

Resources to give facts a fighting chance against misinformation

Bärbel Winkler and John Cook
EGU24 – EOS1.8 – Tuesday April 16, 2024



THE UNIVERSITY OF
MELBOURNE

Why resources to fight misinformation are needed



Skeptical Science

<https://skepticalscience.com>

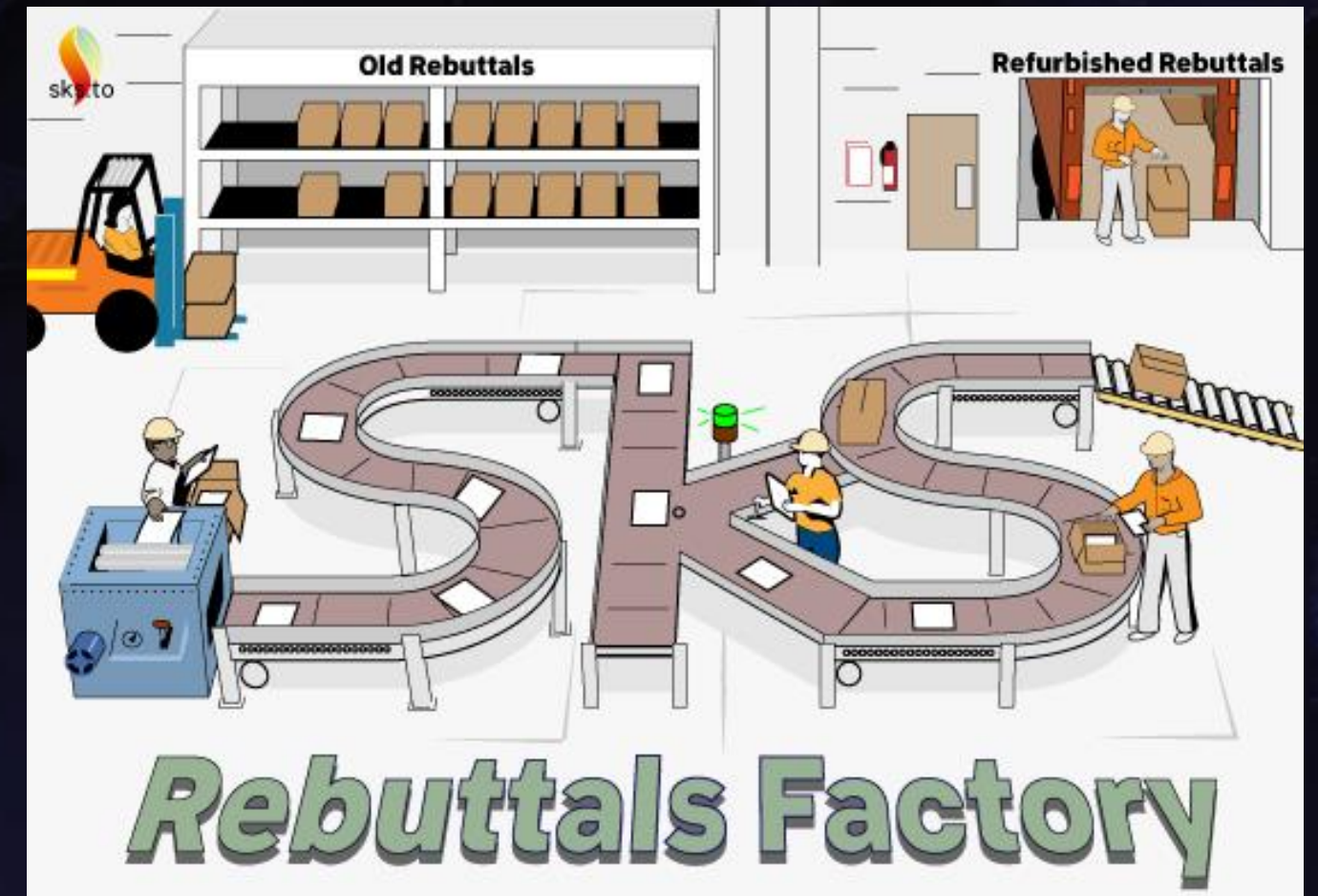


For detailed information about Skeptical Science please check the display presented at EGU2020

<https://sks.to/egu2020-display>

Skeptical Science – Rebuttal Updates

<https://sks.to/at-a-glance>



For detailed information about our rebuttal updates please check the display presented at EGU2023

<https://sks.to/egu23-abstract-1>

Skeptical Science – Rapid Debunking

<https://sks.to/hotmess>

„Climate – the Movie: a hot mess with (c)old myths!“ – 25 of them to be exact!



Climate - the Movie: Skeptical Science Myth Rebuttals Online *a hot mess of (c)old myths!*

<http://sks.to/keyword> Use "http://sks.to/" plus the keyword listed in the table to access the complete rebuttal on SkepticalScience.com

#1 sun ✓	#2 past ✓	#3 consensus	#4 cooling	#5 model ✓	#6 temp ✓	#7 1998	#8 1970s ✓	#9 iceage	#10 antarctica
#11 lag ✓	#12 impacts	#13 gore	#14 cosmic ✓	#15 cold ✓	#16 hurricane ✓	#17 1934 ✓	#18 hockey	#19 mars	#20 uhi ✓
#21 1500cycle	#22 arcticcycle	#23 sealevel	#24 vapor	#25 planets	#26 green	#27 oceanheat	#28 climategate	#29 co2	#30 sensitivity
#31 greenhouse ✓	#32 lia ✓	#33 midcentury	#34 glacier	#35 pre1940	#36 evidence	#37 bear ✓	#38 troposphere ✓	#39 kilimanjaro	#40 underestimat
#41 extreme	#42 pollutant	#43 correlat ✓	#44 greenland	#45 pastco2 ✓	#46 weather	#47 hotspot	#48 neptune	#49 jupiter	#50 pdo
#51 saturate	#52 pluto	#53 icecollapse	#54 volcano	#55 species	#56 wmp ✓	#57 co2data	#58 ocean	#59 elnino	#60 arctic
#61 schulte	#62 dropped	#63 slc	#64 aerosols	#65 microsite	#66 residence	#67 shift	#68 thermo	#69 significant	#70 warming
#71 falsify	#72 landuse	#73 settled	#74 winter	#75 methane	#76 500	#77 decline	#78 himalaya	#79 acid	#80 seapredict
#81 oreskes	#82 1995	#83 icemelt	#84 oceanco2	#85 agw	#86 co2up	#87 albedo	#88 snowfall	#89 hansen1988	#90 lindzenchoi
#91 acrim	#92 solarcycle	#93 spring	#94 oism	#95 watersun	#96 amazon	#97 chaos	#98 stratosphere	#99 searetract	#100 mauna
#101 driver	#102 trenberth	#103 ordovician	#104 southice	#105 amplify	#106 stopped	#107 diverge	#108 hulme	#109 cfc	#110 volcanodrop
#111 co2conc	#112 bright	#113 warmco2	#114 ozone	#115 microwave	#116 industrial	#117 icefraction	#118 toocold	#119 waste	#120 plant ✓
#124 greatlake	#125 runaway	#127 trace ✓	#128 overestimate	#129 breath	#130 iceloss	#131 royalsoc	#132 dmi	#133 fewdegrees	#134 humidity
#136 cycle	#137 fewdegrees	#139 toohard	#140 economy	#141 baseload	#143 cloud ✓	#144 tamper	#145 peerreview	#146 ipccskeptic	#147 foi
#148 bleach	#151 futurecool	#152 stomata	#153 name	#155 soares	#157 seaice	#158 linear	#159 snowcover	#160 atoll	#161 inertia
#162 trends	#163 10000	#164 ipccmwp	#168 ljungqvist	#169 limits	#170 highway	#171 removeco2	#172 urgent	#174 soot	#175 poor
#176 arctic1940	#177 expensive	#178 sealevelrise	#179 venus	#180 variable	#181 limitscool	#182 searise	#183 jobs	#185 gbr ✓	#186 negspencer
#187 loehle	#188 salby	#189 co2increase	#190 postma	#191 CERN ✓	#195 slr2010	#197 underground	#198 galileo	#199 northwest	#200 stepfunction
#201 tuvalu	#202 best	#204 planetary	#205 schmittner	#206 iris	#207 uah ✓	#209 santer	#210 accelerate	#211 ipccnatural	#212 thermostat
#213 survived	#214 himalayagrow	#215 pal	#216 nuclear	#217 seaice1940	#218 pastarctic	#219 arcticstorm	#220 sandy	#222 16years	#223 longtail
#225 solarminimum	#226 robust97	#227 akasofu	#228 confidence	#229 projections	#230 ipccpause	#232 heatwave	#233 fringe	#234 damagecosts	#235 adaptcheap
#236 meat	#237 satellite	#238 money	#239 holistic	#240 wildfires ✓					

(Available at : <http://skepticalscience.com/fixednum.php>)

sks.to

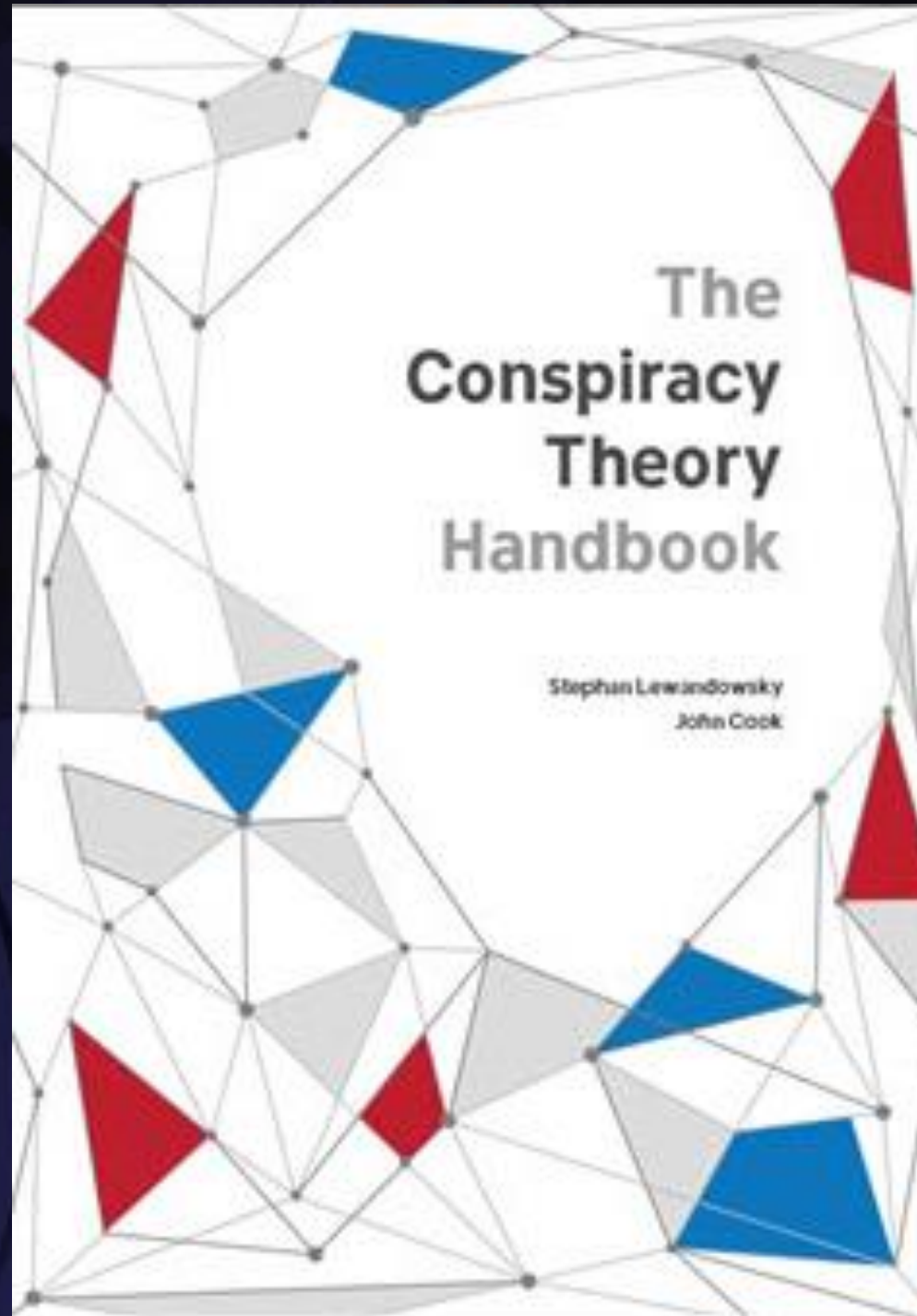
The Debunking Handbook 2020

<https://sks.to/debunk2020>



The Conspiracy Theory Handbook

<https://sks.to/conspiracy>



The seven traits of conspiratorial thinking

TRAITS OF CONSPIRATORIAL THINKING



Contradictory



Conspiracy theorists can simultaneously believe in ideas that are mutually contradictory. For example, believing the theory that Princess Diana was murdered but also believing that she faked her own death.³⁰ This is because the theorists' commitment to disbelieving the "official" account is so absolute, it doesn't matter if their belief system is incoherent.

Overriding suspicion



Conspiratorial thinking involves a nihilistic degree of skepticism towards the official account.³¹ This extreme degree of suspicion prevents belief in anything that doesn't fit into the conspiracy theory.

Nefarious intent



The motivations behind any presumed conspiracy are invariably assumed to be nefarious.³¹ Conspiracy theories never propose that the presumed conspirators have benign motivations.

Something must be wrong



Although conspiracy theorists may occasionally abandon specific ideas when they become untenable, those revisions don't change their overall conclusion that "something must be wrong" and the official account is based on deception.^{24, 30}

Persecuted victim



Conspiracy theorists perceive and present themselves as the victim of organized persecution.²⁹ At the same time, they see themselves as brave antagonists taking on the villainous conspirators. Conspiratorial thinking involves a self-perception of simultaneously being a victim and a hero.

Immune to evidence



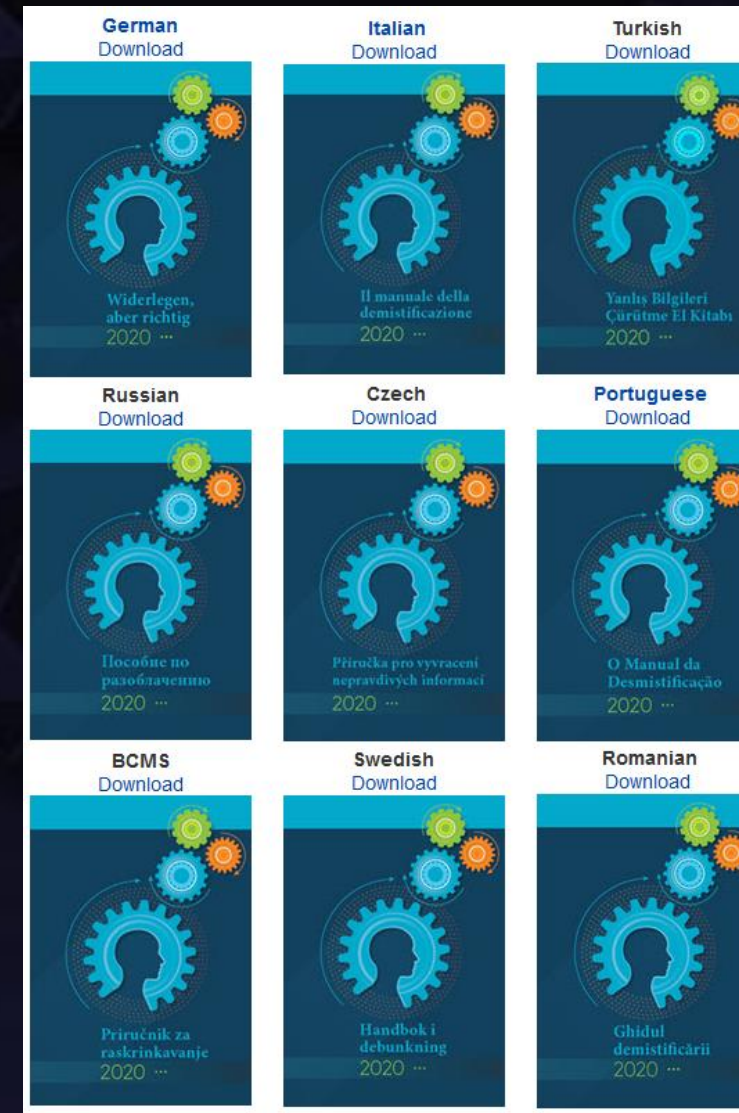
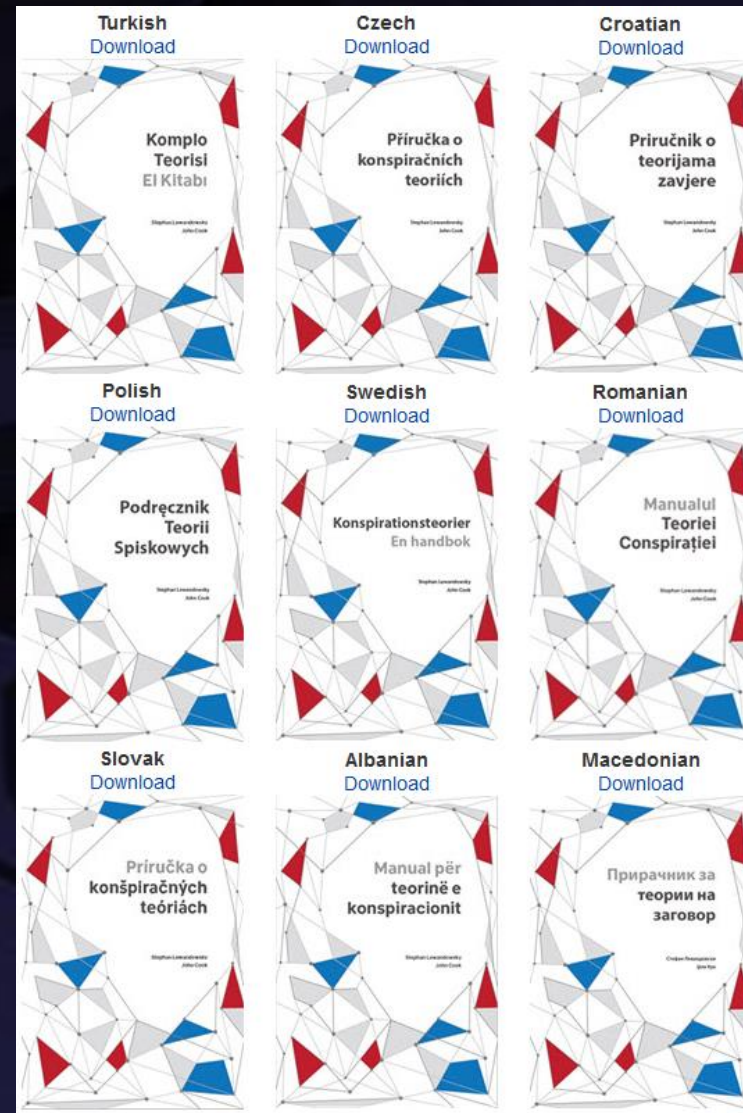
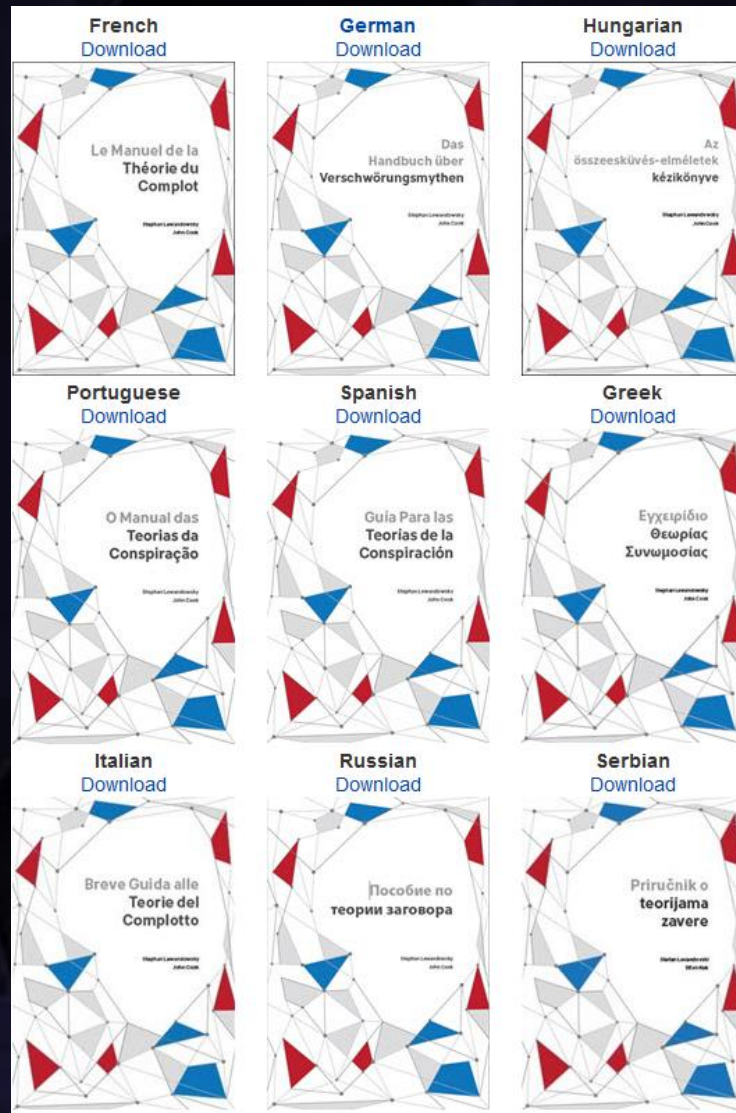
Conspiracy theories are inherently self-sealing—evidence that counters a theory is re-interpreted as originating from the conspiracy.^{31, 32, 33} This reflects the belief that the stronger the evidence against a conspiracy (e.g., the FBI exonerating a politician from allegations of misusing a personal email server), the more the conspirators must want people to believe their version of events (e.g., the FBI was part of the conspiracy to protect that politician).

Re-interpreting randomness



The overriding suspicion found in conspiratorial thinking frequently results in the belief that nothing occurs by accident.³⁴ Small random events, such as intact windows in the Pentagon after the 9/11 attacks, are re-interpreted as being caused by the conspiracy (because if an airliner had hit the Pentagon, then all windows would have shattered³⁵) and are woven into a broader, interconnected pattern.

Translations



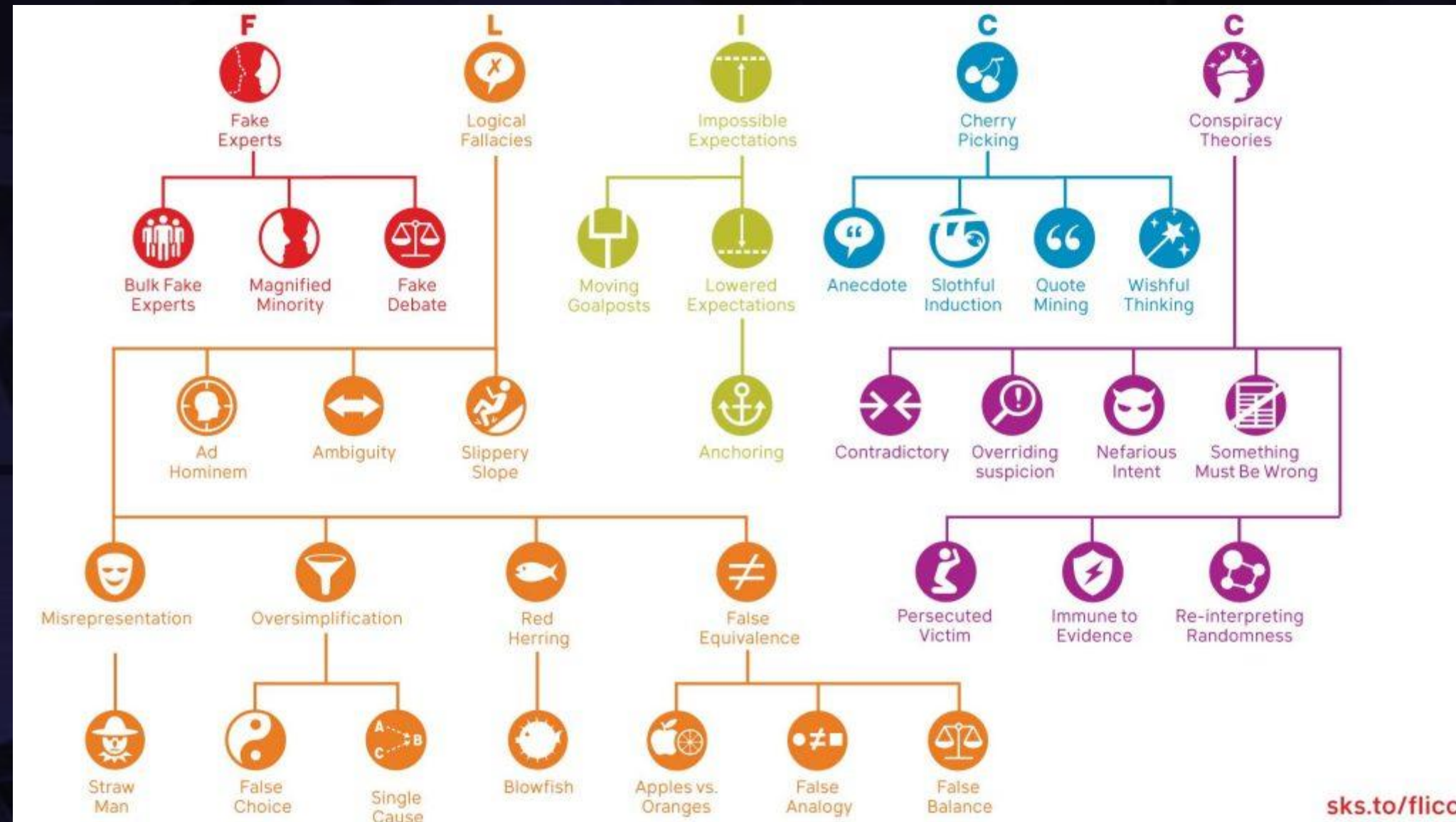
Both handbooks have been translated by volunteers into at least 18 languages by now!

Explain the techniques used to distort the facts



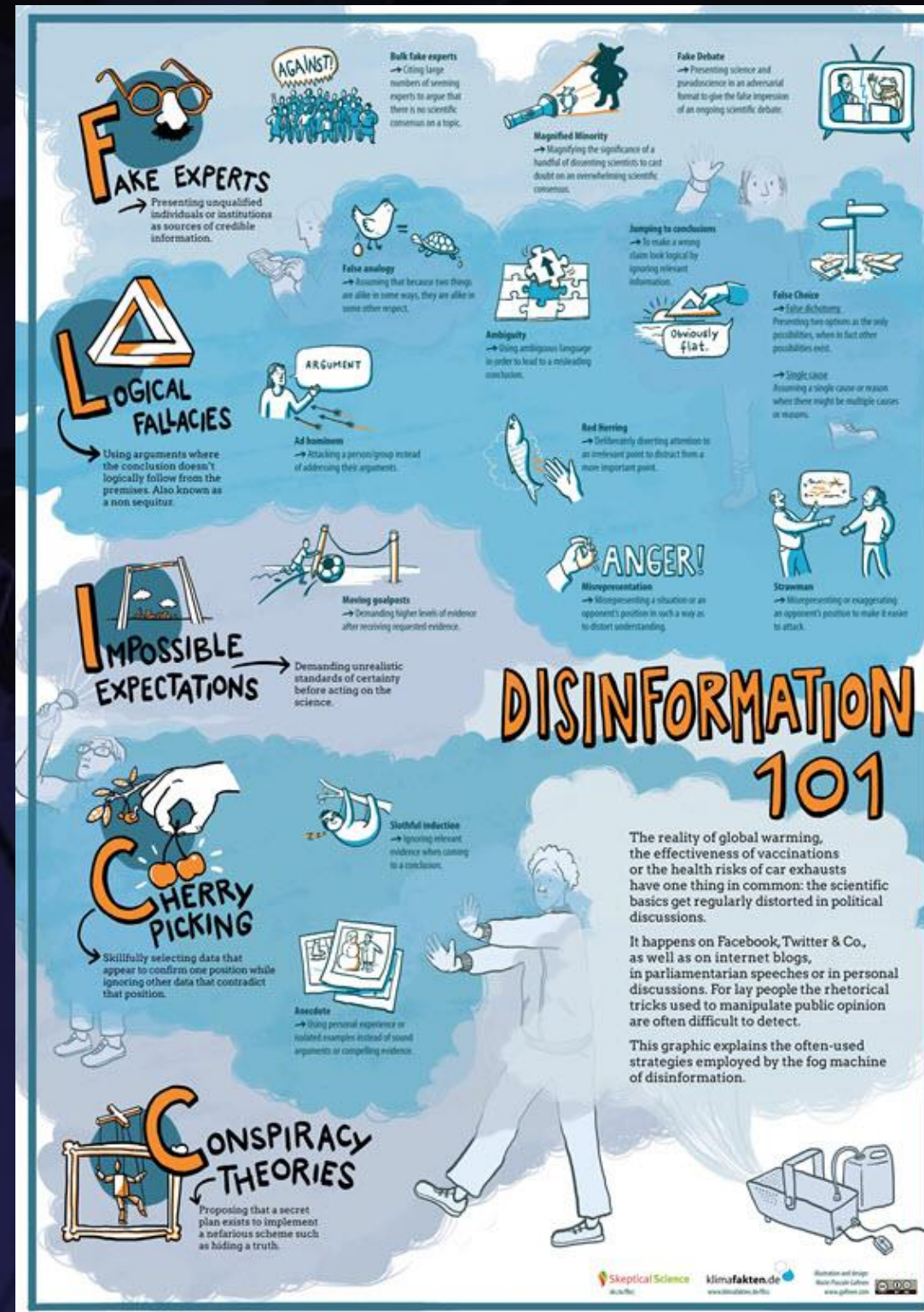
FLICC – the techniques of science denial

<https://sks.to/flicc-sks>



The FLICC Poster

<https://sks.to/flicc-poster>



Cranky Uncle Game

<https://crankyuncle.com/game>



Cranky Uncle Game



sks.to/crankyiphone



sks.to/crankyandroid



sks.to/crankybrowser

Translations
<https://sks.to/crankym1>



The Teachers' Guide to Cranky Uncle

<https://sks.to/crankyguide>

the Teachers' Guide to Cranky Uncle

I PREFER
OLD SCHOOL!



JOHN COOK



Bärbel Winkler

Skeptical Science



baerbelw@skepticalscience.com

<https://sks.to/BaerbelW>

John Cook



john@skepticalscience.com

<https://sks.to/JohnCook>

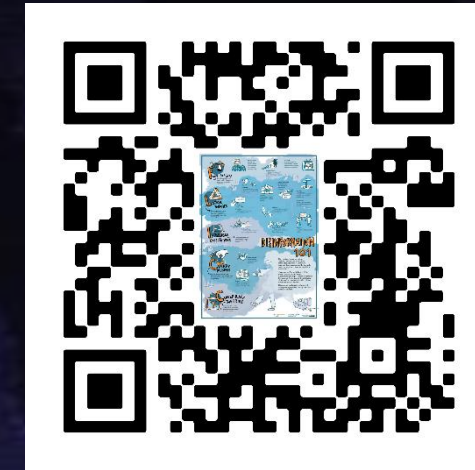
QR-Codes to some resources



Website Skeptical
Science



John Cook's Cranky
Uncle website



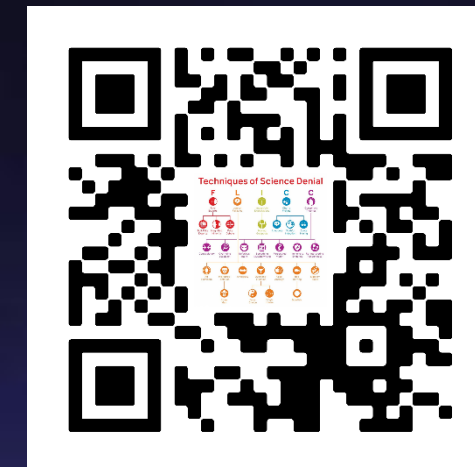
FLICC Poster



The Debunking
Handbook 2020



The Conspiracy
Theory Handbook



History of FLICC

Resources & References

Lewandowsky, S., & Cook, J. (2020). The Conspiracy Theory Handbook. Available at <https://sks.to/conspiracy>

Lewandowsky, S., Cook, J., Ecker, U. K. H., Albarracín, D., Amazeen, M. A., Kendeou, P., Lombardi, D., Newman, E. J., Pennycook, G., Porter, E. Rand, D. G., Rapp, D. N., Reifler, J., Roozenbeek, J., Schmid, P., Seifert, C. M., Sinatra, G. M., Swire-Thompson, B., van der Linden, S., Vraga, E. K., Wood, T. J., Zaragoza, M. S. (2020). The Debunking Handbook 2020. Available at <https://sks.to/db2020>. DOI:10.17910/b7.1182

Cook (2020). Deconstructing climate science denial. In Holmes, D. & Richardson, L. M. (Eds.) Research Handbook on Communicating Climate Change. Cheltenham, UK: Edward Elgar Publishing. <https://doi.org/10.4337/9781789900408.00014>

Cook, J. (2021). Cranky Uncle: a game building resilience against climate misinformation. Plus Lucis, 3(2021), 13-16

Resources to give facts a fighting chance against misinformation

Bärbel Winkler and John Cook
EGU24 – EOS1.8 – Tuesday April 16, 2024



THE UNIVERSITY OF
MELBOURNE