

Property Investment UK Property available across the North West at 40% below Market Value FreshStartLiving.com
New Scientist Magazine Subscribe and save 20% at official subscription site. 1 year for £143 newscientist.com/subscribe
Business Analyst Jobs The latest Business Analyst jobs. Register free & apply online today! www.AccountancyAgeJo...

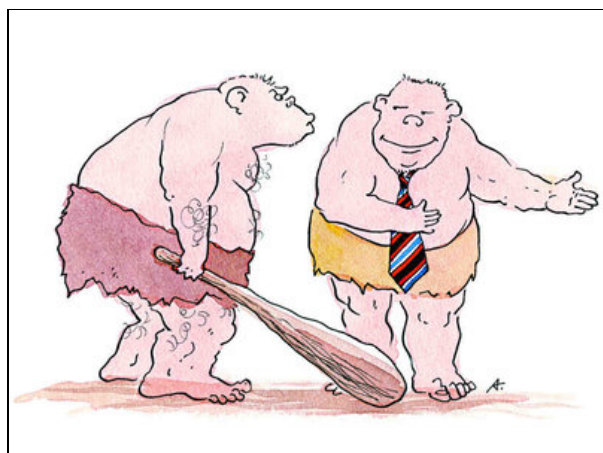


Life on Earth: A timeline Evolution 101

email font size 6 comments Recommend Back to Blog home

MONDAY, MAY 2, 2011

Survival of the kindest: The evolution of sympathy



TONY AUTH / The Philadelphia Inquirer (tauth@phillynews.com)

Darwinism is more often associated with the liberal left than the conservative right, but it's moved a long way across the political spectrum from Darwin's day, when it was embraced by advocates of free-market economics, colonialism, and similar ideas today associated with the right.

Apparently, Darwinism is still sometimes invoked in arguments for economic conservatism. It's reflected in a recent e-mail I received from a reader: "Maybe you should write about the current reversing of evolution by humans, using technology. . . . Fitness, in humans, means the intelligence and ability to deliver a healthy child. . . . Today, especially in the USA, the least fit make the most offspring while the more fit have the least children. The most fit pay to insure the survival and future breeding of the least fit."

Let's leave aside the part connecting fitness and intelligence for another column, since the term fitness has a very specific meaning in evolution apart from what people try to achieve in the gym. Instead, I'll focus on the idea that helping people interferes with evolution.

I find this letter so intriguing because it reflects the reaction some people had to Darwin's publication of On The Origin of Species in 1859.

According to University of Massachusetts historian Diane Paul, people of Darwin's time realized that evolution was an ongoing process and that our policies and medical advances would influence its direction.

Some preached that charity and social services impeded evolution - a position that came to be called social Darwinism.

Many Christians of the time opposed that attitude, believing mankind should help the poor and the sick.

Paul said Darwin's writing reflected mixed reactions to the ideas that would later be called social Darwinism. He did, however, hit on an important argument against it in his second book, The Descent of Man: Sympathetic instincts that lead us to aid the helpless are themselves products of natural selection.

That idea has stood the test of time.

"Evolution made us all the things we are by nature - it made us cooperative and selfish," said David Sloan Wilson, an evolutionary biologist at Binghamton University. Evolution, he said, left us with the good, the bad, the beautiful, and the ugly.

By educating children, treating sick people, and doing medical research, we're playing out the generous side of our evolutionary destiny.

There's cooperative behavior everywhere in nature, said Stuart West, an evolutionary biologist at Oxford University. Worker bees, ants, wasps, and other social insects forgo their own reproduction to help the queen. The cells of slime molds cooperate, as do bacteria.

What Darwin couldn't explain was how natural selection led to sympathy. Today, it's still the subject of active research and some controversy.

On the surface, selfish creatures would seem to have a survival advantage over selfless ones. That's what makes it a rich area for research, says Rutgers University professor Robert Trivers. As a scientist, he said, "you're automatically attracted to contradictions - those are the most fruitful to solve."

Individual animals may be torn by conflicting instincts, he said. "One part of a ground squirrel says 'give a

ABOUT PLANET OF THE APES

Faye Flam - writer

In pursuit of her stories, science writer Faye Flam has weathered storms in Greenland, gotten frost nip at the South Pole, and floated weightless aboard NASA's zero-g plane. She is a graduate of the California Institute of Technology and started her writing career with the Economist. She later took on the particle physics and cosmology beat at Science Magazine. In 1995 she came to the Inquirer as a science writer - where she's covered everything from climate change to space exploration to forensics. Her last science column, "Carnal Knowledge," ran from 2005 to 2008.



Tony Auth, illustrator

Tony Auth graduated from UCLA with a degree in biological illustration. He was chief medical illustrator at a large teaching hospital in southern California before joining the Inquirer as staff editorial cartoonist in 1981. Like all practicing political cartoonists, he's gotten more than his share of both awards and hate mail. Over the years Tony has written and/or illustrated eleven children's books.



Apply now >
BRITISH AIRWAYS
Offer extended until 23 May 2011.
The more you put on, the more you'll take-off.
Representative 50.1% APR
variable Terms and Conditions apply.

Apply now >
BRITISH AIRWAYS
Offer extended until 23 May 2011.
The more you put on, the more you'll take-off.
Representative 50.1% APR
variable Terms and Conditions apply.

warning call,' and another part says 'shut the hell up and get down to the nearest hole.'"

Trivers said half the mystery was cleared up by the late biologist William Hamilton, who realized that natural selection would lead to altruism, even self-sacrifice, among closely related individuals. A mother who risks her life to protect her young may pass on more of her own genes than a mother who does not. Worker ants and bees share most of their genes with the queen, so helping her helps their genes propagate.

That doesn't explain why people often help friends or other non-relatives. There, altruism usually incurs some benefit, said Trivers. Friends do nice things in return. Being a good citizen allows you benefits of being part of the group.

That didn't always go over well with people, Trivers said. When he taught at Harvard in the 1970s, one student told him he didn't want to live in a world where altruism had such strings attached.

A less depressing view comes from Binghamton's Wilson, who argues that there's another force at play - group selection. When different groups of creatures are competing, some groups will survive while others go extinct. In some cases, those groups that cooperate survive better.

Group selection once stood as a mainstream idea, but it fell out of favor, he said. He believes it goes a long way toward explaining why we humans can achieve so much by working together. "Once you add that layer, you begin to see how altruism could evolve," he said.

Other biologists say that while group selection might happen in a few circumstances, they dismiss the notion that it explains much about human behavior.

Still, the idea got a recent boost from a group of biologists at Harvard. Earlier this year, they published a paper in the journal Nature that used a combination of game theory and other mathematics to explain cooperation.

That paper, whose authors included the renowned biologist E.O. Wilson, attacks the currently favored use of "kin selection" to explain altruism, replacing it with a different combination of evolutionary processes, including group selection.

In response, 139 other biologists cooperated on a rebuttal.

Several said that the paper mischaracterized the mainstream view - that the authors were attacking a "straw man" as Oxford's West put it.

Whichever idea comes out on top, it won't change the answer to our original question - whether society is tampering with evolution's course by using public money to help "unfit" people.

Both sides argue that sympathy and cooperation came about as products of evolution - part of our nature along with selfishness and greed. The scientists differ only on how we got that way.

Contact staff writer Faye Flam at 215-854-4977 or [fflam@phillynews.com](mailto:fflam@phillynews.com).

Posted by Faye Flam @ 5:31 AM Permalink | 6 comments

Recommend

Be the first of your friends to recommend this.

Sign in to post a comment

### Comments



0 like this / 0 don't • Posted 10:55 AM, 05/02/2011

Thanks for this great series. I tried to post earlier but it did not go through. This website needs some evolution.

— Magistra

Sign in to report abuse



0 like this / 0 don't • Posted 11:39 AM, 05/02/2011

Altruism - bah! Here's the real story: <http://abstrusegoose.com/360>

— ctbrunner

Sign in to report abuse



0 like this / 0 don't • Posted 5:12 PM, 05/02/2011

It appears that my comment is too long for one post - so I'm sending TWO !

You raise an interesting fact, Faye Flam.

And that is - the people who 'specialize' in the field of evolution can't even agree on the most basic building blocks of human behavior.

Well, regardless of THEIR confusion, it's MY statement that the foundation of all human motivation is Selfishness. This is a fact everyone proves every moment of our lives with every selection and action we make. EVERY selection and action we make is based on our personal likes & dislikes - selfishness. This includes sympathy, since we're ONLY sympathetic to what WE choose.

On this foundation of Selfishness sits our ability to satisfy our selfishness. This is the power of Force - physical, mental, and emotional force.

Concerning the 'unfit' (which is to say 'unproductive') there will always be those 'better' and 'worse' than each of us in the ability to forcefully express her/his selfishness.

But it's one thing for a family to have the right to support or not support their 'unproductive' family members, and quite another thing for government to MANDATE that society support its 'unproductive' members. Local Charities and community groups exist for this function - NOT a mandate from government to tax its people for the anonymous support of unproductive members of society.

— AION139

Sign in to report abuse



0 like this / 0 don't • Posted 5:23 PM, 05/02/2011

It appears that my comment is too long for one post - so I'm sending TWO !

### BLOG ROLL

Blogs on evolution

John Hawks' weblog

Pharyngula

The Primate Diaries in Exile

Evolution for Everyone David Sloan Wilson

Why Evolution is True

Science blogs

Abstract | Philly

Not Exactly Rocket Science Discover Magazine

Bad Astronomy Discover Magazine

Other useful links

Academy of Natural Sciences

National Center for Science Education

Understanding Evolution University of California Berkeley

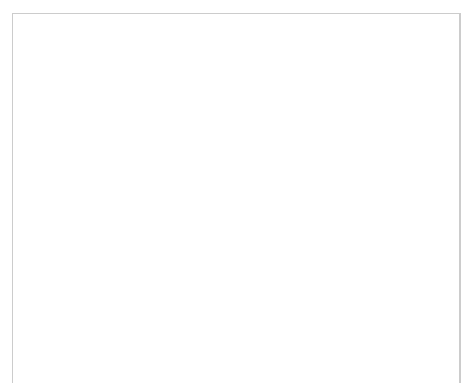
### ARCHIVES

May

April

### GET IT NOW

Subscribe to the RSS feed





You raise an interesting fact, Faye Flam.

And that is – the people who 'specialize' in the field of evolution can't even agree on the most basic building blocks of human behavior.

Well, regardless of THEIR confusion, it's MY statement that the foundation of all human motivation is Selfishness. This is a fact everyone proves every moment of our lives with every selection and action we make. EVERY selection and action we make is based on our personal likes & dislikes – selfishness. This includes sympathy, since we're ONLY sympathetic to what WE choose.

On this foundation of Selfishness sits our ability to satisfy our selfishness. This is the power of Force – physical, mental, and emotional force.

Concerning the 'unfit' (which is to say 'unproductive') there will always be those 'better' and 'worse' than each of us in the ability to forcefully express her/his selfishness.

But it's one thing for a family to have the right to support or not support their 'unproductive' family members, and quite another thing for government to MANDATE that society support its 'unproductive' members. Local Charities and community groups exist for this function – NOT a mandate from government to tax its people for the anonymous support of unproductive members of society.

— AION139

[Sign in to report abuse](#)



0 like this / 0 don't • Posted 5:50 PM, 05/02/2011

Sympathy is an emotion that is generated from an direct and personal situation, not some abstract indirect impersonal 'altruistic' situation. And when we give sympathy, we give it EXPECTING to see it benefit those we show our kindness to.

But government taxation for 'welfare' reduces our emotional response of sympathy to absolute nonsense substituting an impersonal, indirect, and abstract response instead.

Whether it be individual, small group, or large crowd, you'll find that ALL effort and expression is based on personal selfishness. Whether or not it succeeds in its expression depends entirely on an individual's ability to use the force of their body, mind, and emotions.

— AION139

[Sign in to report abuse](#)



0 like this / 0 don't • Posted 12:30 AM, 05/03/2011

It would be very informative to see layman's explanations for how altruistic and cooperative characteristics evolve, because they seem, on the face of it, quite problematic. For example, there are some honeybees (Japanese and other East Asian) that defend against invading wasps by swarming over them and vibrating rapidly. This overheats and suffocates the wasps. How in the world does such an esoteric cooperative exercise evolve? At first gloss it seems that the jump is too big, the coincidence too large; a group of individuals "know" to do the exact same thing, all at the same time, and it just happens to work. If one or two did it, no useful effect. I'm sure there are similar examples from other hived/colonial/pack animals, where it seems that evolution has a tall task in explaining how everyone gets on the same page. You would think the transitional stages of such behavior would be more in view around us. Maybe it is?

— nerdyseahorse

[Sign in to report abuse](#)

6 comments

### Register to comment

Why are we asking you to register? We've made some changes to increase the quality of the user experience and dialogue, and reduce the number of inappropriate or offensive posts. You're now required to have a registered username and account before adding a comment. This will improve the experience for everyone. We apologize for the inconvenience.

**Join the conversation!**

[SIGN UP NOW](#)

#### Already Registered?

**Sign In**

Email address

Password

[SIGN IN](#)

[Forgot Password?](#)

#### today's PHILLY.COM POLL

##### How did you learn of Bin Laden's death?

- TV
- Website
- Twitter
- Facebook
- Other social media
- Radio
- Newspaper
- Other

#### TODAY'S PHILLY.COM VIDEOS [RSS](#)

- Fans torn in Werth's homecoming
- Jon Dorenbos, One Great Idea
- Mob Scene, Corrupt or Entrapped?
- Reaction to Osama's death
- The Gossip, Comcast Cares Day

[More videos >>](#)

#### PHILLY.COM PROMOTIONS

- Philly.com Contests
- Philly Dealyo
- Philadelphia Visitors Guide
- Philadelphia Restaurants
- Philadelphia Sports
- Buy Phillies Tickets

#### latest PHOTO GALLERIES [RSS](#)

- William & Kate: The Royal Wedding
- Social Circuit Sp 2011 Part II
- Love: Rebecca Druckenmiller & Dan Richman
- Social Circuit Sp 2011
- 4/6 Social Circuit Photos
- 4/13 Social Circuit Photos

***Vote***

***View results***

**Philly.com:** [News](#) | [Sports](#) | [Business](#) | [What's Happening](#) | [Restaurants & Food](#) | [Entertainment](#) | [Living](#) | [Marketplace](#) | [Jobs](#)

**Site Services:** [Advertise on Philly.com](#) | [View print ads and special sections](#) | [Mobile Edition](#) | [News In Education](#)

**The Inquirer:** [The Inquirer Digital](#) | [Columns](#) | [Subscriber Services](#)

**Daily News:** [Daily News Digital](#) | [Columns](#) | [Subscriber Services](#)

**Classifieds:** [Jobs](#) | [Cars on AutoTrader.com](#) | [Real Estate](#) | [Rentals](#) | [Marketplace](#) | [Celebrations](#)

**Partners:** [Phrequence](#) | [Philadelphia City Paper](#) | [Philly Dealyo](#) | [The Trend](#) | [Active Adult Housing](#) | [Homes and Living](#) | [Communities Magazine](#) | [Employment Weekly](#) | [Taste of Philadelphia](#) | [Parade Magazine](#)

[About Philly.com](#) | [Contact Us](#) | [Terms of Use & Privacy Statement](#) | [Copyright 2011](#)

[Latest News Feed](#)  [RSS](#)  [All RSS Feeds](#) [RSS Terms of Use](#)