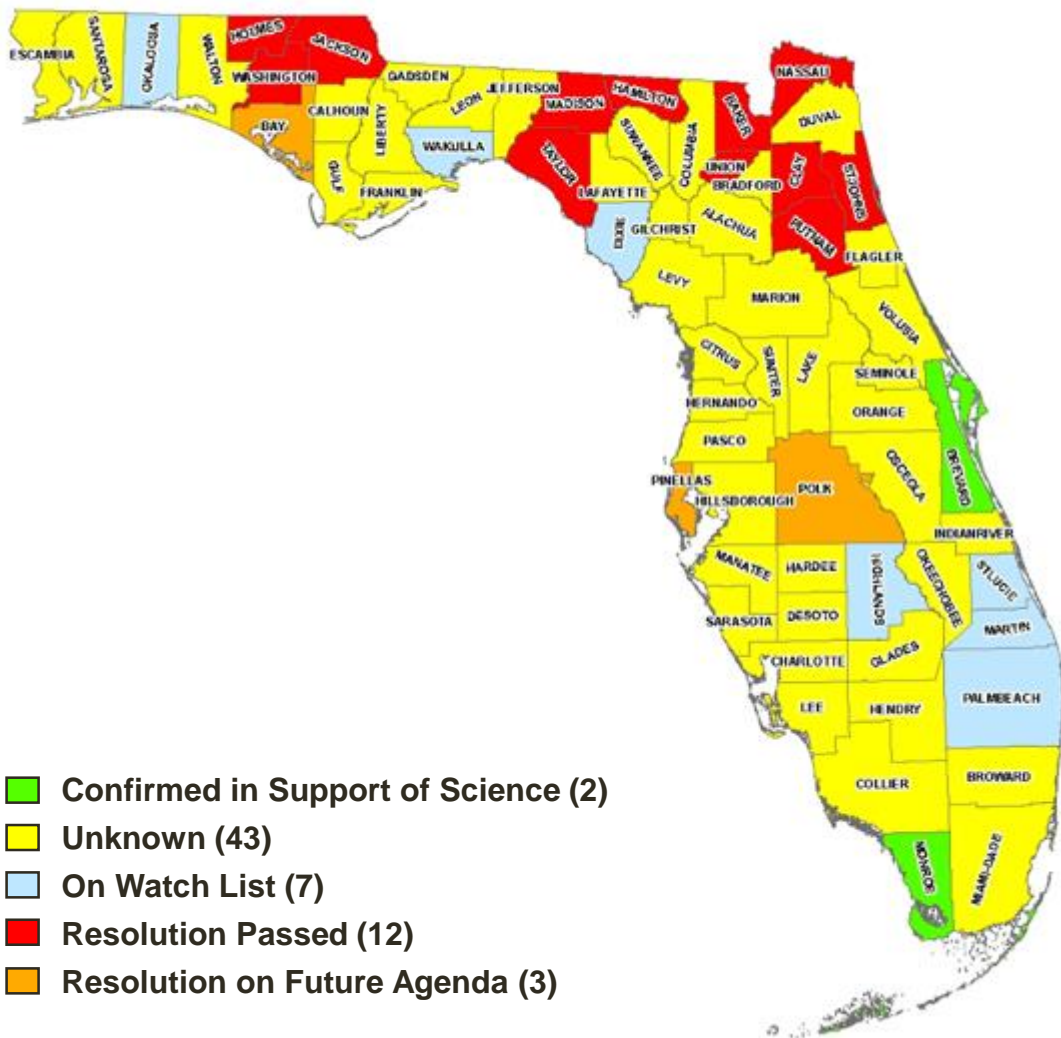
But ID remains a public relations success story



The United States is near the bottom in public acceptance of evolution

But ID remains a public relations success story

Florida Counties with Anti-Evolution Resolutions



12 Florida Counties have now passed resolutions urging changes in Florida's pending science standards, which would for the first time cite evolution as the central organizing principle of the life sciences.



"What's wrong with wanting our children

Witness cites school board's anti-evolution bias

Religion behind intelligent design policy, former board member says

AP Associated Press

Updated: 8:05 p.m. ET Sept. 27, 2005

HARRISBURG, Pa. - The Dover school board showed a clear bias against teaching Darwinian evolution before it voted to require students to be exposed to "intelligent design" in science class, a former board member testified Tuesday.

The testimony about the school board's intentions came on the second day of a trial over whether the intelligent-design concept has a place in public schools.

FREE VIDEO



Launch

• Evolution trial

IN THE UNITED STATES DISTRICT COURT FOR THE MIDDLE DISTRICT OF PENNSYLVANIA

TAMMY KITZMILLER; BRYAN AND CHRISTY REHM; DEBORAH FENIMORE AND JOEL LIEB; STEVEN STOUGH; BETH EVELAND; CYNTHIA SNEATH; JULIE SMITH; AND ARALENE ("BARRIE") D. AND FREDERICK B. CALLAHAN,

Plaintiffs,

v.

DOVER AREA SCHOOL DISTRICT;
DOVER AREA SCHOOL DISTRICT BOARD OF DIRECTORS.

Defendants.

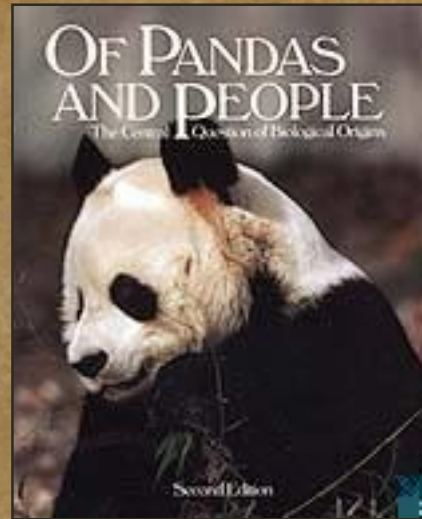
Civil Action No. _____

COMPLAINT

I. INTRODUCTION

On October 18, 2004, the defendant Dover Area School District Board of Directors ("Dover School Board") passed by a 6-3 vote the following resolution:





INTELLIGENT DESIGN IN PUBLIC SCHOOL SCIENCE CURRICULA

A Legal Guidebook

David K. DeWolf
Stephen C. Meyer
Mark E. DeForrest

FOUNDATION FOR
THOUGHT AND ETHICS

Witness cites school board's anti-evolution bias

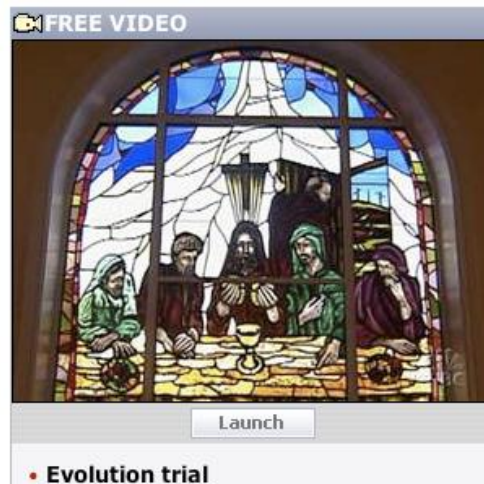
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The Dover Board was following a legal playbook coauthored by the Director of the Discovery Institute's Center for Science & Culture, and published by *The Foundation for Thought and Ethics*, which also published the ID textbook *Of Pandas and People*.

The new Monkey Trial

By persuading the Dover, Pa., school board to teach creationism, Christian zealots have a showdown over the status of not just evolutionary theory, but science itself.

By Michelle Goldberg

Pages 1 2 3 4 5

January 10, 2005 | It was an ordinary springtime school board meeting in the bedroom community of Dover, Pa. The high school needed new biology department had recommended Kenneth Miller and Josephy's "Of Pandas and Bears," a fantastic text," said Carol "Casey" Brown, 57, a self-described the board's senior member. "It just followed our curriculum

But Bill Buckingham, a new board member who'd recently joined the curriculum committee, had an objection. "Biology," he said. He wanted a book that balanced theories of evolution with creationism. He was willing to turn his town into a cultural battlefield to

"This country wasn't founded on Muslim beliefs or evolutionary theory," said a gray-haired man who wears a red, white and blue crucifix necklace at the meeting. "This country was founded on Christianity, and not on such."



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EDUCATION WEEK

October 1, 2005

WEB EXTRA

Outside Courtroom, Intelligent-Design Beliefs At Odds with Scientists

Kenneth R. Miller is one of the country's best-known biologists. He has written textbooks, authored many scientific articles and essays, and teaches at one of the nation's most prestigious universities. And in his testimony during a closely scrutinized federal trial here this week, he was unequivocal: "Intelligent design" is not science, and should not be presented as such in science classes. (September 30, 2005)



—Carolyn Kaster/AP

Brown University biologist Kenneth Miller walks to federal court in Harrisburg, Pa., Sept., 27. Mr. Miller was the first witness called by plaintiffs suing the Dover Area School District for exposing its students to the theory of "intelligent design."

• **Testimony Tackles Question: What Is Intelligent Design?** (September 29, 2005)

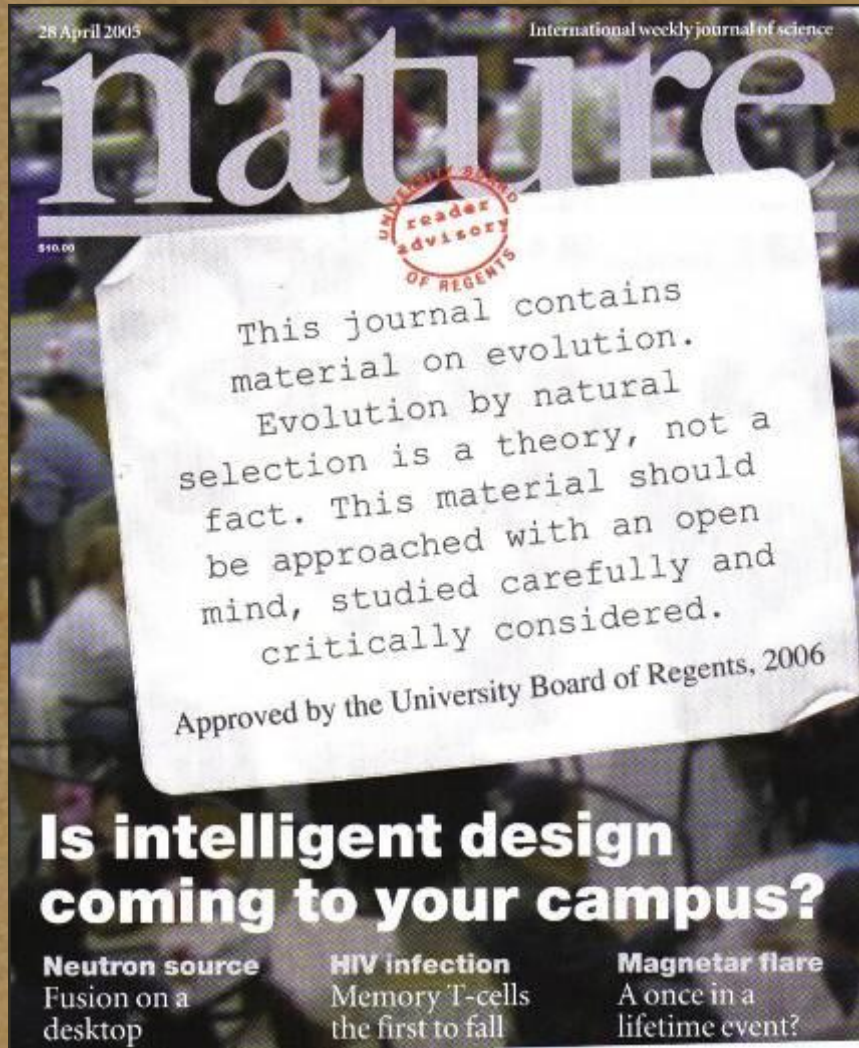
• **Plaintiffs Recall Atmosphere Leading Up to Intelligent-Design Policy** (September 28, 2005)

September 26, 2005
Trial Begins



For ID proponents, the trial was their chance, in front of a conservative judge, to present the “science” of design.





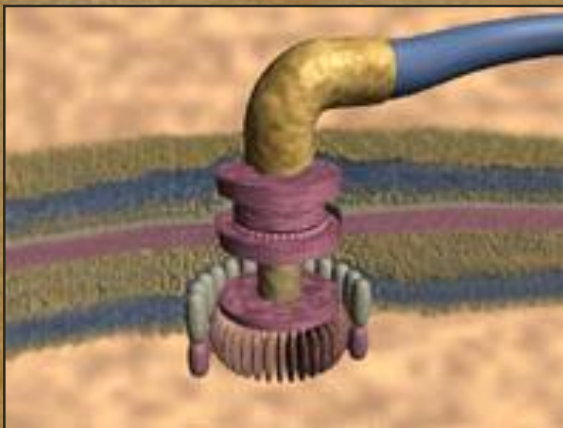
Actual Result?

The trial demonstrated the collapse of ID as a scientific theory.

Biochemical Claim: Evolution cannot explain the origin of Complex Cellular Machines

Why not?

Because these structures possess “Irreducible Complexity,” and that means they could not have been produced by evolution — even in principle.



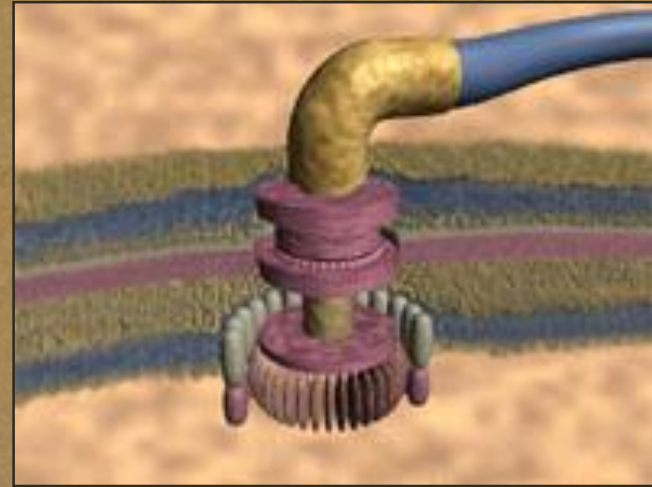
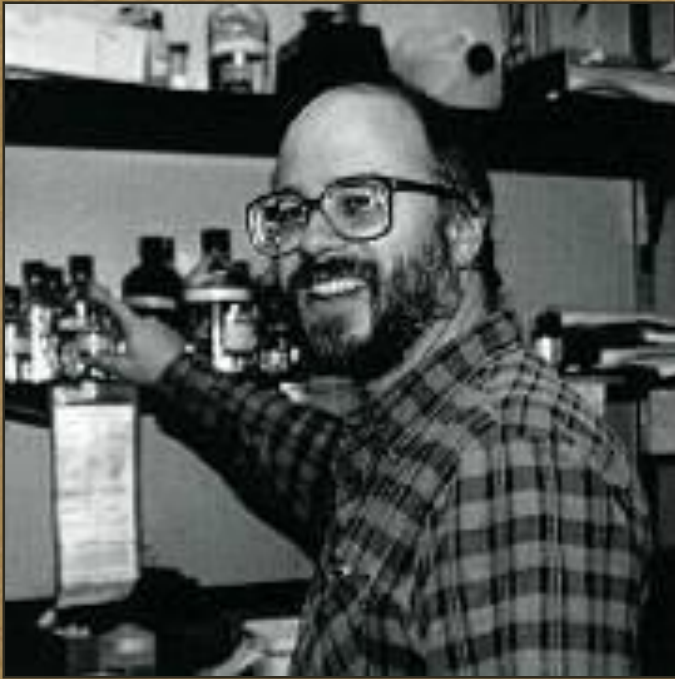
Bacterial Flagellum

Prime Example

- Bacterial flagellum

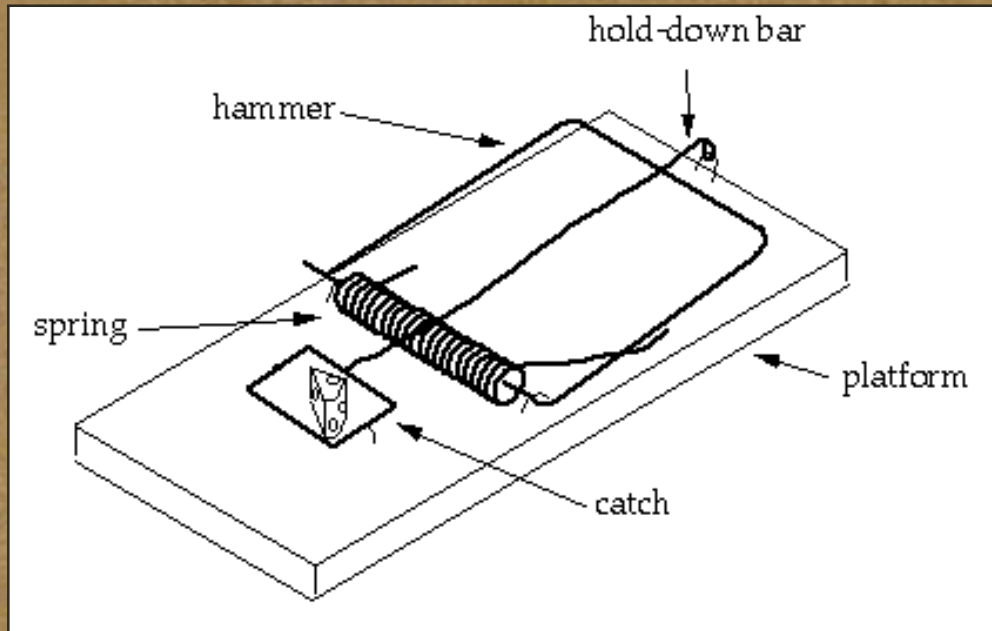


Electron micrograph of an E. coli showing several flagella at the apex of the cell.



Bacterial Flagellum

“An irreducibly complex system cannot be produced directly ... by slight, successive modifications of a precursor system, because any precursor to an irreducibly complex system that is missing a part is by definition nonfunctional.”

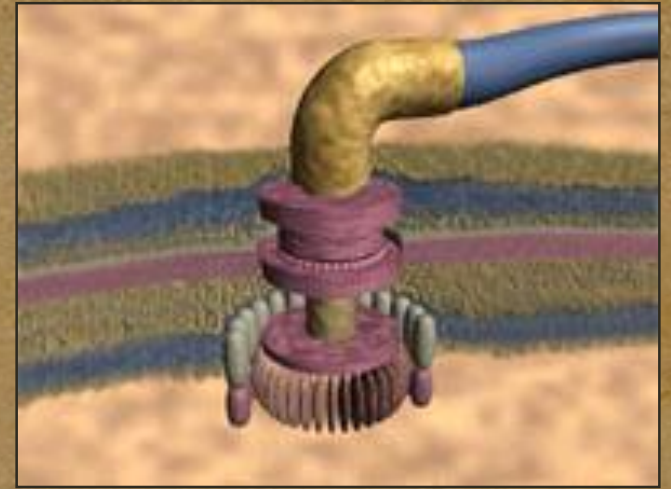


"A good example of such a system is a mechanical mousetrap. ... The function of the mousetrap requires all the pieces: you cannot catch a few mice with just a platform, add a spring and catch a few more mice, add a holding bar and catch a few more. All of the components have to be in place before any mice are caught. Thus the mousetrap is irreducibly complex."



The complete machine has a function...

“Since natural selection requires a function to select, an irreducibly complex biological system ... would have to arise as an integrated unit for natural selection to have anything to act on.”



....but its component parts do not.

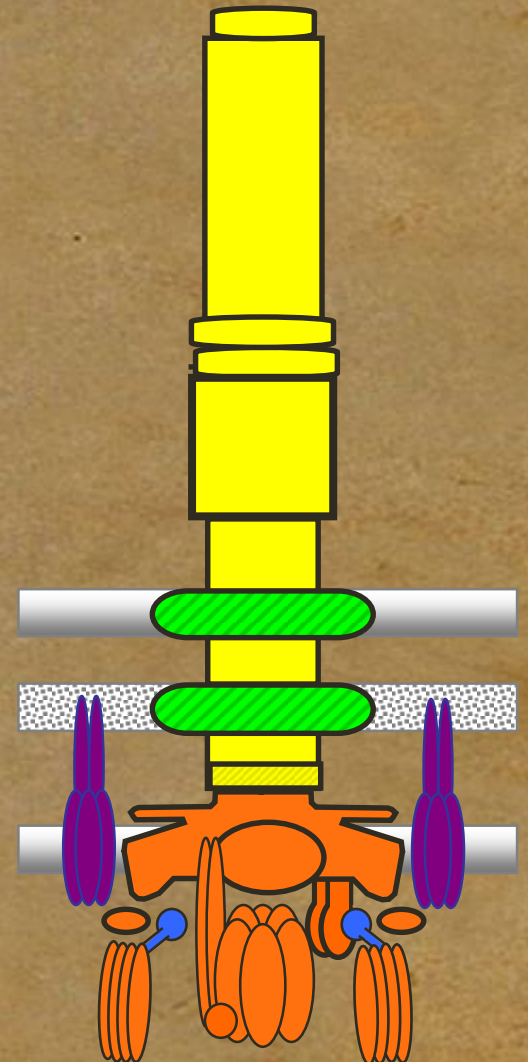
Poster-Child for Intelligent Design

The Bacterial Flagellum

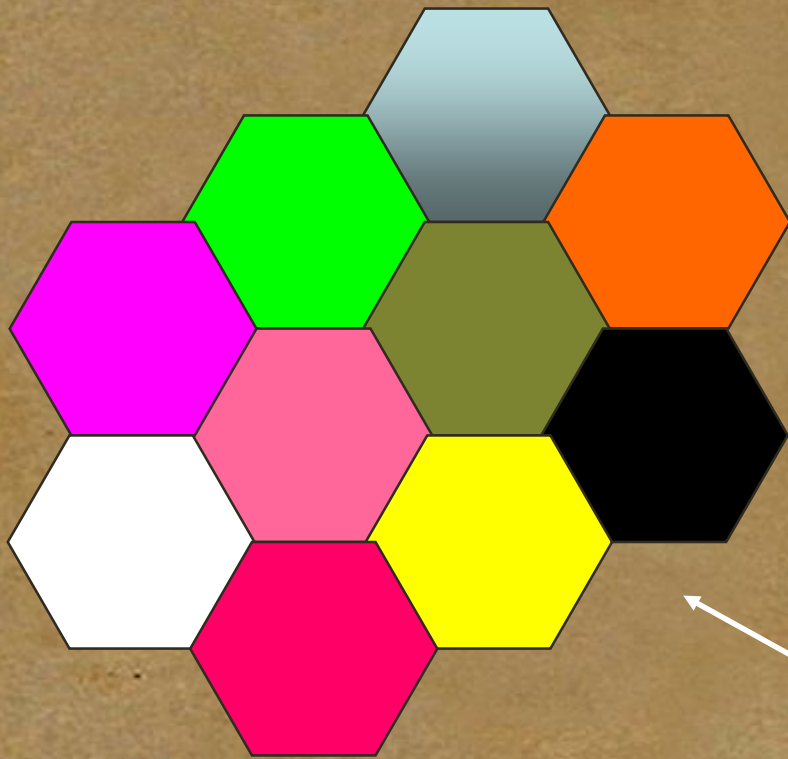
The Turn of the Screw: The Bacterial Flagellar Motor

Cell, Vol. 93, 17-20, April 3, 1998
David J. DeRosier

“More so than other motors, the flagellum resembles a machine designed by a human.”

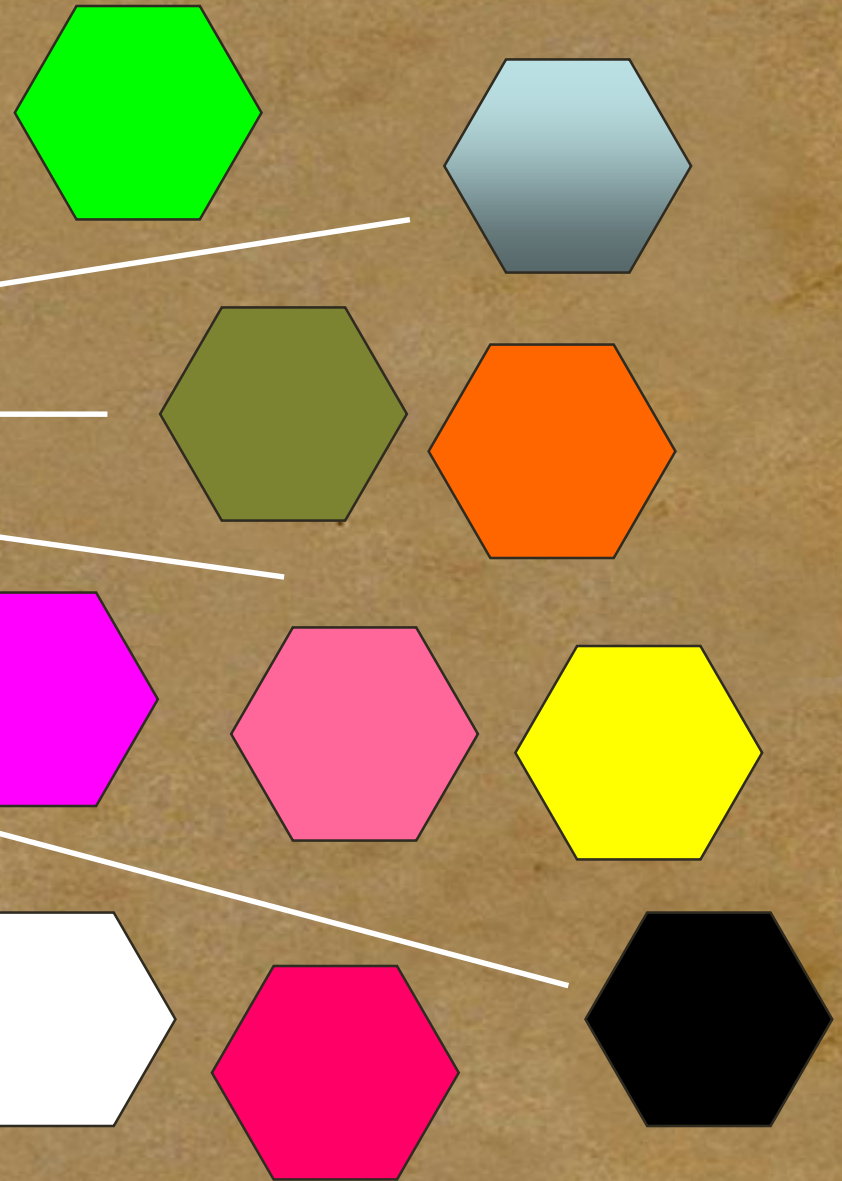


Biochemical Machine



Function Favored by Natural Selection

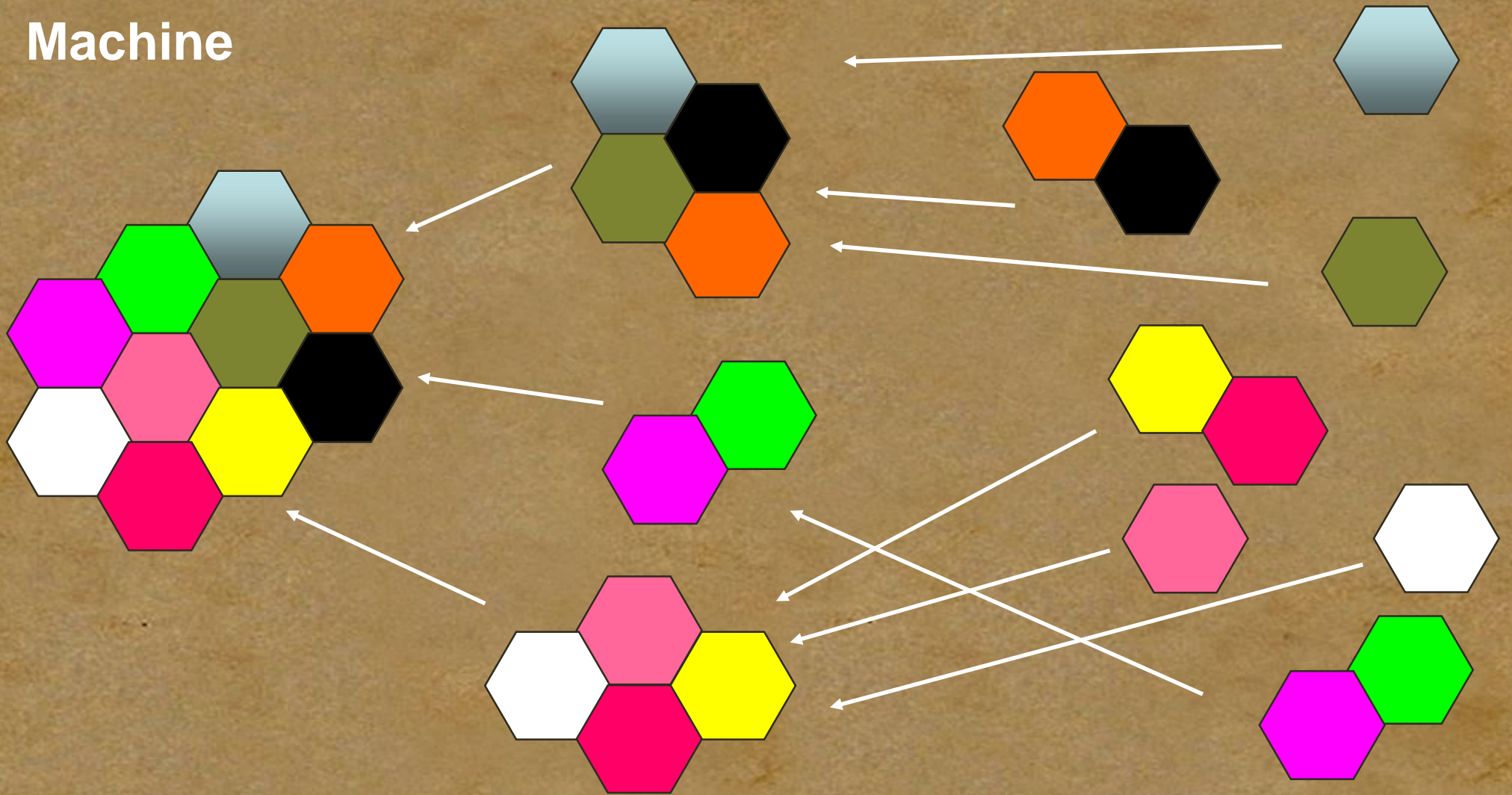
Individual Parts



No function. Therefore, natural selection cannot shape components.

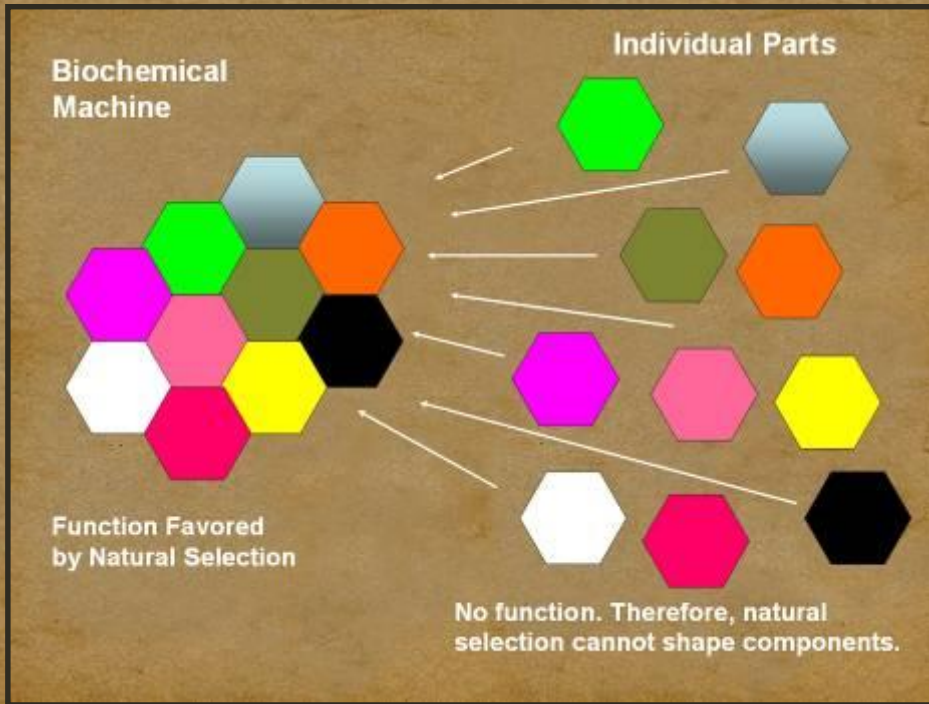
Biochemical Machine

Individual Parts



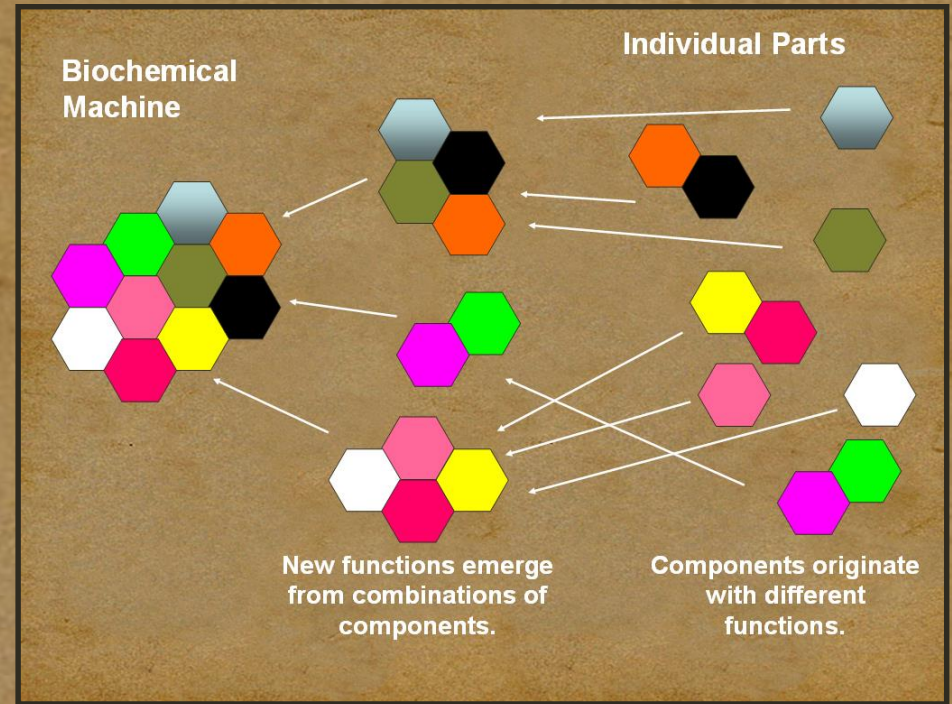
New functions emerge from combinations of components.

Components originate with different functions.



DESIGN:

Parts useless on their own

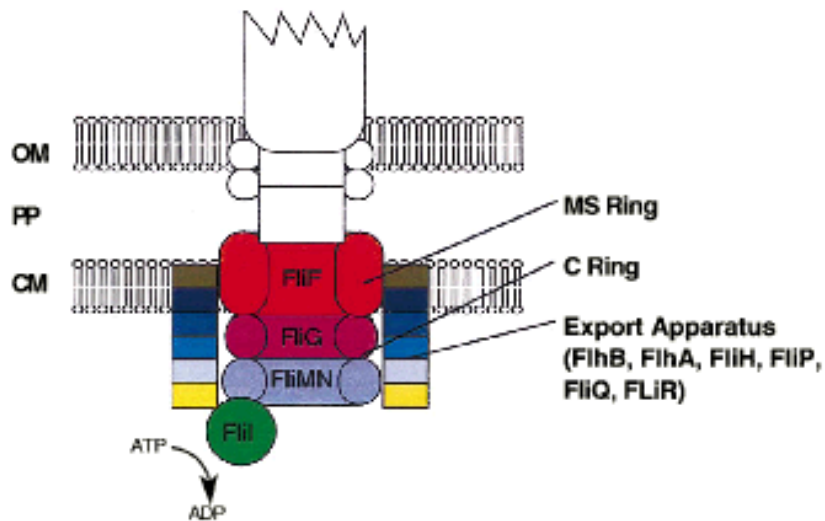


EVOLUTION:

Parts do other jobs

“Irreducible Complexity” makes a specific claim, and so does evolution.

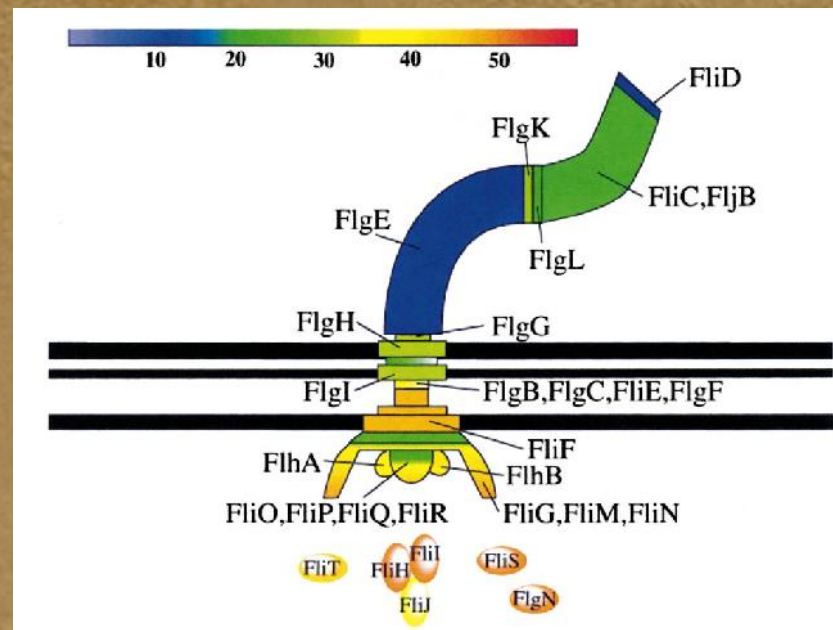
Therefore, if we take away 40
of the flagellum's parts:



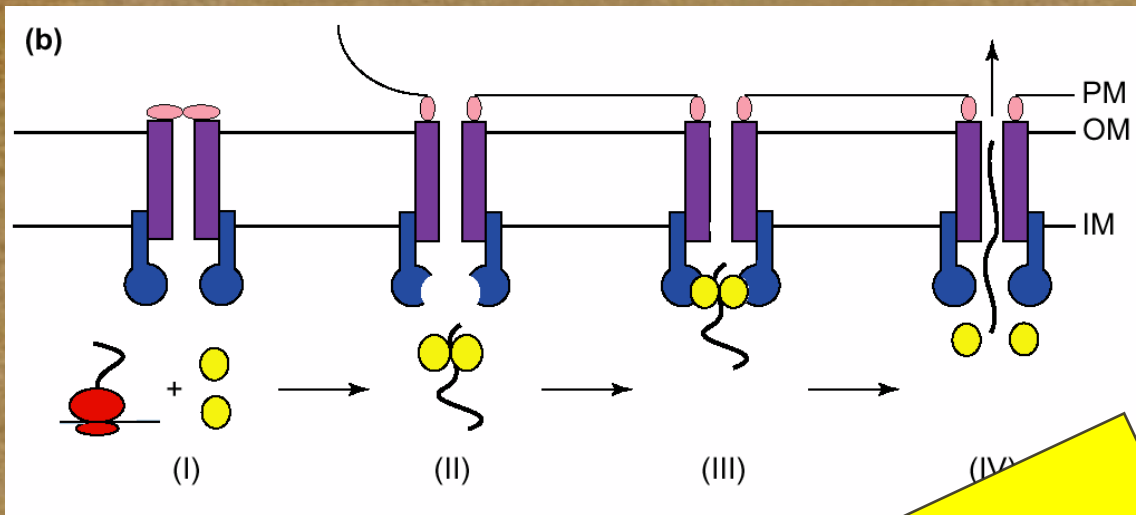
Leaving just 10. What's left
should be non-functional.
Right?

But they're not!

But it's not. In fact, those 10 parts are fully-functional!



Bacterial Flagellum (~50 parts)

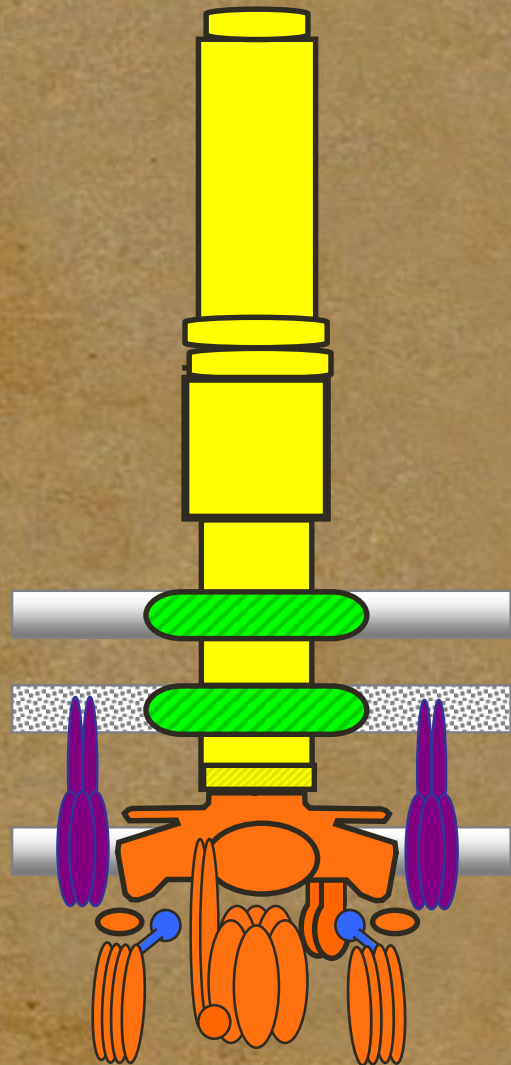


Type-III Secretory System (10 parts)

Wrong

“...any precursor of a fully functional complex system that is missing a part is by definition nonfunctional.”

In fact, the flagellum contains many parts homologous to other systems



Flagellar component
FlhF
FlhA
FlhB
FliI
FliH
FliJ
FliO
FliP
FliQ
FliR
FliG
FliN
FliM, C-term
FlhC
FlhD
FlgD
FlgJ
FlgL
FlgK
FlgE
FlgB
FlgC
FlgF
FlgG
FlhE
FlgH
FlgI
MotA
MotB
FliM, N-term.
CheY
CheA
CheW
CheR
MCPs

Type III Secretion apparatus

Axial protein family

Type II secretion

Ion transport

Signal transduction

Table 1 | Homologies of flagellar proteins

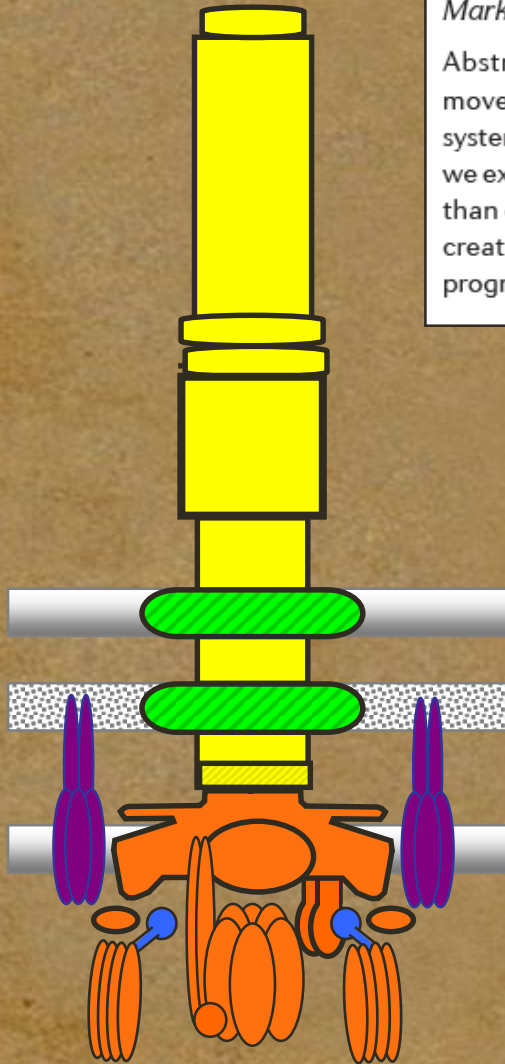
Protein	Location	Function	Indispensable?	Homologies*	Refs
FlgA	P ring	Chaperone?	Absent from Gram-positive bacteria	CpaB [†]	25, 29
			Yes	FlgBCEFGK [‡]	25
			Yes		25
			Yes	FlgBCEFGK	25
			Absent from Gram-positive bacteria	None yet known	25
			Absent from Gram-positive bacteria	None yet known	25
			FlgJ N-terminal domain absent from some systems	None yet known	25
			Yes	FlgBCEFGK [‡]	25
			Yes	FliC [‡]	25
			Absent from <i>Caulobacter</i>	None yet known	25
			Undetectable in some systems	None yet known	25
			Yes	LcrD/YscV [†]	25
			Yes	YscU [†]	25
			Absent from many systems	Other activators [†]	25
FliE	Unknown	Unknown	Mutant retains full motility		25
FliA	Cytoplasm	σ factor	Absent from <i>Caulobacter</i>	RpoD, RpoH, RpoS [†]	25
FliB	Cytoplasm	N-methylase	Absent from <i>Escherichia coli</i>		25
FliC	Filament	Flagellin	Yes	FlgL [‡] , EspA [†]	25, 78
FliD	Filament	Filament cap; hook-associated protein 2	Absent from <i>Caulobacter</i>	None yet known	25
FliE	Rod/basal body	M5 ring-rod junction	Yes	None yet known	25
FliF	T3SS apparatus	Protein export	Yes	YscJ [‡]	25
FliG	Peripheral	Motor	Yes	MgtE [‡]	25
FliH	T3SS apparatus	Regulates FliI	Mutant retains some motility	YscL*, AtpFH [‡]	38, 79
FliI	T3SS apparatus	ATPase for protein export	Yes	YscN [†] , AtpDI, Rho [†]	38
FliJ	Cytoplasm	Chaperone	Undetectable in some systems	YscO [‡]	25
FliK	Hook/basal body	Controls hook length	Yes	YscP [‡]	25
FliL	Basal body	Unknown	Mutant retains full motility	None yet known	80
FliM	T3SS apparatus	Protein export	Yes	FliN [‡] , YscQ [‡]	25
FliN	T3SS apparatus	Protein export	Yes	FliM [‡] , YscQ [‡]	25
FliO	T3SS apparatus	Protein export	Undetectable in some systems	None	25
FliP	T3SS apparatus	Protein export	Yes	YscR [†]	25
FliQ	T3SS apparatus	Protein export	Yes	YscS [†]	25
FliR	T3SS apparatus	Protein export	Yes	YscT [†]	25
FliS	Cytoplasm	FliC chaperone	Absent from <i>Caulobacter</i>	None yet known	25
FliT	Cytoplasm	FliD chaperone	Absent from many systems	None yet known	25
FliZ	Cytoplasm	Regulator	Absent from many systems	None yet known	25
MotA	Inner membrane	Motor	Yes	ExbB [†] , TolQ [‡]	25
MotB	Inner membrane	Motor	Yes	ExbD [†] , TolR [†] , OmpA [†]	25

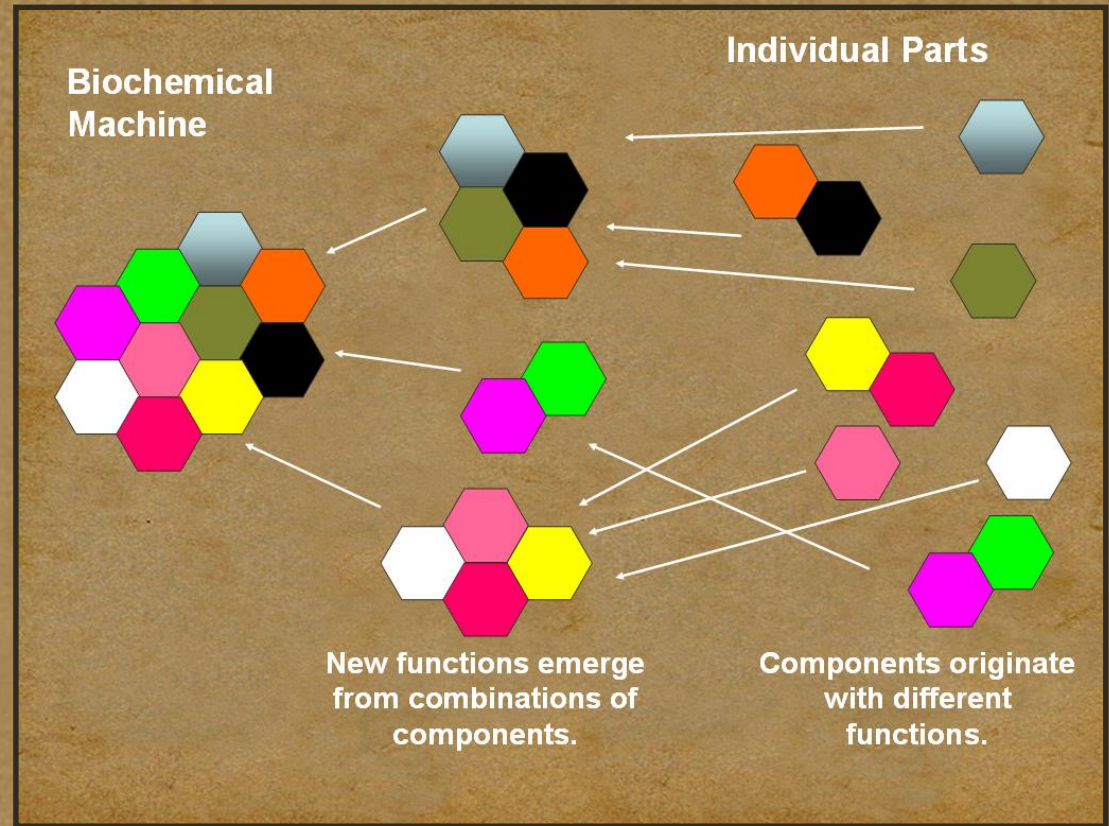
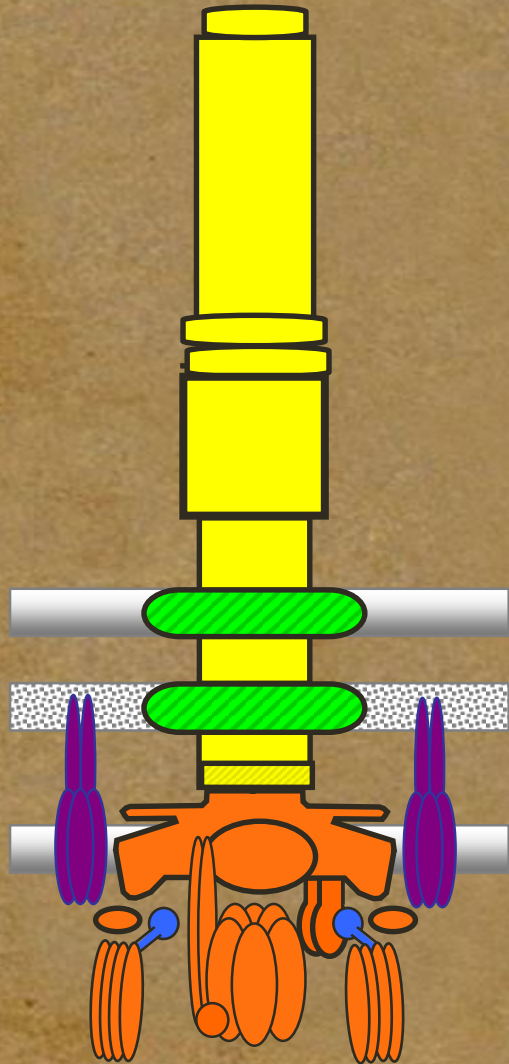
SCIENCE AND SOCIETY

From *The Origin of Species* to the origin of bacterial flagella

Mark J. Pallen and Nicholas J. Matzke

Abstract | In the recent Dover trial, and elsewhere, the 'Intelligent Design' movement has championed the bacterial flagellum as an irreducibly complex system that, it is claimed, could not have evolved through natural selection. Here we explore the arguments in favour of viewing bacterial flagella as evolved, rather than designed, entities. We dismiss the need for any great conceptual leaps in creating a model of flagellar evolution and speculate as to how an experimental programme focused on this topic might look.





Careful analysis of the bacterial flagellum matches evolutionary theory, not the design-creation model.

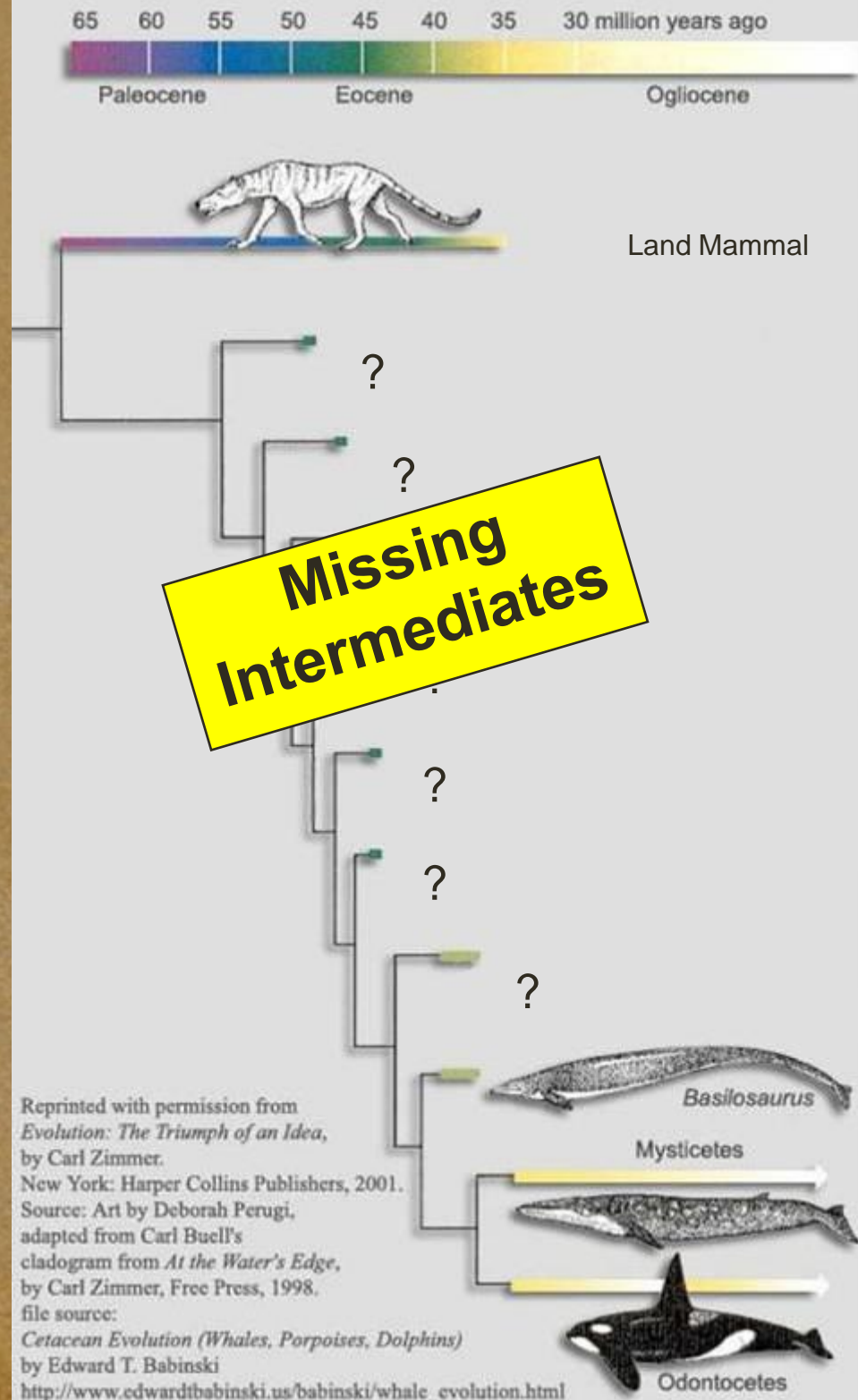
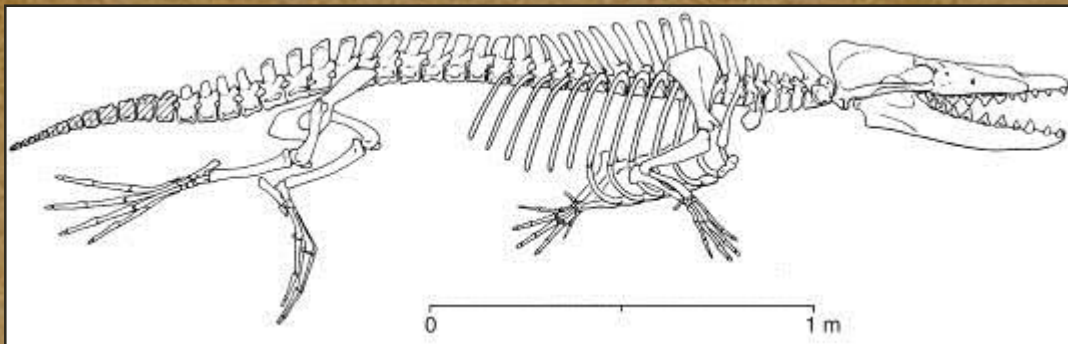
Arguments based on the fossil record as a “problem” for evolution backfired

No Intermediate Forms in the Fossil Record?



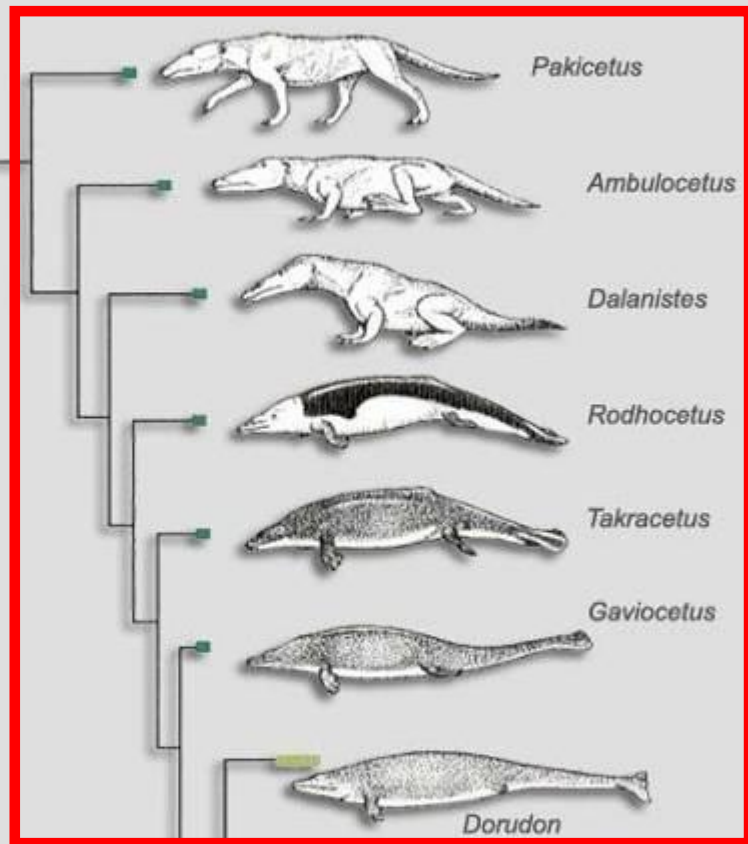
“So many intermediate forms have been discovered between fish and amphibians, between amphibians and reptiles, between reptiles and mammals, and along the primate lines of descent that it often is difficult to identify categorically when the transition occurs from one to another particular species.”

- National Academy of Sciences, 1999

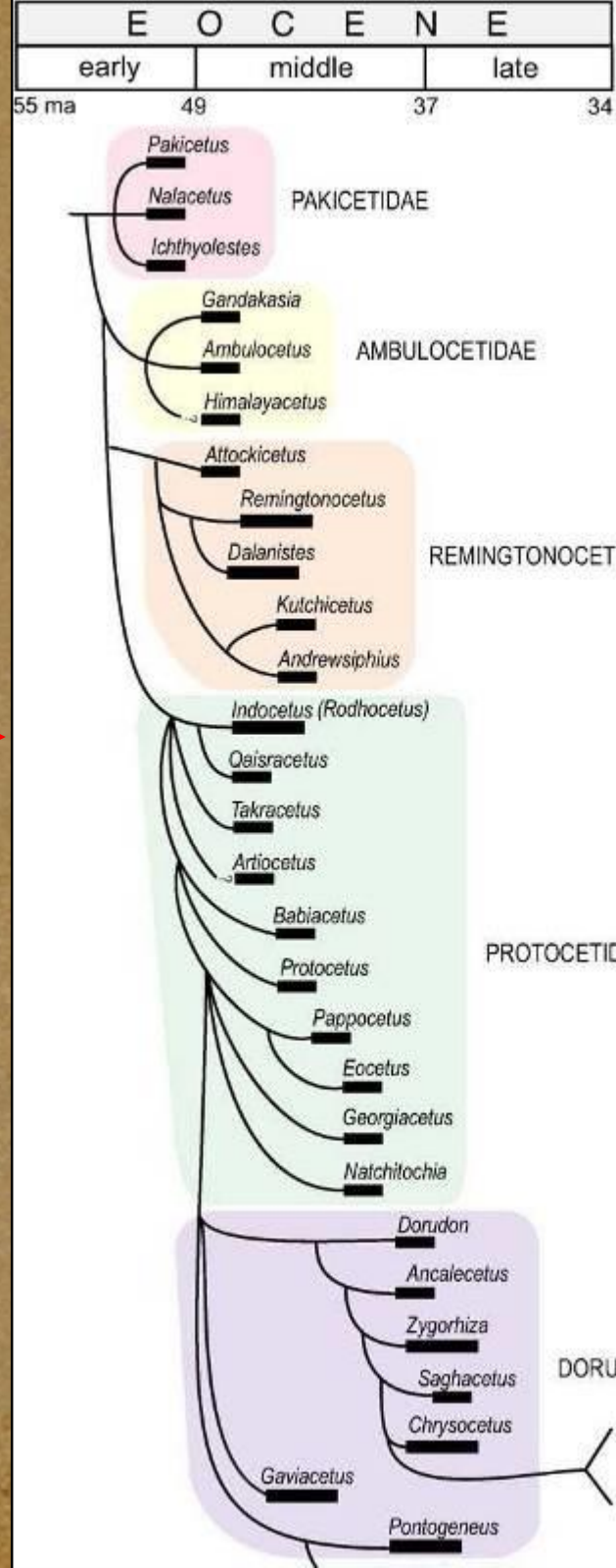





Mesonychids



Reprinted with permission from *Evolution: The Triumph of an Idea*, by Carl Zimmer. New York: Harper Collins Publishers, 2001. Source: Art by Deborah Perugi, adapted from Carl Buell's cladogram from *At the Water's Edge*, by Carl Zimmer, Free Press, 1998. file source: *Cetacean Evolution (Whales, Porpoises, Dolphins)* by Edward T. Babinski http://www.edwardtbabinski.us/babinski/whale_evolution.html



Whale Origins as a Poster Child for Macroevolution

We have the fossils.
We win. 

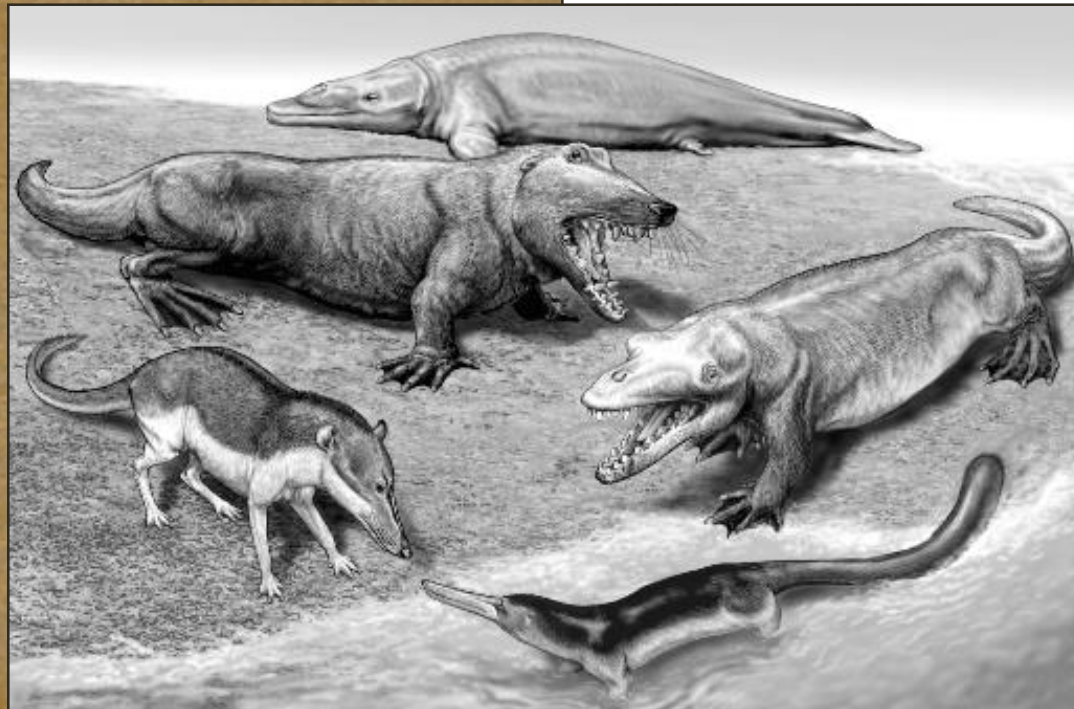
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Whales indisputably are mammals, which is clear from their means of oxygen intake (they breathe with lungs), their care of newborns (mothers nurse their calves with milk), and a host of other features. This implies that whales

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FOSSILS COLLECTED IN THE LAST DECADE DOCUMENT THE WAYS IN WHICH CETACEA (WHALES, DOLPHINS, AND PORPOISES) BECAME AQUATIC, A TRANSITION THAT IS ONE OF THE BEST DOCUMENTED EXAMPLES OF MACROEVOLUTION IN MAMMALS

ignorance on the part of those unaware of published research. However, the sheer volume and pace of recent research also cause problems. For those outside of the circle of specialists actively studying whale origins, it is hard to keep up with all the new discoveries.



Reconstructions of representative Eocene cetaceans. Clockwise from top: a beached *Dorudon* (Dorudontidae), *Ambulocetus* (Ambulocetidae), *Pakicetus* (Pakicetidae), *Kutchicetus* (Remingtonocetidae), and *Rodhocetus* (Protocetidae). These cetaceans are shown together for comparison, but they were not contemporaries and lived in different environments. Artwork by Carl Buell.

Comparative Genomic Evidence was Decisive



Chimp genetic code opens human frontiers Genome comparison reveals many similarities — and crucial differences

By Alan Boyle

Science editor
MSNBC

Updated: 4:20 p.m. ET Sept. 1, 2005

Scientists unleashed a torrent of new data comparing the DNA sequences of humans and chimpanzees on Sept. 1. The data appears to contain clues to how the two species diverged from their common relatives in the animal kingdom.

"We're really looking at an incredibly spectacular," said University of Washington geneticist Robert Waterston, senior author of a study in the journal Nature presenting the draft of the chimpanzee genome.

*"More than a century ago Darwin and Huxley posited that humans share recent common ancestors with the African great apes. **Modern molecular studies have spectacularly confirmed this prediction** and have refined the relationships, showing that the common chimpanzee (*Pan troglodytes*) and bonobo (*Pan paniscus*) are our closest living evolutionary relatives."*

Testing the Evolutionary Hypothesis of Common Ancestry

Chromosome numbers in the great apes:

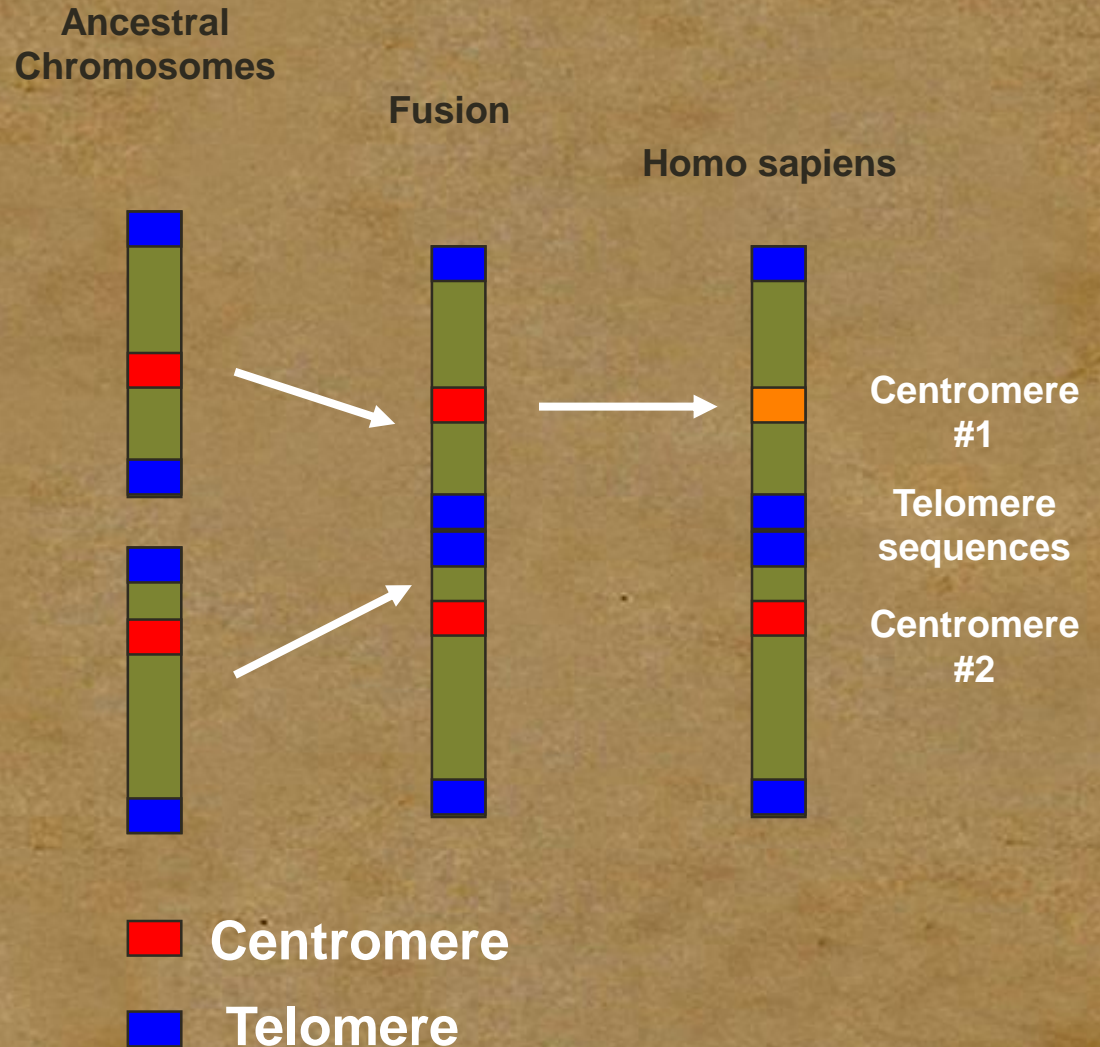
human (Homo)	46
chimpanzee (Pan)	48
gorilla (Gorilla)	48
orangutan (Pongo)	48



Testable prediction: If these organisms share common ancestry, the human genome must contain a fused chromosome.

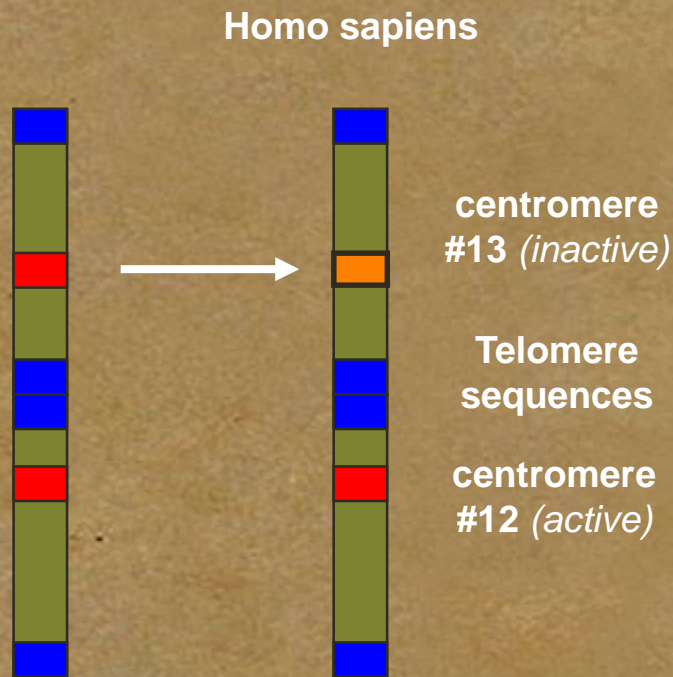
Chromosome numbers in the great apes (Hominidae):

human (Homo)	46
chimpanzee (Pan)	48
gorilla (Gorilla)	48
orangutan (Pongo)	48



Testable prediction: The marks of that fusion must appear in one of the human chromosomes.

Human Chromosome #2 shows the exact point at which this fusion took place



We've got the genes, too.

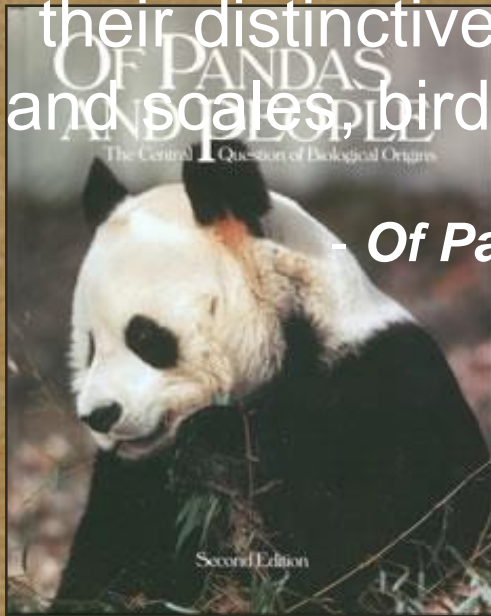


“Chromosome 2 is unique to the human lineage of evolution, having emerged as a macrocentric chromosome in other primates. It has been

16:114455823 – 114455838), where our analysis confirmed the presence of multiple subtelomeric duplications to chromosomes 1, 5, 8, 9, 10, 12, 19, 21 and 22 (Fig. 3; Supplementary Fig. 3a, region A). During the formation of human chromosome 2, one of the two centromeres became inactivated (2q21, which corresponds to the centromere from chimp chromosome 13) and the centromeric structure quickly deteriorated (42).”

Hillier et al (2005) “Generation and Annotation of the DNA sequences of human chromosomes 2 and 4,” *Nature* 434: 724-731.

“**Intelligent Design** means that the various forms of life began abruptly through an **intelligent agency**, with their distinctive features already intact – fish with fins and scales, birds with feathers, beaks, and wings, etc.”



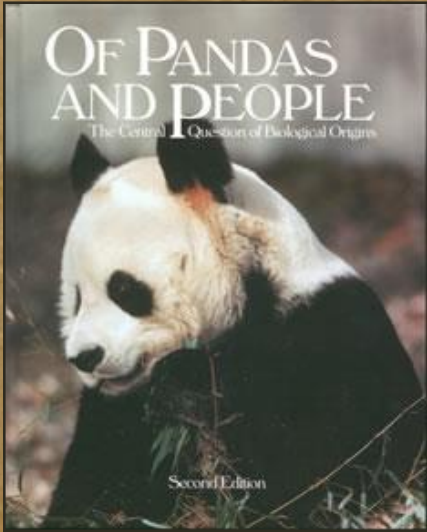
- *Of Pandas and People*, 1993, pp. 99-100

The history of the ID textbook “Pandas”

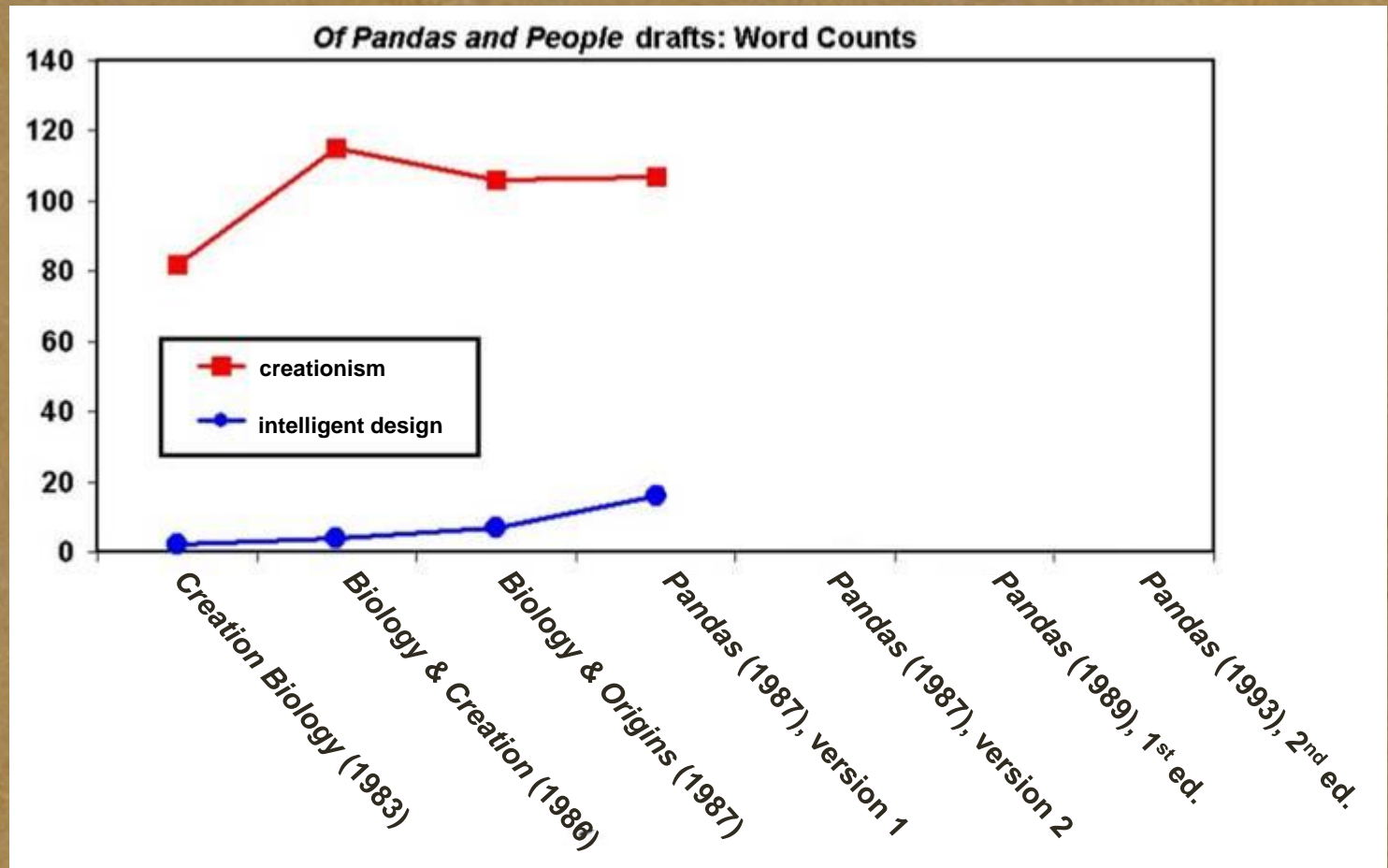
closed the case

ns that the various forms of life began abruptly through an **intelligent creator**, with their distinctive features already intact – fish with fins and scales, birds with feathers, beaks, and wings, etc.”

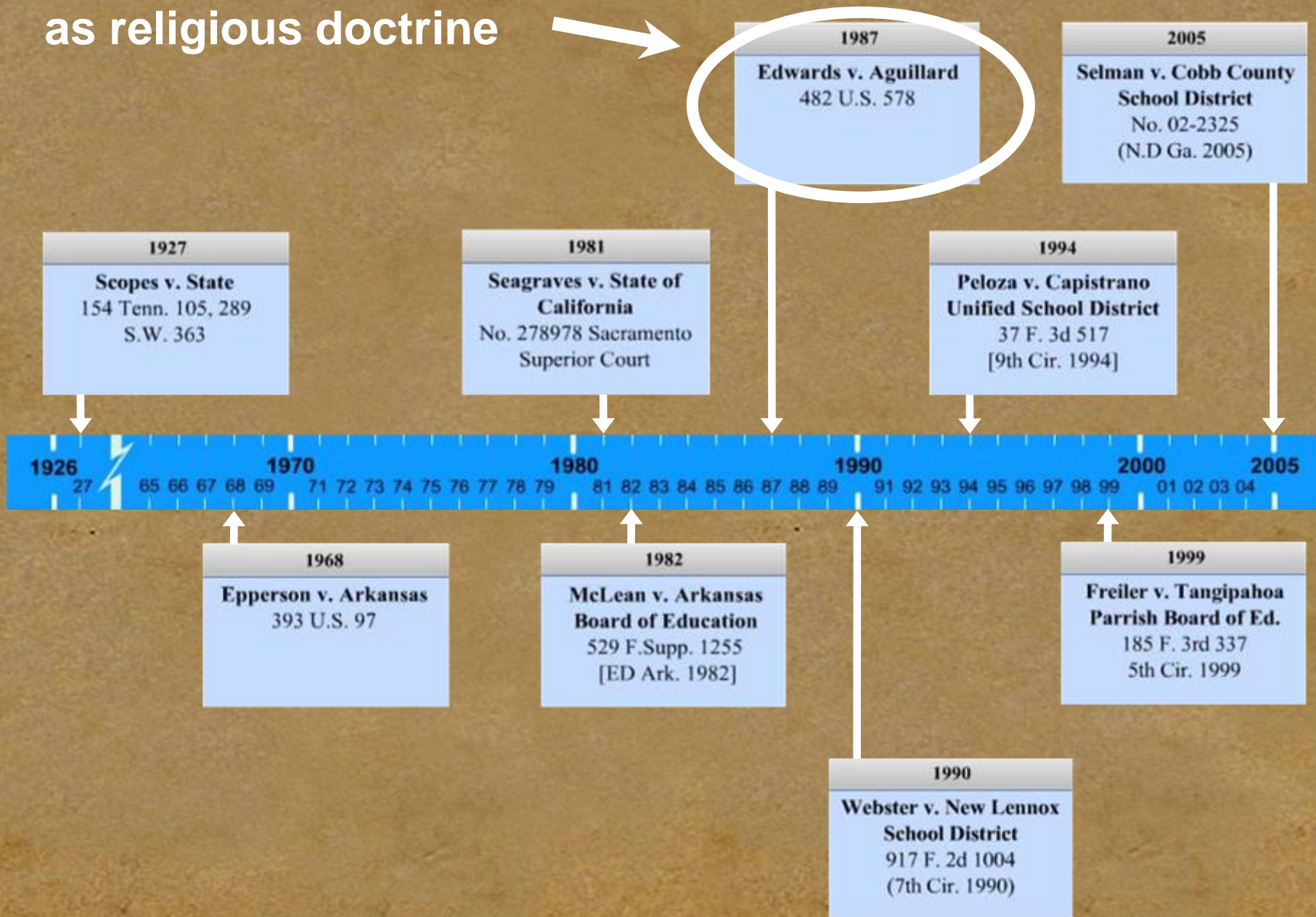
- *Biology & Origins*, 1986, pp. 2-13, 2-14.



Something remarkable must have happened in 1987!



1987: Edwards vs. Aguillard
identified “creation science”
as religious doctrine



Issuing Rebuke, Judge Rejects Teaching of Intelligent Design

By LAURIE GOODSTEIN

Published: December 21, 2005

A federal judge ruled on Tuesday that it was unconstitutional for a Pennsylvania school district

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IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA
TAMMY KITZMILLER, et al. : Case No. 04cv2688
Plaintiffs : Judge Jones

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v. :
:

DOVER AREA SCHOOL DISTRICT, et al.,:
Defendants. :

MEMORANDUM OPINION
December 20, 2005
INTRODUCTION:

On October 18, 2004, the Defendant Dover Area School Board of Directors passed by a 6-3 vote the following resolution:

Students will be made aware of gaps/problems in Darwin's theory and of other theories of evolution including, but not limited to, intelligent design. Note: Origins of Life is not taught.

On November 19, 2004, the Defendant Dover Area School District announced by press release that, commencing in January 2005, teachers would be required to read the following statement to students in the ninth grade biology class at Dover High School:

The Pennsylvania Academic Standards require students to learn about Darwin's Theory of Evolution and

The New York Times
ON THE WEB



intelligent design, the judge, John E. Jones III, issued ed strong support for scientists who have fought to

Pa., school board, who he said sion of "breathtaking inanity" and "dragged" their g utter waste of monetary and personal resources."

Bush, concluded that intelligent design was not nents admit they must change the very definition of



NOVA

JUDGMENT DAY
INTELLIGENT DESIGN ON TRIAL

November 13th on Most PBS Stations



(Available online)

SCIENCE on Trial

PARTLY CLOUDY
32°
19°
 BACK PAGE

PENNSYLVANIA NEWSPAPER OF THE YEAR

The Patriot-News

WEDNESDAY
 December 21, 2005

50 cents

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 HARRISBURG, PA. PENNLIVE.COM FINAL EDITION

JUDGE JONES ON THE DOVER SCHOOL BOARD: "The students, parents, and teachers of the Dover Area School District deserved better than to be dragged into this legal maelstrom, with its resulting utter waste of monetary and personal resources."

THE DECISION: U.S. District Judge John E. Jones III, right, struck down Dover's intelligent design policy, saying the school board's real purpose was to promote religion.

JUDGE JONES ON INTELLIGENT DESIGN: "We have addressed the seminal question of whether ID is science. We have concluded that it is not, and moreover that ID cannot uncouple itself from its creationist, and thus religious, antecedents."

JUDGE RULES INTELLIGENT DESIGN IS 'NOT SCIENCE'

Area schools walk a fine line over religion

FROM THE RULING:

"The citizens of the Dover area were poorly served by the members of the Board who voted for the [intelligent design] Policy. It is ironic that several of these individuals, who so staunchly and proudly touted their religious convictions in public, would time and again lie to cover their tracks and disguise the real purpose behind the ID Policy."

Historic ruling orders Dover to rescind policy

BY DIANA FISHELOCK
 Of The Patriot-News

Religion still has a place in public schools, a fact in evidence during the holidays: but districts face a delicate balance in studying faith without promoting it or alienating students.

This time of year, midstate schools take different approaches. While some of the more religiously diverse communities revel in Christmas, Hanukkah and Kwanzaa, others avoid religious holidays altogether.

Religion can't be avoided when studying American history and culture, some area school officials say.


Derry Twp. teachers talk about traditions, including Christmas, Hanukkah and Kwanzaa, said Tom Portner, a school district

BY BILL SIKON
 Of The Patriot-News

In a sweeping and potentially landmark ruling, a federal judge yesterday said that the Dover Area School District's policy on intelligent design is unconstitutional and that the concept of intelligent design is unscientific and religious.

And in an unusually scathing rebuke, he called several former school board members who supported the policy liars.

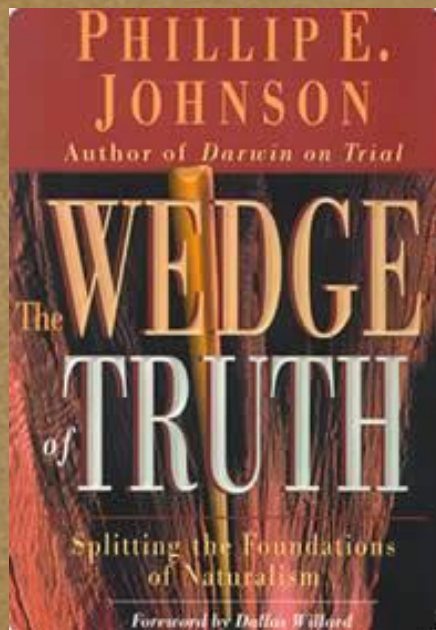
U.S. Middle District Judge John E. Jones III, who presided over a six-week trial in Harrisburg, ruled that the intelligent design policy promotes religion and violates the




Was the Dover Trial a victory of science over faith?



Portraying evolution as anti-God is part of ID's "Wedge" strategy, articulated by Phillip Johnson

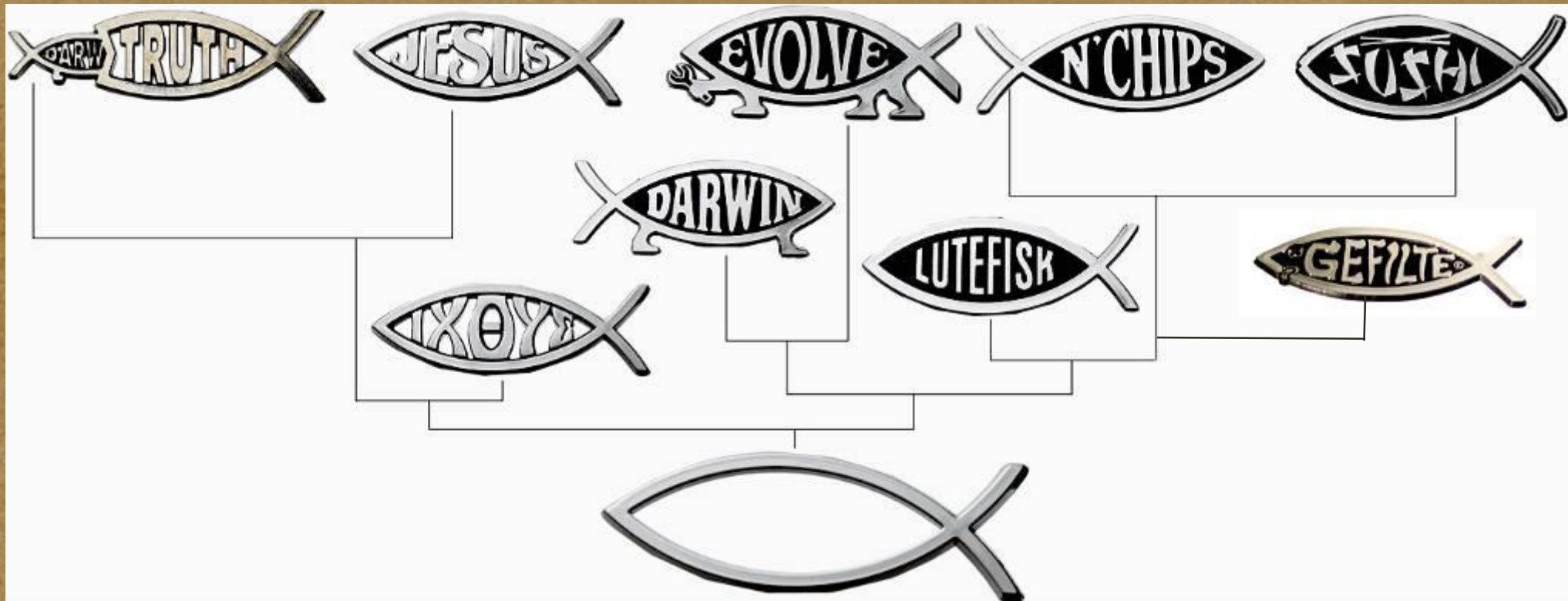


“The objective [of the Wedge Strategy] is to convince people that Darwinism is inherently atheistic, thus shifting the debate from creationism vs. evolution to the existence of God vs. the non-existence of God. From there people are introduced to ‘the truth’ of the Bible and then ‘the question of sin’ and finally ‘introduced to Jesus.’”

- Church & State magazine, April 1999

A Presumption of Conflict between Science and Religion is the Driving Force behind the Struggle over Evolution:





<http://www.millerandlevine.com/talks/colbert.html>

The Colbert Report January 12, 2006

Correspondence

Nature **443**, 26(7 September 2006) | doi:10.1038/443026b; Published online 6 September 2006

Dogma, not faith, is the barrier to scientific enquiry

U Kutschera¹

1. Institute of Biology, University of Kassel, Heinrich-Plett-Strasse 40, D-34109 Kassel, Germany

Sir:

Your News
(*Nature* **443**)
Francis Co
religious v

In a famous article, "Nothing in biology makes sense except in the light of evolution" (*Am. Biol. Teach.* **35**, 125–129; 1973), **Dobzhansky** described his religious beliefs: "It is wrong to hold creation and evolution as mutually exclusive alternatives. **I am a creationist and an evolutionist.** Evolution is God's, or Nature's, method of Creation."

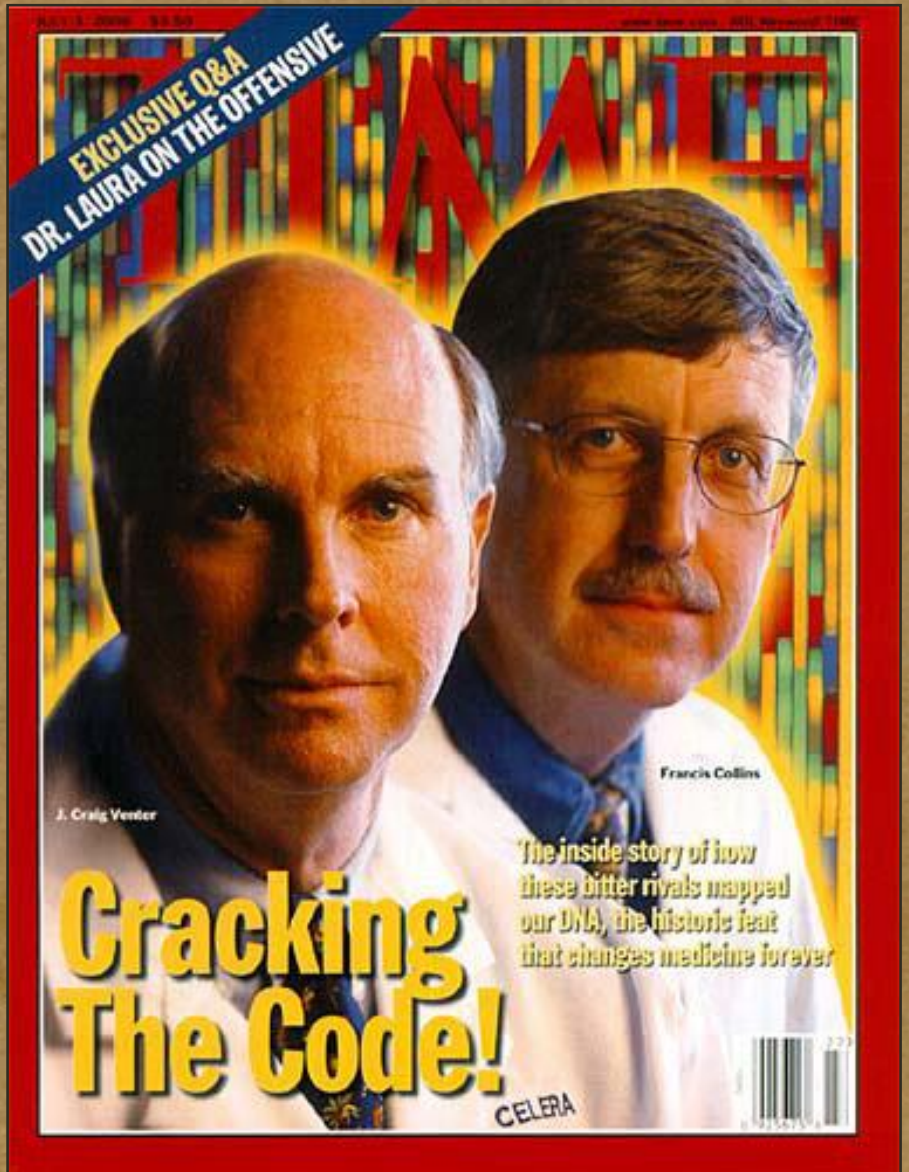
In contrast to modern creationists, Dobzhansky accepted macroevolution and the documented age of Earth. He argued that "**the Creator has created the living world not by caprice (supernatural fiat) but by evolution propelled by natural selection**".

nature

A SCIENTIST PRESENTS
EVIDENCE FOR BELIEF

THE
LANGUAGE
OF GOD

FRANCIS S. COLLINS





Charles Krauthammer

Op-Ed Columnist

Phony Theory, False Conflict

'Intelligent Design' Foolishly Pits Evolution Against Faith

By Charles Krauthammer

Friday, November 18, 2005; Page A23

Because every few years this country, in its infinite tolerance, insists on hearing yet another appeal of the Scopes monkey trial, I feel obliged to point out what would otherwise be superfluous: that the two greatest scientists in the history of our species were Isaac Newton and Albert Einstein, and they were both religious.

Newton's religion was traditional. He was a staunch believer in Christianity and a member of the Church of England. Einstein's was a more diffuse belief in a deity who set the rules for everything that occurs in the universe.

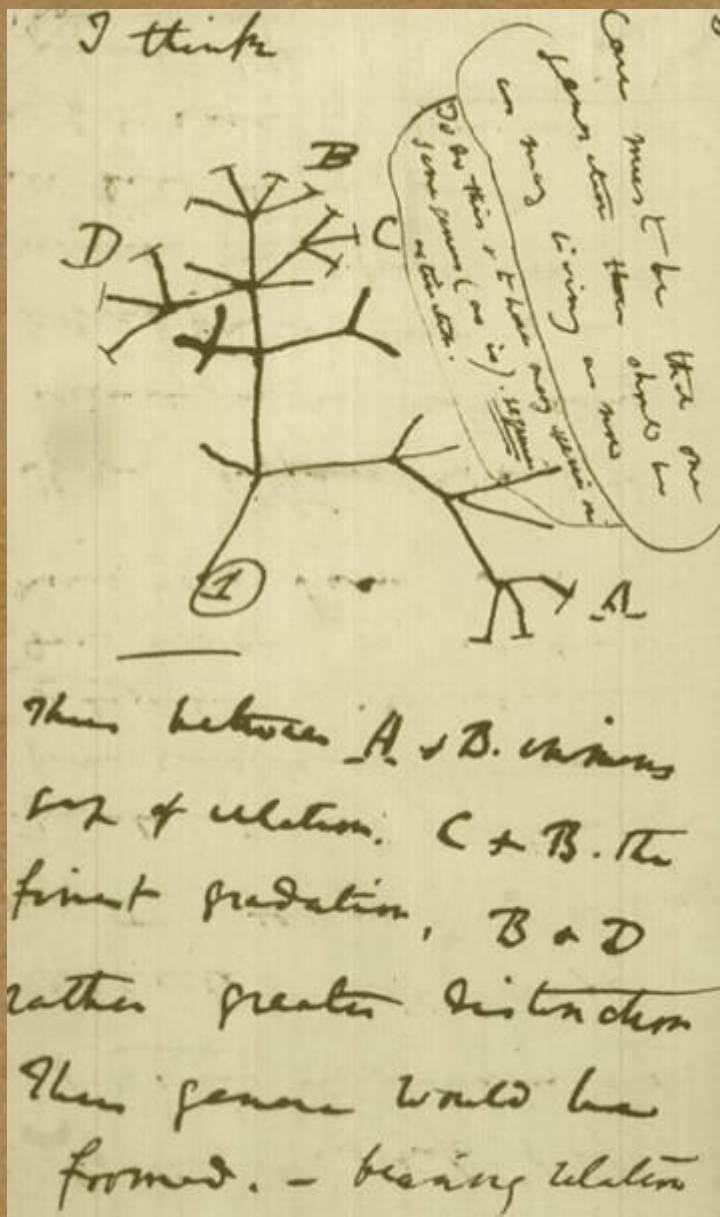
Neither saw science as an enemy of religion. On the contrary. "He believed he was doing God's work," James Gleick wrote in his recent biography of Newton. Einstein saw his entire vocation -- understanding the workings of the universe -- as an attempt to understand the mind of God.

The
Washington
Post

How ridiculous to make evolution the enemy of God.

What could be more elegant, more simple, more brilliant, more economical, more creative, indeed more divine than a planet with millions of life forms, distinct and yet interactive, all ultimately derived from accumulated variations in a single double-stranded molecule, pliable and fecund enough to give us mollusks and mice, Newton and Einstein?

Even if it did give us the Kansas State Board of Education, too.



“There is grandeur in this view of life; with its several powers having been originally breathed into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most wonderful and most beautiful have been, and are being evolved.”

Dr. Kenneth Miller



Miller was the lead witness in the Pennsylvania "intelligent design" case that began in September 2005, and which has been front-page news since it started. The case involves a group of parents who are suing the school district for requiring high school biology teachers to read a four-paragraph statement to students that casts doubt on Darwin's theory of evolution. The paragraphs imply that life could not have arisen without the help of an intelligent hand(i.e. "intelligent design"). On the stand, Miller noted that virtually every prominent scientific organization in the United States has upheld Darwin's theory of evolution as an unshakeable pillar of science and that "intelligent design" is "a form of creationism."

Miller is the author of the acclaimed book *Finding Darwin's God: A Scientist's Search for Common Ground Between God and Evolution*, lively and cutting-edge analysis of the key issues that seem to divide science and religion. He contends that, properly understood, evolution adds depth and meaning not only to a strictly scientific view of the world, but also to a spiritual one. Miller is a firm believer in evolution, he is one of America's foremost experts on the subject, but he also believes in God—and he doesn't think the two beliefs to be mutually exclusive. Francisco Ayala, the Donald Bren Professor of Biological Sciences at the University of California, Irvine says that, "Finding Darwin's God is an artfully constructed argument against both those who deny evolution and those using science to justify a materialist worldview. Yet it is a book for all readers. I know of no other that would surpass it in being mindful of different views, while still [being] forceful."

Bruce Alberts, the president of the National Academy of Sciences, says that Miller "convincingly argues that science and religion offer different, but compatible, ways of viewing the world." Miller has written major articles for numerous scientific journals and magazines, including *Nature*, *Scientific American*, *Cell*, and *Discover*. He has also appeared on PBS as a scientific commentator.