



EST. 1785

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***Library & Information  
Research***

**Barry Cull**

*What is right is not always popular,  
and what is popular is not always right.*

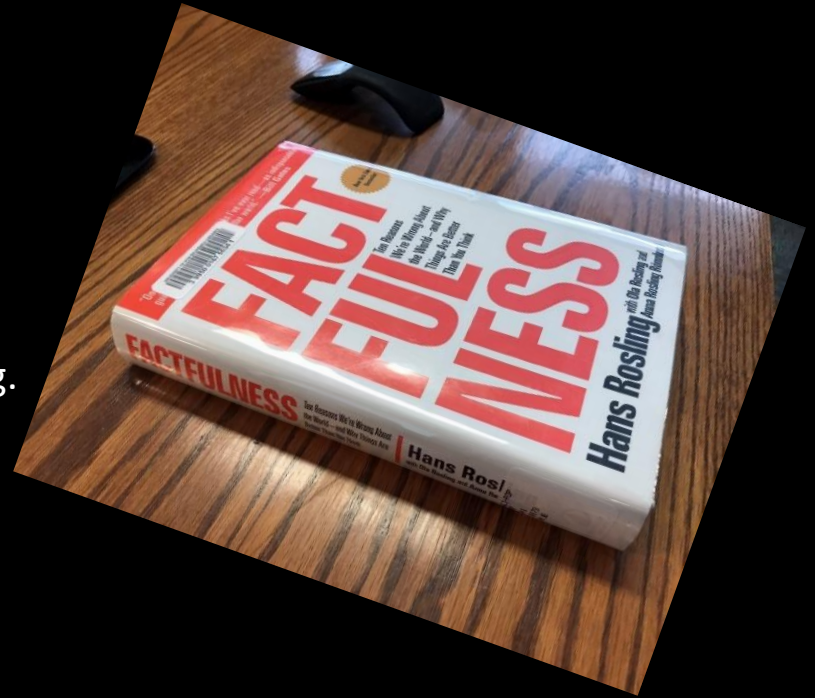
- Albert Einstein (1879-1955)

# Facts?

Answer this question, from this book.  
Rosling, H., Rosling, O., & Rönnlund Anna Rosling.  
(2018). *Factfulness*. Flatiron Books.

SCI-POP: Popular Reading Collection  
HWK-STACKS: Main Collection  
BF441 .R673 2018

Discuss it with your partner!



**1.** In the past 20 years, the proportion of the world population living in extreme poverty has...

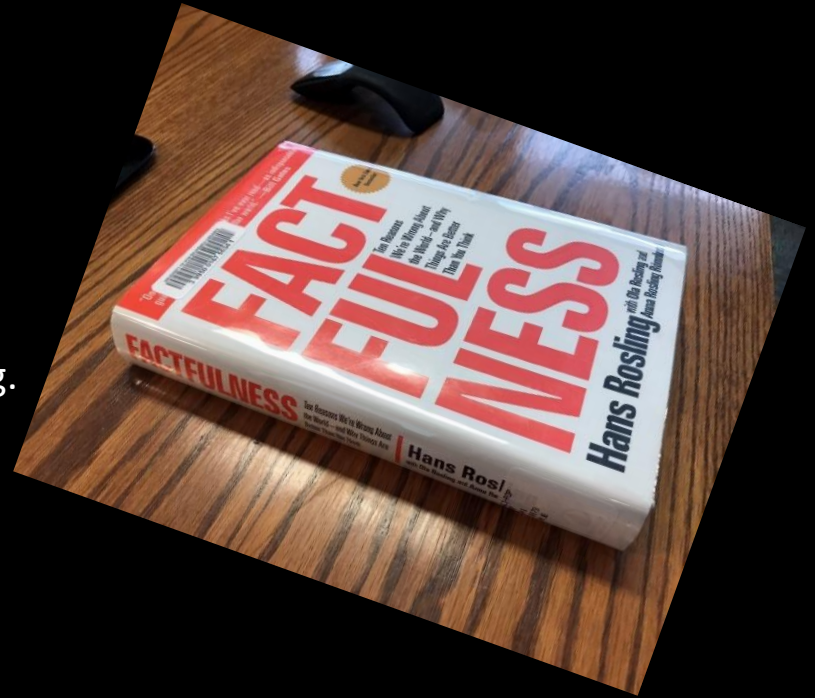
- A.** almost doubled.
- B.** remained more or less the same.
- C.** almost halved.

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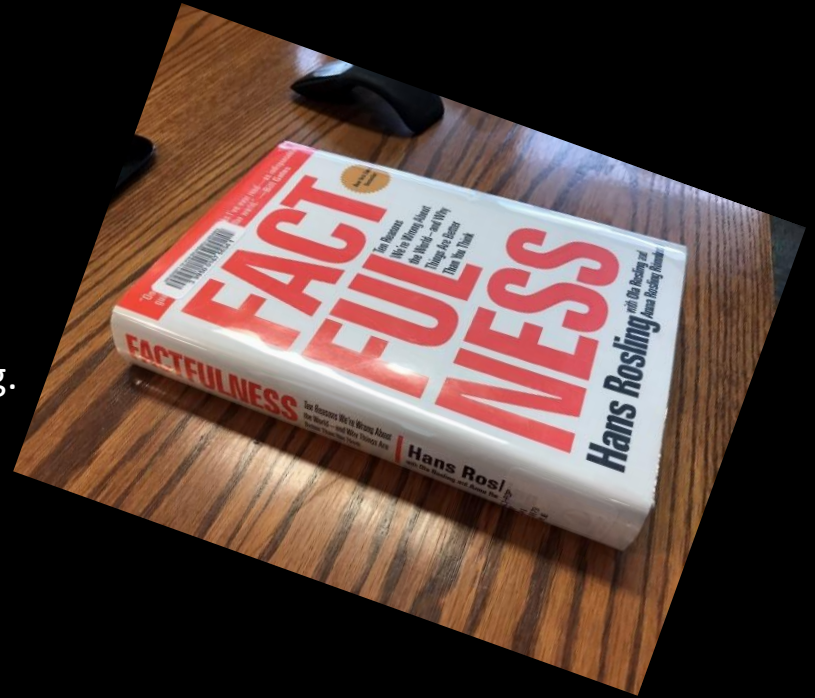
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Discuss it with your partner!



**2.** Worldwide, 30-year-old men have spent 10 years in school, on average.  
How many years have women of the same age spent in school?

**A.** 9 years

**B.** 6 years

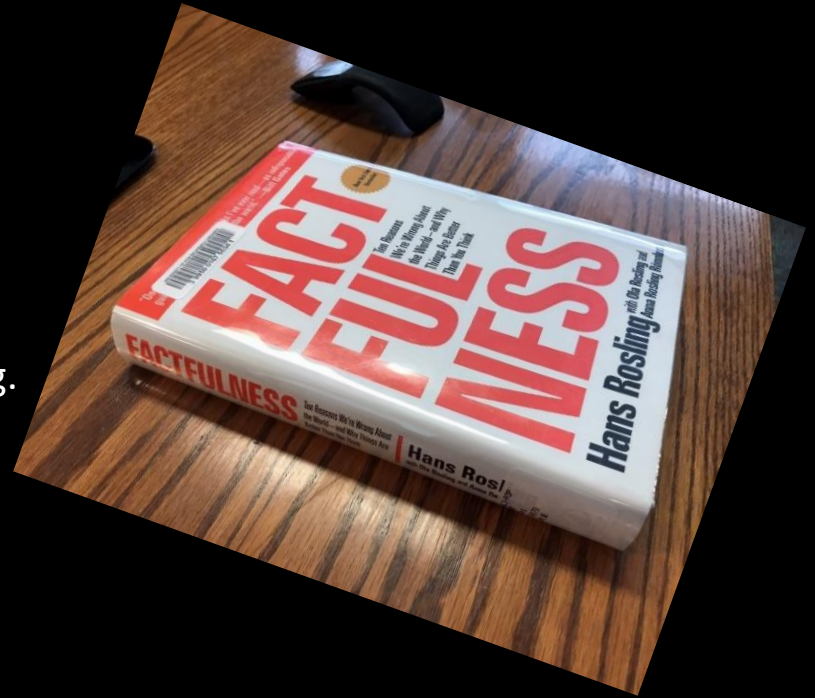
**C.** 3 years

# Facts?

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How many years have women of the same age spent in school?

**A.** 9 years

**B.** 6 years

**C.** 3 years



***Knowledge** does not  
jump down people's  
throats.*

***You have to seek it.***

- Dallas Willard,  
Philosopher

***Seek*** and you will find.

- Jesus Christ



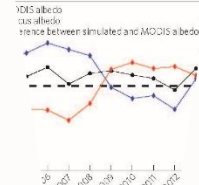
# *4 Types of Published Research Documents*

# Contribution of light-absorbing impurities in snow to Greenland's darkening since 2009

M. Dumont<sup>1,4\*</sup>, E. Brun<sup>2,1</sup>, G. Picard<sup>3,4</sup>, M. Michou<sup>2</sup>, Q. Libois<sup>3,4</sup>, J.-R. Petit<sup>3,4</sup>, M. Geyer<sup>2</sup>, S. Morin<sup>1</sup> and B. Josse<sup>2</sup>

The surface energy balance and mass balance of the Greenland ice sheet depends on the albedo of snow, which governs the amount of solar energy that is absorbed. The observed decline of Greenland's albedo over the past decade<sup>1,2</sup> has been attributed to an enhanced growth of snow grains as a result of atmospheric warming<sup>3,4</sup>. Satellite observations show that, since 2009, albedo values went up in springtime at high elevations where atmospheric warming<sup>3,4</sup>. Satellite observations show that, since 2009, albedo values went up in springtime at high elevations where atmospheric warming<sup>3,4</sup>. Satellite observations show that, since 2009, albedo values went up in springtime at high elevations where atmospheric warming<sup>3,4</sup>.

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observed broadband albedo at the May-June period from the MODIS satellite and simulated albedo from the model.

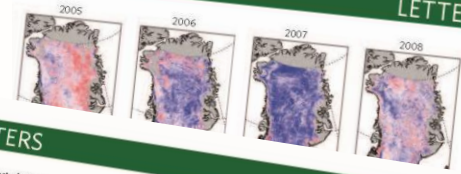


difference between simulated and MODIS albedo.

The snow spectral albedo is computed as a function of the physical properties of surface snow. These original features have been used widely in many previous studies of the GrIS surface mass balance<sup>1,2,7</sup>.

Received 12 March 2014; accepted 2 May 2014; published online 8 June 2014

1. Roy, I. E. et al. Greenland ice-sheet albedo feedback. *Thermodynamics and albedo in Greenland. *Environ. Res. Lett.* 6, 014005 (2011)*.



10. Holzner, E. & Baumann, W. The functional pore complex, a prokaryotic cyanobacterial. *Chlorox Biol.* 8, 1161-1168 (1998).

Acknowledgements The authors are grateful to E. Dumont, C. Chagnaud, R. Steiner, M. Borsari, P. Wright, A. V. Kozlov, M. S. Timofeev, X. Yin, A. Rother and E. Penggang for help...

Additional Information Supplementary information is available in the online version of the paper. Reprints and permissions information is available online at www.nature.com/reprints.

Competing financial interests The authors declare no competing financial interests.

\*Méditerranée-CNRS, CNRM-GAME UMR 5589, CNRS, Grenoble 38000, France; CNRS, Grenoble Alpes, USM 5182, Grenoble 38000, France; CNRS, Grenoble Alpes, USM 5182, Grenoble 38000, France; CNRS, Grenoble Alpes, USM 5182, Grenoble 38000, France; CNRS, Grenoble Alpes, USM 5182, Grenoble 38000, France; CNRS, Grenoble Alpes, USM 5182, Grenoble 38000, France; CNRS, Grenoble Alpes, USM 5182, Grenoble 38000, France.

# Journal Articles

# Has the Earth's sixth mass extinction already arrived?

Anthony D. Barnosky<sup>1,2,3</sup>, Nicholas Matias<sup>1,2,3</sup>, Susumu Hwang<sup>1,2,3</sup>, Guinevere M. Hogan<sup>1,2,3</sup>, Christopher J. Quinn<sup>1,2,7</sup>, Charles Marshall<sup>1,2,3</sup>, Jennifer L. Guire<sup>1,2,3</sup>, Emily L. Rousey<sup>1,2</sup>, Kaitlin C. N. Smith<sup>1,2</sup>, Ben N. Kuvshinov<sup>1,2</sup> & Beth A. Gillett<sup>1,2,7</sup>

Present-day mass extinctions occur five times when the Earth loses more than three-quarters of its species in a geologically short interval compared to the five times in the past 540 million years or so. Biologists now suggest that a sixth mass extinction may be underway, the known species losses over the past few centuries and millennia. Here we compare differences between fossil and modern data and the addition of recently available palaeontological information to influence our understanding of the current extinction crisis. Our results confirm that current extinction rates are higher than would be expected from the fossil record, highlighting the need for effective conservation measures.

Of the four billion species estimated to have evolved on the Earth over the last 3.5 billion years, some 99% are gone<sup>1</sup>. That shows how very common extinction is, but normally it is balanced by speciation. The balance wavers such that at several times in life's history extinction rates appear somewhat elevated, but only five times qualify for 'mass extinction' status: near the end of the Ordovician, Devonian, Permian, Triassic and Cretaceous Periods<sup>2,3</sup>. These are the 'Big Five' mass extinctions (two are technically 'mass depletions')<sup>4</sup>. Different causes are thought to have precipitated these events (Table 1). The extent of each extinction above and below the species loss is also variable, but generally higher than any other geological period. In the last 540 million years, and extending a further 75% of the way back<sup>5</sup>. Increasingly, scientists are recognizing modern extinctions as well as past ones<sup>6,7</sup>. Little is understood about the causes of these extinctions, but they are being identified because many species have been geographically distributed. Such extinctions are thought to have caused the sixth mass extinction<sup>8-17</sup>, through co-opting resources, fragmenting habitats,

introducing non-native species, spreading pathogens, killing species directly, and changing global climate<sup>18,19</sup>. If so, recovery of biodiversity will not occur on any timeframe meaningful to people: evolution of new species typically takes at least hundreds of thousands of years<sup>20,21</sup>, and recovery from mass extinction episodes probably occurs on timescales encompassing millions of years<sup>22</sup>. Although there are many definitions of mass extinction and gradual extinction<sup>23,24</sup>, here we take a conservative approach and use the term 'mass extinction' to refer to the ongoing crisis. Getting a higher resolution of recent mass extinctions that have extreme diversity loss to the fossil record is the very unmet need (see Fig. 1). We find that the Earth's history shows that extreme extinctions are not rare, but current threats to species are not all equal.

### Data deficiencies

Only a few kinds of taxa (primarily those with fossilizable hard parts) and a limited subset of the Earth's biomes (generally in temperate latitudes) have data sufficient for direct fossil-to-modern comparisons

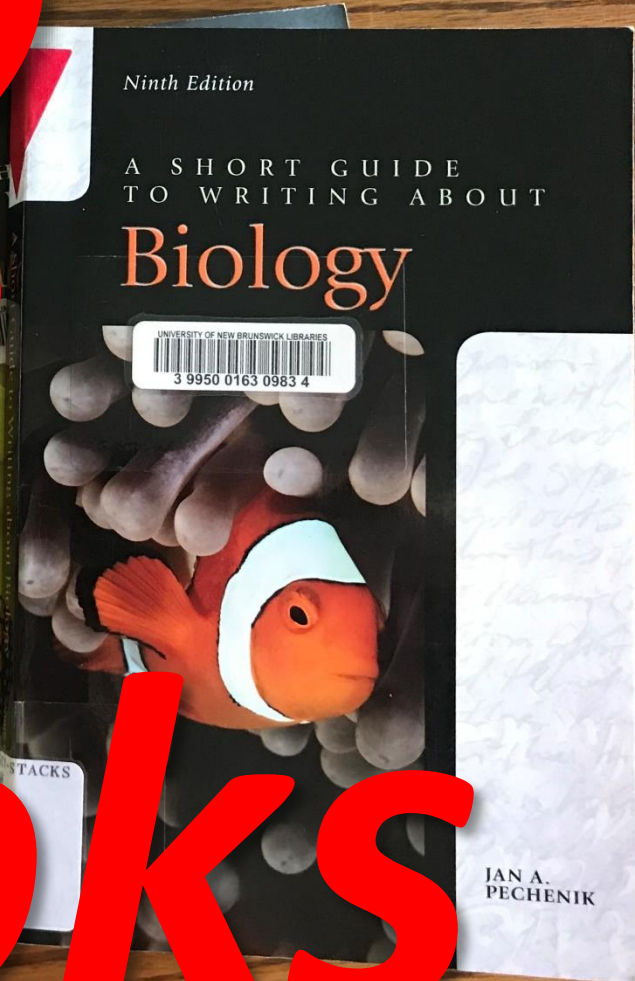
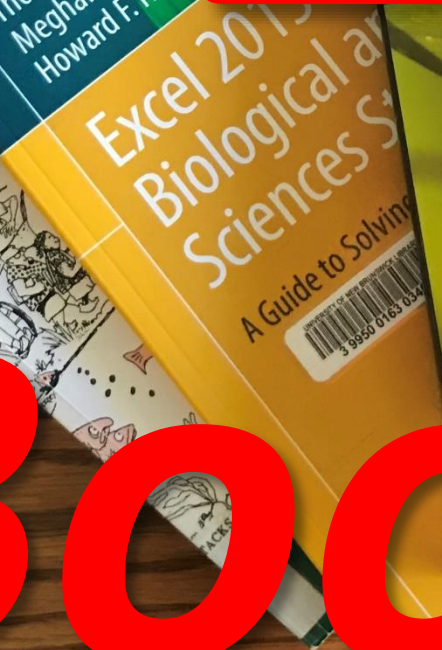
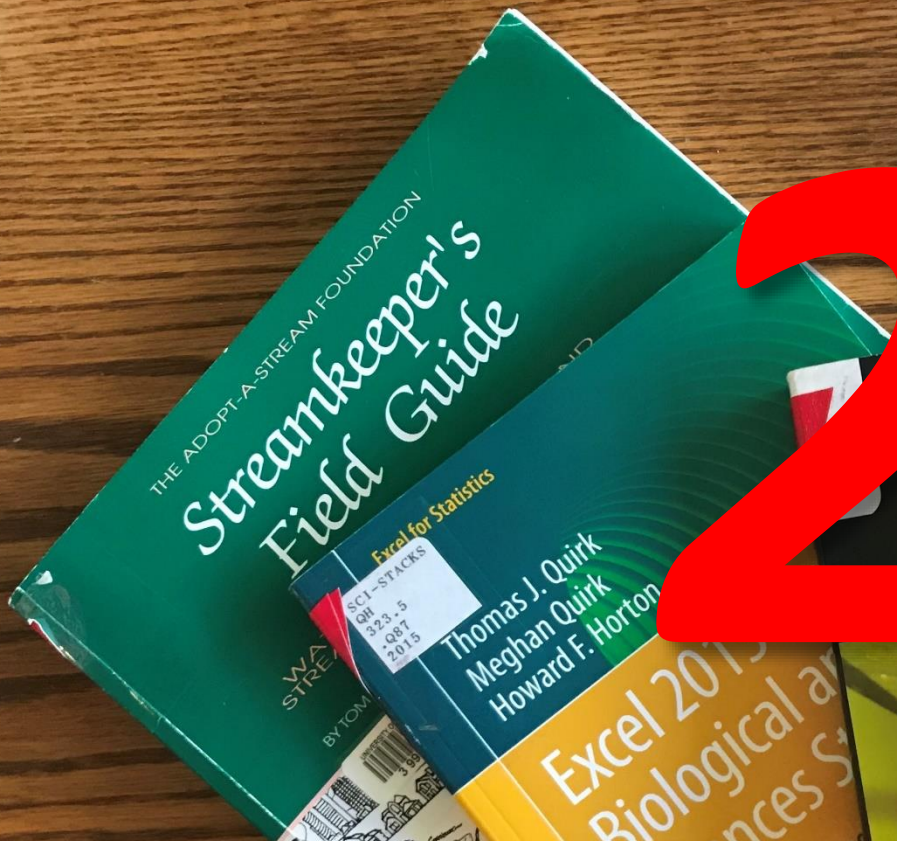
Table 1 | The 'Big Five' mass extinction events

Event	Proposed causes
The Ordovician event <sup>24, 44</sup> ended ~443 Myr ago; within 3.3 to 1.9 Myr 57% of genera were lost, an estimated 86% of species.	Onset of alternating glacial and interglacial episodes; repeated marine transgressions and regressions. Uplift and weathering of the Appalachians affecting atmospheric and ocean chemistry. Sequestration of CO <sub>2</sub> .
The Devonian event <sup>64, 77</sup> ended ~359 Myr ago; within 29 to 2 Myr 35% of genera were lost, an estimated 65% of species.	Global cooling (followed by global warming), associated with the onset of the Permian and Permian-Triassic extinctions, and the spread of anoxic waters.
The Permian event <sup>47, 57</sup> ended ~252 Myr ago; within 1.5 Myr to 1 Myr 56% of genera were lost, an estimated 90% of species.	Global warming. Some of the Permian-Triassic extinctions are associated with marine and terrestrial anoxia. Evidence for a bolide impact still debated.
The Triassic event <sup>74</sup> ended ~202 Myr ago; within 1 Myr to 0.5 Myr 45% of genera were lost, an estimated 80% of species.	Global warming. Some of the Permian-Triassic extinctions are associated with marine and terrestrial anoxia. Evidence for a bolide impact still debated.
The Cretaceous event <sup>76, 78</sup> ended ~65 Myr ago; within 2.5 Myr to less than a year 40% of genera were lost, an estimated 76% of species.	A bolide impact in the Yucatán is thought to have led to a global calcification crisis and caused rapid cooling. Preceding this impact, biota may have been declining owing to a variety of causes: Deccan volcanism contemporaneous with global warming; tectonic uplift affecting topography and accelerating erosion, potentially contributing to ocean eutrophication and anoxic episodes. CO <sub>2</sub> spike just before extinction, drop during extinction.

Myr, million years; kyr, thousand years.  
<sup>1</sup>Department of Integrative Biology, University of California, Berkeley, California 94720, USA; <sup>2</sup>University of California Museum of Paleontology, California, USA; <sup>3</sup>University of California Museum of Vertebrate Zoology, California, USA; <sup>4</sup>Human Evolution Research Center, California, USA; <sup>5</sup>Present addresses: <sup>6</sup>Departamento de Ecologia, Universidade de São Paulo (USP), São Paulo, Brazil (T.B.Q.); <sup>7</sup>National Evolutionary Synthesis Center, 2024 W. Main Street, Suite A200, Durham, North Carolina 27705, USA (J.L.W.).

Review Articles & Primary Articles (studies, essays)

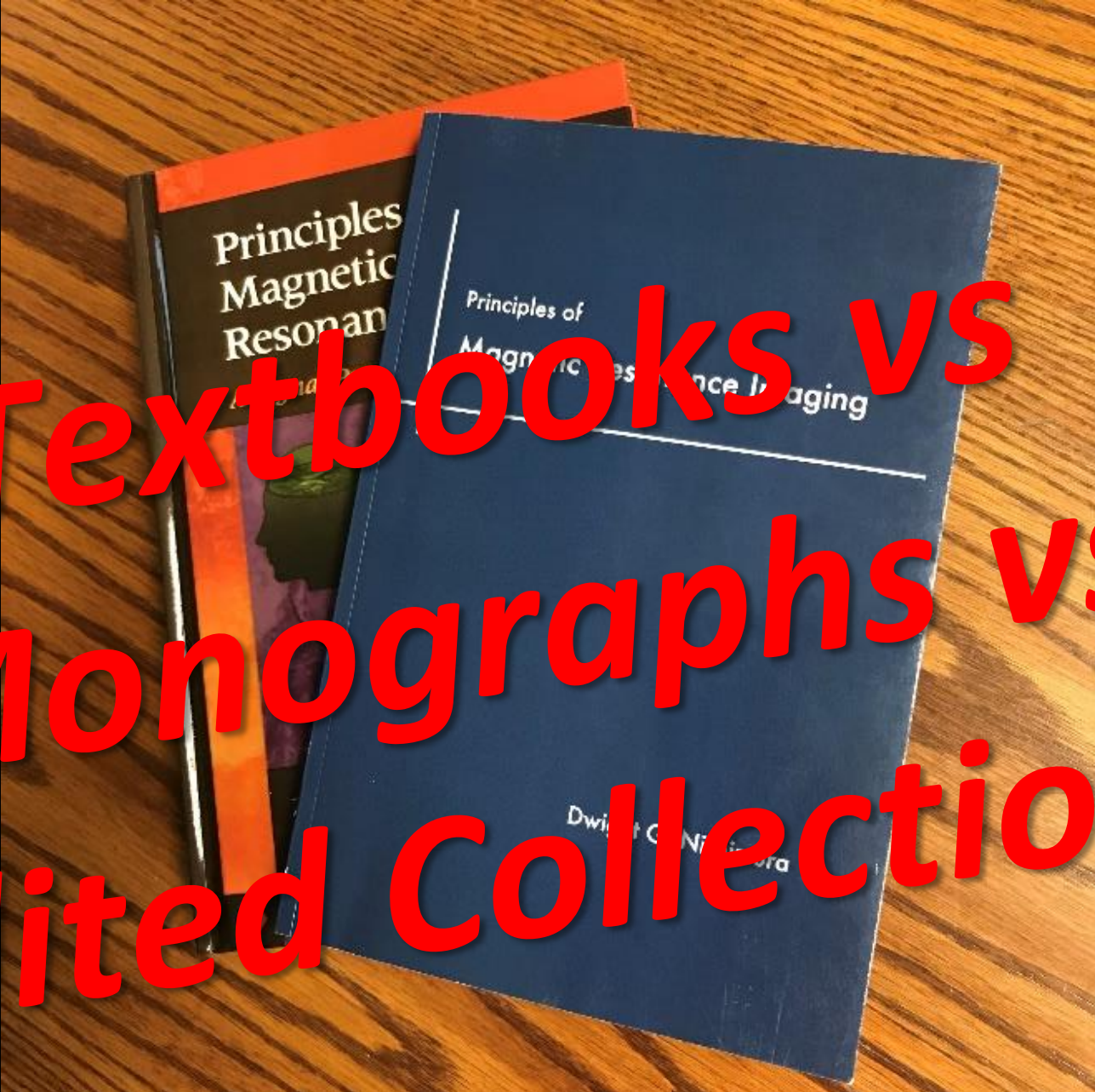




2

Books





The image shows two books on a wooden surface. The book in the foreground is blue and titled "Principles of Magnetic Resonance Imaging" by Dwight G. Nishida. The book behind it is black and titled "Principles of Magnetic Resonance" by Li-Ta Hsieh. The text "Textbooks vs Monographs vs Edited Collections" is overlaid in large, bold, red font across the books.

**Textbooks vs  
Monographs vs  
Edited Collections**

Watershed Science Institute  
Watershed Condition Series  
Technical Note 2  
Index of Biotic Integrity (IBI)

Contents  
Introduction  
Determining an IBI score  
Exploring the value of IBI to NRCS



United Nations

Climate Change  
[un.org/en/sections/issues-depth/clim](http://un.org/en/sections/issues-depth/clim)

"Biotic integrity" is based on the premise that the status of biological systems provides the most effective measure of the "integrity of water" (Karr, 1997)

Climate Change is the defining issue of our time and we are at a defining moment. From shifting weather patterns that threaten food production to rising sea levels that increase the risk of catastrophic flooding, the impacts of climate change are global in scope and



Vidar Nordli-Mathisen - The wind turbines in the La Frontera National Park, Chile. Report by the Intergovernmental Panel on Climate Change

CR2019 REPORT

# 3 Canada's Changing Climate Report

Canada

# Government Documents



Contents

Introduction

Determining an IBI score

Exploring the value of IBI to NRCS

Yashayaev, I. and Loder, J.W. (2017): Further intensification of deep convection in the Labrador Sea in 2016; *Geophysical Research Letters*, v. 44, p. 1429–1438. doi: 10.1002/2016GL071668.

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Yin, J., Griffes, S.M. and Stouffer, R.J. (2010): Spatial variability of sea level rise in twenty-first century projections; *Journal of Climate*, v. 23, p. 4585–4607.

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Zhai, L., Greenan, B.J.W., Hunter, J., James, T.S., ... and Henton, J.A. (2015): Estimating sea-level allowances for Atlantic Canada using the Fifth Assessment Report of the IPCC; *Atmosphere-Ocean*, v. 53, p. 476–490. doi:10.1080/07055900.2015.1106401

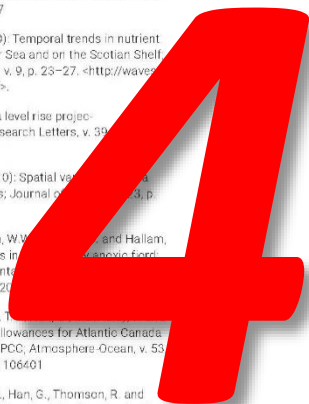
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# Grey Literature

effectiveness of conservation p



In the South of Spain, renewable energy sources are used to combat climate change.





News



## COVID Vaccine Hesitancy and Risk of a Traffic Crash

Donald A. Redelmeier, MD, FRCPC, MSHSR, FACP,<sup>a,b,c,d,e</sup> Jonathan Wang, MMASc,<sup>b,c</sup> Deva Thiruchelvam, MSc<sup>a,c</sup>

<sup>a</sup>Evaluative Clinical Sciences, Sunnybrook Research Institute, Toronto, Ont, Canada; <sup>b</sup>Department of Medicine, University of Toronto, Ont, Canada; <sup>c</sup>Institute for Clinical Evaluative Sciences (ICES), Toronto, Ont, Canada; <sup>d</sup>Division of General Internal Medicine; <sup>e</sup>Center for Leading Injury Prevention Practice Education Research, Sunnybrook Health Sciences Centre, Toronto, Ont, Canada

# Evaluation

# exercise #1

### ABSTRACT

**BACKGROUND:** Coronavirus disease (COVID) vaccine hesitancy is a reflection of psychology that might also contribute to traffic safety. We tested whether COVID vaccination was associated with the risks of a traffic crash.

**METHODS:** We conducted a population-based longitudinal cohort analysis of adults and determined COVID vaccination status through linkages to individual electronic medical records. Traffic crashes requiring emergency medical care were subsequently identified by multicenter outcome ascertainment of all hospitals in the region over a 1-month follow-up interval (178 separate centers).

**RESULTS:** A total of 11,270,763 individuals were included, of whom 16% had not received a COVID vaccine and 84% had received a COVID vaccine. The cohort accounted for 6682 traffic crashes during follow-up. Unvaccinated individuals accounted for 1682 traffic crashes (25%), equal to a 72% increased relative risk compared to vaccinated individuals (95% confidence interval, 60–87,  $P < 0.001$ ). The increased traffic crash risk among unvaccinated individuals extended to diverse subgroups, was similar to the relative risk associated with sleep apnea, and was equal to a 40% increase after adjusting for age, sex, race, education, socioeconomic status, and medical diagnoses (95% confidence interval, 40–41,  $P < 0.001$ ). The increased risks extended across the spectrum of crash severity. Similar results were observed for other vaccines, and were validated in supplementary analyses of crossover cases, propensity scores, and additional controls.

**CONCLUSIONS:** These data suggest that COVID vaccine hesitancy is associated with significant increased risks of a traffic crash. An awareness of these risks might help to encourage more COVID vaccination.

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**KEYWORDS:** COVID-19; Human factors; Judgment and reasoning; Motor vehicle accident; Traffic crash; Vaccine hesitancy

## COVID Vaccine Hesitancy and Risk of a Traffic Crash

Donald A. Redelmeier, MD, FRCPC, MSc<sup>a</sup>, Nathan D. Anand, MD, FRCPC, MSc<sup>b</sup>, and Neelima Thiruchelvam, MSc<sup>a,c</sup>

<sup>a</sup>Evaluative Clinical Sciences, Sunnybrook Health Sciences Centre, University of Toronto, Toronto, Ontario, Canada; <sup>b</sup>Department of Medicine, University of Toronto, Toronto, Ontario, Canada; <sup>c</sup>Institute for Clinical Evaluative Sciences, University of Toronto, Toronto, Ontario, Canada; <sup>d</sup>Department of General Internal Medicine; <sup>e</sup>Center for Leading Injury Prevention Practice Education & Research, Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada.

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**RESULTS:** A total of 11,270,763 individuals were included in the study, of whom 95% had received a COVID vaccine and 84% had received a COVID vaccine. The risk of a traffic crash was significantly higher among unvaccinated individuals (25%), equal to the risk of a traffic crash among vaccinated individuals (95% confidence interval, 63-82;  $P < 0.001$ ). The increased risks among unvaccinated individuals extended to all subgroups, was similar to the risk of a traffic crash among those with sleep apnea, and was equal to the risk of a traffic crash among those with lower socioeconomic status, and medical diagnoses (95% confidence interval, 40-57;  $P < 0.001$ ). The increased risks extended across the spectrum of crash types and appeared similar for Pfizer, Moderna, or other vaccines, and were validated in supplementary analyses using propensity scores, and additional controls.

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**DINOSAURS**

**DIDN'T**

**READ.**

**NOW THEY**

**ARE**

**EXTINCT**

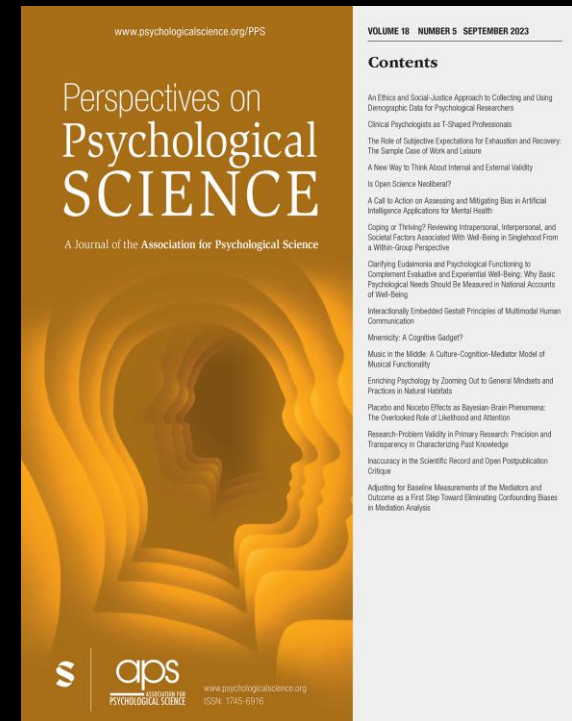
# Evaluation exercise #2

## The Unwisest Idea on Campus: Commentary on Lilienfeld (2017)

Jonathan Haidt

New York University Stern School of Business

**The term microaggression has swept through the academy in English speaking countries in the last two or three years. Lilienfeld (2017, this issue) has done the academy a great service in analyzing the concept and showing why it is not ready to serve as the scientific basis for new policies and programs being rolled out at many universities. In this commentary, I will extend Lilienfeld's analysis and show why the "microaggression program" (as I'll call the combination of theory and on-campus applications) is more damaging and less salvageable than Lilienfeld suggests. In fact, it may be the least wise idea one can find on a college campus today....**





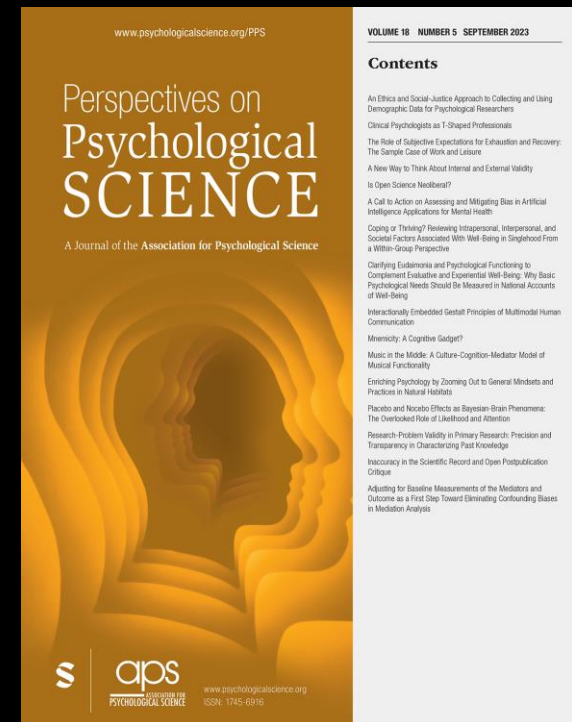
# Evaluation exercise #2

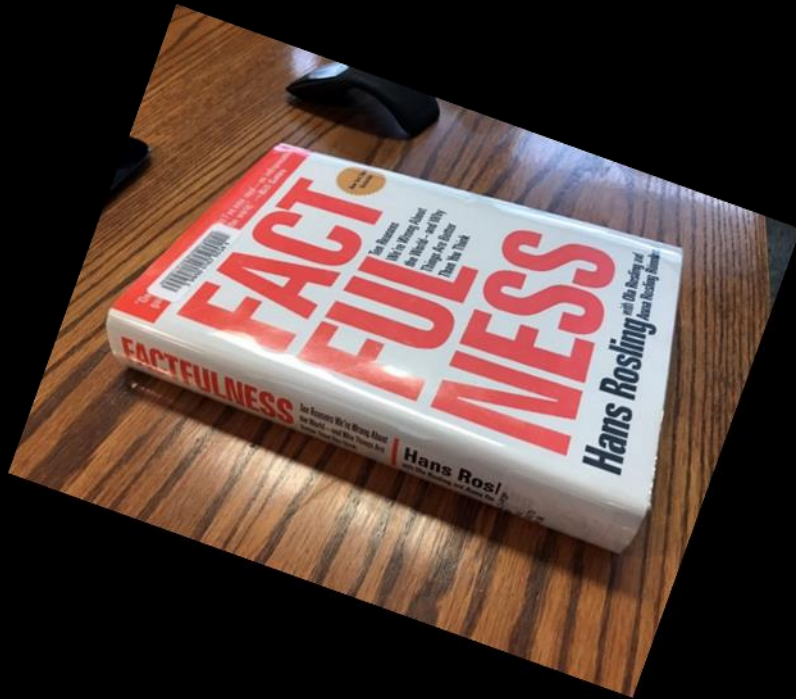
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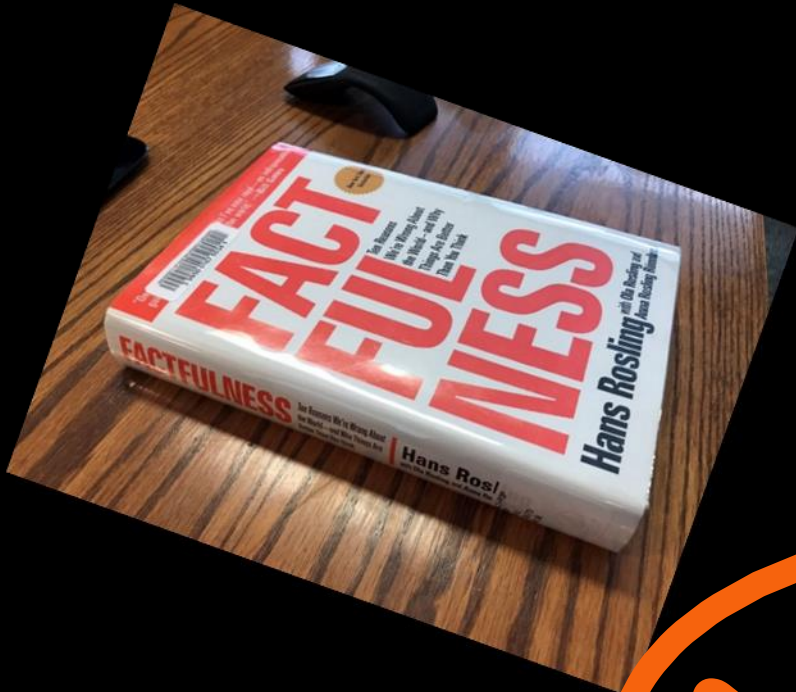


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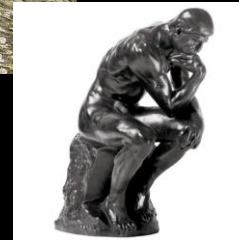
***Knowledge** does not  
jump down people's  
throats.*

***You have to seek it.***

- Dallas Willard,  
Philosopher



Where do  
you think  
best?



**4 places to find  
published research...**

- [
1. **Google**.....for finding...everything! (good & BAD)
  2. **Google Scholar**...known items (but there's a lot of BAD)
- ]

3. **UNB WorldCat**...books, articles+

4. **Scopus, SocINDEX, etc**.....**MANY MORE** articles+ (comprehensive)

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