openlab reading club

fostering critical thinking and constructive communication

Omar Awile (omar.awile@cern.ch)

27.1.2017

A worrying trend

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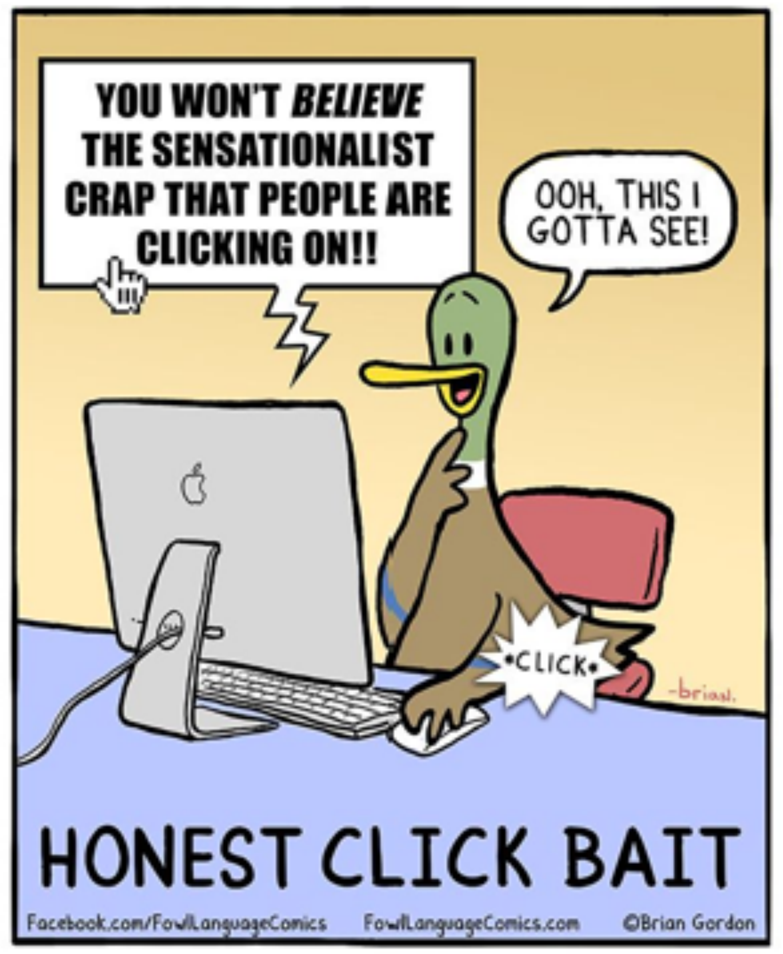
FAN MAIL
MEDIA INQUIRIES
STAFF
CONTRIBUTE
RSS
EMAIL

AS MANY AS 10,000 NYC RESIDEN
POSSIBLY EXPOSED TO EBOL

Sensationalist or misleading news


YOU WON'T BELIEVE THE SENSATIONALIST CRAP THAT PEOPLE ARE CLICKING ON!!
OOH, THIS I GOTTA SEE!
•CLICK•
HONEST CLICK BAIT
Facebook.com/FowlLanguageComics
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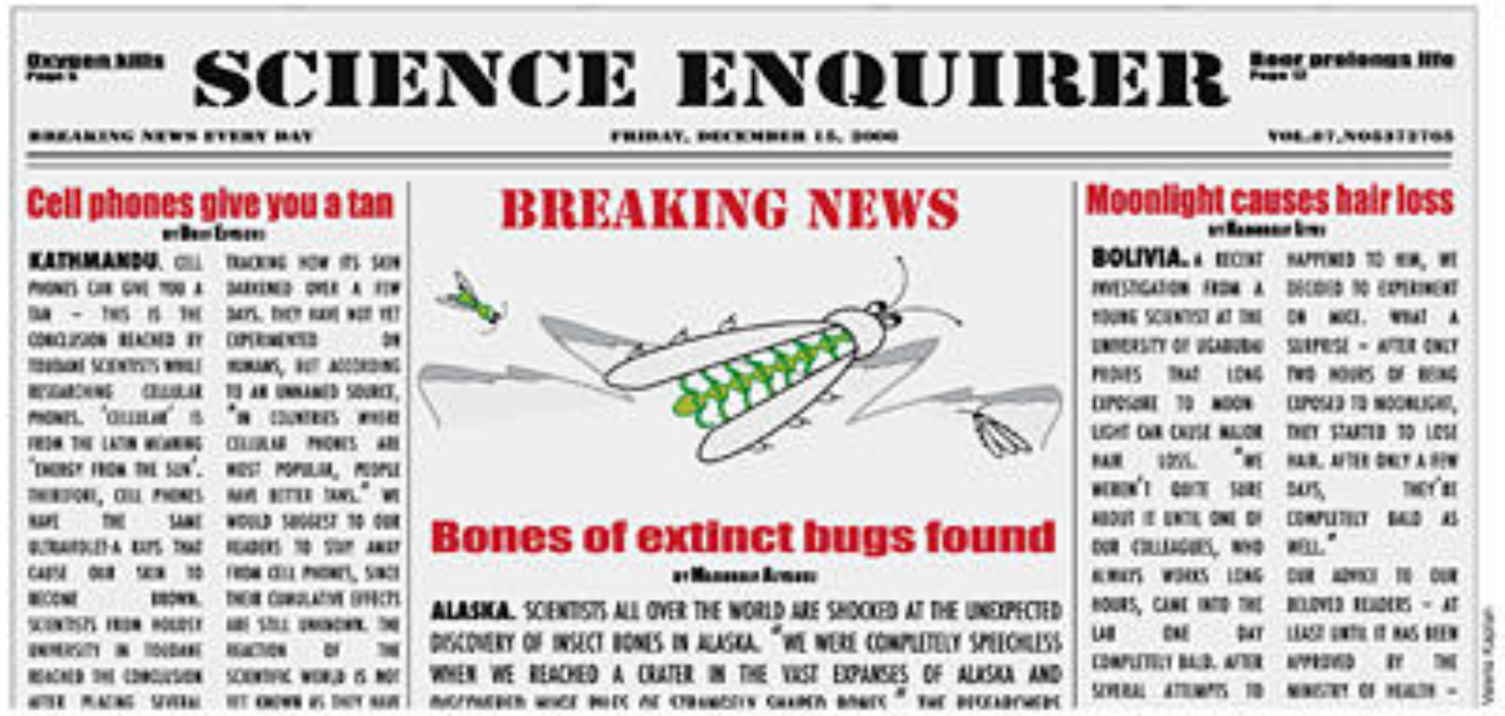


SCIENCE ENQUIRER

BREAKING NEWS

Cell phones give you a tan

Moonlight causes hair loss

Bones of extinct bugs found

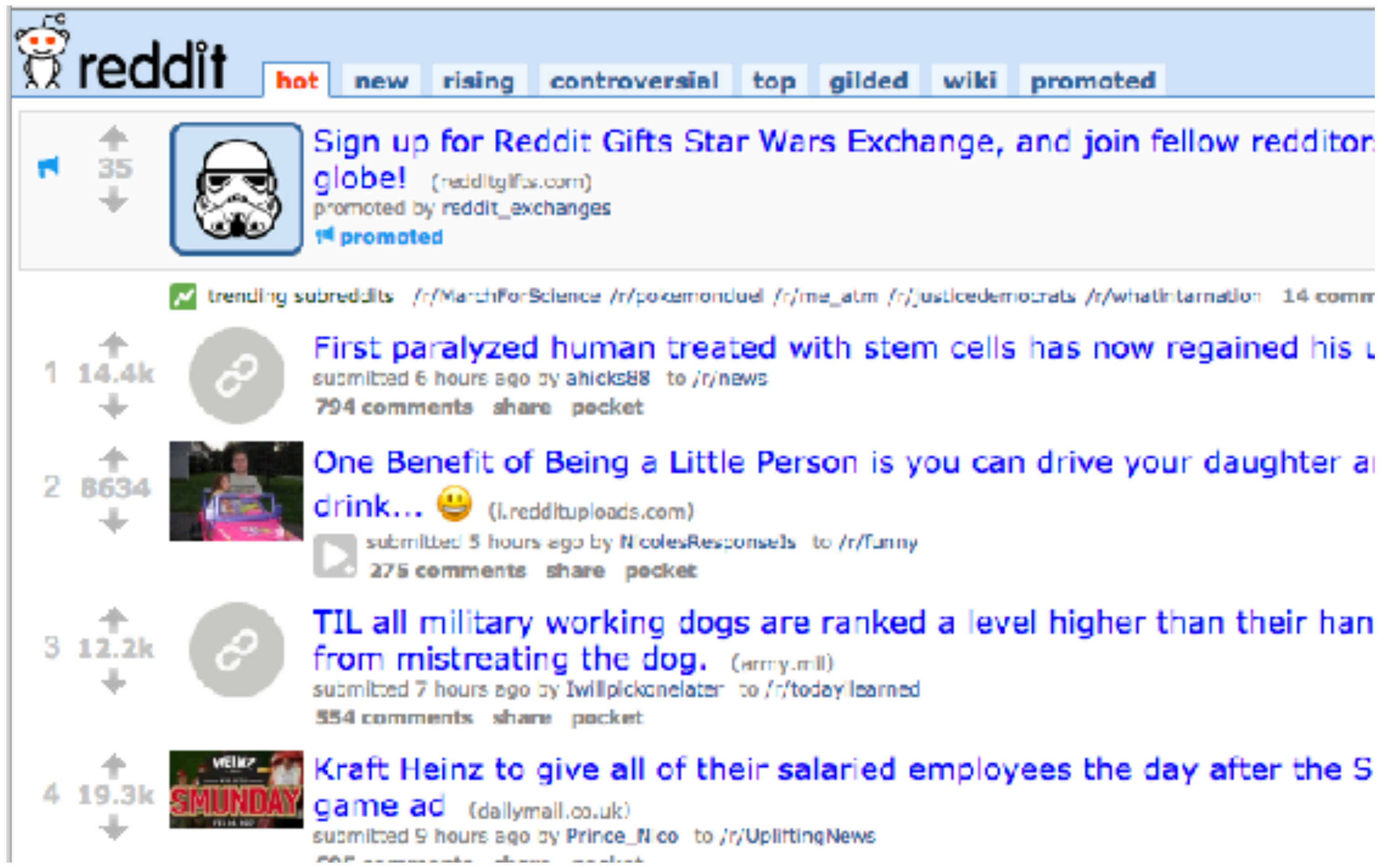
ALASKA. SCIENTISTS ALL OVER THE WORLD ARE SHOCKED AT THE UNEXPECTED DISCOVERY OF INSECT BONES IN ALASKA. "WE WERE COMPLETELY SPEECHLESS WHEN WE REACHED A CRATER IN THE VAST EXPANSES OF ALASKA AND

Bad science journalism

facebook

social media bubble and confirmation bias

Information overflow


reddit
hot
new
rising
controversial
top
gilded
wiki
promoted

35 Sign up for Reddit Gifts Star Wars Exchange, and join fellow reddito globe! (redditgifts.com)
promoted by reddit_exchanges
promoted

trending subreddits /r/MarchForScience /r/pokemonduel /r/me_irl /r/justicedemocrats /r/whatintarnation 14 comm

1 14.4k First paralyzed human treated with stem cells has now regained his
submitted 6 hours ago by ahicks88 to /r/news
794 comments share pocket

2 8634 One Benefit of Being a Little Person is you can drive your daughter a drink... 😃 (i.reddituploads.com)
submitted 5 hours ago by NicolesResponses to /r/funny
275 comments share pocket

3 12.2k TIL all military working dogs are ranked a level higher than their han from mistreating the dog. (army.mil)
submitted 7 hours ago by Iwillpickonelater to /r/todayilearned
554 comments share pocket

4 19.3k Kraft Heinz to give all of their salaried employees the day after the S game ad (dailymail.co.uk)
submitted 9 hours ago by Prince_Nico to /r/UpliftingNews

Poor discussion culture

Practicing an essential skill in four simple steps

1

pick a text

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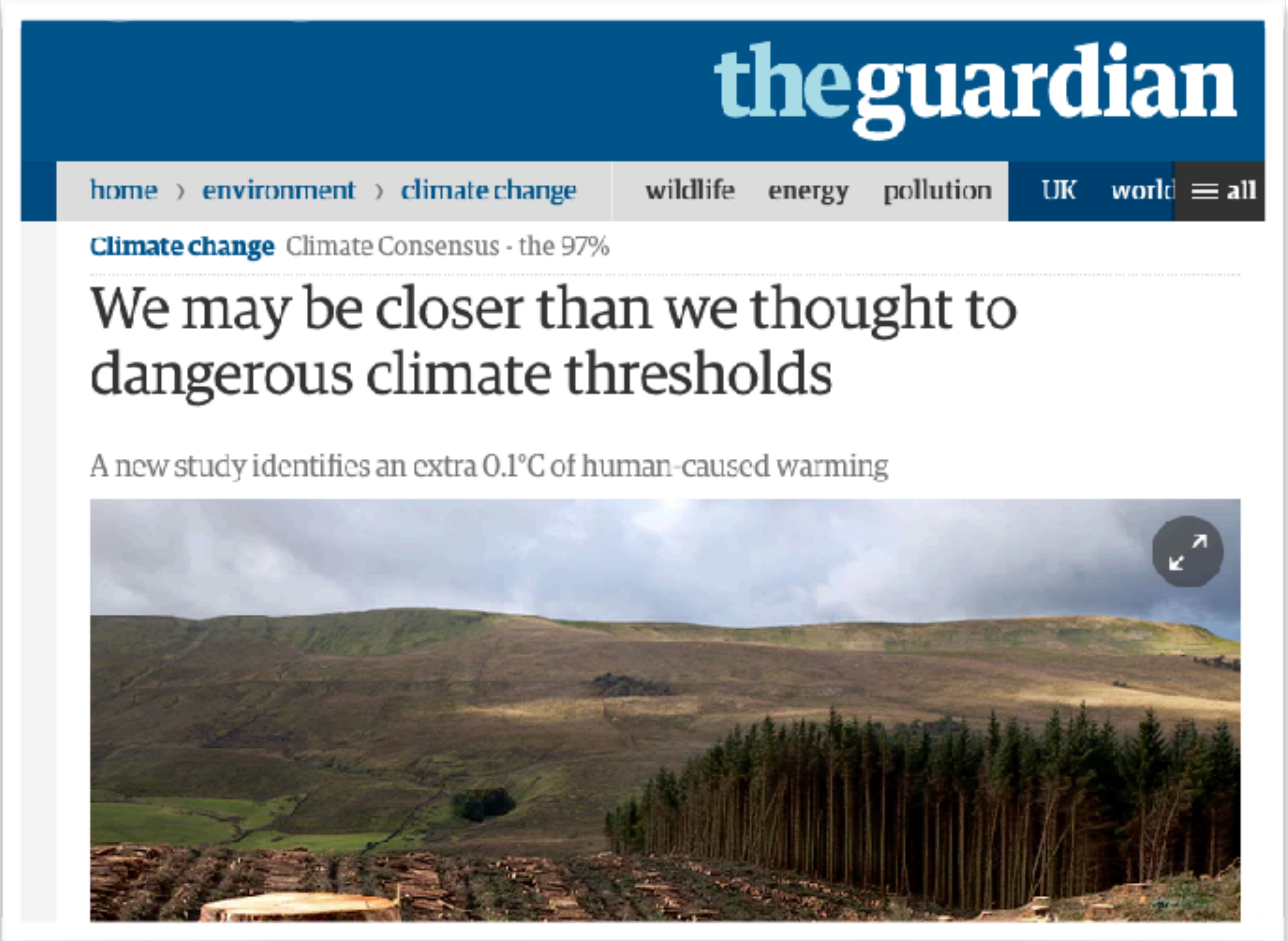
pick a text



theguardian

home › environment › climate change   wildlife   energy   pollution   UK   world   ≡ all

Climate change Climate Consensus - the 97%

We may be closer than we thought to dangerous climate thresholds

A new study identifies an extra 0.1°C of human-caused warming

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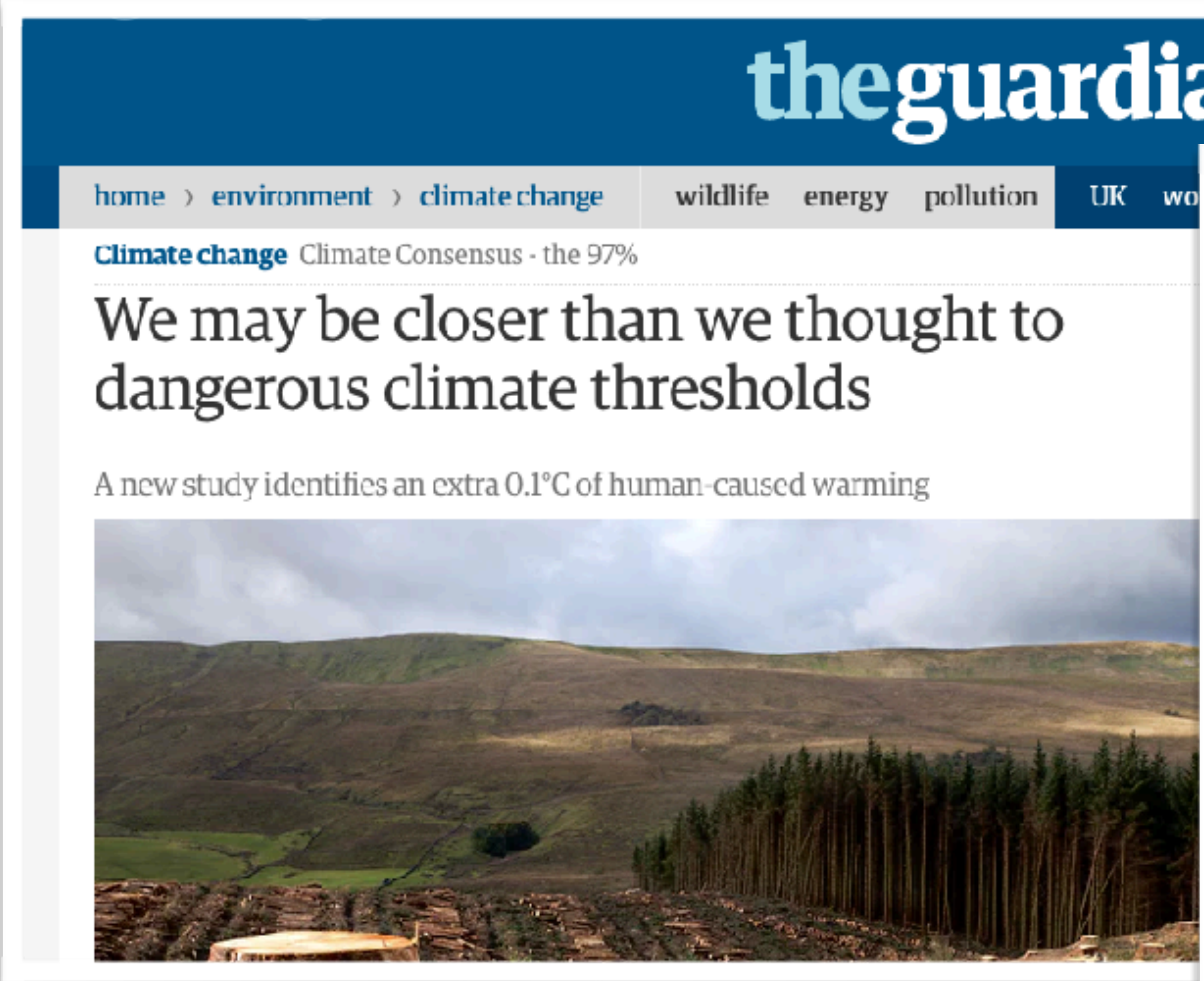

theguardian
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wildlife energy pollution
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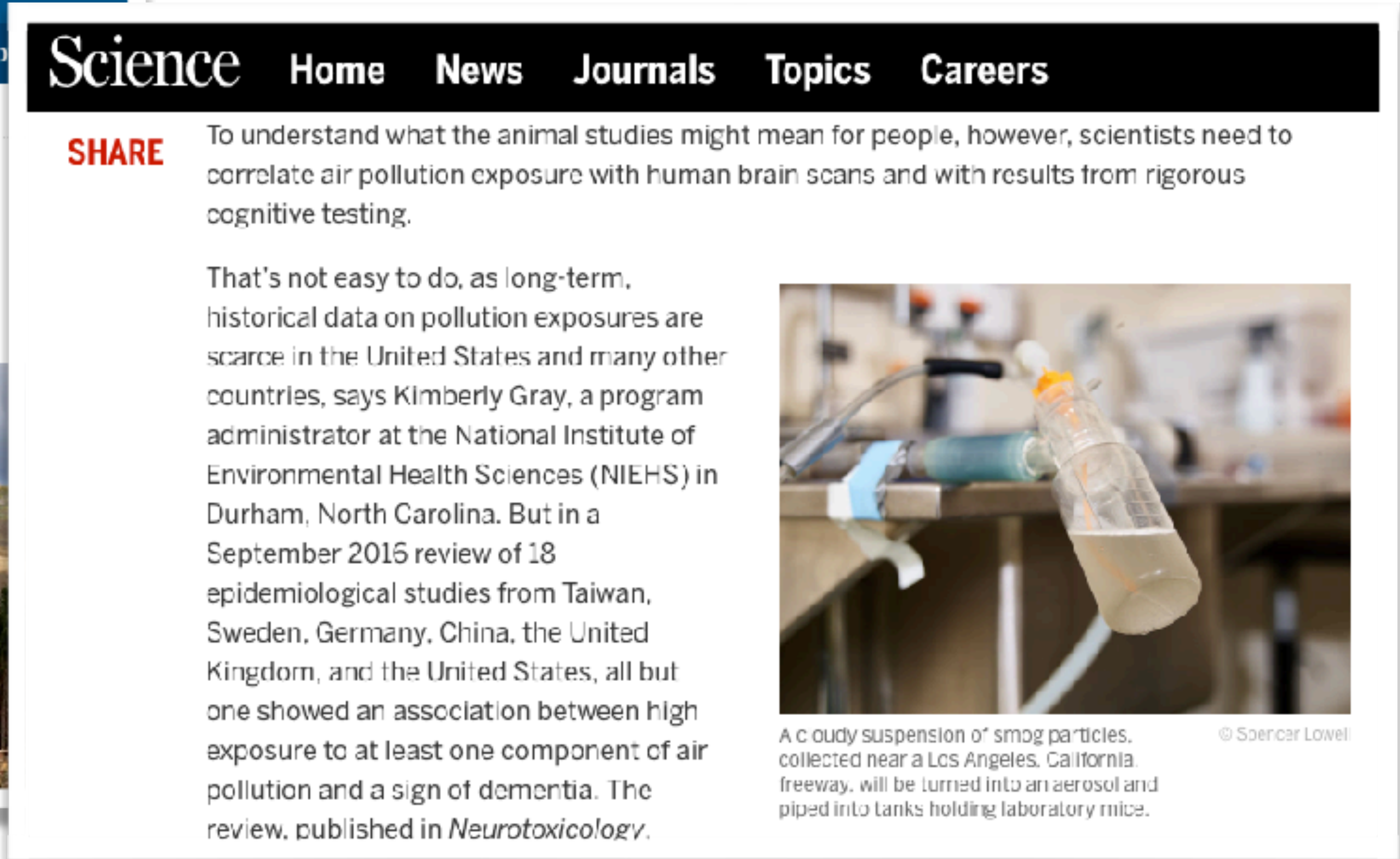

To understand what the animal studies might mean for people, however, scientists need to correlate air pollution exposure with human brain scans and with results from rigorous cognitive testing.

That's not easy to do, as long-term, historical data on pollution exposures are scarce in the United States and many other countries, says Kimberly Gray, a program administrator at the National Institute of Environmental Health Sciences (NIEHS) in Durham, North Carolina. But in a September 2016 review of 18 epidemiological studies from Taiwan, Sweden, Germany, China, the United Kingdom, and the United States, all but one showed an association between high exposure to at least one component of air pollution and a sign of dementia. The review, published in *Neurotoxicology*,

A cloudy suspension of smog particles, collected near a Los Angeles, California, freeway, will be turned into an aerosol and piped into tanks holding laboratory mice.

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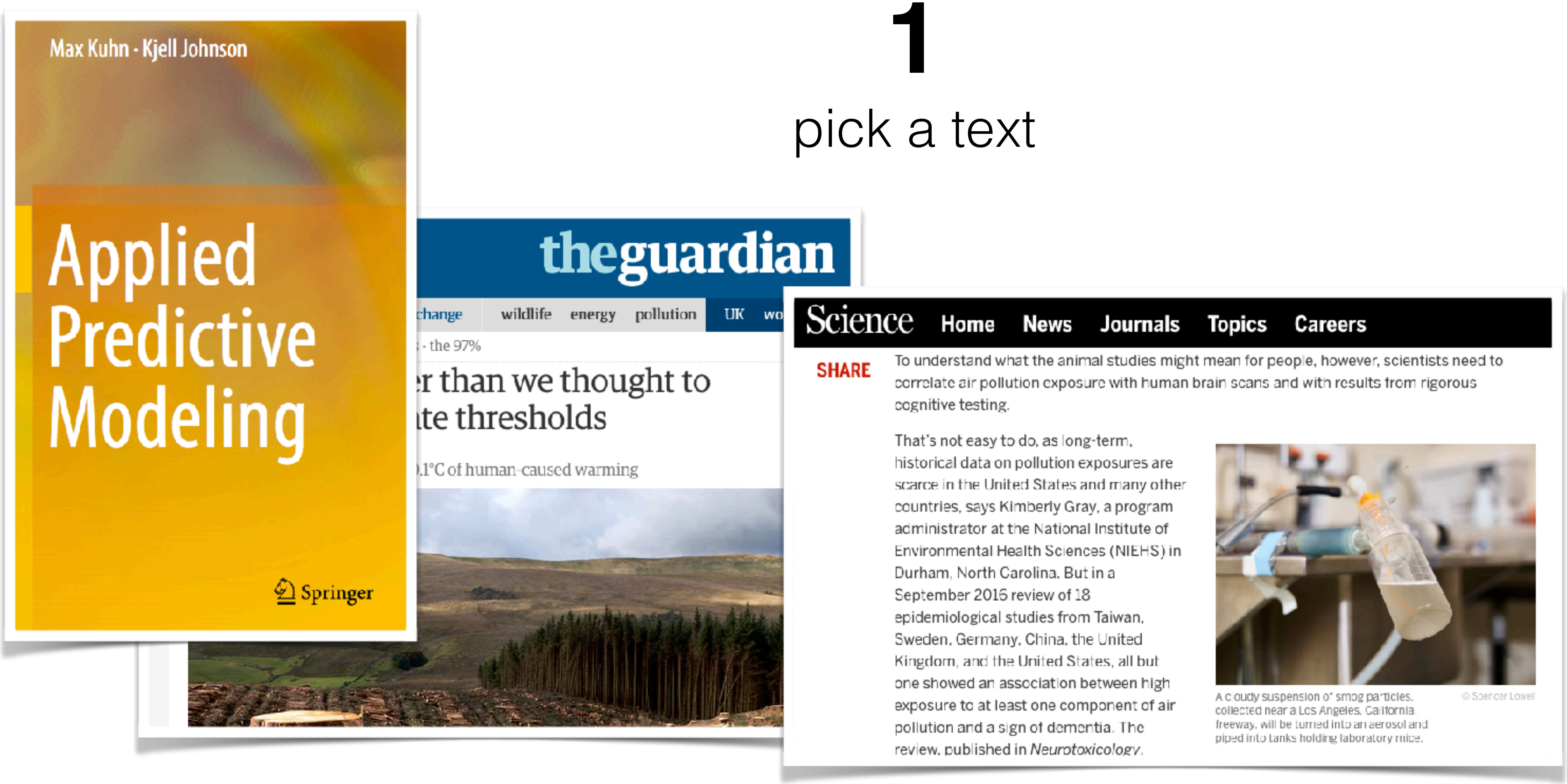
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Applied Predictive Modeling
Springer
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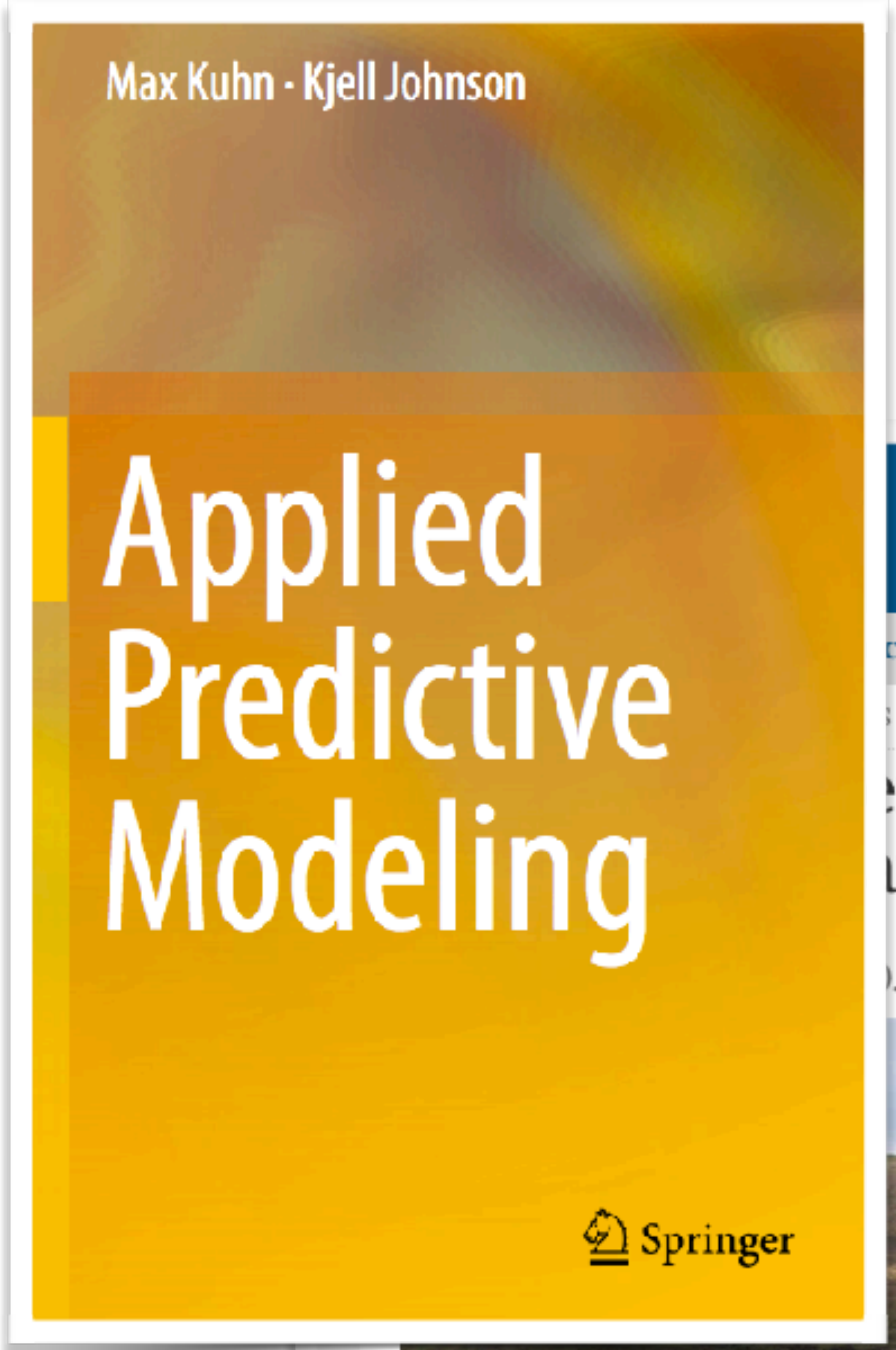

Max Kuhn · Kjell Johnson

Applied Predictive Modeling

Springer

theguardian

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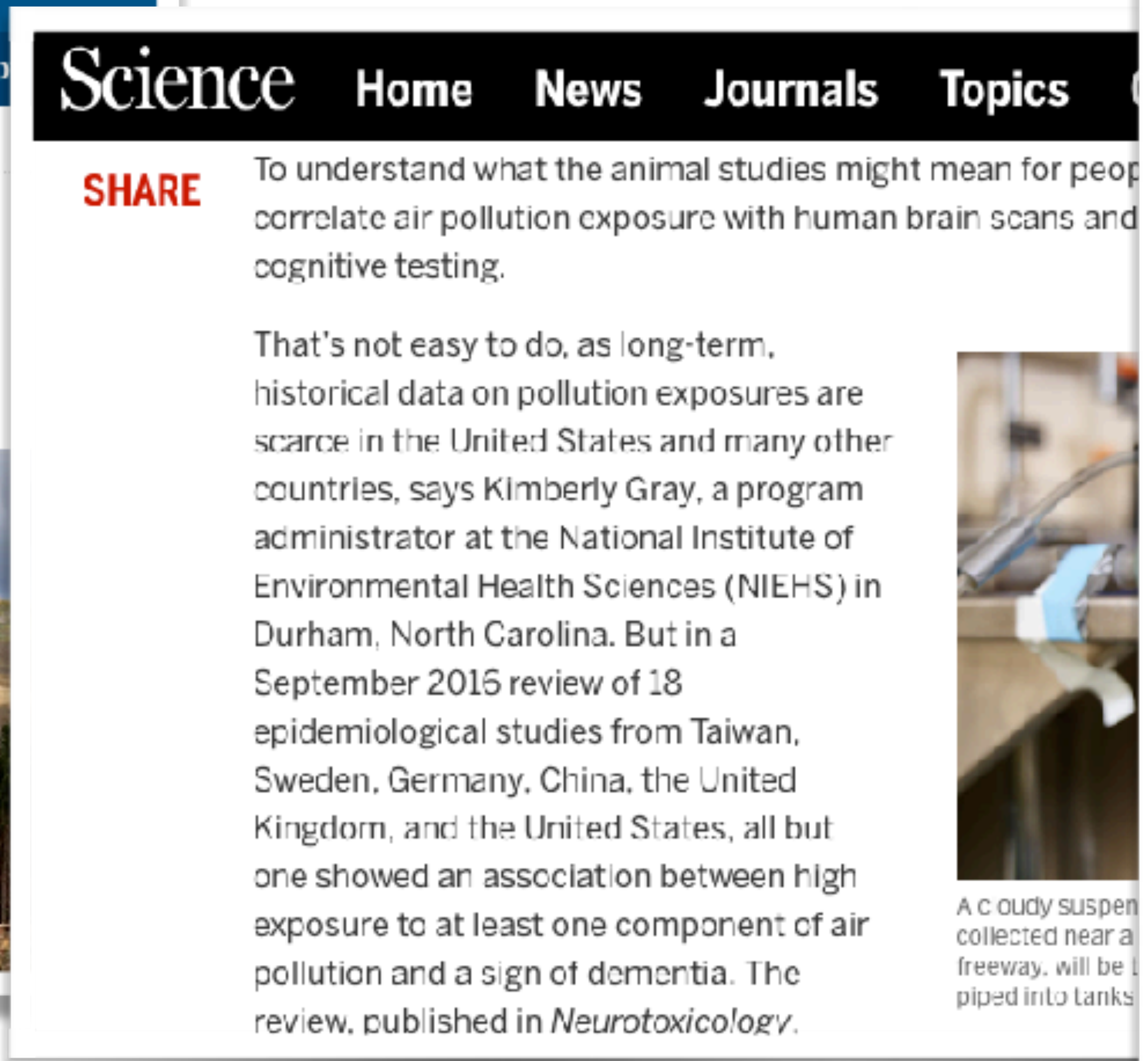

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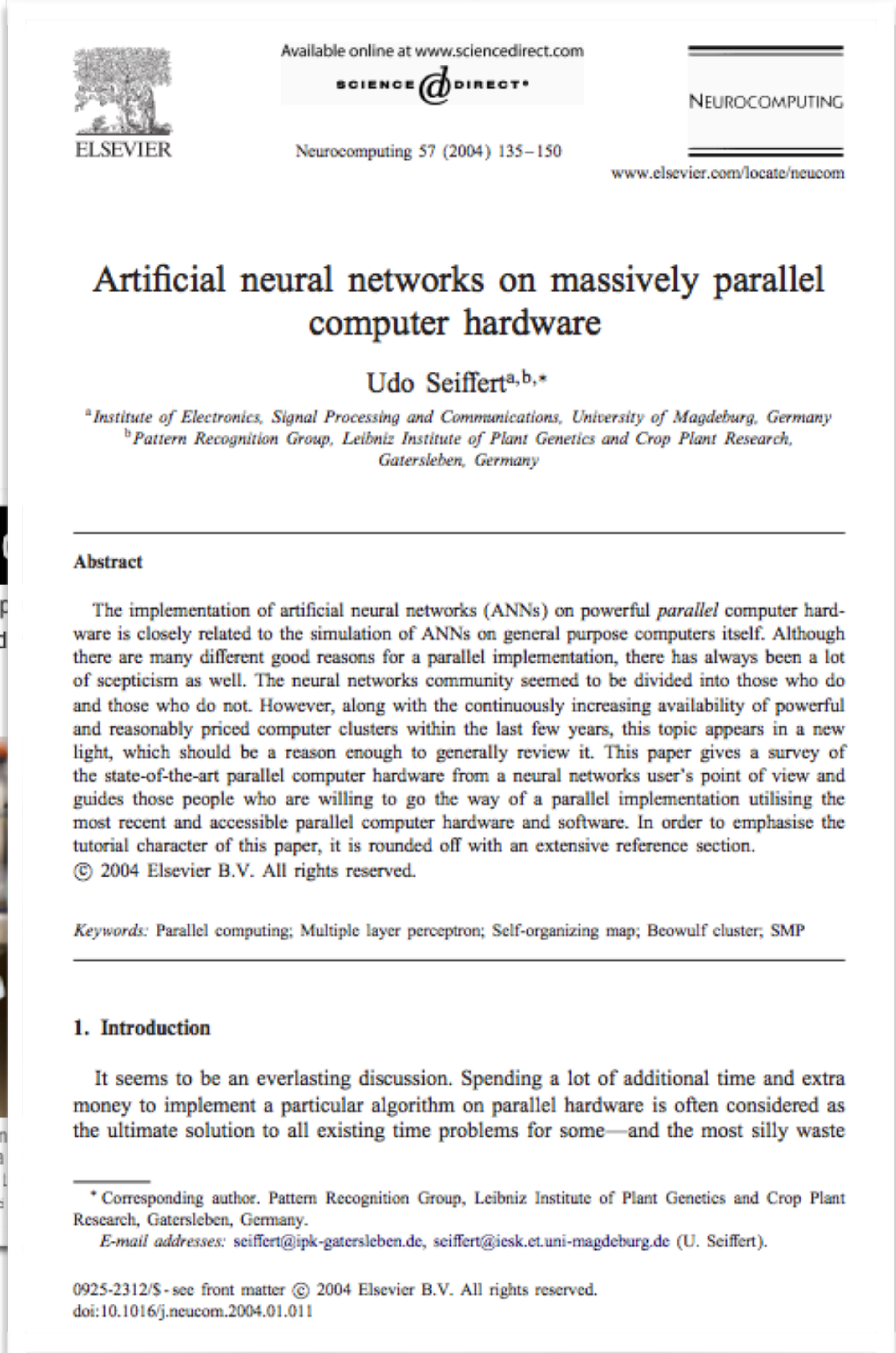

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Artificial neural networks on massively parallel computer hardware

Udo Seiffert[a,b,*]

[a] *Institute of Electronics, Signal Processing and Communications, University of Magdeburg, Germany*
[b] *Pattern Recognition Group, Leibniz Institute of Plant Genetics and Crop Plant Research, Gatersleben, Germany*

Abstract

The implementation of artificial neural networks (ANNs) on powerful *parallel* computer hardware is closely related to the simulation of ANNs on general purpose computers itself. Although there are many different good reasons for a parallel implementation, there has always been a lot of scepticism as well. The neural networks community seemed to be divided into those who do and those who do not. However, along with the continuously increasing availability of powerful and reasonably priced computer clusters within the last few years, this topic appears in a new light, which should be a reason enough to generally review it. This paper gives a survey of the state-of-the-art parallel computer hardware from a neural networks user's point of view and guides those people who are willing to go the way of a parallel implementation utilising the most recent and accessible parallel computer hardware and software. In order to emphasise the tutorial character of this paper, it is rounded off with an extensive reference section.

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Keywords: Parallel computing; Multiple layer perceptron; Self-organizing map; Beowulf cluster; SMP

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1. Introduction

It seems to be an everlasting discussion. Spending a lot of additional time and extra money to implement a particular algorithm on parallel hardware is often considered as the ultimate solution to all existing time problems for some—and the most silly waste

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[*] Corresponding author. Pattern Recognition Group, Leibniz Institute of Plant Genetics and Crop Plant Research, Gatersleben, Germany.

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doi:10.1016/j.neucom.2004.01.011

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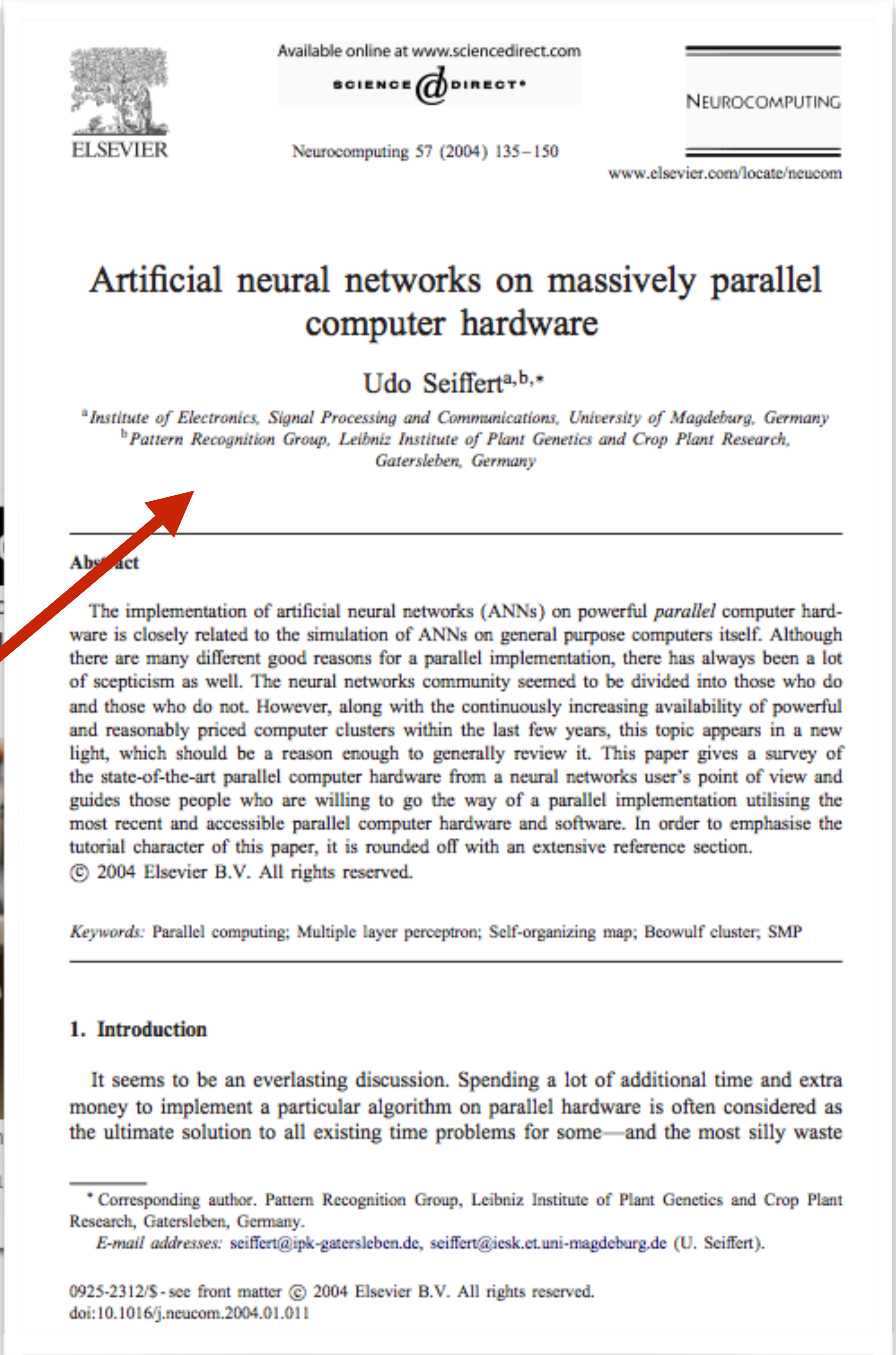

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Practicing an essential skill in four simple steps

2

read consciously

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2

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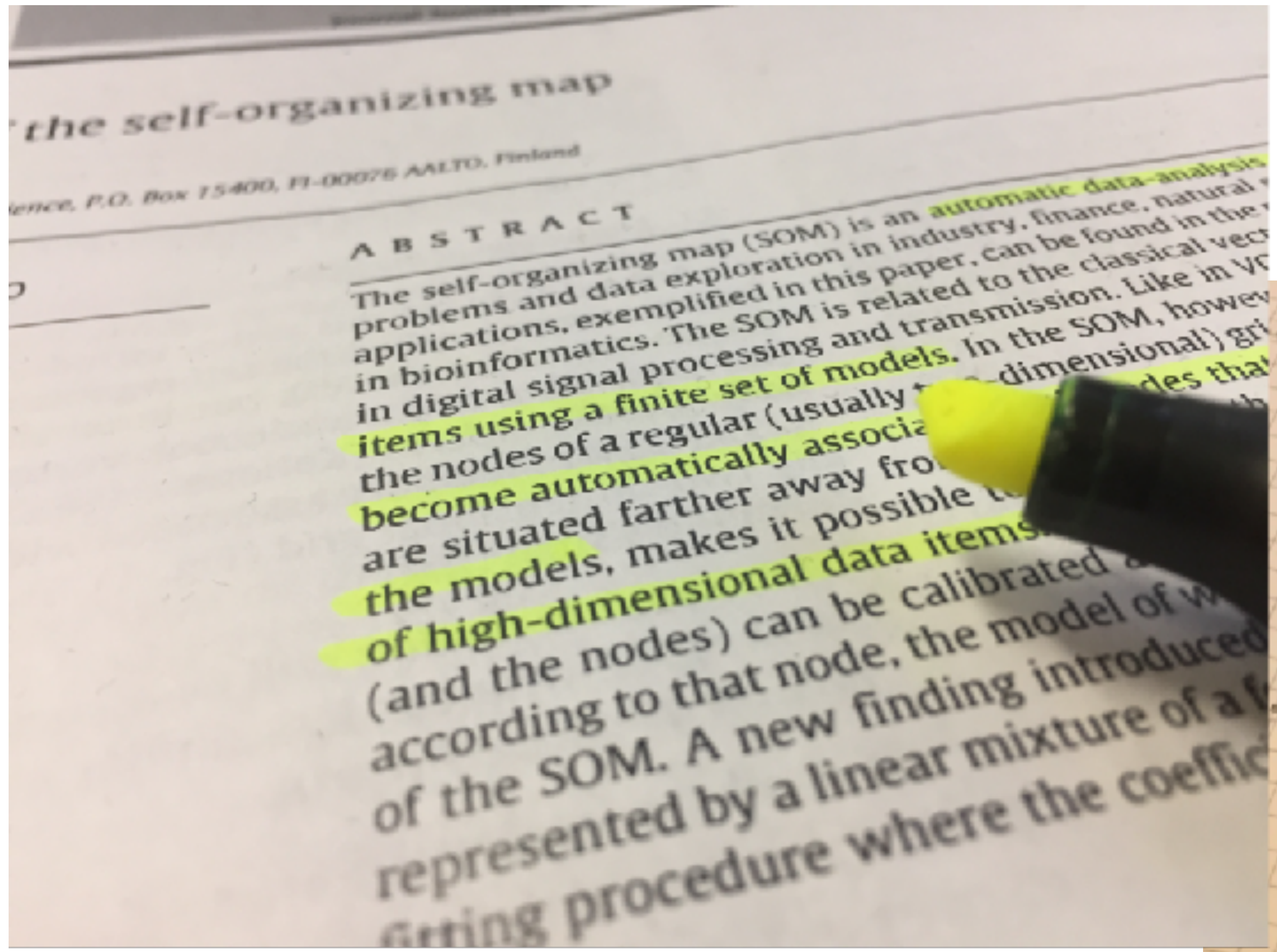


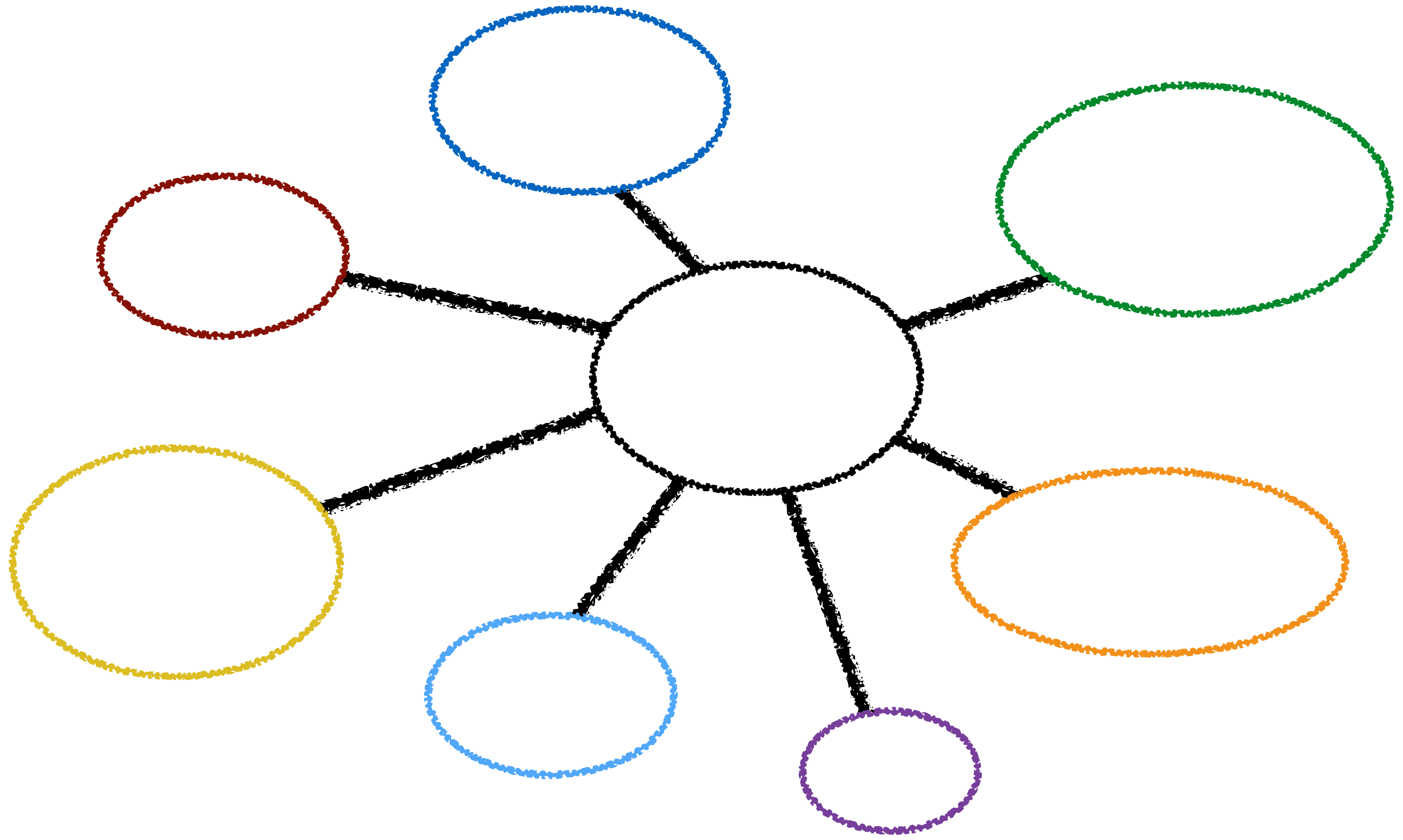
the self-organizing map

ence, P.O. Box 15400, FI-00076 AALTO, Finland

ABSTRACT

The self-organizing map (SOM) is an automatic data-analysis
problems and data exploration in industry, finance, natural
applications, exemplified in this paper, can be found in the
in bioinformatics. The SOM is related to the classical vec
in digital signal processing and transmission. Like in vo
items using a finite set of models. In the SOM, howev
the nodes of a regular (usually t dimensional) gri
become automatically associa des that
are situated farther away fro
the models, makes it possible t
of high-dimensional data items
(and the nodes) can be calibrated
according to that node, the model of w
of the SOM. A new finding introduced
represented by a linear mixture of a f
fitting procedure where the coeffic

- highlight
- take notes
- make drawings



- check sources
- compare with current knowledge
- be critical
- ask questions (and write them down)

Practicing an essential skill in four simple steps

3

discuss in your group

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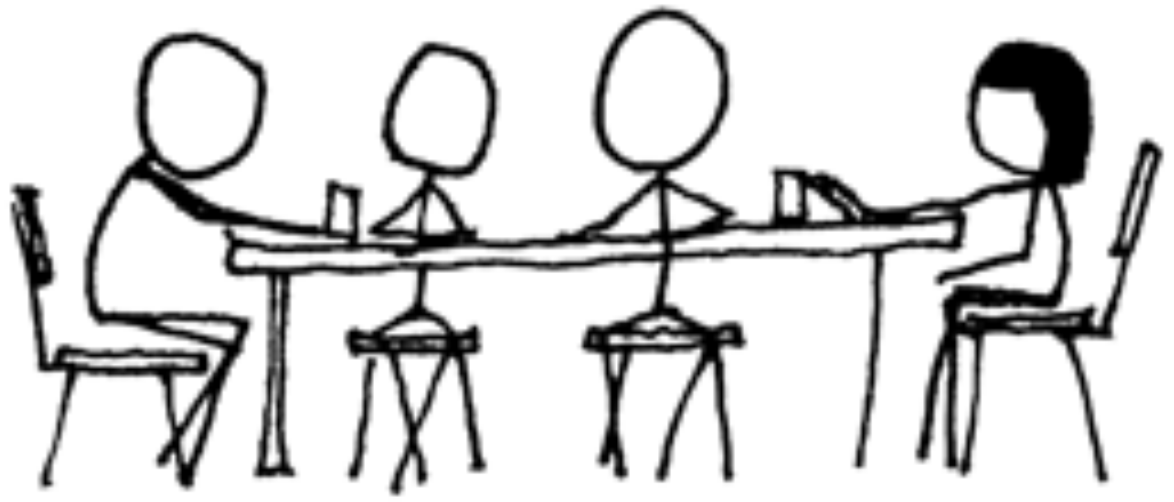
3

discuss in your group

Every opinion counts!
start with a roundtable

Ask questions!



summarize the highlights
what did you like?
what was the key point?

Be critical but factual
why did you like or dislike something?

Practicing an essential skill in four simple steps

4

open doors

Practicing an essential skill in four simple steps

4

open doors

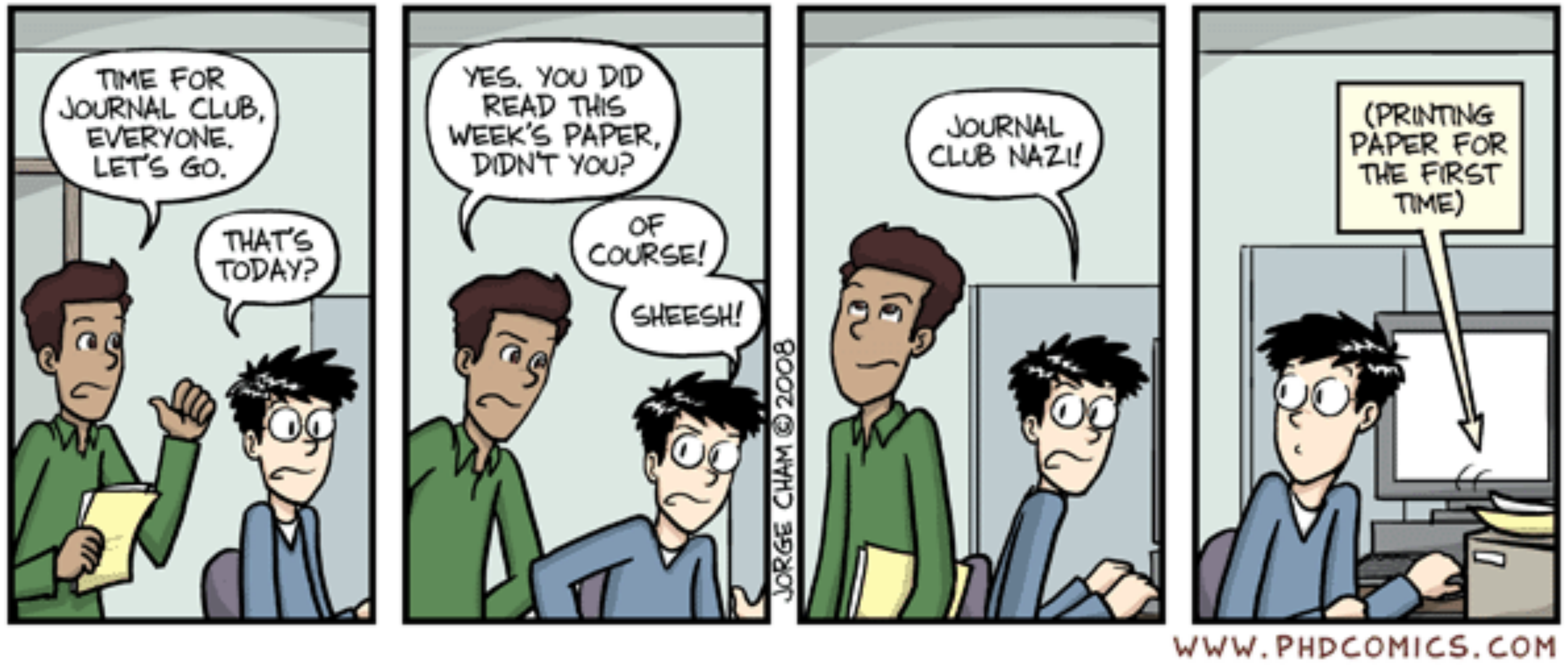
Connect what you know with what you've learned

As a group!

Spark an idea!

~~openlab~~HTCC reading club

- Started in October 2016
- Every 2 weeks, 1 hour discussion session
- 9 articles read
- Topics: Performance modeling, machine learning, distributed computing, parallel programming
- Average 5 participants


TIME FOR JOURNAL CLUB, EVERYONE. LET'S GO.
THAT'S TODAY?
YES, YOU DID READ THIS WEEK'S PAPER, DIDN'T YOU?
OF COURSE!
SHEESH!
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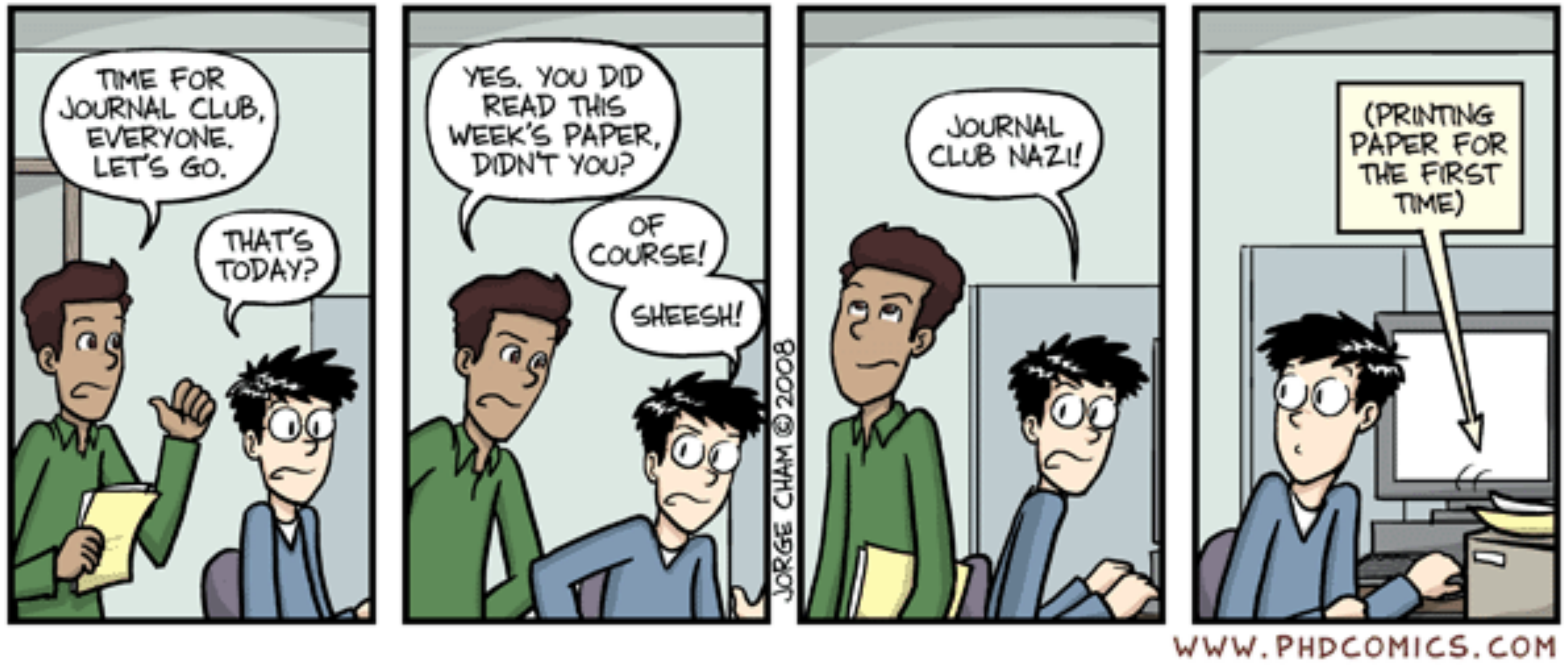
https://e-groups.cern.ch/e-groups/Egroup.do?egroupId=10238392 ← To receive announcements

https://mattermost.web.cern.ch/it-dep/channels/openlab-readingclub ← To continue the discussion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