

futurology vs collapse

Daniel 'poelzi' Poelzleithner

24.10.2015

1 Introduction

2 Let's see

3 Can we save ourselves ?

Content

1 Introduction

2 Let's see

3 Can we save ourselves ?

Futurology vs. Collapse

futurology vs. collapse

Futurology

<http://reddit.com/r/futurology>

- Population: 4,329,037 (Oct 2015)
- very optimistic
- technocratic (everything can be solved through technology)

Collapse

<http://reddit.com/r/collapse>

- Population: 41,166 (Oct 2015)
- very pessimistic
- prepers & doomers (we are bound to collapse)

Why ?

- My wakeupcall: Guy McPhearson @OHM 2013
- Very negative view, but has many valid points
- One of the to too few: meta-scientists.

Why ?

- I read both, heavily
- Neither an extrem optimistic, nor pessimistic view is healthy, or right
- Reality is usually somewhere in between

Content

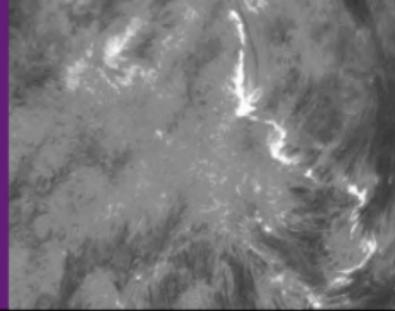
1 Introduction

2 Let's see

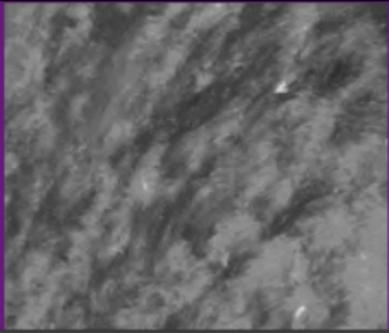
3 Can we save ourselves ?

futurology or collapse ?

- Solar Storm Risk to the North American Electric Grid
- collapse
- [http://www.lloyds.com/ /media/Lloyds/Reports/Emerging%20Risk%20Reports/Solar%20Storm%20Risk](http://www.lloyds.com/media/Lloyds/Reports/Emerging%20Risk%20Reports/Solar%20Storm%20Risk)



SOLAR STORM RISK TO THE NORTH AMERICAN ELECTRIC G



futurology or collapse ?

- Worse Than Fossil Fuels Why Bioenergy Is Not Green
- collapse
- <http://www.nakedcapitalism.com/2015/10/worse-than-fossil-fuels-why-bioenergy-is-not-green.html>

Recent Items

- 2:00PM Water Cooler 10/23/2015 - 10/23/2015 - Lambert Strether
- Negative Real Rates Signify a Broken Financial System - 10/23/2015 - Yves Smith
- Links 10/23/15 - 10/23/2015 - Yves Smith
- Announcing the Double Your Donation Challenge! - 10/23/2015 - Yves Smith
- Failure of Globalization and the Fourth Estate - 10/23/2015 - Yves Smith
- New York City and Missouri Pensions Follow California Treasurer Chiang on Private Equity Transparency....Sort Of - 10/23/2015 - Yves Smith
- Joe Firestone: Fiscal Myths of Campaign 2016 - 10/23/2015 - Yves Smith
- What Could Possibly Go Wrong (Next) in the Middle East? - 10/23/2015 - Yves Smith
- Mathew D. Rose: Hubris and Nemesis In Germany – Volkswagen, Refugees, and Football - 10/22/2015 - Yves Smith

Your favorite stock, see if it's a buy, sell or hold opportunity

Worse Than Fossil Fuels? Why Bioenergy Is Not Green

Posted on October 22, 2015 by Yves Smith

This is Naked Capitalism fundraising week. 979 donors have already invested in our efforts to combat corruption and predatory conduct, particularly in financial realm. Please join us and participate via our [Tip Jar](#), which shows how to give via check, credit card, debit card, or PayPal. Read about [why we're doing this fundraiser](#), what we've accomplished in the last year, and our fifth target, more original reporting.

By the [Breakthrough Institute](#). Originally published at [OilPrice](#)

An interview with Tim Searchinger, a Research Scholar at the Woodrow Wilson School of Princeton University and a Senior Fellow at the World Resources Institute.

Bioenergy's role in the global economy is growing as governments promote renewable biofuels and biomass electricity to replace fossil fuels. But in recent years, mounting scientific evidence has shown that bioenergy is not, in fact, carbon-neutral: hidden emissions from land-use change actually make it worse than traditional fossil fuels. Given increasing competition for land and the need to reduce carbon emissions, Princeton Research Scholar Tim Searchinger argues that bioenergy is the wrong path.

The fundamental idea behind bioenergy is that it's carbon-neutral because it releases the carbon that plants absorb when they grow, and thus does not add carbon to the air. Why is this wrong?

It's a common misunderstanding. Burning biomass of course emits carbon, just like burning fossil fuels. The assumption is that the plant growth to produce that biomass offsets the emissions. But the first requirement for a valid offset, whether for carbon or anything else, is that it is additional. If your employer wants to offset your overtime with vacation, they have to give you additional vacation, not just count the vacation you've already earned. Similarly, you can't count plant growth as an offset if it was occurring anyway. Plant growth can only offset energy emissions if it is additional. Counting plants that would grow anyway is a form of double-counting.

TIP JAR



Please [Donate](#) or [Subscribe!](#)

futurology or collapse ?

- X-ray technology reveals California's forests are in for a radical transformation. Estimation of dead tree count statewide could be close to 120 million — as much as 20% of the state's forests.
- collapse
- <http://www.latimes.com/local/california/la-me-dying-forests-20151020-story.html>

SATURDAY OCT. 24, 2015

MOST POPULAR LOCAL PATRICIA ENTERTAINMENT SPORTS POLITICS EDUCATION PLACE AN AD

We read 1 of 5 stories this month. Subscribe to get unlimited digital access.

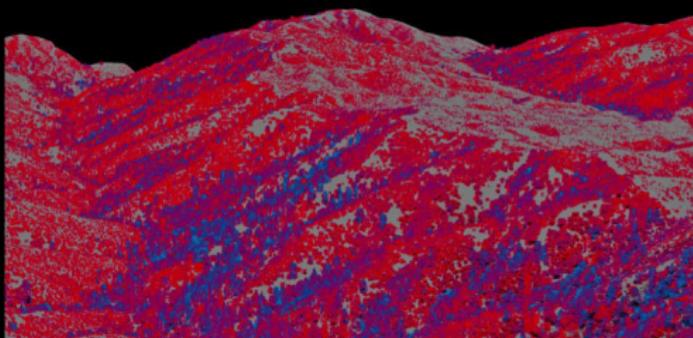


ADVERTISEMENT



LOCAL / CALIFORNIA

X-ray technology reveals California's forests are in for a radical transformation



futurology or collapse ?

- Mind hack: Scientists use magnets to change attitudes on immigration, religion
- futurology
- <https://www.rt.com/uk/318881-magnets-brain-immigration-religion/>



RT News App

[Home](#) / [UK](#) /

Mind hack: Scientists use magnets to change attitudes on immigration, religion

Published time: 16 Oct, 2015 16:07

[Get short URL](#)

Researchers from the University of York have used magnetic energy to suppress humans' 'threat-response' functions and dramatically change people's attitudes to immigration.

Psychologists used magnetic force to safely shut down the region of the brain associated with "threat-response functions" and conducted a series of tests where volunteers were asked questions about their beliefs.

Scientists found the people were less likely to have negative views when the magnetic force was applied to the posterior medial frontal cortex, positioned a few inches up from the forehead.

[Where to watch](#)[Schedule](#)

Recommended

Promoted Links by Taboola ▶



The Growing Influence Of Think-Tanks In Germany
Financial Times

futurology or collapse ?

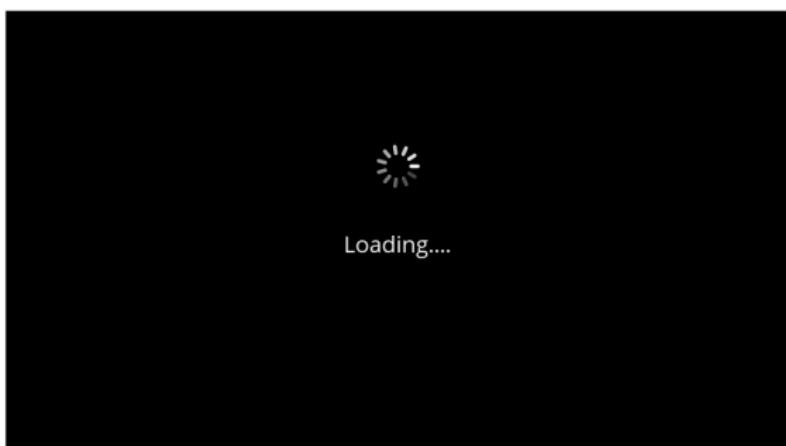
- Hurricane Patricia Becomes Strongest Hurricane Ever Recorded; Catastrophic Landfall Expected in Mexico Friday
- collapse
- <http://www.weather.com/storms/hurricane/news/hurricane-patricia-mexico-coast>



Hurricane Central

Patricia Pushes Inland After Becoming Strongest Landfalling Pacific Hurricane on Record (FORECAST)

Published Oct 24 2015 02:02 AM EDT | [weather.com](#)



Patricia: The Strongest Hurricane in History Makes Landfall in Mexico

Hurricane Patricia has become the strongest hurricane ever measured in the Pacific. Meteorologist Danielle Banks takes a look at some video from Manzanillo, Mexico, as it makes landfall.

Hurricane Patricia became the strongest hurricane ever known to make landfall on the Pacific coast of Mexico after the center of its eye crossed the coast of Jalisco state early Friday evening. While its winds are losing strength, damage is still

Hot List



5 Things to Know About Hurricane Patricia



What Can a Cat 5 Hurricane Do?



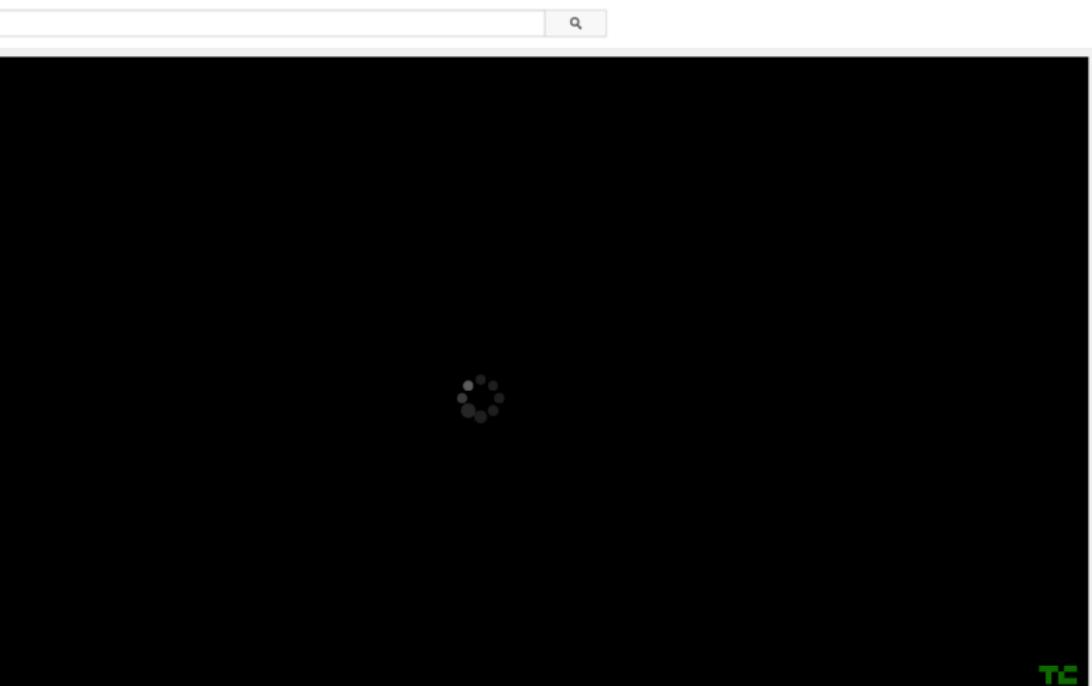
Texas Flood Threat: 6 Things You Should Know



Incredible Storm Rescue Photos

futurology or collapse ?

- Sam Altman (Y Combinator) defending Basic Income as a tool to deal with disruptive technologies
- futurology
- <https://www.youtube.com/watch?v=uSrBOsgzihw>



Bubble, Toil and Trouble with Sam Altman

Subscribe 154,661

are *** More

2015

to Y Combinator's Sam Altman about the impact of tech on Bay area infrastructure, why a universal basic income might be a great idea, and getting tech involved in government.

Launch today: <http://bit.ly/1BjOX2e>

SHOW MORE

Up next

Startup Voodoo 2015: Ke

from Y Combinator

by Startup Voodoo

5,345 views

41:52

Bootstrapping to Success

by TechCrunch

535 views

18:55

Square Files For IPO, Cit

Factor | Crunch Report

by TechCrunch

1,957 views

6:56

Andre Iguodala Talks Te

by TechCrunch

711 views

19:59

Sprig Wants to Kill Fast

by TechCrunch

847 views

15:11

Why are we here? | Scott

Summit on Technological

by 2noame

1,361 views

16:53

Sam Altman on how to g

Combinator

by Startup Grind

18,821 views

32:49

Home Improvement ~ S

Bubble, Toil and Trouble

by Futurama Wowcast

367 views

26:04

50 Entrepreneurs share

by Blockbeef

299,351 views

18:40

Elon Musk launches Tes

by Every Elon Musk Video

1,490,283 views

29:17

Elon Musk and Y Combin

Thinking for the Future -

by Vanity Fair

143,861 views

47:54

Why start a Startup | San

PlatzConf Mexico, May

by Platz Team

futurology or collapse ?

- A new update to the limits to growth model suggests that preparing for collapse is more important than trying to avoid
- collapse
- http://sustainable.unimelb.edu.au/sites/default/files/docs/MSSI-ResearchPaper-4_Turner_2014.pdf

Is Global Collapse Imminent? An Updated Comparison of The Limits to Growth with Historical Data

Research Paper No. 4 August 2014

About MSSI Research Papers

MSSI's Research Papers Series is a key communication initiative of the Melbourne Sustainable Society Institute, aimed at stimulating thought and discussion within the University of Melbourne and broader community and showcasing the scholarship of MSSI.

Editor

Dr Lauren Rickards, Melbourne Sustainable Society Institute, Lauren.Rickards@unimelb.edu.au

Author

Dr Graham M. Turner is a Principal Research Fellow at the Melbourne Sustainable Society Institute, University of Melbourne, Australia.

Acknowledgments

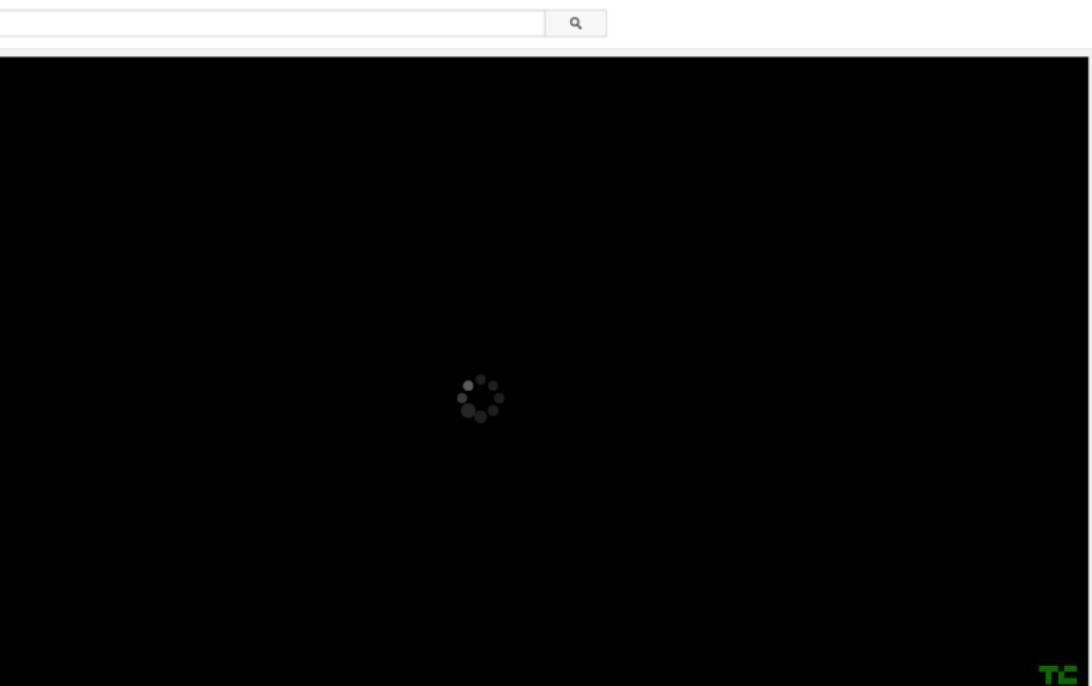
This Paper draws substantially on the following publication, with additional material incorporated: Turner G 2012, On the cusp of global collapse? Updated comparison of the Limits to Growth with historical data. *GAIA*, 21, pp. 116-124.

Citing this report

Please cite this paper as Turner, G. (2014) 'Is Global Collapse Imminent?', MSSI Research Paper No. 4, Melbourne Sustainable Society Institute, The University of Melbourne.

futurology or collapse ?

- A new material with micropores might be a way to fight climate change. Scientists have created crystals that capture carbon dioxide much more efficiently than previously known materials, even in the presence of water.
- futurology
- <http://www.futuretimeline.net/blog/2015/10/18.htm>



Bubble, Toil and Trouble with Sam Altman

Subscribe 154,661

are *** More

2015

to Y Combinator's Sam Altman about the impact of tech on Bay area infrastructure, why a universal basic income might be a great idea, and getting tech involved in government.

Launch today: <http://bit.ly/1BjOX2e>

SHOW MORE

Up next

Startup Voodoo 2015: Ke
from Y Combinator
by Startup Voodoo
5,345 views

41:52

Bootstrapping to Success
by TechCrunch
535 views

18:55

Square Files For IPO, Cit
Factor | Crunch Report
by TechCrunch
1,957 views

6:56

Andre Iguodala Talks Te
by TechCrunch
711 views

19:59

Sprig Wants to Kill Fast
by TechCrunch
847 views

15:11

Why are we here? | Scott
Summit on Technological
by 2noame
1,361 views

16:53

Sam Altman on how to g
Combinator
by Startup Grind
18,821 views

32:49

Home Improvement ~ S
Bubble, Toil and Trouble
by Futurama Wowcast
367 views

26:04

50 Entrepreneurs share
by Blockbeef
299,351 views

18:40

Elon Musk launches Tes
by Every Elon Musk Video
1,490,283 views

29:17

Elon Musk and Y Combin
Thinking for the Future -
by Vanity Fair
143,861 views

47:54

Why start a Startup | San
PlatzConf Mexico, May
by Platz Team

futurology or collapse ?

- System that replaces human intuition with algorithms outperforms 615 of 906 human teams.
- futurology
- <http://news.mit.edu/2015/automating-big-data-analysis-1016>

MIT News

ON CAMPUS AND AROUND THE WORLD

[Browse](#)or [Search](#)[FULL SCREEN](#)

Automating big-data analysis

System that replaces human intuition with algorithms outperforms 615 of 906 human teams.

Larry Hardesty | MIT News Office
October 16, 2015

▼ Press Inquiries

PRESS MENTIONS

Big-data analysis consists of searching for buried patterns that have some kind of predictive power. But choosing which "features" of the data to analyze usually requires some human intuition. In a database containing, say, the beginning and end dates of various sales promotions and weekly profits, the crucial data may not be the dates themselves but the spans between them, or not the total profits but the averages across those spans.

MIT researchers aim to take the human element out of big-data analysis, with a new system that not only searches for patterns but designs the feature set, too. To test the first prototype of their system, they enrolled it in three data science competitions, in which it competed against human teams to find predictive patterns in unfamiliar data sets. Of the 906 teams

MIT researchers have created an algorithm that outperforms humans when searching for patterns in data sets, reports Rachel Feltman for *The Washington Post*. The algorithm uses "raw datasets to make models predicting things such as when a student would be most at risk of dropping an online course."

The Washington Post

SHARE



Seung Lee writes for *Newsweek* that MIT

futurology or collapse ?

- Permafrost warming in parts of Alaska is 'unbelievable'
- collapse
- <http://www.bbc.com/news/science-environment-34540414>

The BBC has updated its cookie policy. We use cookies to ensure that we give you the best experience on our website. This includes cookies from third party social media websites if you visit a page which contains embedded content from social media. Such third party cookies may track your use of the BBC website. We and our partners also use cookies to ensure we show you advertising that is relevant to you. If you continue without changing your settings, well assume that you are happy to receive all cookies on the BBC website. However, you can change your cookie settings at any time.

- Continue
- Change settings
- Find out more



Sign in

News Sport Weather Shop Earth More

Search



NEWS

Home | Video | World | UK | Business | Tech | Science | Magazine | Entertainment & Arts | Health | In Pictures | More ▾

Science & Environment

Permafrost warming in parts of Alaska 'is accelerating'

By Matt McGrath
Environment correspondent, BBC News

① 22 October 2015 | Science & Environment | 367



Houses like this one near Fairbanks have collapsed because of permafrost melt

One of the world's leading experts on permafrost has told BBC News that the rate of warming of Arctic frozen土 is faster than expected.

Top Stories

Flood threat from Hurricane Patricia

① 41 minutes ago

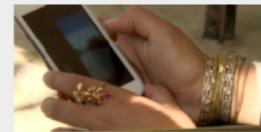
Maldives leader held over 'bomb plot'

① 32 minutes ago

'Urgent action' call on cyber-crime

① 1 hour ago

Features & Analysis



Chatting with Taliban

The girl who filmed the militant on the bus



futurology or collapse ?

- Warmer ocean may be releasing frozen methane
- futurology
- <http://news.agu.org/press-release/bubble-plumes-off-washington-oregon-suggest-warmer-ocean-may-be-releasing-frozen-methane/> (39 votes)

BUBBLE PLUMES OFF WASHINGTON, OREGON SUGGEST WARMER OCEAN MAY BE RELEASING FROZEN METHANE

14 October 2015



Joint Release

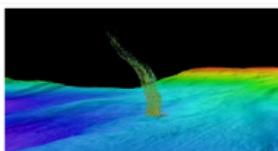
WASHINGTON, D.C. – Warming ocean temperatures a third of a mile below the surface, in a dark ocean in areas with little marine life, might attract scant attention. But this is precisely the depth where frozen pockets of methane 'ice' transition from a dormant solid to a powerful greenhouse gas.

New research suggests that subsurface warming could be causing more methane gas to bubble up off the Washington and Oregon coast.

The study shows that of 168 bubble plumes observed within the past decade, a disproportionate number were seen at a critical depth for the stability of methane hydrates. The study has been accepted for publication in *Geochemistry, Geophysics, Geosystems*, a journal of the American Geophysical Union.

"We see an unusually high number of bubble plumes at the depth where methane hydrate would decompose if seawater has warmed," said lead author H. Paul Johnson, a University of Washington professor of oceanography. "So it is not likely to be just emitted from the sediments; this appears to be coming from the decomposition of methane that has been frozen for thousands of years."

Methane has contributed to sudden swings in Earth's climate in the past. It is unknown what role it might contribute to contemporary climate change, although recent studies have reported warming-related methane emissions in Arctic permafrost and off the Atlantic coast.



Sonar image of bubbles rising from the seafloor off the Washington coast. The base of the column is 515 meters deep (about 1/3 of a mile) and the top of the plume is at 1/10 of a mile (180 meters) deep.

Credit: Brendan Phillips/University of Washington

TWITTER

Tweets

- Eos** [@AGU_Eos](#) 7h Severe Hurricane Patricia Approaching Mexico Coast
ow.ly/TMj7p @wildweatherdan #AGUblog pic.twitter.com/9v9mGIV5BD
- Retweeted by Am Geophysical Union 7h Show Photo
- Am Geophysical Union** 7h Tweet to @theAGU

MEDIA CONTACTS

Nanci Bompey

Public Information Manager
Phone: +1 202 777 7524
E-mail: NBompey@agu.org

Joan Buhrman

Strategic Communications Manager
Phone: +1 202 777 7509
E-mail: JBuhrman@agu.org

Lauren Lipuma

Public Information Specialist
Phone: +1 202 777 7396
E-mail: LLipuma@agu.org

Phone: +1 (800) 966 2481
(Toll free in North America)
Fax: +1 202 328 0566

futurology or collapse ?

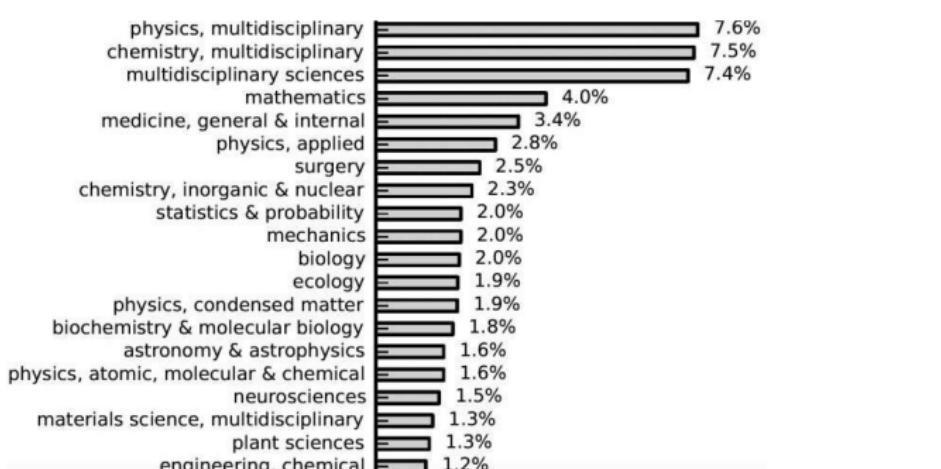
- Koster said he was troubled by new reports about the site. One found radiological contamination in trees outside the landfill's perimeter. Another showed evidence that the fire has moved past two rows of interceptor wells and closer to the nuclear waste.
- collapse
- <http://www.usnews.com/news/us/articles/2015/10/06/disaster-plan-developed-in-case-fire-reaches-nuclear-waste>

futurology or collapse ?

- Like Sleeping Beauty, some research lies dormant for decades, study finds
- futurology
- <http://phys.org/news/2015-05-beauty-lies-dormant-decades.html>

Like Sleeping Beauty, some research lies dormant for decades, study finds

May 25, 2015



This list shows the top 20 disciplines producing sleeping beauties in science. Credit: Indiana University

Why do some discoveries fade into obscurity while others blaze a new trail the moment they are published? More mysteriously, why do some research papers remain dormant for years and then suddenly explode with great impact upon the scientific community?



The last group, dubbed "sleeping beauties," is the subject of a new study from the Indiana University Bloomington School of Informatics and Computing's Center for Complex Networks and Systems. It was released today in the *Proceedings of the National Academy of Sciences*.

"This study provides empirical evidence that a paper can truly be 'ahead of its time,'" said Alessandro Flammini, an associate professor of informatics and corresponding author on the study. "A 'premature' topic may fail to attract attention even when it is introduced by authors who have already established a strong scientific reputation."

A prime example is a seminal paper by Albert Einstein, Boris Podolsky and Nathan Rosen that laid out the "EPR Paradox," a major puzzle in quantum entanglement

TRUSTED
OPEN ACCESS
RESOURCES
SEARCH BY GEOGRAPHY
AND CATEGORY

The Association of Learned & Professional Society Publishers

Copyright Clearance Center

Featured Last comments Popular

Researchers develop new method for scaling up quantum devices 21 hours ago 0

Trisulfur anion helps explain gold deposits on Earth 21 hours ago 2

Hendo brings out second hoverboard iteration 11 hours ago 0

Cobalt-ligand catalyst successfully converts carboxylic acids and esters into alcohols 19 hours ago 0

Researchers create blackest material ever made 22 hours ago 2

more »

futurology or collapse ?

- U.S. Navy presentation on Low Energy Nuclear Reactions (LENR) Phenomena and Potential Applications
- futurology
- <http://www.lenr-forum.com/forum/index.php/Attachment/386-IEEE-brief-DeChiaro-9-2015-pdf/>



GADGETS · SPORTS · GAMING · PICS · WORLDNEWS · VIDEOS · ASKREDDIT · AWW · MUSIC · FUNNY · NEWS · MOVIES · BLOG · BOOKS · HISTORY · FOOD · PHILOSOPHY · TELEVISION · JOKES · ART · DIY · SPACE · DOCUMENTARIES · FITNESS · ASKSCIENCE · NOTTHEONION · TODAYILEARNED · PERSONALFINANC

Transhuman Universe

news today · science summaries · AMAs · IRC · glossary

ED · OTHER DISCUSSIONS (1)

Want to join?

Summary of the Week every Friday and Sunday!

ology, support the future of our community and hit the subscribe button on the right!

my presentation on Low Energy Nuclear Reactions (LENR) Phenomena and Potential Applications (self.Futurology)

* by Always_Question

systems Command (NAVSEA) of the U.S. Navy has released a [report](#) regarding LENR and its potential applications. The potential applications are nothing short of futuristic and quite profound.

also does a nice job in summarizing the recent push toward commercialization by various companies. As the evidence appears to suggest, then the world could change in very fundamental and profound ways.

additional verification, here is the [link](#) to the IEEE meeting posting where it appears Dr. DeChiaro made a presentation.

4 ago

at's next, Tatler-Vogue Anthropology?) has [this article](#)

He converts H-1 (ordinary hydrogen) to H-2 (deuterium), then to H-3 (tritium) and H-4 (he-4). This process involves beta decay and releases energy.

Rossi, who has landed a [significant investment from Cherokee Investment Partners](#), a

leaves us with three stark choices: (a) Rossi and those working with him or independently are making a monumental and far-reaching blunder in their experimental work; (b) Rossi is leading a conspiracy to suppress scientific behavior; or (c) Rossi has made an important discovery with sweeping implications. In the past month, and with more researchers finding similar results, (a) and (b) look less likely.

in the wind:

At the same time in two decades, the Japanese government has issued a request for proposals for a new type of nuclear fusion (LENR) research.

<https://www.reddit.com/r/LENR/> exists!

4 ago

Rossi. Both bad and good.

The fraud wouldn't have been thrown out of the scientific and investment community? He's been at it for a decade and still hasn't been dunked out yet.

This is a landmark discovery that it's being made out to be. Why is it taking so long to formally bring it to market?

Want to join?

search

this post wa

88 point

shortlink

username

remember

Futuro

unsubscribed

4,329,436

317 h

source

quality

Y

A subreddit

and evidence

development

civilization.

Click here to

1. E

II

S

2. S

3. I

C

W

N

4. N

futurology or collapse ?

- We passed 400 ppm co2 equivalent in 1985 and are currently over 481 co2 eq.
- collapse
- <http://www.esrl.noaa.gov/gmd/ccgg/aggi.html>



THE NOAA ANNUAL GREENHOUSE GAS INDEX (AGGI)

NOAA Earth System Research Laboratory, R/GMD, 325 Broadway, Boulder, CO 80305-3328

James H Butler@noaa.gov

Stephen A Montzka@noaa.gov

Updated Spring 2015

Introduction

The AGGI is a measure of the warming influence of long-lived trace gases and how that influence is changing each year. The index was designed to enhance the connection between scientists and society by providing a normalized standard that can be easily understood and followed. The warming influence of long-lived greenhouse gases is well understood by scientists and has been reported by NOAA through a range of national and international assessments. Nevertheless, the language of scientists often eludes policy makers, educators, and the general public. This index is designed to help bridge that gap. The AGGI provides a way for this warming influence to be presented as a simple index.

Increases in the abundance of atmospheric greenhouse gases since the industrial revolution are mainly the result of human activity and are largely responsible for the observed increases in global temperature [IPCC 2013]. However, climate projections have model uncertainties that overwhelm the uncertainties in greenhouse gas measurements. We present here an Index that is directly proportional to the direct warming influence (also known as climate forcing) supplied from these gases. Because it is based on the observed amounts of long-lived greenhouse gases in the atmosphere, this index contains relatively little uncertainty.

The Intergovernmental Panel on Climate Change (IPCC) defines climate forcing as "An externally imposed perturbation in the radiative energy budget of the Earth climate system, e.g. through changes in solar radiation, changes in the Earth albedo, or changes in atmospheric gases and aerosol particles." Thus climate forcing is a "change" in the status quo. IPCC takes the pre-industrial era (chosen as the year 1750) as the baseline. The perturbation to direct climate forcing (also termed "radiative forcing") that has the largest magnitude and the least scientific uncertainty is the forcing related to changes in long-lived, well mixed greenhouse gases, in particular carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and halogenated compounds (mainly CFCs).

Atmospheric global greenhouse gas abundances are used to calculate changes in radiative forcing beginning in 1979 when NOAA's global air sampling network expanded significantly. The change in annual average total radiative forcing by all the long-lived greenhouse gases since the pre-industrial era (1750) is also used to define the NOAA Annual Greenhouse Gas Index (AGGI), which was introduced in 2004 [Hofmann et al., 2006a] and has been updated annually since.

Observations

The NOAA monitoring program provides high-precision measurements of the global abundance and distribution of long-lived greenhouse gases that are used to calculate changes in radiative climate forcing.

Air samples are collected through the NOAA/ESRL global air sampling network, including a cooperative program for the carbon gases which provides samples from ~80 global background air sites, including measurements at 5 degree latitude intervals from ship routes (see Figure 1).

futurology or collapse ?

- Floating Farms: Fleets of Agricultural Barges Could Yield 10 Tons Per Ship Per Year
- futurology
- <http://weburbanist.com/2015/09/27/floating-farms-agricultural-barges-to-yield-10-tons-per-year/>

Floating Farms: Agricultural Barges to Yield 10 Tons Per Year

Article by [Urbanist](#), filed under [Public & Institutional](#) in the [Architecture](#) category.



Powered by solar-paneled roofs overhead, these barge farms feature hydroponic space for produce above and support fish farming below, using extant technologies to offshore vast quantities of food to be grown on the water.



Categories

Architecture

[Abandoned Places](#)[Cities & Urbanism](#)[Houses & Residential](#)[Offices & Commercial](#)[Public & Institutional](#)[Art](#)

More Articles from WebUrbanist



futurology or collapse ?

- Investors Are Mining For The Next Hot Commodity: Water. Wall Street Smells Profit As California Endures Devastating Drought
- collapse
- <https://theoldspeakjournal.wordpress.com/2015/09/25/investors-are-mining-for-the-next-hot-commodity-water-wall-street-smells-profit-as-california-endures-devastating-drought/>

The Oldspeak Journal

[ABOUT...](#) [ARCHIVES](#) [RSS FEED](#)

"RESOURCE SHOCKS", BIG WATER, CORPORATE CONTROL OF NATURAL RESOURCES, DESALINATION PLANTS, FRESH WATER, GLOBAL WATER SHORTAGES, LONG-TERM GROUNDWATER DEPLETION, RESOURCE APPROPRIATION, WALL STREET SPECULATORS, WATER ASSETS, WATER PRIVATIZATION, WATER RIGHTS, WATER SCARCITY, WATER SUPPLY

Investors Are Mining For The Next Hot Commodity: Water. Wall Street Smells Profit As California Endures Devastating Drought

In Uncategorized on September 25, 2015 at 7:38 pm

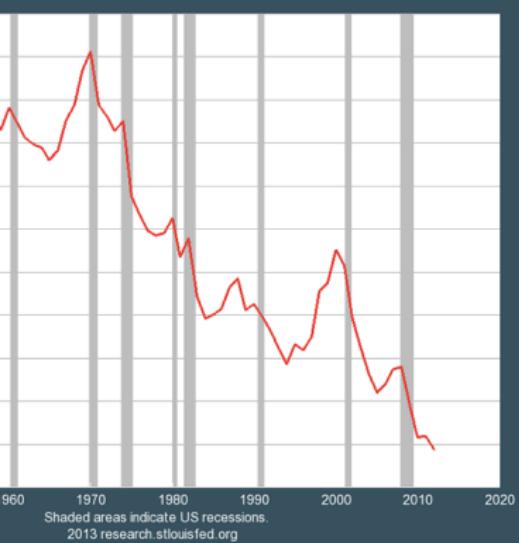


Drip-irrigated lemon orchards at the Cadiz water project in the Mojave Desert.

Oldspeak: "Investing in the water industry is one of the great opportunities for the coming decades, Water is the scarce resource that will define the 21st century, much like plentiful oil defined the last century." —Matthew J. Diserio, Water Asset Management

futurology or collapse ?

- Employee compensation as a percent of GDP is down to the lowest level recorded [chart]
- collapse
- <http://www.marketoracle.co.uk/images/2013/Dec/MM-12-5-13-employee-compensation.png>



futurology or collapse ?

- 'Doomsday Vault' sees its first withdrawal
- collapse
- <http://www.usatoday.com/story/news/world/2015/09/23/newser-doomsday-vault/72671518/>

'Doomsday Vault' sees its first withdrawal

Kate Seamons, Newsler 8:06 p.m. EDT September 23, 2015

f
509

t
111

in
6

r
1

g
46



(Photo: John McConnico, AP)

f 509 | t 111 | in 6 | r 1 | g 46 | CONNECT | TWEET | LIKED | COMMENT | EMAIL | MORE

The "Doomsday Vault" just got its first bit of doomsday press: coverage of its first-ever withdrawal of seeds.

The vault has since 2008 sat on the Norwegian Island of Svalbard, 800 miles from the North Pole where the soil is always frozen. It's a place so cold that Reuters explains that in the event of power failure the crop seeds within the vault would be preserved for at least 200 years. That makes it an ideal location to house and safeguard the seeds in the event of catastrophe, and the first catastrophe of sorts has apparently occurred: Syria's civil war.

There are other gene banks around the world, one being in Aleppo. It's located at the headquarters of the International Center for Agricultural Research in Dry Areas (ICARDA)—which itself in 2012 moved from Aleppo to Beirut due to the conflict.

Cary Fowler, the creator of the Svalbard vault, last month told Australia's ABC News that "we don't think that seed collection has been lost," but ICARDA has certainly lost its ability to get the seeds to farmers or scientists who request them. He said the plan was to "re-establish that gene bank center now in two locations; in Morocco and Lebanon."

The Local reports that since 2008, ICARDA was able to send samples of 87% of its seeds to Svalbard and other banks. It's now asking for some 116,000 samples that include wheat, barley, and grasses that thrive in dry areas. The transfer will occur once the paperwork is done. While the news may sound negative, Slate points out the vault is working "exactly how [its] supposed to work. When disaster strikes, the Arctic seed vault forms a sort of planetary insurance policy."

THIS STORY FIRST APPEARED ON NEWSLER:



NEWSLER

The 'Doomsday Vault' Protects the Planet From Catastrophe. And Catastrophe Has Occurred

MORE FROM NEWSLER:

futurology or collapse ?

- Watch High-Speed Trading Bots Go Berserk | MIT Technology Review
- collapse
- <http://www.technologyreview.com/view/428756/watch-high-speed-trading-bots-go-berserk/>

MIT Technology Review



NEWS & ANALYSIS ▾

FEATURES

VIEWS

MULTIMEDIA

DISCUSSIONS

TOPICS

POPULAR: TESLA AUTOPILOT ALPHABET'S SPENDING PLANS



SUBSCRIBE

A PLACE OF INSIGHT

Want to go ad free?

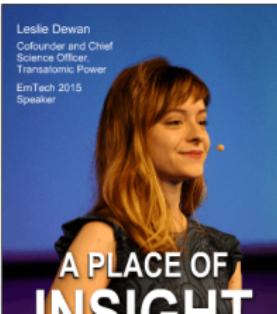
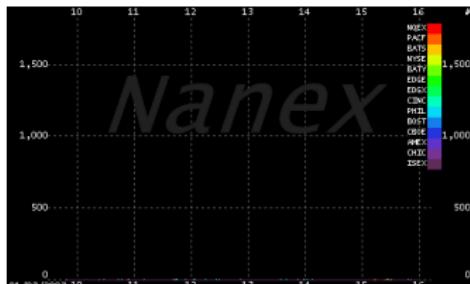
VIEW

29 COMMENTS

 Will Knight
August 7, 2012

Watch High-Speed Trading Bots Go Berserk

A chart shows the ascent of high-speed algorithmic trading, a phenomenon that is unnerving the financial markets.



futurology or collapse ?

- Break-even achieved in Swedish fusion research project using ultra-dense deuterium at Gothenburg Uni.
- futurology
- <http://scitation.aip.org/content/aip/journal/adva/5/8/10.1063/1.4928572>



Heat generation above break-even from laser-induced fusion in ultra-dense deuterium

[CrossMark](#)
Leif Holmlid^{1,a)}[+ VIEW AFFILIATIONS](#)^{a)} Email: holmlid@chem.gu.seAIP Advances 5, 087129 (2015); <http://dx.doi.org/10.1063/1.4928572>
[Download PDF](#)
[PREVIOUS ARTICLE](#)
[TABLE OF CONTENTS](#)
[NEXT ARTICLE >](#)

[Sign in or Register to Rate or Recommend this](#)
[Recommend This \(0 Recommendations\)](#)
[Abstract](#)
[Full Text](#)
[References \(28\)](#)
[Cited By \(0\)](#)
[Data & Media](#)
[Metrics](#)
[Related](#)

ABSTRACT

Previous results from laser-induced processes in ultra-dense deuterium D(0) give conclusive evidence for ejection of neutral massive particles with energy $\times 10$ MeV u $^{-1}$. Such particles can only be formed from nuclear processes like nuclear fission at the low laser intensity used. Heat generation is of interest for future fusion energy applications and has now been measured by a small copper (Cu) cylinder surrounding the laser target. The temperature rise of the Cu cylinder is measured with an NTC resistor during around 5000 laser shots per measured point. No heating in the apparatus or the gas feed is normally used. The fusion process is suboptimal relative to previously published studies by a factor of around 10. The small neutral particles H $_N$ (0) of ultra-dense hydrogen (size of a few pm) escape with a substantial fraction of the energy. Heat loss to the D $_2$ gas (at <1 mbar pressure) is measured and compensated for under various conditions. Heat release of a few W is observed, at up to 50% higher energy than the total laser input thus a gain of 1.5. This is uniquely high for the use of deuterium as fusion fuel. With a slightly different setup, a thermal gain of 2 is reached, thus clearly above break-even for all neutronically values possible. Also including the large kinetic energy which is directly measured for MeV particles leaving through a small opening gives a gain of 2.3. Taking into account the lower efficiency now due to the suboptimal fusion process, previous studies indicate a gain of at least 20 during long periods.

Key Topics

[Laser fusion](#)
[Nuclear fusion power](#)
[Copper](#)
[Fusion fuels](#)
[Neutrons](#)


FEATURED JOB

physicstoday

Assistant/Associate/
Full Professor - Supervisor,
Bursts and
Transients - Theory

Louisiana State University

Baton Rouge, Louisiana

Access Key

[Free Content](#)
[Open Access Content](#)
[Subscribed Content](#)
[Free Trial Content](#)

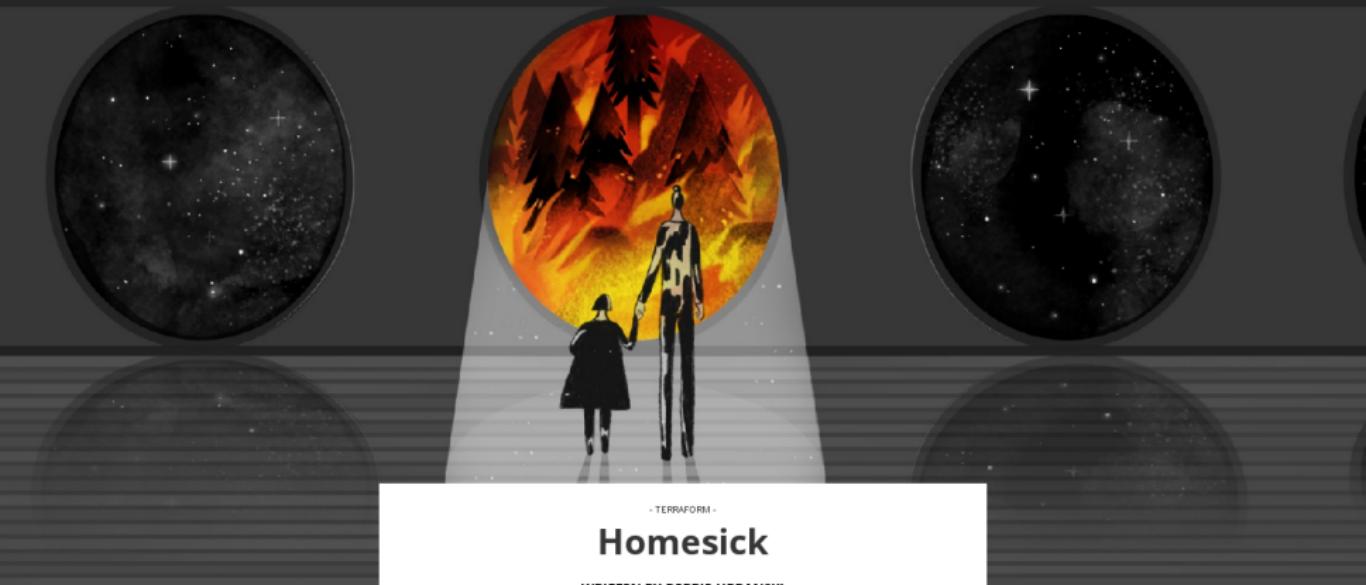
I. INTRODUCTION

[GO TO SECTION...](#)

Laser-induced nuclear fusion processes^{1,2} are expected to occur quite easily in ultra-dense deuterium D(0). The theoretical understanding of this material has recently been improved.³ Laser-induced fusion in D(0) using nanosecond and picosecond pulsed lasers has been reported^{4–10}. The reason for the quite facile fusion processes is the high density of D(0), close to 10²⁹ cm⁻³ or 140 kg cm⁻³. This means an energy density of 10¹⁹ J m⁻³ only from the bonding energy, and an energy density at least 10⁹ higher from nuclear fusion. Lipson et al.¹¹ have reported experimental results on very high density hydrogen clusters in voids

futurology or collapse ?

- Homesick - According to a 1976 NASA study, living in a space colony might make us feel as though nothing is real; a self-contained, artificial world could trigger a solipsistic syndrome in its residents "where everything is like a theater stage."
- futurology
- <http://motherboard.vice.com/read/homesick>



- TERRAFORM -

Homesick

WRITTEN BY DEBBIE URBANSKI

September 24, 2015 // 09:10 AM EST



According to a 1976 NASA study, living in a space colony might make us feel as though nothing is real; a self-contained, artificial world could trigger a solipsistic syndrome in its residents "where everything is like a theater stage." To counter the problem, NASA suggested

futurology or collapse ?

- World's first AI boss improves warehouse efficiency by 8%
- futurology
- <http://ieet.org/index.php/IEET/more/dvorsky20150918>



Institute for Ethics & Emerging Technologies

[Blog](#) [Events](#) [Media](#) [About](#) [Programs](#) [Publications](#) [Staff](#) [Contact](#) [Donate](#) [Login](#) [Register](#)

DONATE

Safe & Secure



The IEET is a 501(c)3 non-profit, tax-exempt organization registered in the State of New Jersey and in the United States. Please give as you are able, and help support our work for a brighter future.

Search the IEET



Subscribe and Contribute to:



Technopgressive?
BioConservative? Huh?
Quid: overview of
biopolitical points of view



[IEET](#) > [Rights](#) > [Economic](#) > [Vision](#) > [Artificial Intelligence](#) > [Sociology](#) > [Directors](#) > [George Dvorsky](#)

[Print](#) • [Email](#) • [permalink](#) • (1) [Comments](#) • (17172) [Hits](#) • [subscribe](#) • • • • • [Tweet](#)

G+ 29

This Artificially Intelligent Boss Means the Workplace Will Never Be the Same

By George Dvorsky

i09

Posted: Sep 18, 2015

Suddenly, your boss doesn't seem so bad. Japanese firm Hitachi is now using artificially intelligent managers, in what may be a world's first. These AI bosses can not only issue work-flows and employee duties in real time, they can even find ways to improve employee efficiency.

A week ago, Hitachi announced its new initiative via this press release:

Development of Artificial Intelligence issuing work orders based on understanding of on-site kaizen activity and demand fluctuation.



George Dvorsky



By "kaizen" Hitachi is referring to the Japanese business philosophy of the continuous improvement of working practices, personal efficiency, and so on. In this case, an AI has been put in charge of a warehouse management system—and it has apparently improved efficiency by 8%.

According to the Hitachi release, it's able to provide appropriate work orders "based on an understanding of demand fluctuation and on-site kaizen activity derived from big data accumulated in corporate business systems, and its verification in logistics tasks." So unlike previous efforts at automation, this system can adjust work orders in real time, basing its decisions on huge stores of data.

Writing in Yahoo! Tech, Glenn McDonald explains more:

The Hitachi AI is programmed to adjust work flows depending on what the weather's like (among other

futurology or collapse ?

- New Studies Dismantle the Notion of a Global Warming 'Pause'
- collapse
- <http://www.washingtonpost.com/news/energy-environment/wp/2015/09/17/new-statistical-studies-dismantle-the-notion-of-a-global-warming-pause/>

Energy and Environment

Global warming ‘pause’ never happened, scientists say

A



141

By Chelsea Harvey September 17 Follow @chelseaharvey



Calved icebergs from the nearby Twin Glaciers. (Joe Raedle/Getty Images)

The climate science sphere has been wrapped up in a major debate for the past several years: over the global warming “pause.” But now, a growing body of research has some scientists saying that the case may, in fact, be closed.

Most Read

- 1 These researchers have discovered the perfect password that's also easy to remember

- 2 Are you a democratic socialist like Bernie Sanders? Take the quiz.

- 3 Economists are starting to warn about the risk of a new U.S. recession

- 4 Most Americans are wrong about whether concealed carry makes us safer

- 5 Why record-breaking hurricanes like Patricia are expected on a warmer planet

Unlimited Access to The Post. Just 99¢

futurology or collapse ?

- Tuna and mackerel populations suffer catastrophic 74% decline, research shows
- collapse
- <http://www.theguardian.com/environment/2015/sep/15/tuna-and-mackerel-populations-suffer-catastrophic-74-decline-research-shows>

[sign in](#)[subscribe](#)[search](#)[jobs](#)[more ▾](#)[International ▾](#)

the guardian

[home](#) [UK](#) [world](#) [sport](#) [football](#) [opinion](#) [culture](#) [business](#) [lifestyle](#) [fashion](#) [environment](#) [tech](#) [travel](#)[≡ browse all sections](#)[home](#) > [environment](#) > [wildlife](#) [energy](#) [pollution](#) [climate change](#)[Marine life](#)

Tuna and mackerel populations suffer catastrophic 74% decline, research shows

WWF says we risk losing species critical to human food security unless action is taken to halt overfishing and other threats to marine life

Fiona HarveyWednesday 16 September 2015
00.01 BST[Shares](#)
28,010[Comments](#)
386[Save for later](#)

Yellowtail and albacore tuna are becoming increasingly rare, as well as bluefin. Photograph: Brian Skerry/WWF

Tuna and mackerel populations have suffered a "catastrophic" decline of nearly three quarters in the last 40 years, according to new research.

WWF and the Zoological Society of London found that numbers of the

Advertisement

futurology or collapse ?

- Exxon's Own Research Confirmed Fossil Fuels' Role in Global Warming Decades Ago; Top executives were warned of possible catastrophe from greenhouse effect, then led efforts to block solutions.
- collapse
- <http://insideclimatenews.org/news/15092015/Exxons-own-research-confirmed-fossil-fuels-role-in-global-warming>



ALL STORIES

CARBON COPY

TAR SANDS

CLEAN ECONOMY

TODAY'S CLIMATE

GAS DRILLING

ICN BOOKS

BIG OIL, BAD AIR

EXXON: ROAD NOT TAKEN

Exxon: The Road Not Taken

Exxon's Own Research Confirmed Fossil Fuels' Role in Global Warming Decades Ago

Top executives were warned of possible catastrophe from greenhouse effect, then led efforts to block solutions.

By Neela Banerjee, Lisa Song and David Hasemyer

Sept 21, 2015



Exxon's Richard Wetherham (right) and Edward Garvey (left) are aboard the company's Esso Atlantic tanker working on a project to measure the carbon dioxide levels in the ocean and atmosphere. The project ran from 1979 to 1982. (Credit: Richard Wetherham)

[Tweet](#) 6,197 [G+](#) 775

eventually endanger humanity.

"In the first place, there is general scientific agreement that the most likely manner in which mankind is influencing the global climate is through carbon dioxide release from the burning of fossil fuels," Black told Exxon's Management Committee, according to a written version he recorded later.

It was July 1977 when Exxon's leaders received this blunt assessment, well before most of the world had heard of the looming climate crisis.

At a meeting in Exxon Corporation's headquarters, a senior company scientist named James F. Black addressed an audience of powerful oilmen. Speaking without a text as he flipped through detailed slides, Black delivered a sobering message: carbon dioxide from the world's use of fossil fuels would warm the planet and could



Cast of Characters



EXXON RESEARCH AND ENGINEERING COMPANY
REPRODUCED WITH PERMISSION OF THE EXXON MOBIL CORPORATION

Explore the
Exxon Documents

About This Series

After eight months of investigation, InsideClimate News presents this multi-part history of Exxon's engagement with the emerging science of climate change. The story spans four decades, and is based on primary sources including internal company files dating back to the late 1970s, interviews with former company employees, and other evidence, much of which is being published here for the first time.

It describes how Exxon conducted cutting-edge climate research decades ago and then, without revealing all that it had learned, worked at the forefront of climate denial, manufacturing doubt about the scientific

futurology or collapse ?

- RESOURCE CRISIS: Why Johnny can't understand climate: functional illiteracy and the rise of "unpropaganda"
- collapse
- <http://cassandralegacy.blogspot.com/2015/08/why-johnny-can-t-understand-climate.html>

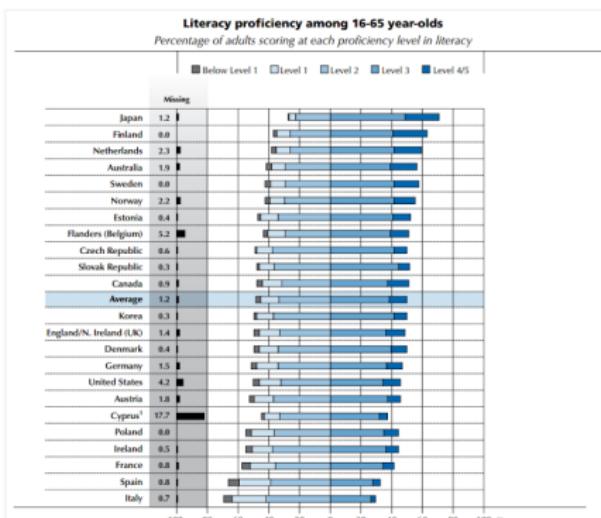


Welcome to the age of diminishing returns

Monday, August 31, 2015

Why Johnny can't understand climate: functional illiteracy and the rise of "unpropaganda"

Posted by Ugo Bardi

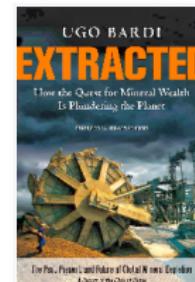


1. See notes at the end of this chapter.

Notes: Adults in the missing category were not able to provide enough background information to impute proficiency scores because of language difficulties, or learning or mental disabilities (referred to as literacy-related non-response).

Ugo Bardi's blog

This blog explores the concept that the root of our economic problems is the gradual depletion of cheap mineral ores.

Extracted

A report to the Club of Rome
published by Chelsea Green. (click on image for a link)

Rules of the blog

I try to publish a post every Monday, but short additional posts may appear in between. Comments are moderated, trolls are not welcome. You can reproduce my posts as you like, of course citing the source!

The Seneca Effect

futurology or collapse ?

- Next Big Future: Startup Knowm combines machine learning, quantum computing via memristors
- futurology
- <http://nextbigfuture.com/2015/08/startup-knowm-combines-machine-learning.html>



GLOBAL COVERAGE

The World's Largest Selection of Electronic Components Available for Immediate Shipment!



DIGIKEY.COM

5

Knowm combines machine learning, quantum computing via memristors

re, brain, future, machine learning, memristor, neuromorphic, quantum computing

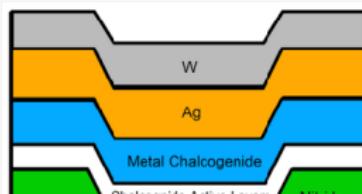


has a combo 'Anti-Hebbian and Hebbian' (AHaH) machine learning approach using memristors (others use one or the other, but only Knowm uses both at once) thus allowing the customer specific learning algorithm using the same building blocks.

computing approach combines the best of machine learning and quantum computing via memristors," Chief Executive Officer Alex Nugent told EE Times in advance of the company's neuromemristive processors use a low-level instruction set that can be combined in various ways to achieve any number of learning algorithms."

take the "let's decode the brain" approach and want to simulate the brain on massive computer clusters. While this will most certainly provide insights into how the brain works, they will deal with the reality that that their simulations will not be able to compete on power, density and speed with other approaches that have addressed the issue directly.

a different approach, which is to build a chip that doesn't necessarily emulate a brain but instead provides adaptive-learning functions at a foundation 'physical' level and consequently beats on power and density.



CHURNSP

SaaS & Mobile
Retain your users an

[View details](#) [Free trial](#)

Community

People ▾ Recent ▾ Popular ▾

Stable supply of
high quality DRAM
DRAM Series

Laptops Laptops

Automotive grade

FORM GROUP **LAPIS** LAPIS Semiconductor

futurology or collapse ?

- Researcher Demonstrates How to Suck Carbon from the Air, Make Stuff from It: A novel electrochemical process sequesters carbon in the form of a versatile building material
- futurology
- <http://www.technologyreview.com/news/540706/researcher-demonstrates-how-to-suck-carbon-from-the-air-make-stuff-from-it/>

MIT Technology Review



NEWS & ANALYSIS ▾

FEATURES

VIEWS

MULTIMEDIA

DISCUSSIONS

TOPICS

POPULAR:

TESLA AUTOPILOT

ALPHABET'S SPENDING PLANS

**EmTech
MIT**Nov. 2-4, 2015
MIT Media Lab
Cambridge

REGISTER NOW

Exclusive Content

Want to go ad free?

MATERIALS NEWS

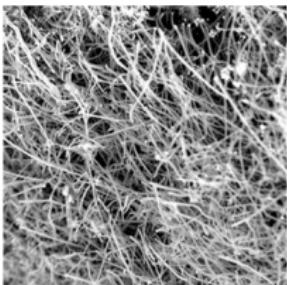
48 COMMENTS



Researcher Demonstrates How to Suck Carbon from the Air, Make Stuff from It

A novel electrochemical process sequesters carbon in the form of a versatile building material.

By Mike Orcutt on August 19, 2015



A new method for taking carbon dioxide directly from the air and converting it to oxygen and nanoscale fibers made of carbon could lead to an inexpensive way to make a valuable building material — and may even serve as a weapon against climate change.

Carbon fibers are increasingly being used as a structural material on the aerospace, automotive, and other industries, which value its strength and light weight. The useful attributes of carbon fibers, which also include electrical conductivity, are enhanced at the nanoscale, says [Stuart Licht](#), a professor of chemistry at George Washington University. The problem is that it's very expensive to



Julia Greer
Professor of
Materials Science
and Mechanics,
California Institute of
Technology
EmTech 2015
Speaker

futurology or collapse ?

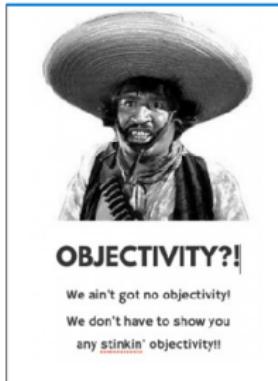
- Jimmy Carter Is Correct that the U.S. Is No Longer a Democracy
- collapse
- <http://www.greanvillepost.com/2015/08/03/jimmy-carter-is-correct-that-the-u-s-is-no-longer-a-democracy/>



Jimmy Carter Is Correct that the U.S. Is No Longer a Democracy

 TGP STAFF  August 3, 2015

Eric Zuesse



If YOU don't, who will?

DONATE WHAT YOU CAN TO HELP

THE GREANVILLE POST

Checkout using  

futurology or collapse ?

- Genetic switch turns on the aging process at reproductive maturity
- futurology
- <http://www.sciencedaily.com/releases/2015/07/150723125244.htm>

Science News*from research organizations***Simple flip of genetic switch determines aging or longevity in animals****Scientists pinpoint start of aging, discover it is not a slow series of random events**

Date: July 23, 2015

Source: Northwestern University

Summary: When does aging really begin? Scientists now have a molecular clue. In a study of the roundworm *C. elegans*, they found that adult cells abruptly begin their downhill slide when an animal reaches reproductive maturity. A genetic switch starts the aging process by turning off cell stress responses that protect the cell by keeping important proteins folded and functional. Germline stem cells throw the switch in early adulthood, after the animal starts to reproduce, ensuring its line will live on.

Share:



Total shares:

futurology or collapse ?

- More than 2,100 new coal plants are being planned worldwide — enough to cook the planet
- collapse
- <http://www.vox.com/2015/7/9/8922901/coal-renaissance-numbers>

There are 2,100 new coal plants being planned worldwide — enough to cook the planet

Updated by Brad Plumer on July 9, 2015, 2:29 p.m. ET [@bradplumer](#) brad@vox.com

TWEET (551) SHARE (1,724) +



The sun never sets on the global coal empire.

(Shutterstock)

Pipelines Work!

The Keystone XL Pipeline will...

- Transport oil safely
- Minimize environmental impact
- Create jobs & enhance energy security

LEARN MORE ABOUT SAFETY



Most Viewed



Watch: Adele's gorgeous video for her new single "Hello"

futurology or collapse ?

- Mystery of Siberia's 200ft-deep craters solved: Enormous holes were formed by methane eruptions triggered by melting permafrost
- collapse
- <http://www.dailymail.co.uk/sciencetech/article-3159067/Mystery-Siberia-s-200ft-deep-craters-solved-Enormous-holes-formed-methane-eruptions-triggered-melting-permafrost.html>

Mystery of Siberia's 200ft-deep craters solved: Enormous holes were formed by methane eruptions triggered by melting permafrost

- Months of research has found the strange holes in the Yamal Peninsula in Siberia are caused by gas eruptions
- Years of warming in the permafrost is thought to have caused natural gas to accumulate in underground pockets
- This has then erupted to create craters, some of which are up to 60 metres deep, that are now filling with water
- Previous theories for the craters, which have appeared overnight, included underground explosions and meteorites

By WILL STEWART IN MOSCOW FOR MAILONLINE

PUBLISHED: 09:44 GMT, 13 July 2015 | UPDATED: 12:51 GMT, 13 July 2015



1.9k
shares

149
[View comments](#)

Russian scientists say mystery giant holes suddenly appearing in northern Siberia were caused by dramatic gas eruptions, a process previously 'never observed'.

A new expedition this week to several craters dotting the energy-rich Yamalo-Nenets reindeer region found evidence they were previously pingos, mounds with an inner ice core common in Arctic and sub-Arctic regions.

Warming over a number of years triggered melting and the resulting empty space inside the ice humps became filled with natural gas, mainly methane, which eventually triggered eruptions.

[Scroll down for video](#)



futurology or collapse ?

- In test dogfight, F-35, gets destroyed by F-16, the plane it is supposed to be replacing.
- futurology
- <http://arstechnica.com/information-technology/2015/06/report-in-test-dogfight-f-35-gets-waxed-by-f-16/>

TECHNOLOGY LAB / INFORMATION TECHNOLOGY

Report: In test dogfight, F-35 gets waxed by F-16

F-35 pilot found his aircraft "substantially inferior" in close battle.

by Sean Gallagher - Jul 1, 2015 12:10am CEST

[Share](#) [Tweet](#) 45



 US Air Force

A test pilot report obtained by [defense journalist David Axe of War is Boring](#) detailed the performance of the F-35 Joint Strike Fighter in a mock air battle against a two-seat F-16D in January. The F-16D—based on a design developed 40 years ago and from a production run in the mid-1990s—bested the F-35 in close-range combat maneuvers.

In the report, which Axe had obtained but did not publish in full, the F-35 pilot reported that his aircraft was in a "clean" configuration for the test, carrying nothing under its wings or in its internal weapons bays. The F-16, on the other hand, was flying with under-wing external fuel drop tanks.

FURTHER READING



LATEST FEATURE STORY



FEATURE STORY (6 PAGES)

Review: Ubiquiti UniFi made me realize how terrible consumer Wi-Fi gear is

I ditched my old consumer Wi-Fi for an enterprise solution—and I'll never go back.

WATCH ARS VIDEO



Ars reviews the Microsoft Surface Book

With that hybrid hinge, it ain't cheap, but it is pretty.

STAY IN THE KNOW WITH



LATEST NEWS

futurology or collapse ?

- Google's AI Bot thinks purpose of life is to "live forever"
- futurology
- <http://www.businessinsider.com/google-tests-new-artificial-intelligence-chatbot-2015-6>

A new online-learning experience from:



Offering world-class education for **free**—wherever there is access to the internet.

Google's artificial-intelligence bot says the purpose of living is 'to live forever'



Nathan McAlone



✉

Jun. 27, 2015, 1:54 PM

▲ 377,562

○ 61



FACEBOOK



LINKEDIN



TWITTER



EMAIL



PRINT

This week, Google released a research paper chronicling one of its latest forays into artificial intelligence.

Researchers at the company programmed an advanced type of "chatbot" that learns how to respond in conversations based on examples from a training set of dialogue.

And the bot doesn't just answer by spitting out canned answers in response to certain words; it can



AP Photo/Connie Zhou

Recommended For You



A day in the life of a daily fantasy sports pro who makes hundreds of thousands of dollars

futurology or collapse ?

- Human radiologists missed 7% of cancers in a study, a deep learning algorithm missed 0%
- futurology
- <http://money.cnn.com/2015/03/12/technology/enlitic-technology/index.html>



Could this computer save your life?



Recommend 1.1k



Meet the computer diagnosing cancer

Your video will play in 00:09

Cancer is good at hiding.

It's so good that sometimes sick patients are sent home with a clean bill of health.

Sponsored Links



7 Easy Ways To
Incorporate Yoga On...
Huffington Post



These Are The Crucial
Lessons We've...
Huffington Post

And screenings don't always help: A 2013 study by Oxford University found "no evidence" that screening programs are responsible for the decline in breast cancer, and a study by the Huntsman Cancer Institute last year found that colon cancer is missed in about 6% of colonoscopies.

By Jillian Eugenios @jillianeugenios

Social Surge - What's Trending



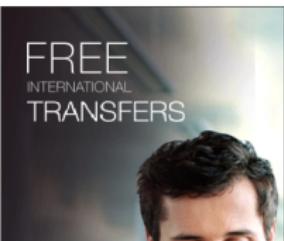
These 5 new Pop-Tart flavors are
unbelievable. (Hint:
Bacon!)



Mark Zuckerberg
and Priscilla Chan
are opening a school



Sky taxis are about
to become a reality



Advertisement

Search for Jobs

Millions of job openings!

Job title

futurology or collapse ?

- A Dutch City Will Start Experimenting with Unconditional Basic Income This Summer
- futurology
- <http://www.futurism.com/links/view/a-dutch-city-will-start-experimenting-with-unconditional-basic-income-this-summer/>

A Dutch City Will Start Experimenting with Unconditional Basic Income This Summer



Written By
[Futurism](#)

4 months ago



futurology or collapse ?

- Researchers create creepy, hyperrealistic CGI skin
- futurology
- <http://www.slashgear.com/researchers-create-creepy-hyperrealistic-cgi-skin-24390258/>

Trending

Cars

YouTube Red

Apple

Star Wars

Microsoft Surface Book



Det nya Office för Mac har kommit!
Skaffa det nu med Office 365.

Köp Office 365



Researchers create creepy, hyperrealistic CGI skin

Lindsey Caldwell · Jun 24, 2015

Twitter 43 Facebook 169 Google+ Reddit



A newly developed CGI rendering technique is about to take CGI renditions of human skin to an "uncanny valley" level of creepy. Until now, rendering only created "mesoscale" details such as pores and wrinkles. This new CGI method captures details on a "microscale" which includes the texture within pores and extremely fine lines. Normally, skin microstructures that are under one-tenth of a millimeter are not reconstructed in CGI, even though they have a large impact in the way we perceive facial expressions.

In people, skin microstructures deform with each expression or as skin is prodded and pulled. A group of researchers from the University of Southern California's Institute for Technologies (USC ICT) have developed a technique for creating true-to-life skin CGI by mapping and predicting the way skin moves.

1



LATEST HEADLINES



Samsung Stripe and Band batteries are flexible, target wearables
Oct 23, 2015



Fallout 4 Xbox One controller arrives next month
Oct 23, 2015



Pandora settles with record companies for \$90m
Oct 23, 2015



Ancient viking sword discovered in 'excellent condition'
Oct 23, 2015



R2-D2 reimagined as festive lawn ornament, wall charger
Oct 23, 2015



futurology or collapse ?

- Robotics revolution rocks Chinese textile workers
- futurology
- <http://www.aljazeera.com/indepth/features/2015/06/robotics-revolution-rocks-chinese-textile-workers-150614073735531.html>

**Enemy of Enemies**

How did ISIL become the world's most powerful insurgent group?

 WATCH NOW
NewshourTV SCHEDULE
News [01:21 AM]

Inside the hidden world of hostage taking

**BUSINESS & ECONOMY**

Robotics revolution rocks Chinese textile workers

Hundreds of thousands of jobs are at risk as manufacturers plan to employ hi-tech gadgetry in factories to cut costs.

Charlotte Middlehurst | 16 Jun 2015 09:40 GMT | Business & Economy, Science & Technology, Asia, China

 1458  312  2   

China's textile industry is moving quickly towards technology to make manufacturing more efficient [Reuters]

Changshu, China - It's a working Sunday in early spring but Wang Yanzhu's textile factory feels conspicuously empty.

The quad outside the workers dorm looks bare but for the surrounding peach blossoms.

RELATED**[Opinion] Is China-Africa cooperation a win-win situation?**

Chinese PM has admitted to 'growing pains' in Sino-Africa ties while new book claims Beijing is an
Politics, Africa, Latin America, Angola, Botswana, Brazil, China, Ethiopia, India, Kenya

**Dust in the lung**

One journalist is determined to help China's millions of migrant workers suffering from the deadly black lung disease.

Poverty & Development, Human Rights, Health, Environment, China

China's misunderstood soft power**LATEST NEWS****Jordan and Russia to cooperate on Syria military action**

Amman is understood to want to protect armed groups it supports from being targeted by Moscow air strikes.
War & Conflict, Middle East, Russia, Jordan, Syria

**Mexico in state of emergency as record storm hits coast**

President Pena Nieto urges thousands to stay in shelters amid early reports of landslides and flooding.

Weather, Latin America, Mexico

MOST VIEWED

1. Mexico in state of emergency as record storm hits coast

futurology or collapse ?

- Biodiversity reduces human, wildlife diseases and crop pests: Study confirms 'dilution effect hypothesis'
- collapse
- <http://www.sciencedaily.com/releases/2015/06/150615094309.htm>

Science News*from research organizations***Biodiversity reduces human, wildlife diseases and crop pests**

Study confirms 'dilution effect hypothesis' that suggests biodiversity loss in nature poses a public health threat by causing and exacerbating disease outbreaks

Date: June 15, 2015

Source: University of South Florida (USF Health)

Summary: With infectious diseases increasing worldwide, the need to understand how and why disease outbreaks occur is becoming increasingly important. Looking for answers, a team of biologists found broad evidence that supports the controversial 'dilution effect hypothesis,' which suggests that biodiversity limits outbreaks of disease among humans and wildlife.

Share:



Total shares:

futurology or collapse ?

- In Wyoming it's now illegal to collect data about pollution
- collapse
- <http://www.greenisthenewred.com/blog/wyoming-ag-gag-data-gathering-law/8396/>

In Wyoming it's now illegal to collect data about pollution

by WILL POTTER on JUNE 8, 2015
in TERRORISM LEGISLATION



A new Wyoming law expands on the "ag-gag" trend of criminalizing whistleblowers in a new way: making it illegal for citizens to gather data about environmental pollution.

[Wyoming's Senate Bill 12](#), or the "Data Trespassing

Bill" as it's being called, criminalizes the collection of "resource data."

It defines collection as "to take a sample of material, acquire, gather, photograph or otherwise preserve information in any form from open land which is submitted or intended to be submitted to any agency of the state or federal government."

Yes, you read that correctly. This law is explicitly targeting those who gather evidence from open land of corporate pollution *for the purpose of turning that evidence over to the government.*

The law goes on to say that any evidence gathered without the property owner's written or verbal permission will not be admissible as evidence in any civil, criminal or administrative proceeding.

The Wyoming bill came with heavy support from cattle ranchers, who are involved in a lawsuit against the Western Watershed Project. Ranchers say the environmentalists improperly collected water samples, which showed elevated E. coli levels.

The lawsuit is pending, but regardless of how it turns out, collecting data on public lands is now illegal in the state.



Google Custom Search



Subscribe to our mailing list

Subscribe

amazon.com

Save Up to 20% On Books



Privacy

How ACIDIC Is Your Body?

Cut down a bit of belly fat everyday with the unique "Body Acidity Test".

TAKE TEST ▶

futurology or collapse ?

- India to revive cold fusion research, two decades after abandoning it.
- futurology
- <http://asianlite.com/news/indian-news/india-to-revive-cold-fusion/>

'Best Newspaper for British Asians'

INDIA DAILY

India's International Newspaper from London

ASIAN LITE NEWS

LONDON BUREAU: ASIAN LITE, OFFICE GOLD, BUILDING 3, CHIWIKEE PARK, LONDON W4 5YA
PHONE: 07877 368 553 (EMAIL: MD@ASIANLITE.COM)

Bikram Vohra
Director Editorial

NEWSPAPER OF THE YEAR
HOWARD LEWIS AWARDS

'Quality broadsheet for Indians Abroad'

Front Page ▾ News ▾ Business ▾ Columns ▾ Entertainment ▾ Sport ▾ Lifestyle ▾ Feature ▾ Woman ▾ Gallery ▾ Asianlite TV ▾ Media Pack ▾ Archive ▾ Contact Us

India To Revive Cold Fusion

Published by Asian Lite Newsdesk

2015/05/30 10:18 AM

By K.S. Jayaraman

India is poised to revive research on controversial cold fusion two decades after abandoning what was then billed as a potential source of clean energy.

Recommendations for restarting cold fusion experiments have been made by a 'high level group' that included two former chairmen of the Department of Atomic Energy (DAE): Anil Kakodkar and Srikumar Banerjee. The group met on April 8 here at the



National Institute of Advanced Studies (NIAS).

The meeting was sponsored by the Ministry of New and Renewable Energy (MNRE) and its recommendations have since been sent to the ministry, NIAS director Baldev Raj, who was formerly director of the Indira Gandhi Centre for Atomic Research (IGCAR) at Kalpakkam near Chennai, said.

Upendra Tripathy, secretary of the MNRE, however, did not respond to questions about the follow-up action likely to be taken by his ministry.

Nuclear fusion that powers the Sun and forms the basis of hydrogen bomb occurs under conditions of extreme temperature and pressure in which hydrogen (or its heavier cousins deuterium and tritium) nuclei fuse to release energy.

In 1989, chemistry professors Martin Fleischmann and Stanley Pons, of the University of Utah in the United States, startedle the world with their claim of having achieved fusion of deuterium at room temperature in an electrolytic cell that used heavy water (in which hydrogen is subsumed by deuterium) and a palladium cathode. The discovery, if true, promised a cheap source of energy.

INDIA DAILY

Click Here to Read Digital Edition

Digital Edition **Mobile Ready**

Search News

SEARCH

futurology or collapse ?

- 85,000 Endangered Antelopes Die Mysteriously In Just One Day
- collapse
- <http://www.iflscience.com/plants-and-animals/saiga-antelopes-dying-unprecedented-rates>



[Follow](#) 177K followers [G+](#) [Follow](#) 514k

PLANTS AND ANIMALS

85,000 Endangered Antelopes Die Mysteriously In Just One Day

May 26, 2015 | by Stephen Luntz



photo credit: Selov via Wikimedia Commons. The saiga's distinctive face was once seen from Europe to North America, but now it is disappearing from its one remaining stronghold



They look like something drawn by Dr Seuss, but saiga antelopes are a real thing. Unfortunately, we can't be sure if they will be a thing for much longer, because at the current rate they could be extinct within a few weeks, at least in the wild.

Saiga antelopes are not particularly rare for a large mammal, with well over 100,000 surviving. However, they have been classified as endangered since hunting slashed their numbers by at least three quarters in the 1990s, after the breakup of the Soviet Union weakened poaching controls. In the past few weeks an estimated 85,000 have died, and that figure, [released on Friday](#), may already be out of date. Worse still, no one knows why.

In 2014, a study by the government of Kazakhstan reported just over a quarter of a million saiga in the country. A smaller number live in Russia and Mongolia, which so far have not been reported to have been affected in the same way.



Search by keyword

find

Choose your poison

Editor's Blog

Environment

Technology

Space

Health and Medicine

The Brain

Plants and Animals

Physics

Chemistry



POPULAR POSTS

futurology or collapse ?

- Telomere extension turns back aging clock in cultured human cells, study finds
- futurology
- <https://med.stanford.edu/news/all-news/2015/01/telomere-extension-turns-back-aging-clock-in-cultured-cells.html>

Telomere extension turns back aging clock in cultured human cells, study finds

Researchers delivered a modified RNA that encodes a telomere-extending protein to cultured human cells. Cell proliferation capacity was dramatically increased, yielding large numbers of cells for study.

JAN 22
2015

A new procedure can quickly and efficiently increase the length of human telomeres, the protective caps on the ends of chromosomes that are linked to aging and disease, according to scientists at the [Stanford University School of Medicine](#).

Treated cells behave as if they are much younger than untreated cells, multiplying with abandon in the laboratory dish rather than stagnating or dying.

The procedure, which involves the use of a modified type of RNA, will improve the ability of researchers to generate large numbers of cells for study or drug development, the scientists say. Skin cells with telomeres lengthened by the procedure were able to divide up to 40 more times than untreated cells. The research may point to new ways to treat diseases caused by shortened telomeres.

Telomeres are the protective caps on the ends of the strands of DNA called chromosomes, which house our genomes. In young humans, telomeres are about 8,000-10,000 nucleotides long. They shorten with each cell division, however, and when they reach a critical length the cell stops dividing or dies. This internal "clock" makes it difficult to keep most cells growing in a laboratory for more than a few cell doublings.

'Turning back the internal clock'

"Now we have found a way to lengthen human telomeres by as much as 1,000 nucleotides, turning back the internal clock in these cells by the equivalent of many years of human life," said [Helen Blau](#), PhD, professor of microbiology and immunology at Stanford and director of the university's [Baxter Laboratory for Stem Cell Biology](#). "This greatly increases the number of cells available for studies such as drug testing or disease modeling."

A paper describing the research was published today in the FASEB Journal. Blau, who also holds the Donald E. and Delia B. Baxter Professorship, is the senior author. Postdoctoral scholar [John Ramunas](#), PhD, of Stanford shares lead authorship with Eduard Yakubov, PhD, of the Houston Methodist Research Institute.



Helen Blau

RELATED NEWS



Jul 7, 2013 New mouse model reveals a mystery of Duchenne muscular dystrophy, scientists report

Children with Duchenne

Jul 7, 2013

Scientists develop new way to grow adult stem cells in culture

MEDIA CONTACTS



KRISTA CONGER
Tel 650-725-5371
kristac@stanford.edu



MARGARITA GALLARDO
Tel 650-723-7897
mjgallardo@stanford.edu

LEADING IN PRECISION HEALTH



Stanford Medicine is leading the biomedical revolution in precision health, defining and developing the next generation of care that is

futurology or collapse ?

- Fossil fuels subsidised by 10m a minute, says IMF – 5.3 trillion per year
- futurology
- <http://www.theguardian.com/environment/2015/may/18/fossil-fuel-companies-getting-10m-a-minute-in-subsidies-says-imf>

[sign in](#)[subscribe](#)[search](#)[jobs](#)[more](#) ▾[International](#) ▾

the guardian

[home](#) UK world sport football opinion culture business lifestyle fashion environment tech travel[≡ browse all sections](#)[home](#) > [environment](#) > [energy](#) pollution climate change wildlife

Fossil fuels

Keep it in the ground

Fossil fuels subsidised by \$10m a minute, says IMF

'Shocking' revelation finds \$5.3tn subsidy estimate for 2015 is greater than the total health spending of all the world's governments

Damian Carrington

[@dpcarrington](#)

Monday 18 May 2015 14.30 BST



< Shares

112,746 1,027

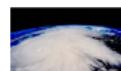


Why we need to keep fossil fuels in the ground

Fossil fuel companies are benefitting from global subsidies of \$5.3tn (£3.4tn) a year, equivalent to \$10m a minute every day, according to a startling new estimate by the International Monetary Fund.

The IMF calls the revelation "shocking" and says the figure is an "extremely robust" estimate of the true cost of fossil fuels. The \$5.3tn subsidy estimated for 2015 is greater than the total health spending of all the world's governments.

Most popular in US



Hurricane Patricia:
fears of landslides in
Mexico as storm
brings downpours



Tolkien's annotated
map of Middle-earth
discovered inside
copy of Lord of the...

futurology or collapse ?

- The encroaching sea: new NZ sea level rise maps; "So is a 10 or 25 metre SLR likely? Unfortunately ...yes"
- collapse
- <http://hot-topic.co.nz/the-encroaching-sea-new-nz-sea-level-rise-maps/>

HOT TOPIC

Global warming and the future of New Zealand



THE ENCROACHING SEA: NEW NZ SEA LEVEL RISE MAPS

by GARETH on APRIL 13, 2015

This guest post is by [Jonathan Muster](#), who has just published an amazing series of [highly detailed maps](#) projecting future sea level rise scenarios onto the New Zealand coastline. If you live within coooee of the sea, you need to explore his maps. Below he explains why he embarked on the project.



The effect of 10m sea level rise on Christchurch: say goodbye to St Albans, prepare to paddle in the CBD. Full map [here](#).

For humans, sea-level rise will almost certainly be the most directly observable effect of climate change, and specifically of global warming. As the climate changes, many of the effects will be subtle, or if not subtle, they will at least be very complex. Summers may be warmer, or cooler; we may experience more rain

HOT TWEETS

Hot Topic
@photopon2z

Stunning, Historic, Mind-Boggling, and Catastrophic Hurricane Patricia Hits 200 mph - Jeff Masters' WunderBlog wunderground.com/blog/jeffm/

Expand

Hot Topic
@photopon2z

Honey, We Broke The Global Warming Graph. Again. – Greg Laden's Blog scienceblogs.com/gregladen/

Show Summary

Hot Topic
@photopon2z

Permafrost warming in parts of Alaska is accelerating - BBC News [bbc.com/news/science-e...](http://bbc.com/news/science-environment-33320000)

Show Summary

Booksellers NZ
@BooksellersNZ

Atmospheric The Burning Story of Climate Change, by Carole Wilkinson booksellersnz.com/book-of-the-month-atmospheric-the-burning-story-of-climate-change-by-carole-wilkinson/

Tweet to @hottopicnz

Hot Topic...
442 likes

[Like Page](#)

Be the first of your friends to like this



Hot Topic
NZ
24 September at 18:04

NZ should be can do, not can't do...

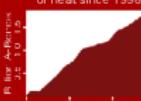


Do us a favour,
Prime
Minister,...

Our climate has accumulated
2,284,145,264
Hiroshima atomic bombs
of heat since 1998

RECENT COMMENTS

Thomas on The advice of fools: Newman and Kelly invisible on

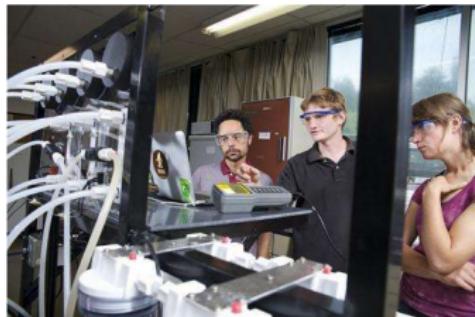


futurology or collapse ?

- New desalination technology could answer state drought woes
- futurology
- <http://phys.org/news/2015-02-desalination-technology-state-drought-woes.html>

New desalination technology could answer state drought woes

February 18, 2015



Could desalination be the answer to California's drought? As parts of the state become drier, scientists are looking at ways to turn seawater into drinkable water.

Could desalination be the answer to California's drought? As parts of the state become drier, scientists are looking at ways to turn seawater into drinkable water.

Desalination has made headlines in recent months as a possible solution to the state's water shortage. But in addition to being expensive, its byproduct— salty brine —can harm marine life once it's reintroduced into the ocean.

A team of researchers from Humboldt State University and the University of Southern California is hoping to address those concerns with a new process called Reverse Osmosis-Pressure Retarded Osmosis (RO-PRO).

They recently received a \$600,000 grant from the California Department of Water Resources to develop a portable, prototype RO-PRO system in Samoa, Calif.— which could lower the cost of desalination and reduce its impact on the environment.

"The high cost and environmental impact of desalination are major issues preventing it from becoming a reliable, drought-resistant water supply," said Andrea Achilli, an Environmental Resources Engineering professor at Humboldt State, who holds a patent on the technology with researchers from the University of Southern California and Colorado School of Mines. "What our system does is address those problems head on."

Desalination plants typically use reverse osmosis, a process that pushes saltwater through a membrane to create purified, drinking water. But in addition to being costly, and energy-intensive, reverse osmosis can negatively impact the environment.

Pipelines Work!

The Keystone XL Pipeline will...

- Transport oil safely
- Minimize environmental impact
- Create jobs & enhance energy security

LEARN MORE ABOUT SAFETY



Featured

Last comments

Popular



Researchers develop new method for scaling up quantum devices 21 hours ago



Trisulfur anion helps explain gold deposits on Earth 21 hours ago



Hendo brings out second hoverboard iteration 11 hours ago



Cobalt-ligand catalyst successfully converts carboxylic acids and esters into alcohols 19 hours ago



Researchers create blackest material ever made 22 hours ago

more »

Lowe's ProServices

futurology or collapse ?

- Sao Paulo: water tankers are the new normal.
- collapse
- <http://lab.org.uk/sao-paulo-water-tankers-are-the-new-normal>

Latin America Inside Out Blog



Latin America Inside Out (LAIO) is a blog about human rights, development, social and economic justice, political rights, culture and the environment in Latin America and the Caribbean.

It features posts by LAB Editors, partners and guest contributors as well as comments from readers.

São Paulo: water tankers are the new normal



Author: Ian Rocha

Published on: Mon Jan 26, 2015

How long can the authorities dither over the growing water crisis affecting Brazil's southeast?

São Paulo, 25 January. Two nights ago, driving up one of São Paulo's main streets, Consolação, we passed two huge water tankers, trundling along in the midst of the cars.

We are used to seeing water tankers (*caminhões-pipa*) in news stories about the drought-ridden Northeast, delivering precious water to poor communities, but here, in the centre of São Paulo?

The next day I saw a tanker outside the school my children used to go to, here in Perdizes, a middle class district. I have a feeling water tankers are going to become a common sight, as we face the worst drought ever. Our taps run dry around 5pm every day, sometimes earlier. And they stay dry till early morning. When the water comes, it is not transparent but milky-white, probably from the large amounts of chlorine being used to kill whatever lurks in the lowest, previously untapped "dead volume" of the depths of the reservoir, from where the water now has to be pumped. More and more restaurants, hospitals and health centres, schools and factories are drilling artesian wells. Water tanks are selling like hot cakes, as people seek ways to store water for the dry periods.



One of the Cantareira reservoirs

It to the Titanic. The orchestra is still playing, but for how long? (See his warning [here](#))

This is a guest post by Ian Rocha, a member of the Latin America Bureau's editorial team. Posts are not necessarily shared by all members of the team.

Filters

Posts are presented in date order, the most recent first, but you can also filter them as follows:

Show all Regions	<input type="checkbox"/>
Show all Countries	<input type="checkbox"/>
Show all Topics	<input checked="" type="checkbox"/>
submit	

Blog Series

Series of posts are usually written by the same author and/or relate to a particular theme, event or visit

[Show All](#)

[La Mezcla](#)

[Amazon Journey 2013](#)

[Lucy Fisher's blog](#)

[Javier Farje's Blog](#)

[Nayana Fernandez' Blog](#)

[David Lehmann's Blog](#)

[Interviews with Social Movements](#)

[Ian Rocha's Blog](#)

[Honduras Memoria Creativa](#)

[World Cup Football Blog](#)

futurology or collapse ?

- We've Passed the Point of Peak Food
- collapse
- <http://disinfo.com/2015/01/weve-passed-point-peak-food/>

We've Passed the Point of Peak Food

by Majestic on January 29, 2015 in Environment, News, Science/Technology

Google™ Custom Search



Doomsayers have gone awfully quiet on peak oil during what appears to be a global oil glut (and price crash), but according to [Smithsonian Magazine](#) we've gone past the point of peak food.

... [A]ccording to research recently published in [Ecology and Society](#), production of the world's most important food sources has maxed out and could begin dropping—even as the Earth's human population continues to grow.



Ralf Seppelt, a scientist with the Helmholtz Centre for Environmental Research in Germany, and several colleagues looked at production rates for 27 renewable and nonrenewable resources. They used data collected from several international organizations, including the Food and Agriculture Organization and the International Union for Conservation of Nature, and analyzed yield rates and totals over a period of time—from 1961 to about 2010 in most cases. For renewable resources like crops and livestock, the team identified peak production as the point when acceleration in gains maxed out and was followed by a clear deceleration.

While annual production is still increasing in all the food resources analyzed—except for wild-caught fish—the rate of acceleration for most of them has been slowing for at least several years. The research team concluded that peak production of the world's most important crops and livestock products came and went between 5 and 30 years ago. For instance, peak corn

Recent Comments



PrivateZero

[Keeping Kids Safe on Halloween](#)

Yeah but they eat way too much and do you see the way they shit!?! No way am I cleaning that up! I'll just get a packet...

10/24



kerryzmo

[The Darknet: Is the Government Destroying "the Wild West of the Internet"?](#)

This should go well, since I've no doubt they completely understand what they're talking about.

10/24



kerryzmo

[Keeping Kids Safe on Halloween](#)

<http://intervene.wpengine.netdna-cdn.com/wp-content/uploads/2012/10/2.jpg>

10/24



lowalityjesus

[Do not remain nameless to yourself](#)

That's so true. It's hard to get anything done, wasting your life trying to grind at a massive problem before you have...

10/24



gustave coumet

[Police: Every Member Of The Church Where A Teen Was Fatally Beaten Is A "Person Of Interest"](#)

From the photo the church appears to be mostly red with some white.

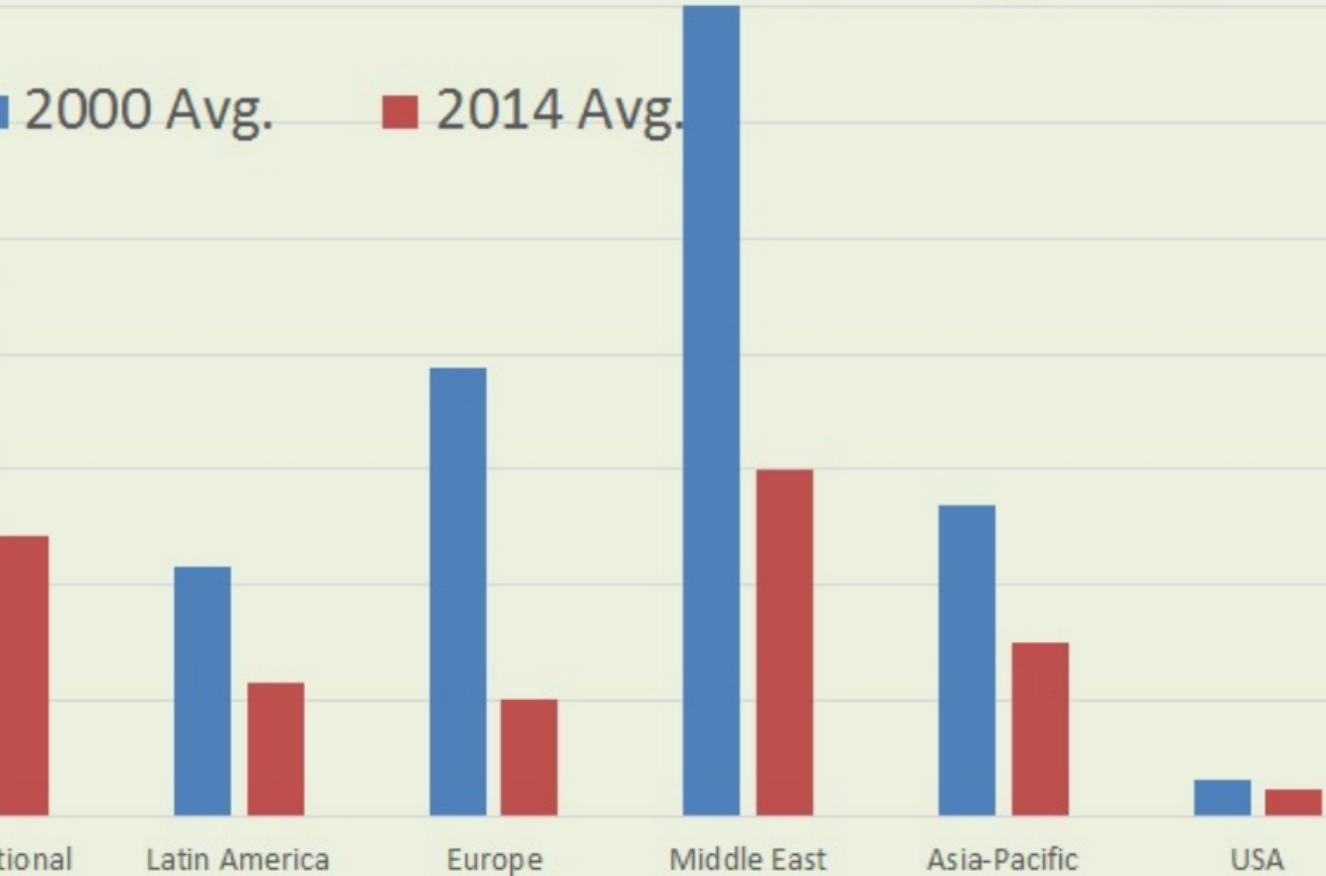
10/24

futurology or collapse ?

Graph Productivity per drilling rig, an illustration of declining returns
(PeakOilBarrel)

- collapse
- <http://i.imgur.com/4Q3DZFg.jpg>

C+C Production in Barrels per Day per Rig



futurology or collapse ?

- Our economic system enriches the most powerful at the expense of the 99% - The richest 1% will soon be wealthier than the rest of the world combined. We must fix our global economy now – or face chaotic consequences.
- collapse
- <http://www.theguardian.com/public-leaders-network/2015/jan/20/economic-system-enriches-most-powerful-oxfam>

[sign in](#)[subscribe](#)[search](#)[jobs](#)[more ▾](#)[International ▾](#)

the guardian

[home](#) [UK](#) [world](#) [sport](#) [football](#) [opinion](#) [culture](#) [business](#) [lifestyle](#) [fashion](#) [environment](#) [tech](#) [travel](#)[≡ browse all sections](#)

Public Leaders Network
Inclusive growth

Our economic system enriches the most powerful at the expense of the 99%

The richest 1% will soon be wealthier than the rest of the world combined. We must fix our global economy now - or face chaotic consequences

- Inclusive growth: how do we include everyone in global prosperity?

Winnie Byanyima

Executive director at Oxfam International and co-chair of the World Economic Forum 2015

Tuesday 20 January 2015 14.50 GMT



< Shares

Comments

606

5



Davos in Switzerland hosts the 2015 gathering of the World Economic Forum, where the world's financial and political elite assemble. Photograph: Michel Euler/AP

Most popular



Hurricane Patricia:
fears of landslides in
Mexico

futurology or collapse ?

- Brazil's worst drought in history prompts protests and blackouts
- collapse
- <http://www.theguardian.com/world/2015/jan/23/brazil-worst-drought-history>


[sign in](#)

[subscribe](#)

[search](#)
[jobs](#)
[more ▾](#)
[international ▾](#)

the guardian

[home](#) > [world](#) > [americas](#) [asia](#) [australia](#) [africa](#) [middle east](#) [cities](#) [development](#) [europe](#) [US](#)
[≡ browse all sections](#)
Brazil

Brazil's worst drought in history prompts protests and blackouts

Lights go out, internet is cut for days, and agriculture is suffering as crisis spreads from São Paulo to Rio de Janeiro and beyond

Jonathan Watts in Rio de Janeiro

Friday 23 January 2015 08.00 GMT



↳ Shares

8,905

Comments

144



The Jacareí river dam is part of São Paulo's Cantareira system of dams. Photograph: Nelson Almeida/AFP/Getty Images

The taps have run dry and the lights have gone out across swathes of Brazil this week as the worst drought in history spreads from São Paulo to Rio de Janeiro and beyond.

More than four million people have been affected by rationing and rolling power cuts as this tropical nation discovers it can no longer rely on once

Testing Laboratories

Industrial Hygiene, Air Quality, Environmental, Microbiology & More



futurology or collapse ?

- Computers using digital footprints are better judge of personality than friends and family
- futurology
- <http://phys.org/news/2015-01-digital-footprints-personality-friends-family.html>



search



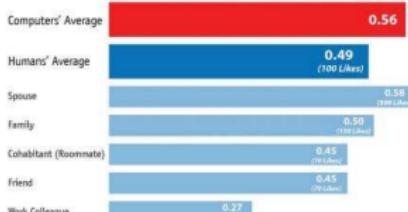
Home > Technology > Computer Sciences > January 12, 2015

Computers using digital footprints are better judge of personality than friends and family

January 12, 2015

How accurate can computer models judge personality compared with humans?

Accuracy, correlation with self-ratings
(The number of Facebook Likes computer models need to achieve a higher accuracy)



Graph showing accuracy of computer model's personality judgement compared with humans. Credit: Wu Youyou and Michal Kosinski

A new study, published today in the journal PNAS, compares the ability of computers and people to make accurate judgments about our personalities. People's judgments were based on their familiarity with the judged individual, while computer models used a specific digital signal: Facebook Likes.

Test for Alzheimer's

Learn the signs and symptoms of the most common form of Dementia!



The results show that by mining Facebook Likes, the computer model was able to predict a person's personality more accurately than most of their friends and family. Given enough Likes to analyse, only a person's spouse rivalled the computer for accuracy of broad psychological traits.

Researchers at the University of Cambridge and Stanford University describe the finding as an "emphatic demonstration" of the capacity of computers to discover an individual's psychological traits through pure data analysis, showing machines can know us better than we'd previously thought: an "important milestone" on the path towards more social human-computer interactions.

"In the future, computers could be able to infer our psychological traits and react accordingly, leading to the emergence of emotionally-intelligent and socially skilled machines," said lead author Wu Youyou, from Cambridge's Psychometrics Centre.

"In this context, the human-computer interactions depicted in science fiction films such as Her seem to be within our reach."

The researchers say these results might raise concerns over privacy as such technology develops; the research team support policies giving users full control of their digital footprint.

In the study, a computer could more accurately predict the subject's personality than a work colleague by analysing just ten Likes; more than a friend or a cohabitant (roommate) with 70, a family member (parent, sibling) with 150, and a spouse with



Featured

Last comments

Popular

- Researchers develop new method for scaling up quantum devices @ 21 hours ago
 - Trisulfur anion helps explain gold deposits on Earth @ 22 hours ago
 - Cobalt-ligand catalyst successfully converts carboxylic acids and esters into alcohols @ 19 hours ago
 - Handi brings out second hoverboard iteration @ 12 hours ago
 - Researchers create blackest material ever made @ 22 hours ago
- [more »](#)



Phys.org

futurology or collapse ?

- Our System Is Broken, Almost No Patented Discoveries Ever Get Used
- futurology
- <http://www.wired.com/2015/01/fixing-broken-patent-system/>

JAY WALKER 01.05.15 6:25 AM

SHARE



SHARE
6419



TWEET
355



PIN

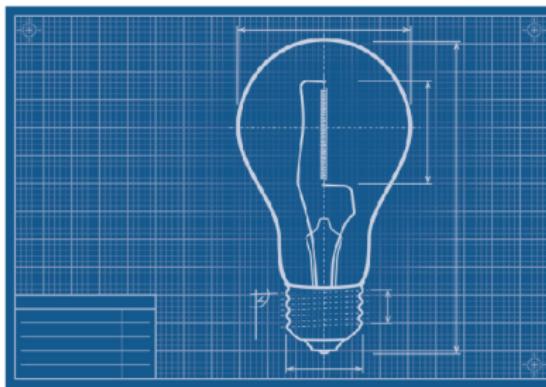


COMMENT
137



EMAIL

OUR SYSTEM IS SO BROKEN, ALMOST NO PATENTED DISCOVERIES EVER GET USED



Getty Images

WE ALL KNOW the patent system is broken.

But most people believe that the biggest problem with it is

that it's broken so completely that almost no one uses it.

LATEST NEWS



GADGET LAB PODCAST

Gadget Lab Podcast: Mobile OS Wars
8 HOURS



AUTO

Rough Weather's Threatening America's
F1 Race
14 HOURS



BOOKS

Harry Potter Is Growing Up, Becoming
Overworked Civil Servant
16 MINUTES

futurology or collapse ?

- This Ingenious Machine Turns Feces Into Drinking Water
- futurology
- <http://www.gatesnotes.com/Development/Omniprocessor-From-Poop-to-Potable>

Sign up to receive occasional updates from
the Gates Notes

Enter your email here

Sign Up

X

Privacy Policy



From Poop to Potable



This Ingenious Machine Turns Feces Into Drinking Water

By **Bill Gates** | January 5, 2015

I watched the piles of feces go up the conveyer belt and drop into a large bin. They made their way through the machine, getting boiled and treated. A few minutes later I took a long taste of the end result: a glass of delicious drinking water.

futurology or collapse ?

- Venezuela: Now There's Not Even Soap
- collapse
- <http://www.zerohedge.com/news/2015-01-04/now-theres-not-even-soap-maduro-heads-china-save-socialist-utopia-venezuela>

[home](#)

This page has been archived and commenting is disabled.

"Now There's Not Even Soap" Maduro Heads To China To 'Save' Socialist Utopia Venezuela

Submitted by Tyler Durden on 01/04/2015 21:57 -0400



Tweet

406



Share

18



G+

34

Social media is awash with striking images of #EmptyShelvesInVenezuela (#AnaquelesVaciosEnVenezuela) as the evaporation of basic human staples such as toilet paper has now been hyperinflated to total **chaos at warehouses and supermarkets**. As President Maduro decries the loss of \$100 oil "stability", vowing to return oil prices to their rightful places (and **heads to China for help**), lines reach for miles for milk and soap... and the people **defy governmental bans on photographing empty market shelves**... "We couldn't find shampoo, so we washed our hair with soap. Now there's not even soap."


 Gabriel Lugo
@GABRIELUGO

 Follow

#AnaquelesVaciosEnVenezuela Caos en el supermercado!
Gente desesperada tratando de comprar leche en Guarenas.

5:32 PM - 4 Jan 2015

238 12

The line for soap...



Contact Information

Tips: tips [at] zero hedge.com

General: info [at] zero hedge.com

Legal: legal [at] zero hedge.com

Advertising: ads [at] zero hedge.com

Abuse/Complaints: abuse [at] zero hedge.com

Suggested Reading

[Make sure to read our Hedge Without Attrition Resources/The Treatment](#)

It would be very wise to read our [disclaimer](#), our [privacy policy](#), and our [conflicts / full disclosure policy](#).

[Notice on Racial Disparities](#)

Hedge Without Attrition

HTP vs. other hedge funds

Sweepstakes

futurology or collapse ?

- In 2015 LPP Fusion will test Tungsten cathode, beryllium electrode and Proton Boron Aneutronic Nuclear Fusion
- futurology
- <http://nextbigfuture.com/2014/12/in-2015-lpp-fusion-will-test-tungsten.html>



— PARKER, COLORADO —
**UNBRIDLED
OPPORTUNITY**

BUSINESS-FRIENDLY
COMMUNITY



LPP Fusion will test Tungsten cathode, beryllium electrode and Proton Boron Aneutronic Fusion

us, energy, focus fusion, fusion, nuclear, technology



Tungsten cathode is finally nearing completion with delivery to LPPFusion should occur by mid February, 2015.

erience resistance to heat. It is the lowest risk material for the next step of our experiment. They need to eliminate evaporation of the electrode and the resulting impurities to get a jump in the yield, and in the resulting fusion energy output or yield. They have firm experimental evidence that tungsten does not erode under the condition FF-1 is currently running.

er refine the theories and technique, paving the way for the beryllium extrudes. Beryllium electrode are expected to be ordered in January, with delivery in the first half of 2015.



Atlas Copco

COMPLETE LINE OF
NITROGEN GENERATION
SYSTEMS

Community

People • Recent • Popular

futurology or collapse ?

- Dystopian Fictions Popularity Is a Warning Sign for the Future — Naomi Klein on Demanding Transition, Not Collapse
- futurology
- <http://www.wired.com/2014/12/geeks-guide-naomi-klein/>

SHARESHARE
6363TWEET
831PIN
98COMMENT
328

EMAIL

GEEK'S GUIDE TO THE GALAXY ENTERTAINMENT 12.20.14 7:00 AM

DYSTOPIAN FICTION'S POPULARITY IS A WARNING SIGN FOR THE FUTURE



Ed Kashi

DYSTOPIAN FICTION IS hot right now, with countless books and movies featuring decadent oligarchs, brutal police

LATEST NEWSGADGET LAB PODCAST
Gadget Lab Podcast: Mobile OS Wars
8 HOURSAUTO
Rough Weather's Threatening America's F1 Race
14 HOURSBOOKS
Harry Potter Is Growing Up, Becoming Overworked Civil Servant
15 HOURS

MORE NEWS

futurology or collapse ?

- Humans May Be Causing the Sixth Great Extinction in Half a Billion Years
- futurology
- <https://news.vice.com/article/humans-may-be-causing-the-sixth-great-extinction-in-half-a-billion-years>



ENVIRONMENT

Humans May Be Causing the Sixth Great Extinction in Half a Billion Years

By *Shelby Kinney-Lang*

December 17, 2014 |



In the past half billion years, five great extinctions have transformed life on Earth, whether brought about by a catastrophic meteor impact that killed off the dinosaurs or prolonged periods of intense volcanic activity, which wiped out as much as 97 percent of all species.

Now, say scientists, Earth may be experiencing a sixth wave of mass extinction. But this time, humans are the cause.

MOST POPULAR

Germany Offers Turkey a Deal: Support For EU Bid In Return For Migration Crisis Help

futurology or collapse ?

- The world may only have 60 years of topsoil left: If present rates of degradation continue, all of the world's topsoil could be lost by 2075, according to a senior UN official.
- futurology
-
- <http://www.futuretimeline.net/blog/2014/12/12.htm#.VluHEzHF98E>

Home | Latest updates | Timeline | Blog | Resources | Forum | Contact

Google™ Custom Search

Search

Nissan
NV® Cargo



Visit NV Cargo >

Learn More >



Follow us +



[Tweet](#)

51

[G+1](#)

5

[Share](#)

262

Ads by Google

► [Organic Topsoil](#)

► [Land Soil](#)

► [Healthy Soil](#)

futurology or collapse ?

- CO2 Takes Just 10 Years to Reach Planet's Peak Heat
- collapse
- <http://www.climatecentral.org/news/co2-emissions-peak-heat-18394>



N

News

Stories from Climate Central's Science Journalists and Content Partners

[Subscribe to our News via RSS](#)

Categories ▾

Places ▾

CO₂ Takes Just 10 Years to Reach Planet's Peak Heat

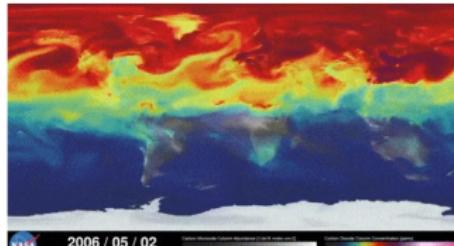
Published: December 3rd, 2014



By Brian Kahn

Follow @bdkahn | 2,557 followers

In a study that could have important ramifications on estimating the impacts, costs and benefits of [reducing carbon dioxide emissions](#), new research shows that CO₂ brings peak heat within a decade of being emitted, with the effects then lingering 100 years or more into the future.



Spring atmospheric CO₂ concentrations, when they're usually at their peak.

Credit: NASA

The research, published Wednesday in *Environmental Research Letters*, provides policymakers and economists with a new perspective on how fast human carbon emissions heat the planet. Back-of-the-envelope estimates for how long it takes for a given puff of CO₂ to crank up the heat have generally been from 40–50 years. But the new study shows that the timeframe for CO₂ emissions to reach their maximum warming potential is likely closer to 10 years.

ARCHIVES

2015

2014

2013

2012

2011

2010

2009

GALLERY



Record highs across the U.S. this winter have markedly beat the number of record lows by a margin of 3 to 2.

[View Gallery](#)

futurology or collapse ?

- 'Superbugs' Kill India's Babies and Pose an Overseas Threat
- collapse
- <http://www.nytimes.com/2014/12/04/world/asia/superbugs-kill-indias-babies-and-pose-an-overseas-threat.html>

Suicide Attack Against Shilites Kills at Least 22 in Southern Pakistan



Papua New Guinea to Resettle Refugees From Australian Detention Center

Xi Jinping's Britain Visit Ends Amid Criticism of Arrest of Dissidents in London



China Cuts Interest Rates for Sixth Time Since November



HONG KONG JOURNAL
Hong Kong's Drive for Green Burials' Clashes With Tradition



Myanmar's Jade Trade Is a \$31 Billion 'Heist,' Report Says

The New York Times

The Digital Sale Ends October 28
One Year. 60% Off. Unlimited Access.

SAVE NOW

ASIA PACIFIC

386 COMMENTS

'Superbugs' Kill India's Babies and Pose an Overseas Threat

By GARDINER HARRIS DEC. 3, 2014



A mother nursing her newborn at a hospital in Haryana, where almost every baby born in hospitals in recent years has been injected with antibiotics. Kuni Takahashi for The New York Times

Email

Share

Tweet

AMRAVATI, India — A deadly epidemic that could have global implications is quietly sweeping India, and among its many victims are tens of thousands of newborns dying because once-miraculous cures no longer work.

These infants are born with bacterial infections that are resistant to most known antibiotics, and more than 58,000 died last year as a result, a recent

AN ICON
JUST GOT LARGER

THE NAVITIMER 46 mm

BREITLING
INSTRUMENTS FOR PROFESSIONALS™

futurology or collapse ?

- Pentagon preparing for mass civil breakdown
- collapse
- <http://www.theguardian.com/environment/earth-insight/2014/jun/12/pentagon-mass-civil-breakdown>



Är tekniken redo när du behöver den som mest?



[sign in](#)



[subscribe](#)



[search](#)

[jobs](#)

more ▾

International ▾

the guardian

[home](#) UK world sport football opinion culture business lifestyle fashion environment tech travel

≡ [browse all sections](#)

[home](#) > [environment](#) > [climate change](#) [wildlife](#) [energy](#) [pollution](#)

Environment
Earth insight

Pentagon preparing for mass civil breakdown

Social science is being militarised to develop 'operational tools' to target peaceful activists and protest movements

Nafeez Ahmed

Thursday 12 June 2014 07.00 BST



< Shares
107,421 Comments
353

Save for later



The Pentagon is funding social science research to model risks of "social contagions" that could damage US strategic interests. Photograph: Jason Reed/REUTERS

A US Department of Defense (DoD) research programme is funding universities to model the dynamics, risks and tipping points for large-scale civil unrest across the world, under the supervision of various US military agencies. The multi-million dollar [programme](#) is designed to develop immediate and long-term "warfighter-relevant insights" for senior officials and decision makers in "the defense policy community," and to inform

Ads by Robicon Project

FREE
Online
Courses
Get the skills you need to land the job you want.

START LEARNING NOW ▶

edX

futurology or collapse ?

- Elon Musk via Edge on AI - "The risk of something seriously dangerous happening is in the five year timeframe. 10 years at most"
- futurology
- <http://i.imgur.com/sL0uqqW.jpg>

CLUB DISCUSSION

isk

er & Entrepreneur; CEO, Chief Designer, SpaceX;
ead of Product Design, Tesla Motors; Chairman,

y

ess in artificial general intelligence (I'm not referring to narrow AI) is incre
xposure to groups like Deepmind, you have no idea how fast—it is growing
tial. The risk of something seriously dangerous happening is in the five year
ease note that I am normally super pro technology, and have never raised
his is not a case of crying wolf about something I don't understand.

thinking we should be worried. The leading AI companies have taken great
ey recognize the danger, but believe that they can shape and control the c
and prevent bad ones from escaping into the Internet. That remains to be

futurology or collapse ?

- Humble spud poised to launch a world food revolution - Dutch team is pioneering development of crops fed by sea water
- futurology
- <http://www.theguardian.com/science/2014/oct/18/humble-potato-poised-to-launch-food-revolution>



Är tekniken redo när du behöver den som mest?



[sign in](#)



[subscribe](#)



[search](#)

[jobs](#)

[more ▾](#)

[International ▾](#)

the guardian

[home](#) [UK](#) [world](#) [sport](#) [football](#) [opinion](#) [culture](#) [business](#) [lifestyle](#) [fashion](#) [environment](#) [tech](#) [travel](#)

[≡ browse all sections](#)

[home](#) > [science](#)

Agriculture

The Observer

Humble spud poised to launch a world food revolution

Dutch team is pioneering development of crops fed by sea water

Tracy McVeigh

Saturday 18 October 2014 13.50 BST



< Shares 19,953 Comments 95

[Save for later](#)



Marc van Rijsselbergh with some of his experimental crop of salt-tolerant potatoes. Photograph by Sarah Helena Rijpkema

In a small army field-hut Dr Arjen de Vos shows off his irrigation machine with pride. Pipes lead out to several acres of muddy field, where only a few stragglers from the autumn harvest of potatoes, salads, carrots and onions are left. The tubes are lined with copper to stop corrosion because - in a move that defies everything we think we know about farming - de Vos is watering his plants with diluted sea water.

It's not the first time he's come up with a radical idea in the



Content

1 Introduction

2 Let's see

3 Can we save ourselves ?

Can we save ourselves

- maybe
- <http://supergravity.org>
- Using one of the sleeping beauties