

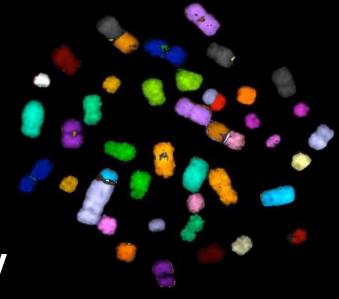
How We Evolved to Have Reason, Consciousness, and Free Will

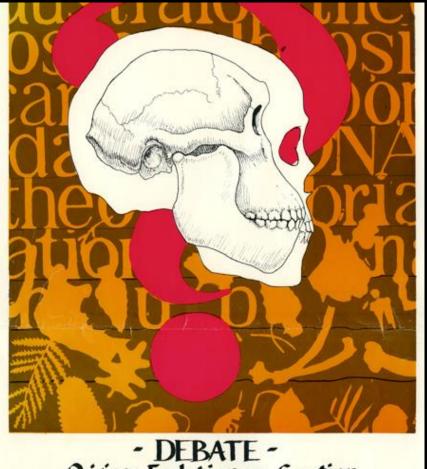


KENNETH R MILLER

## The Human Instinct

Ken Miller Brown University





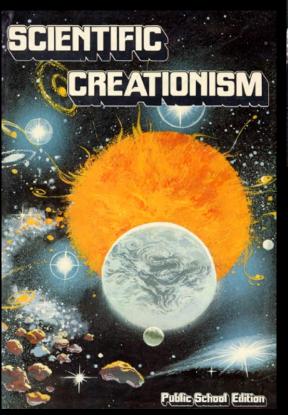
## Origins: Evolution vs. Creation

Roposition: ... The theory of evolution is superior to the idea of special creation as an explanation for the scientific evidence related to origins."

Dr. Kenneth Miller Dr. Henry Morris, dir. of the Institute for Creation Brown U. Dept. of Biology. Research, San Diego, California

Friday, April 10 7 pm. Meehan Aud. free with Brown I.P. gen. adm. \$1. Sponsored by: Assn. of Fraternity Presidents | Brown Christian Fellowship | Brown Young Republicans | Cranston Christian Fellowship Oxtreach Whistoies | The Pean of the College |
The Pean of Student Life

## Debating/Defending **Evolution from Year 1** at Brown





## **Henry Morris** Institute for Creation Research



## **Still Debating in 1997**







## **EDUCATION**

#### Evolution ruling gets cheers from scientists

Friday, January 14, 2005 Posted: 10:51 AM EST (1551 GMT)

ATLANTA, Georgia (AP) -- Since 2002, Dr. Kenneth Miller has been upset that biology textbooks he has written are slapped with a warning sticker by the time they appear in suburban Atlanta schools. Evolution, the stickers say, is "a theory, not a fact."

"What it tells students is that we're certain of everything else in this book except evolution," said Miller, a professor of biology at Brown University, who with Joseph S. Levine has authored three texts for high schoolers.

On Thursday, Miller — along with fellow teachers and scientists — cheered a federal judge's ruling that ordered the Cobb County school board to immediately remove the stickers and never again hand them out in any form.





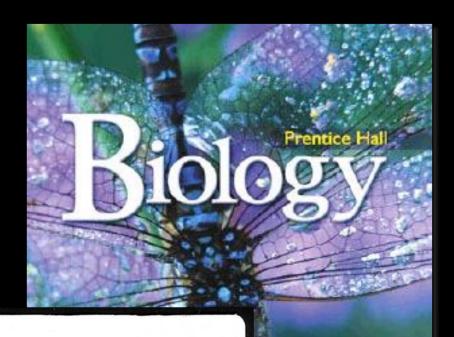
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And then going to court (twice!) because of my textbooks.



rial on evolution. Evolution

is a theory, not a fact, regarding the origin of living things. This material should be approached with an open mind, studied carefully, and critically considered.

Approved by
Cobb County Board of Education
Thursday, March 28, 2002

## THE YORK DISPATCH





YORK, PA., WEDNESDAY, DECEMBER 15, 2004

## 'Design' vs. Darwin hits home

child, left. an attorney for Pepper Hamilton LLP holds the textbook that is the center of the Dover "intelligent design' debate.



11 parents, ACLU sue Dover schools over curriculum

By CHRISTINA KAUFFMAN

Beth Eveland said she plans to stay and fight.

Three board members of the Dover Area School Board have resigned in protest of the board's vote to include the controversial theory of way she does. Moving - and intelligent design in the high school biology curriculum.

Intelligent design attrib-

not accept the theory of evoand HEIDI BERNHARD-BUBB lution regarding such origins.

But "running away isn't going to solve anything," she

The parent of a firstgrader in the district said she knows there are plenty of other parents who feel the uprooting her child - is not an option, she said.

The 35-year-old Dover utes the origin of life to an Township woman was one of tric intelligent being and does a group of 11 district parents in

A look at case law surrounding the debate.

The parents who are suing the district and the lawsuit's

Supporters, detractors of intelligent design turn out for news conference.

school board violated their children's religious freedom by including the theory of intelligent design in biology classes and making teachers read a disclaimer saying there are several "gaps" in Pages A8-9 the scientific research in the

## 2005: Kitzmiller v. Dover

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#### **EDUCATION WEEK**

WEB EXTRA

#### ch / Archives 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

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

ures/Opinior • Plaintiffs Recall Atmosphere Leading Up to Intelligent-Design Policy (September 28, 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."







**Testing the Evolutionary Hypothesis of Common Ancestry** 

**Chromosome Numbers** in the great apes:

human (Homo) chimpanzee (Pan) gorilla (Gorilla) orangutan (Pogo)





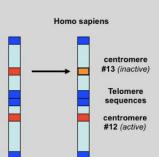


The embryos of placental mammals retain a (empty) yolk sac

scien

teachers would have to read out a stateme about evolution in their lessons. The word refers to "gaps" in Darwin's theory and promotes intelligent design, the concept th

#### **Human Chromosome #2 show** point at which this fusion to



"Chromosome 2 is uniqu of evolution, having eme to-head fusion of two ac that remained separate precise fusion site has b 2q14.1 (ref. 2; hg 16:114 where our analysis confi

multiple subtelomeric duplications t 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 (2g21, which corresponds to the centromere from chimp chromosome 13) and the centromeric structure quickly deterioriated (42)."

nd that means something I co erefore they rea

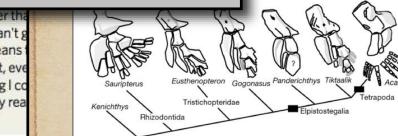
Why? Because they evolved from animals with yolk-containing eggs. house, I can't g hat respect, eve

Lung bud

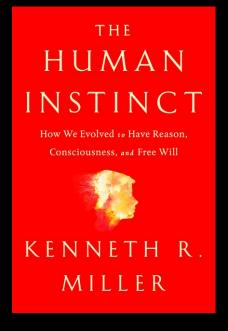
Australia sheds

October, 2006

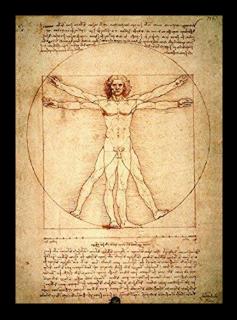
We have the fossils. We win. ₩



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



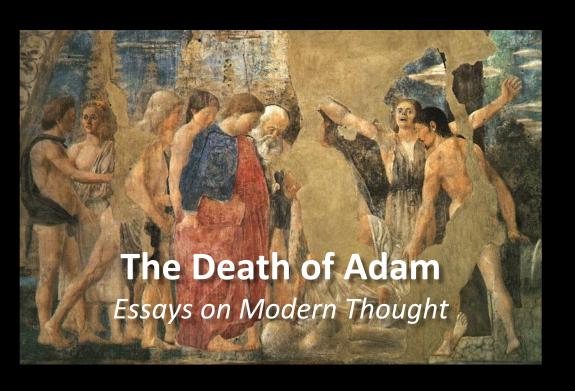




The intellectual burden of denying human evolution in the face of so many lines of evidence would be far too great for any fair-minded person to sustain.

We are creatures of evolution, with all that implies about our bodies, our minds, our thoughts, our hopes and dreams. And now we can begin to ask the really interesting question:

What does it mean to be a creature fashioned by the hand of evolution?

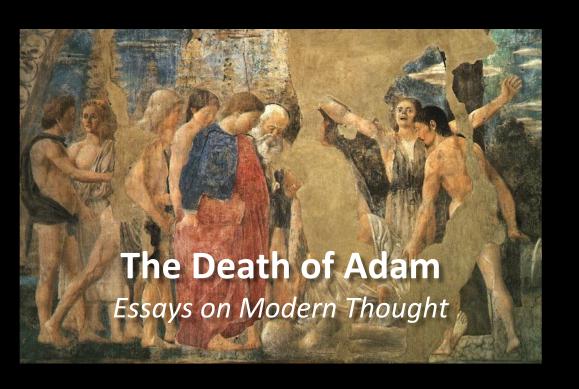




"Darwin [expressed] a cheerful interest in the extermination of races..."

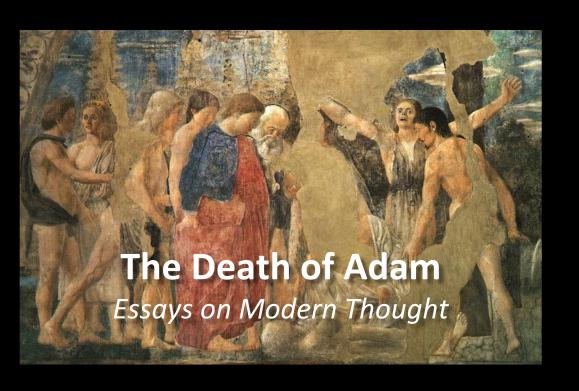
"Darwinism is, intrinsically, a chilling doctrine."

"It is harsh and crude in its practical consequences, in a degree that sets it apart from all other respectable scientific hypotheses; not coincidentally, it had its origins in polemics against the poor, and against the irksome burden of extending charity to them."



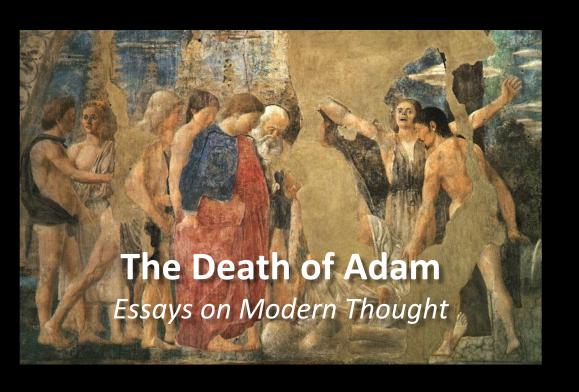


"[Darwinism] has required the disengagement of conscience, among other things. It has required the grand-scale disparagement of the traits that distinguish us from the animals — and the Darwinists take the darkest possible view of the animals."





"For old Adam, that near-angel whose name means Earth, Darwinists have substituted a creature who shares essential attributes with whatever beast has recently been observed behaving shabbily in the state of nature. Genesis tries to describe human exceptionalism, and Darwinism tries to discount it."

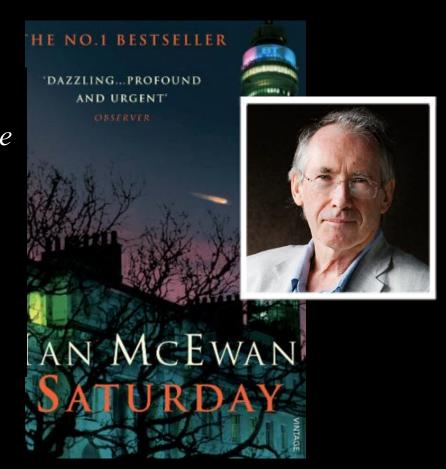




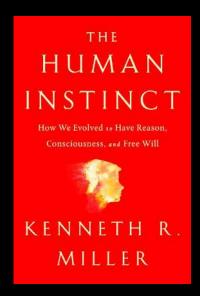
"There is no place left for the soul, or even the self. Moral behavior has little real meaning, and inwardness, in the traditional sense, is not necessary or possible."

"It is a thing that bears reflecting upon, how much was destroyed, when modern thought declared the Death of Adam."

The Sea of Faith
Was once, too, at the full, and round earth's shore
Lay like the fields of a bright girdle furled.
But now I only hear
Its melancholy, long, withdrawing roar,
Retreating, to the breath
Of the night-wind, down the vast edges drear
And naked shingles of the world.



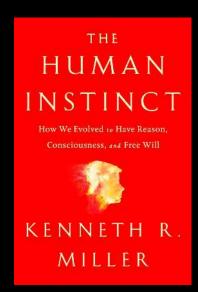
"[Living things], including exalted beings like ourselves, arose from physical laws, from war of nature, famine, and death. This is the 'grandeur.' And a bracing kind of consolation in the brief privilege of consciousness."



The story of human evolution, according to those who spin this narrative, is one of pointless accident, dark struggle, and ultimate meaninglessness.

No wonder so few want to hear the bad news.

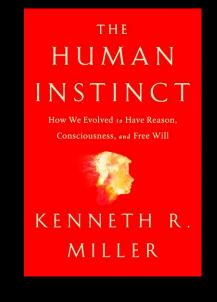
It is imperative to ask if we need a fundamental revision of evolutionary theory to account for the specialness of human nature. As we will see, I don't think so. What we really need is to understand and appreciate the beauty and subtlety of evolution in greater depth than ever.



We are living creatures, to be sure, one species among countless millions that have come and gone in our planet's lifetime. But we are also uniquely the creatures of music and art, of poetry and laughter, of science, reason, and mathematics.

We are the children of evolution in every sense, but we are children of the universe as well, and from that realization comes a new and exhilarating way to see our place among other living things and our home among the stars. It is exactly that place I propose to explore.

- 2) Say it Ain't So
- 3) Chance and Wonder
- 4) Explaining it All
- 5) The Mind of a Primate
- Consciousness
- I, Robot
- 8) Center Stage



Are we just another species? Does evolutionary psychology fully account for human nature? Can we trust a mind shaped by evolution?

Does consciousness contradict evolution?

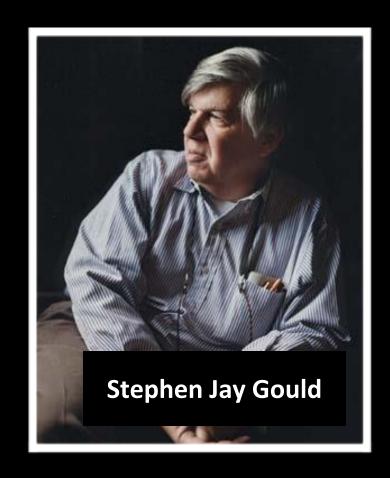
Does evolution deny free will and agency?

What is our place in the Cosmos?

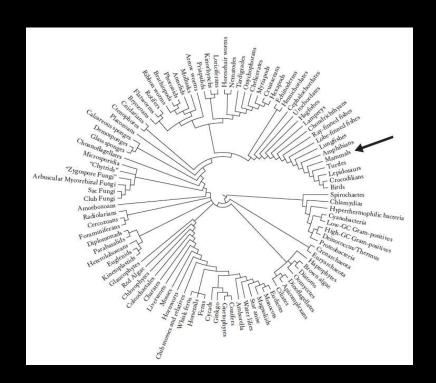
## What is man, that Thou are mindful of him?

(Psalm 8)

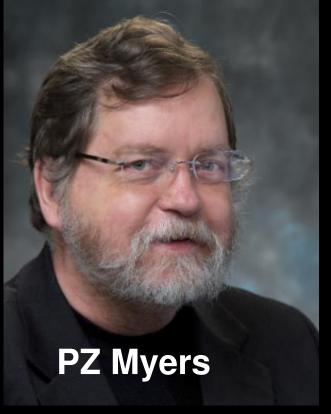
"Humans are not the end result of predictable evolutionary progress, but rather a fortuitous cosmic afterthought, a tiny little twig on the enormously arborescent bush of life, which if replanted from seed, would almost surely not grow this twig again or perhaps any twig with any property that we would care to call consciousness."







"There never was an 'ascent of man,' no matter how desperately we might wish there to be. We are merely a shivering twig that is the last vestige of a richer family tree. Foolishly, we have taken our isolation to mean that we are the true victor's in life's relentless race."

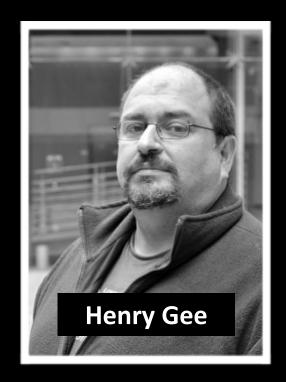


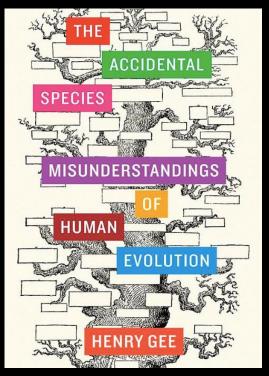
We humans "aren't any more special to the universe than a sea slug."

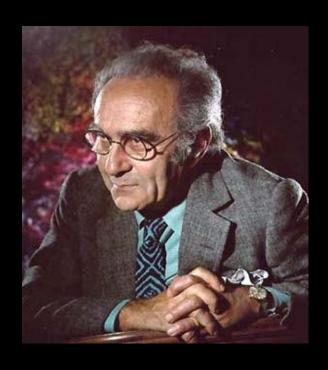


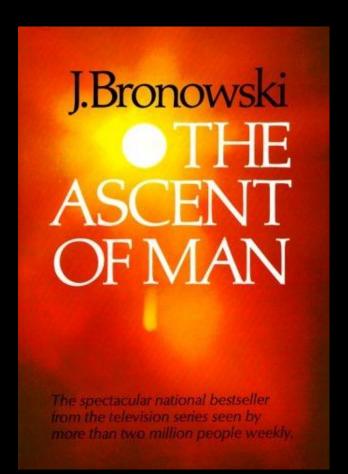
"Giraffe scientists would no doubt write of evolutionary progress in terms of lengthening necks, rather than larger brains or toolmaking skill. So much for human superiority. If that's not ignominy enough, bacterial scientists would no doubt ignore humans completely except as convenient habitats, the passive scenery against which the bacterial drama is cast."

"Now, ask yourself—which of these stories is any more valid than any other, at least as a narrative?"









"Man is a singular creature. He has a set of gifts which make him unique among the animals: so that, unlike them, he is not a figure in the landscape—he is a shaper of the landscape. In body and in mind he is the explorer of nature, the ubiquitous animal, who did not find but has made his home in every continent."



Studies by scientists like Lorenz and Skinner are relevant because "They tell us something about man. But they cannot tell us everything."

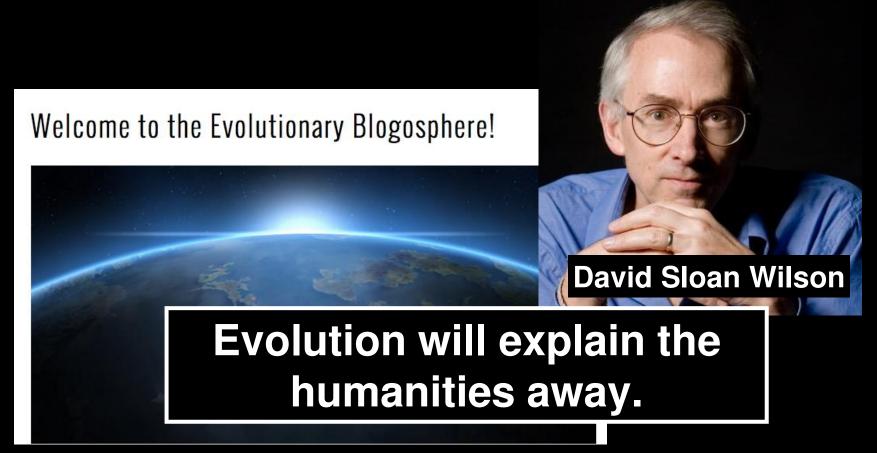
"There must be something unique about man because otherwise the ducks would be lecturing about Konrad Lorenz, and the rats would be writing papers about B. F. Skinner."



## The Perseids - 2017

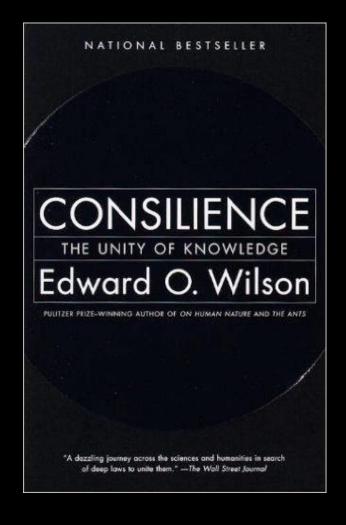
Of all the creatures, of all the forms of life that grace the surface of this small planet, only one that looks this way into the nighttime sky. Only one knows the Perseid spectacular is coming. Only one contemplates the age of the universe, only one is aware of the mysteries to be solved in starlight. While all of life is one, while all of life is linked by ancestry, structure, and design, only the human creature seeks answers to questions in the stars.

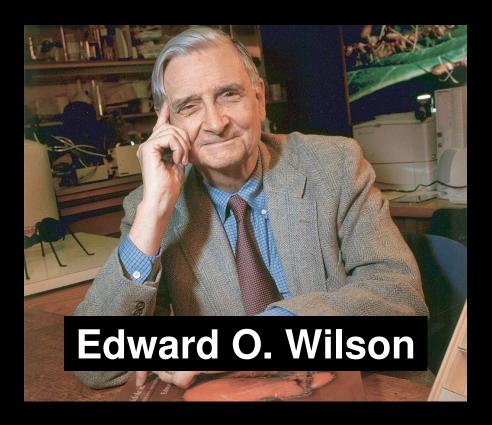
### **Does Evolution Constrain Us?**



### Evolution will include all Human Knowledge:

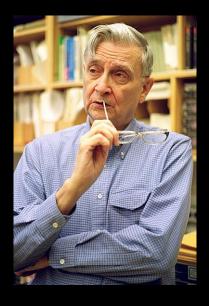
"Nothing about X makes sense except in the light of evolution, where X can equal Anthropology, Art, Culture, Economics, History, Politics, Psychology, Religion, & Sociology."



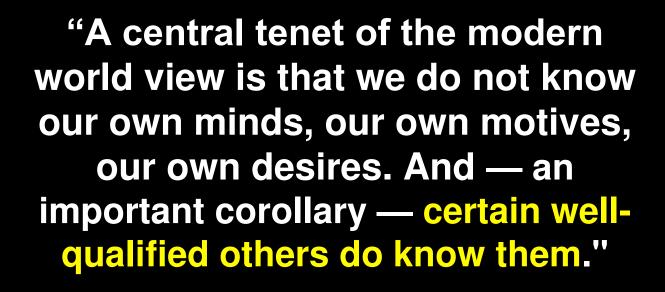


Wilson argues that the adaptive value of human customs, behaviors, superstitions, and social institutions permits evolution to explain *all of them*.



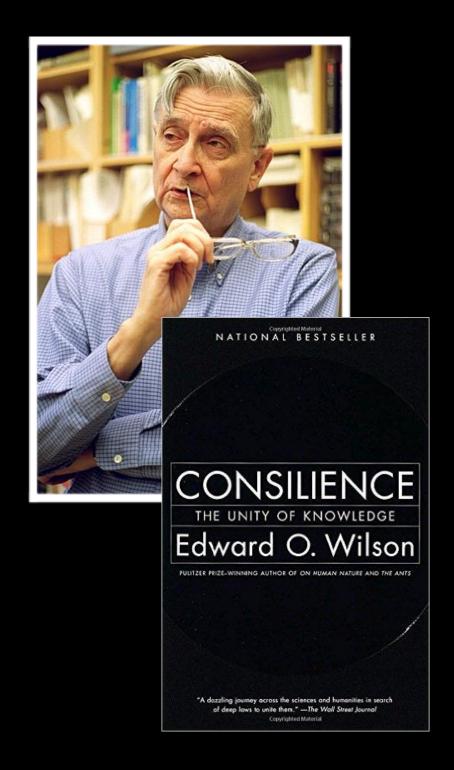




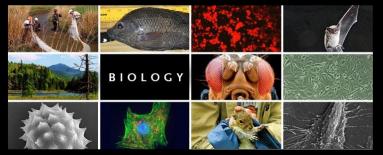


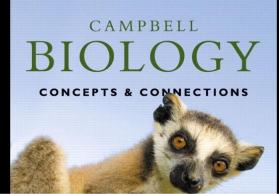
"If history and science have taught us anything, it is that passion and desire are not the same as truth. The human mind evolved to believe in the gods.

"It did not evolve to believe in biology."



## The human mind did not evolve to believe in biology?



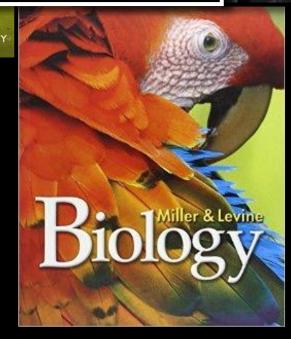


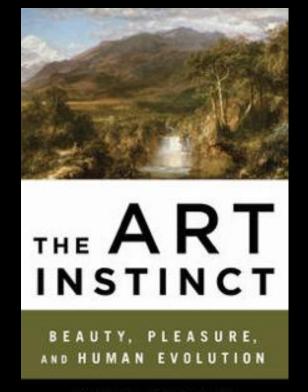


## The Human Mind Invented Biology!





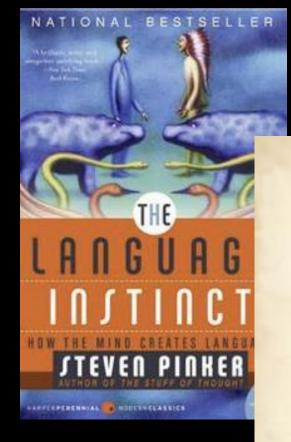


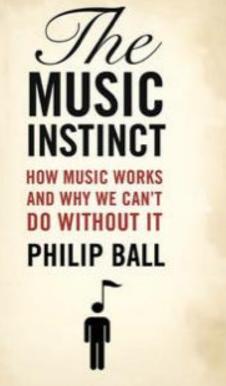


One might say that Evolutionary Psychology has sought to explain away every human activity except itself, and unfortunately it doesn't appreciate why this matters.

DENIS DUTTON

In seeking an adaptive explanation for nearly every human activity, evolutionary psychology consistently overlooks the fact that it, too, is a human activity made possible by the evolutionary process.



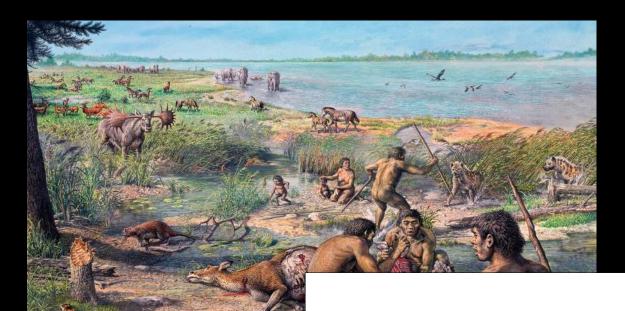


## Supposedly, human psychology was shaped by selective pressures in the Pleistocene



Subdivisions of the Quaternary System			
System/ Period	Series/ Epoch	Stage/ Age	Age (Ma)
Quaternary	Holocene		0.0117-0
	Pleistocene	Tarantian	0.126- 0.0117
		Ionian	0.781- 0.126
		Calabrian	1.80- 0.781
		Gelasian	2.58- 1.80
Neogene	Pliocene	Piacenzian	older

### What about the actual Pleistocene?



"We know so little about the environment of our Pleistocene ancestors, what they were like, and how they lived, that almost any hypothesis about which strategies might have helped them to reproduce, and thus let their characteristics ripple through the gene pool, is bound to be highly speculative." [Anthony Gottlieb, NYTimes 1/29/09]

# The most extreme conclusions of Evolutionary Psychology stem from false confidence about the nature of the human past.

#### Why women cannot read maps and men lose their keys

Women's difficulty in reading maps and men's uselessness in finding things under their noses could be explained by new research, scientists claim.

#### Shopping is 'throwback to days of cavewomen'

A woman's love of shopping is a throwback to her days in the caves, according to a new study.



Men tend to solve naviga strategies Photo: GETTY

## Worst Science Article Ever? Women "Evolved" to Love

Shopping

By Melissa Lafsky | March 2, 2009 11:50 am











You don't have to look to hard to find bad science writing. Here at Discoblog, we do our best to chronicle, analyze, and explain the worst of it, from the playing hockey with facts to the over-reliance on questionable studies to the always-popular "slapping pseudo-science on a stereotype and declaring bulletproof validation." But sometimes an article comes

Discover

along that's so egregious, so sloppy, so far from anything resembling actual fact, that even we are astonished.

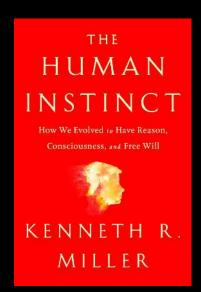


eir Neanderthal



China's re breaking

Especially since we live today in societies that reinforce a host of cultural stereotypes.



The findings of evolutionary psychology have been and will continue to be an important part of the exploration of human nature.

But an obsession to reach deep into the past to find the hidden chains that bind us must be paired with the realization that we have evolved into the only creatures able to perceive those chains, to rise above them, and to achieve an independence of thought, action, and creativity that makes possible the great and lasting achievements of our species.

We are, then, creatures like no other.



THE HUMAN INSTINCT

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to consciousness and its embodiment in human nature matters, and it matters in the deepest sense. It assigns meaning to our view of the world, our relationship with nature, and even the ethical approaches we take in forming societies and dealing with other species. It is important, vitally important, that we get the details of that journey right, that we tell the truth about our biological origins, and that we draw the wisdom of experience from an understanding of our evolutionary past.

Our biological heritage is merely the beginning of what we can be, not the end of it. The understanding that we have our roots in the process of natural selection explains how our brains were shaped, but that does not undermine the independence of human nature or deny the reality of human knowledge and achievement. Evolution may explain the human need for art, music, religion, and even science, but it cannot explain those disciplines away. Each exists, in its highest form, as an expression of the best humanity can offer in making sense of this remarkable world.

We hold in our hands the power to determine whether we will turn out to be the heroes of our lives or if that task will fall to some other creature at some other time. That, I would suggest, is something that should fill us not only with a some of responsibility but also with pride

# Evolution describes not the Death of Adam, but his Triumph. That is the great Truth of our story.

the world in which we live, and delight at being perhaps the very first stirrings of true consciousness in the vastness of the Cosmos. Far from diminishing us, knowing the details of Adam's journey ennobles each of us as a carrier of something truly precious—the genetic, biological, and cultural heritage of life itself. Evolution describes not the death of Adam, but his triumph. That is the great truth of our story.