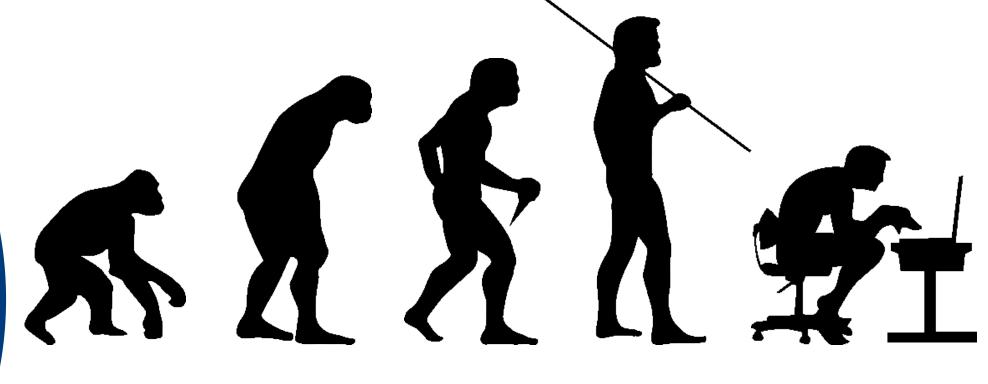
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Stupid Statistics!?

Servan Grüninger, Research Fellow Applied Statistics Group UZH & President reatch

www.reatch.ch | www.servangrueninger.ch | @SGruninger

My academic evolution



Political Science & Law

Biology & Neuroinformatics

Biostatistics & Computation al Science

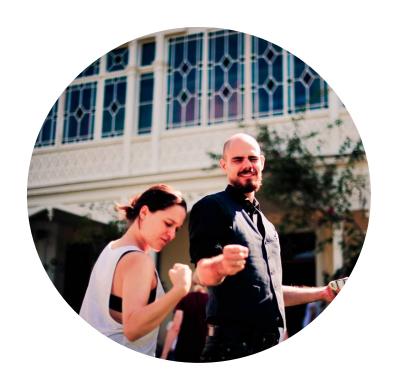
What is reatch?



An independent idea hatchery for a science-friendly culture, where science and society work side by side.

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Our mission



We want to make science relevant and to enrich public discourse with evidence-based solutions.

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We believe in grassroots



Over 250 members in Zürich, Bern, Basel, Lausanne

Sign up for our newsletter and stay informed.

Become a member and get involved!

www.reatch.ch

Stupid Statistics!



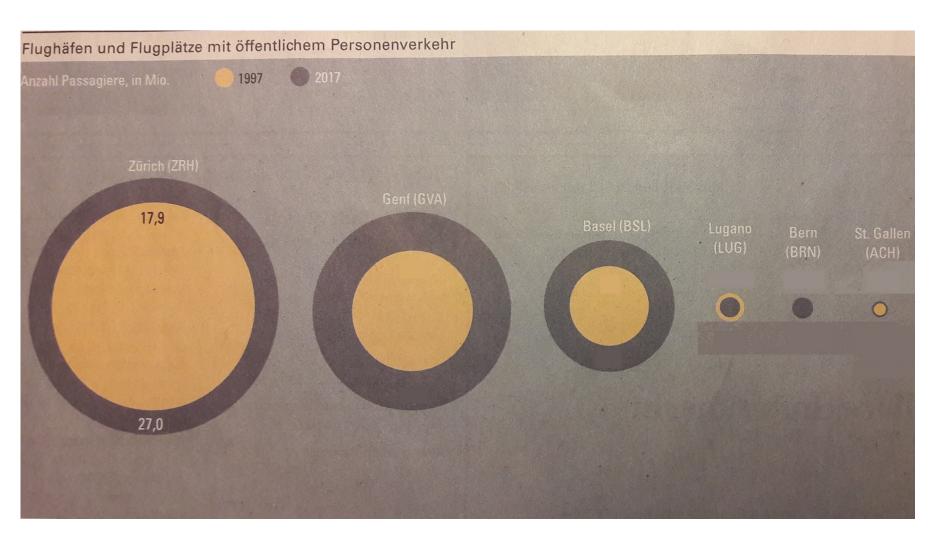
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Stupid Statistics!



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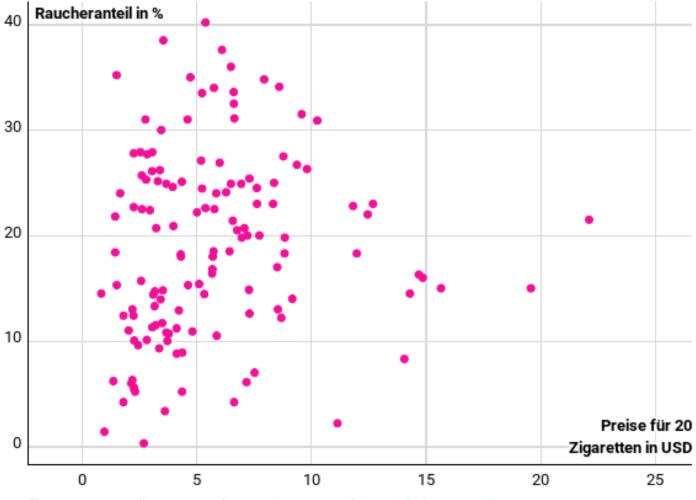
Distorting visuals



NZZ |

https://www.nzz.ch/schweiz/schweizerische-regionalflugplaetze-die-grossen-flugplaetze-wachsen-die-kleinen-schrumpfen/ld/146496

Comparing apples and oranges

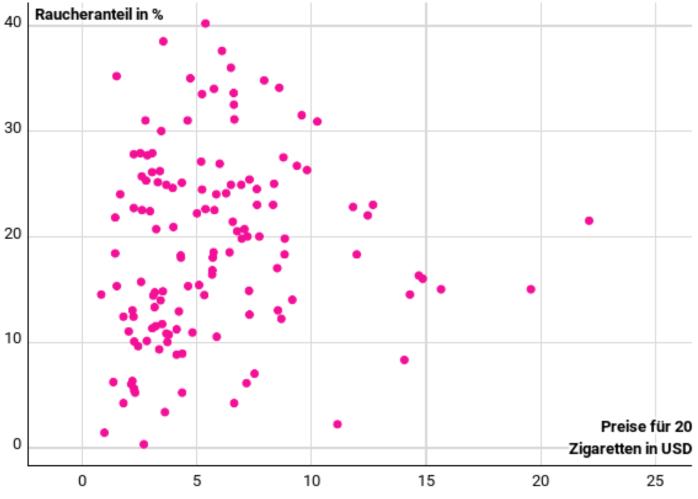


Grafik: watson • Quelle: WHO / tobaccoatlas • Daten herunterladen • Erstellt mit Datawrapper

Watson |

https://www.watson.ch/wissen/die%20welt%20in%20karten/812614572-dieseweltkarte-zeigt-welche-nationen-am-meisten/rauchen

Comparing apples and oranges



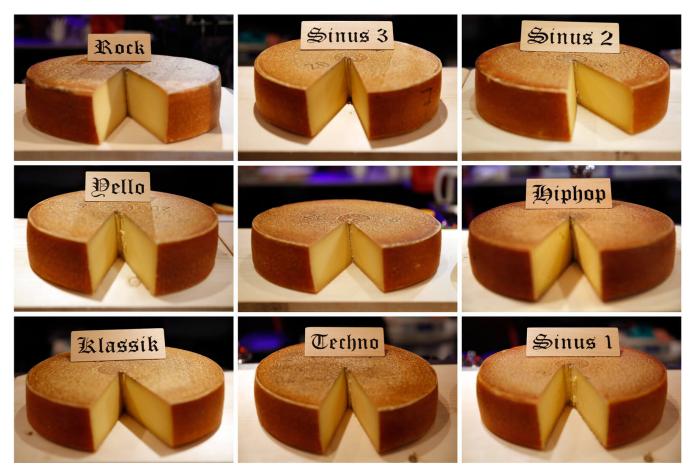
Grafik: watson • Quelle: WHO / tobaccoatlas • Daten herunterladen • Erstellt mit Datawrapper

Watson |

https://www.watson.ch/wissen/die%20welt%20in%20karten/812614572-dieseweltkarte-zeigt-welche-nationen-am-meisten/rauchen

Moronic study designs

Can hip-hop music make cheese tastier? Yes, says science!

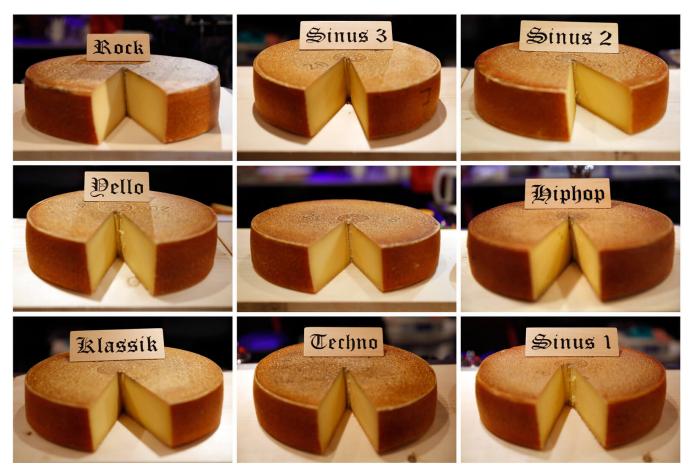


Newly Swissed https://www.newlyswissed.com/cheese-in-sound/

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Moronic study designs

And to push the idea even further, the project applied eight different types of sounds, one each per cheese wheel:

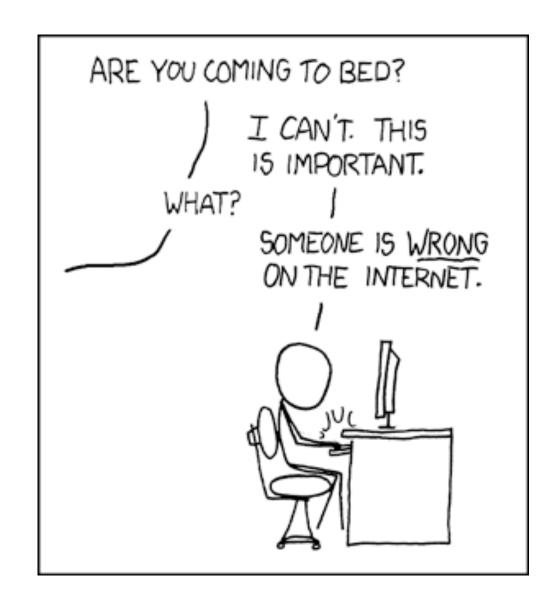


Newly Swissed|https://www.newlyswissed.com/cheese-in-sound/

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12

Debunking takes a lot of time



xkcd comics | https://xkcd.com/386/

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Gather, correct, disseminate

- Step 1: Gather examples of stupid statistics whenever you encounter them
- Step 2: Explain why the use of statistics is stupid in this particular case
- Step 3: Show how the particular use of statistics can be improved
- Step 4: Use repository as a resource for teaching, online discussions or for debunking

xkcd comics | https://xkcd.com/386/

How can you get involved?

- Visit <u>www.stupid-statistics.com</u>
- Contribute in gathering, correcting and improving stupid statistics
- If you use git: Send a pull request with quick explanation of why you believe it is stupid statistics.
- If you don't use git: Just send me an e-mail (servan.grueninger@reatch.ch)

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Thank you for your attention!