CNIC PhDay
22nd November 2019

A Short Trip Around the Research Misconduct: Framework and Stories of Dishonesty

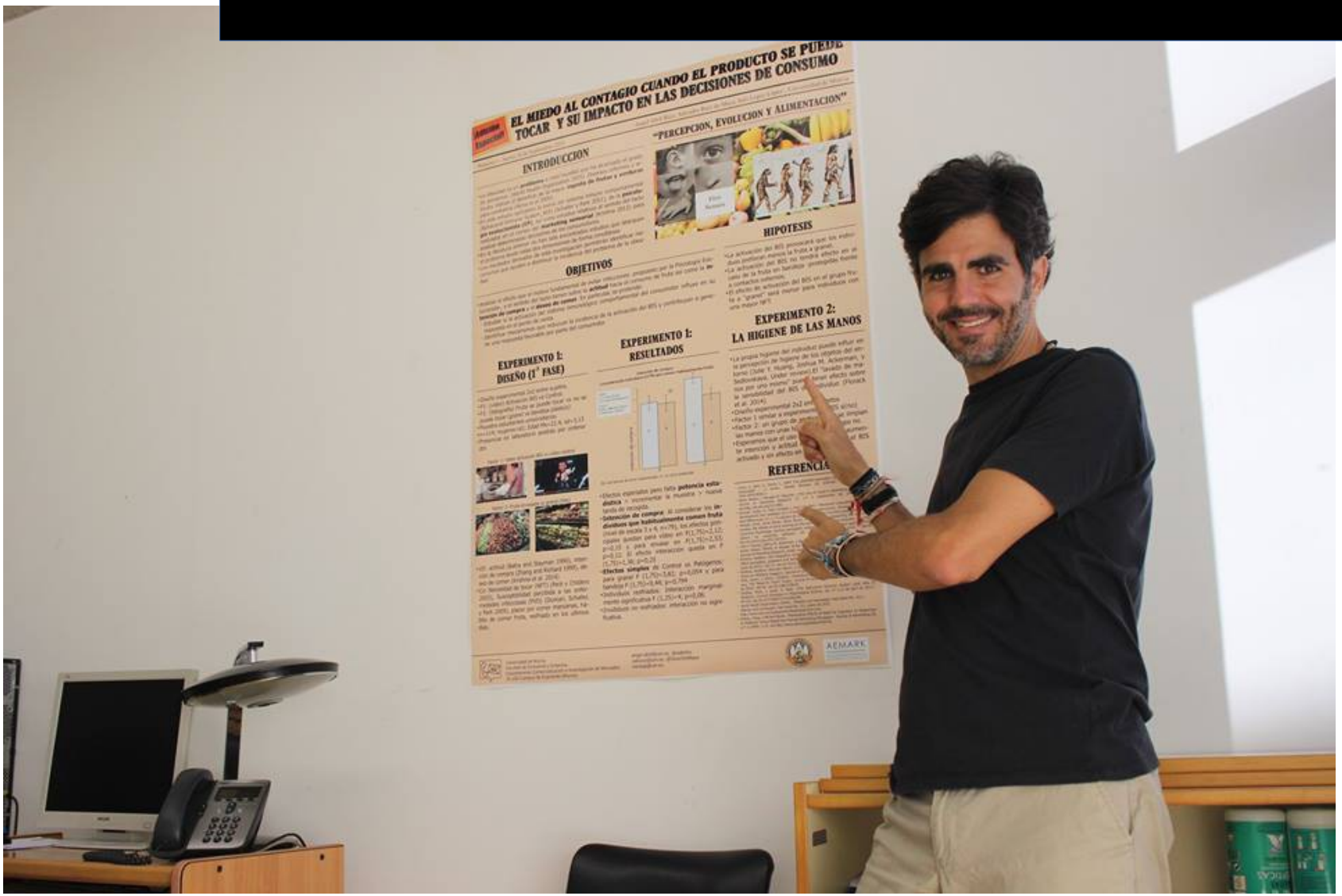
Angel Abril-Ruiz
@aabrilru
http://angel.abrilruiz.es


EL MULETAS


EL MULE

This presentation is dow

Personal motivation on research misconduct



Some participants doing a experiment.
15 April 2015

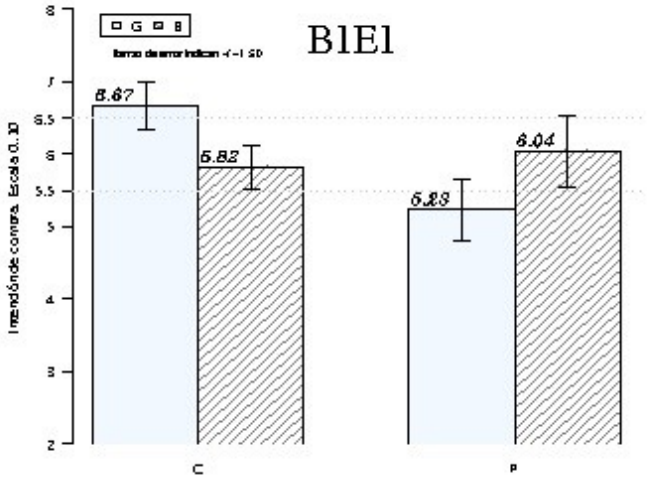
Participants watching a video manipulation and using wipes (towels one use) (2º manipulation). April 2016

- Around **4000 people impacted** with pretests, pilots and experiments.

- Around **500 people** participated in **face-to-face experiments**.

- **4 experiments** 2x2 between subjects
- **4 studies**
- **2 Congresses**: **1 poster; 2 working papers**
- several pretests + video productions + resources for manipulations + ...

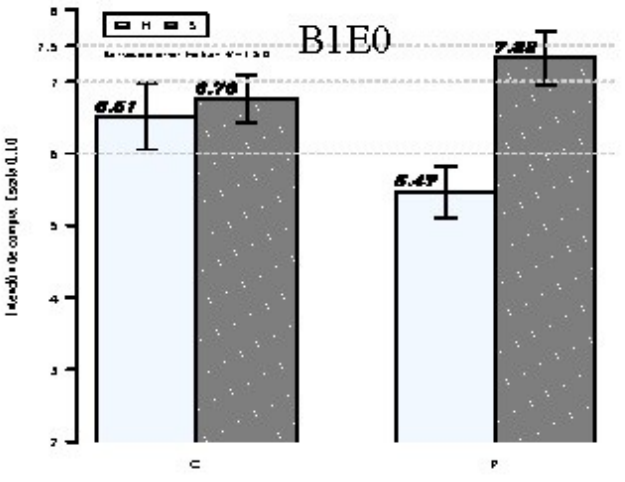
Gráficas finales experimentos tesis @aabrilru. 7JUL16




```
> Anova (mod, type = 3)
Anova Table (Type III tests)

Response: intencion
              Sum Sq  Df  F value  Pr(>F)
(Intercept)  4236.4   1 895.0823 < 2e-16 ***
video          11.0   1   2.3243 0.13009
envase          0.0   1   0.0018 0.96660
video:envase   20.6   1   4.3432 0.03935 *
Residuals     549.0 116
---
```

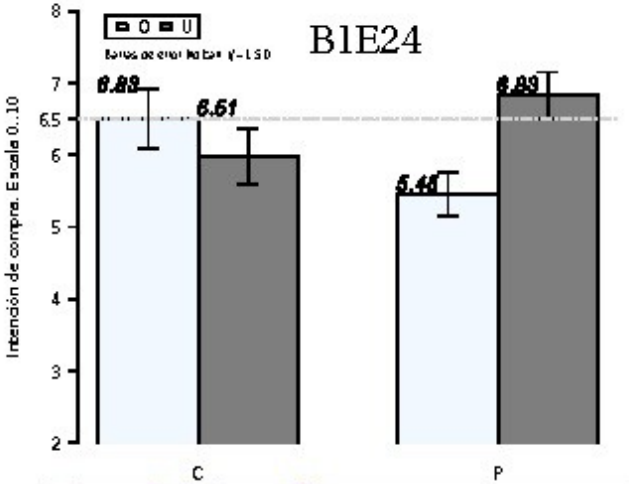
```
> testInteractions(mod, fixed="envase", pairwise="video
F Test:
P-value adjustment method: none
           Value  Df Sum of Sq      F  Pr(>F)
C-P : B  -0.22222   1      0.74 0.1565 0.69312
C-P : G   1.43333   1     30.82 6.5110 0.01202 *
Residuals         116    549.03
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0
> testInteractions(mod, fixed="video", pairwise="envas
F Test:
P-value adjustment method: none
           Value  Df Sum of Sq      F Pr(>F)
B-G : C  -0.84444   1     10.70 2.2599 0.1355
B-G : P   0.81111   1      9.87 2.0851 0.1514
Residuals         116    549.03
```




```
> Anova (mod, type = 3)
Anova Table (Type III tests)

Response: intencion
              Sum Sq  Df   F value    Pr(>F)
(Intercept)   7262.1   1 1175.0015 < 2.2e-16 ***
textobis         2.4   1    0.3942  0.530956
textoinfo       47.8   1    7.7356  0.006026 **
textobis:textoinfo 28.0   1    4.5380  0.034590 *
Residuals     1050.7 170
---
```

```
F Test:
P-value adjustment method: none
           Value  Df Sum of Sq      F  Pr(>F)
C-P : H  1.04901   1     22.27 3.6038 0.05934 .
C-P : S -0.57143   1      7.38 1.1948 0.27590
Residuals         170   1050.68
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1
> testInteractions(mod, fixed="textobis", pairwise="text
none")
F Test:
P-value adjustment method: none
           Value  Df Sum of Sq      F    Pr(>F)
H-S : C -0.24762   1      1.25 0.2025 0.6532448
H-S : P -1.86806   1     78.17 12.6475 0.0004873 ***
Residuals         170   1050.68
---
```




```
> Anova (mod, type = 3)
Anova Table (Type III tests)

Response: intencion
              Sum Sq Df   F value    Pr(>F)
(Intercept)  3835.7  1 1197.6284 < 2.2e-16 ***
video           0.3  1    0.0888  0.766337
toallita        4.6  1    1.4210  0.236179
video:toallita 22.4  1    6.9953  0.009548 **
Residuals     307.5 96
---
```

```
F Test:
P-value adjustment method: none
           Value Df Sum of Sq      F Pr(>F)
C-P : O   1.0533  1     13.869 4.3303 0.0401 *
C-P : U  -0.8400  1      8.820 2.7539 0.1003
Residuals         96    307.467
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.
> testInteractions(mod, fixed="video", pairwise="to
")
F Test:
P-value adjustment method: none
           Value Df Sum of Sq      F   Pr(>F)
O-U : C   0.5200  1      3.380 1.0553 0.306863
O-U : P  -1.3733  1     23.576 7.3610 0.007901 **
Residuals         96    307.467
---
```

Gráficas finales experimentos tesis @aabrilru. 7JUL16

My bottomless pit...

Source:https://www.portalfruticola.com/noticias/2016/05/05/como-hacer-pozos-profundos-consideraciones-tecnicas-y-legales/


«Amanece en Cap de Creus»
Inicio del GR 11. 850Km hasta Cabo Higuer
17/08/2017, 06:58h

«Amanece en Cap de Creus»

Inicio del GR 11. 850Km hasta Cabo Higuer

17/08/2017, 06:58h

850 Km

40.000 m d+

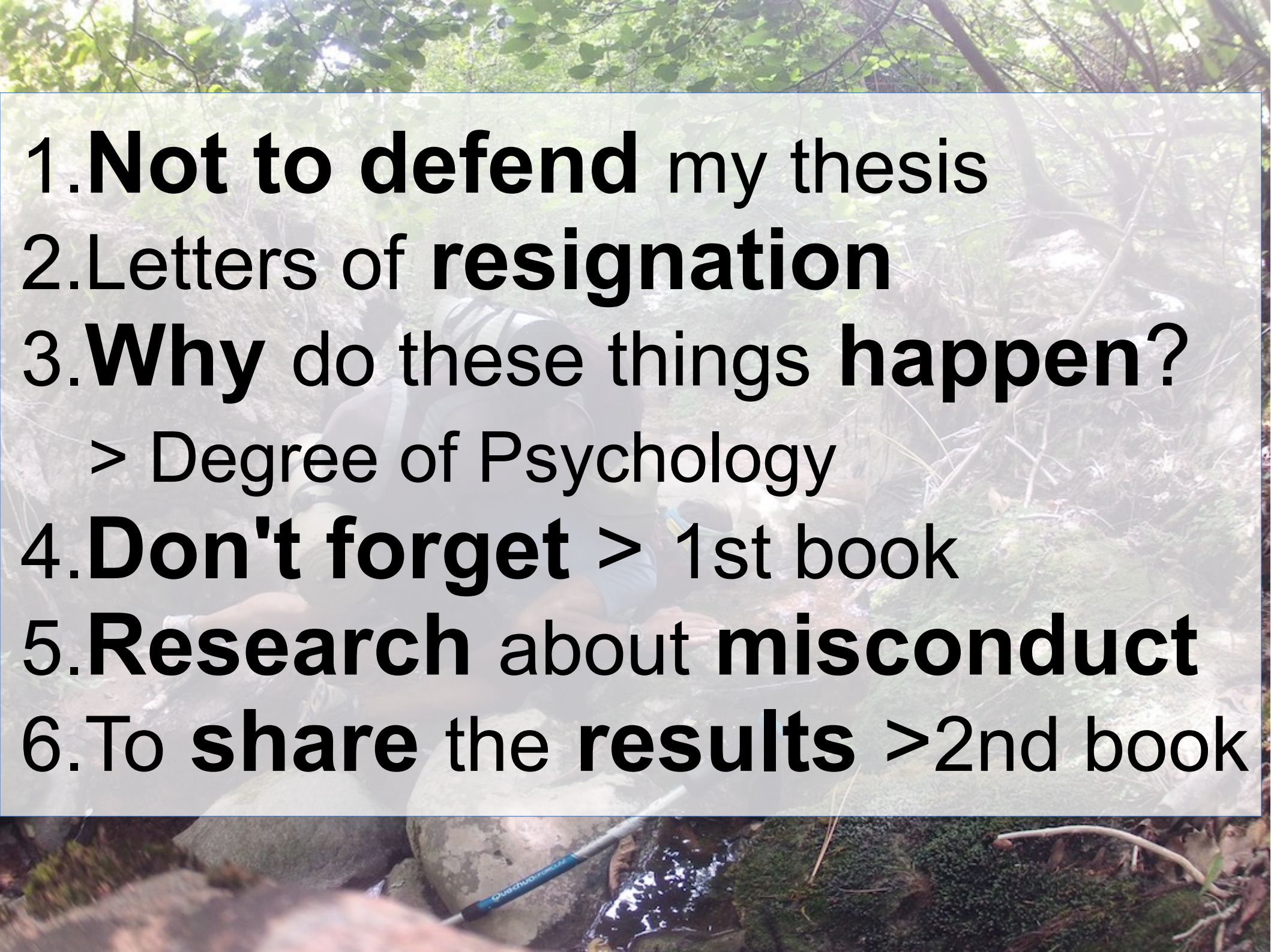
20 days (one **mountain marathon per day**)

Without using shelters

I cried every day....

Who really am I? :)

But little by little
the SMILE
came back...


1. **Not to defend** my thesis
2. Letters of **resignation**
3. **Why** do these things **happen**?
> Degree of Psychology
4. **Don't forget** > 1st book
5. **Research** about **misconduct**
6. To **share** the **results** >2nd book

efend my thesis

resignation

hese things **happen**?

> Degree of Psychology

4. **Don't forget** > 1st book
5. **Research** about **misconduct**
6. To **share** the **results** >2nd book

efend my thesis

resignation

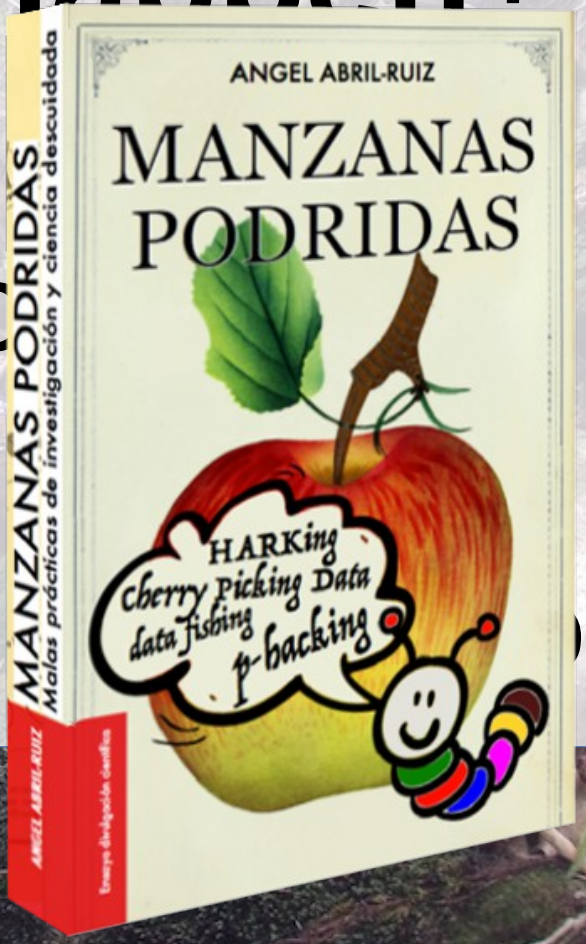
hese things **happen**?

> Degree of Psychology

4. **Don't forget** > 1st bo

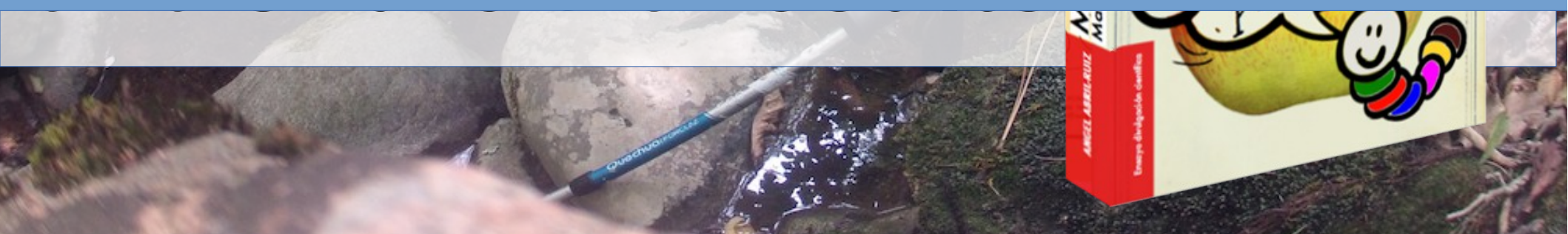
5. **Research** about **mis**

6. To **share** the **results**



efend my thesis

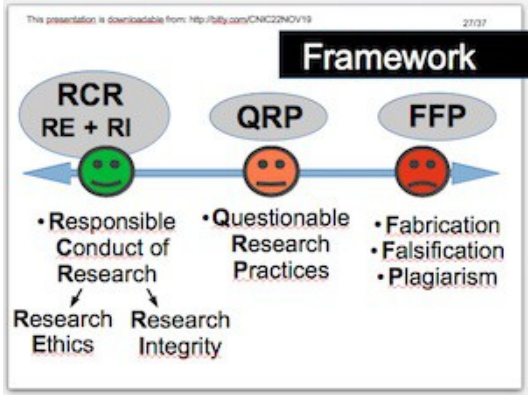
Both books are Creative Commons and available for free download



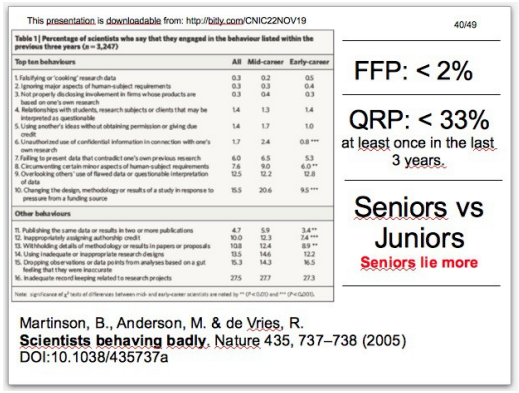
This presentation is downloadab

A breath... So far...

Part 1:
Personal motivation



Part 2: Framework
What is what?

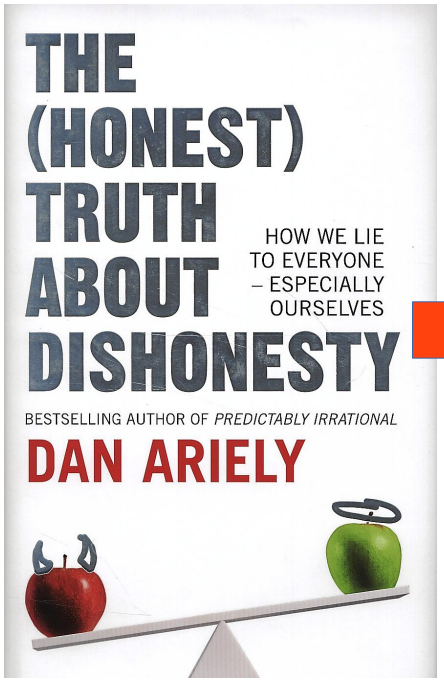


Part 3: Evidence
Some studies

Syllogism (logic)

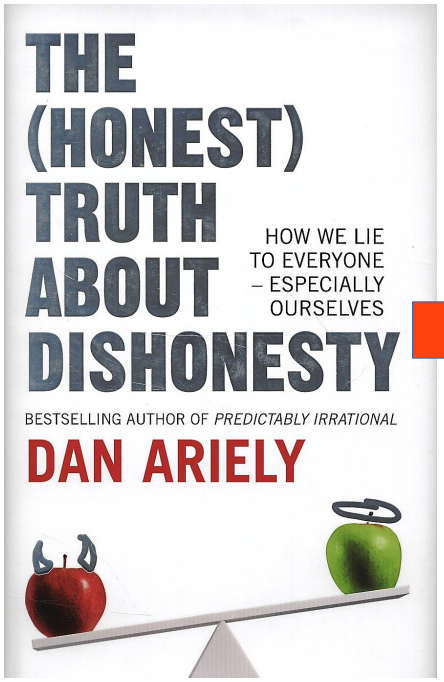
Syllogism (logic)

1.A lot of people lie.



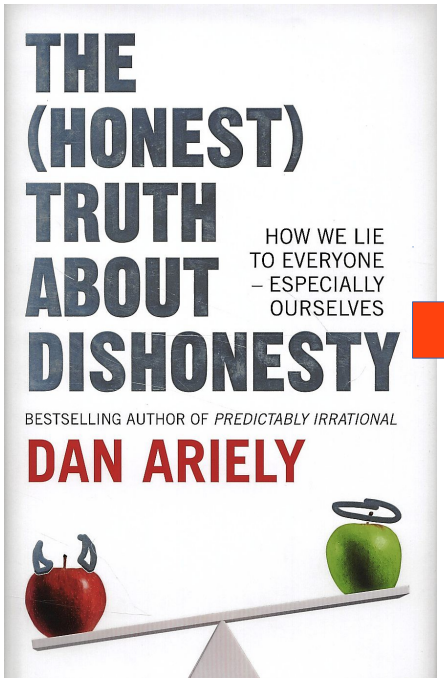
Syllogism (logic)

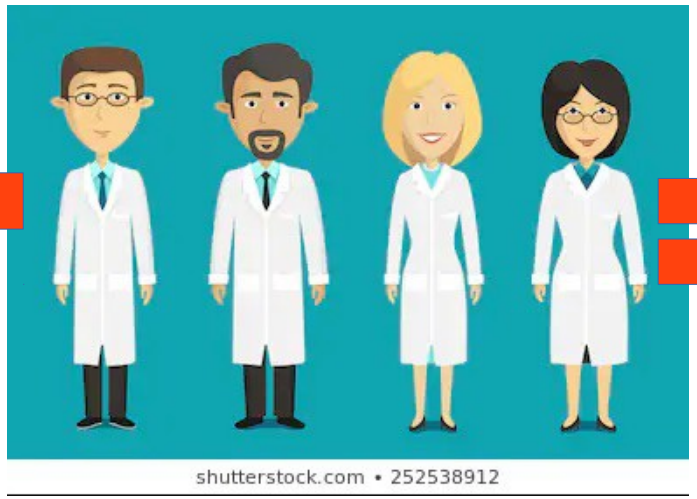
1. A lot of people lie.
2. Scientists are people.



Syllogism (logic)

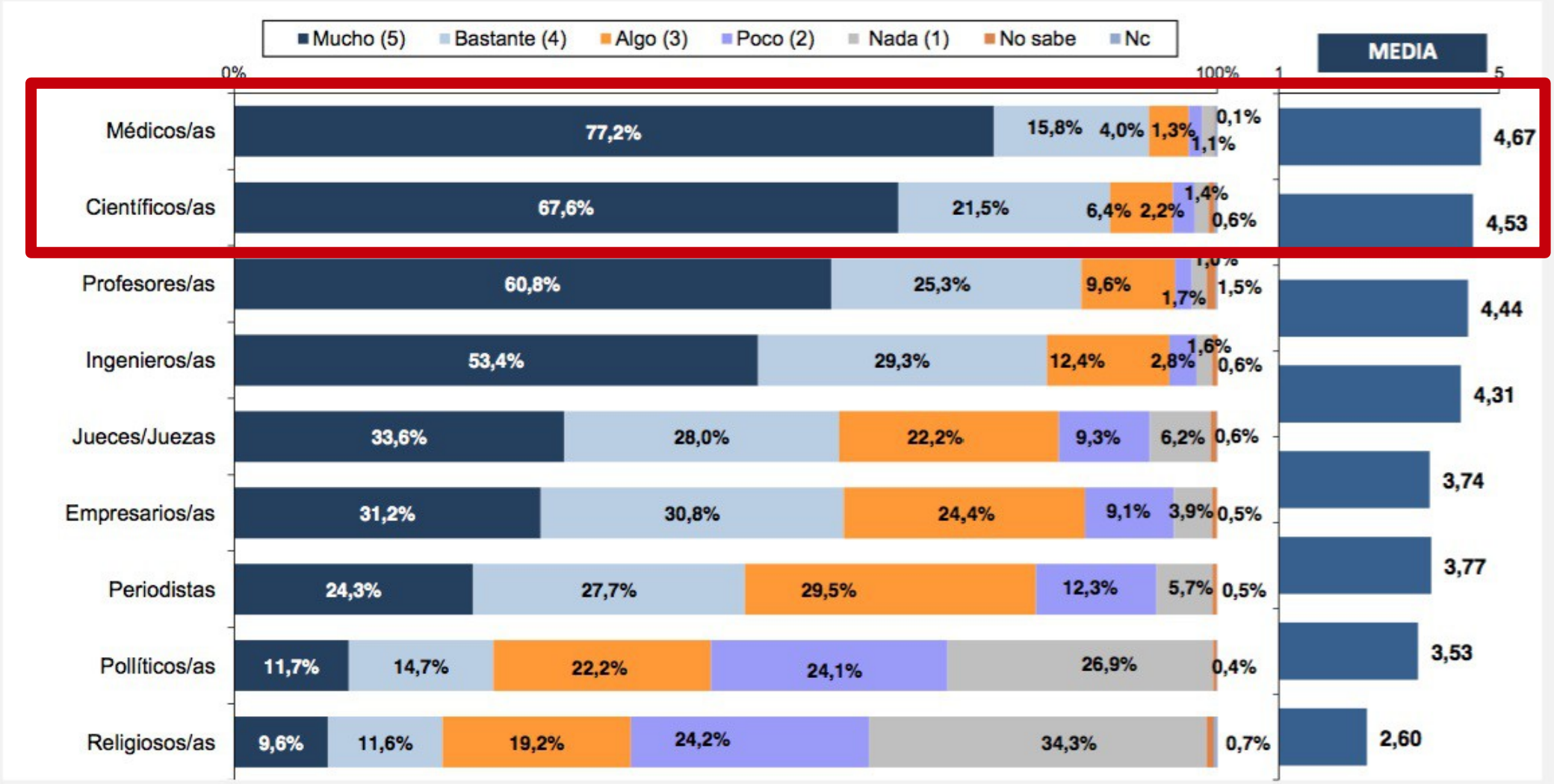
1. A lot of people lie.
2. Scientists are people.
3. A lot of scientists lie.





B.3. Imagen social de la profesión científica

A CONTINUACIÓN, NOS GUSTARÍA QUE NOS DIJERA EN QUÉ MEDIDA VALORA CADA UNA DE LAS PROFESIONES O ACTIVIDADES QUE LE VOY A LEER. PARA ELLO USAREMOS UNA ESCALA DEL 1 AL 5, DONDE EL 1 SIGNIFICA QUE USTED LA VALORA MUY POCO Y EL 5 QUE LA VALORA MUCHO. PUEDE UTILIZAR CUALQUIER PUNTUACIÓN INTERMEDIA PARA MATIZAR SUS OPINIONES. (P.8A)



Base: Total de personas entrevistadas (n=5.200).

source: https://icono.fecyt.es/sites/default/files/filepublicaciones/18/epscyt2018_informe_0.pdf
source: https://www.desicomments.com/smileys/strange-smiley-pic/

B.3. Imagen social de la profes

A CONTINUACIÓN, NOS GUSTARÍA QUE NOS DIJE… USAREMOS UNA ESCALA DEL 1 AL 5, DONDE E… NES O ACTIVIDADES QUE LE VOY A LEER. PARA ELLO …E LA VALORA MUCHO. PUEDE UTILIZAR CUALQUIER (P.8A)

Cognitive disonance for people/society

Base: Total de personas entrevistadas (n=5.200).

source: https://icono.fecyt.es/sites/default/files/filepublicaciones/18/epscyt2018_informe_0.pdf
source: https://www.desicomments.com/smileys/strange-smiley-pic/

nature
International journal of science

Commentary | Published: 08 June 2005

Scientists behaving badly

Brian C. Martinson, Melissa S. Anderson & Raymond de Vries

Nature **435**, 737–738 (2005) | Download Citation
3829 Accesses | **545** Citations | **131** Altmetric | Metrics »

Surveys over 3247

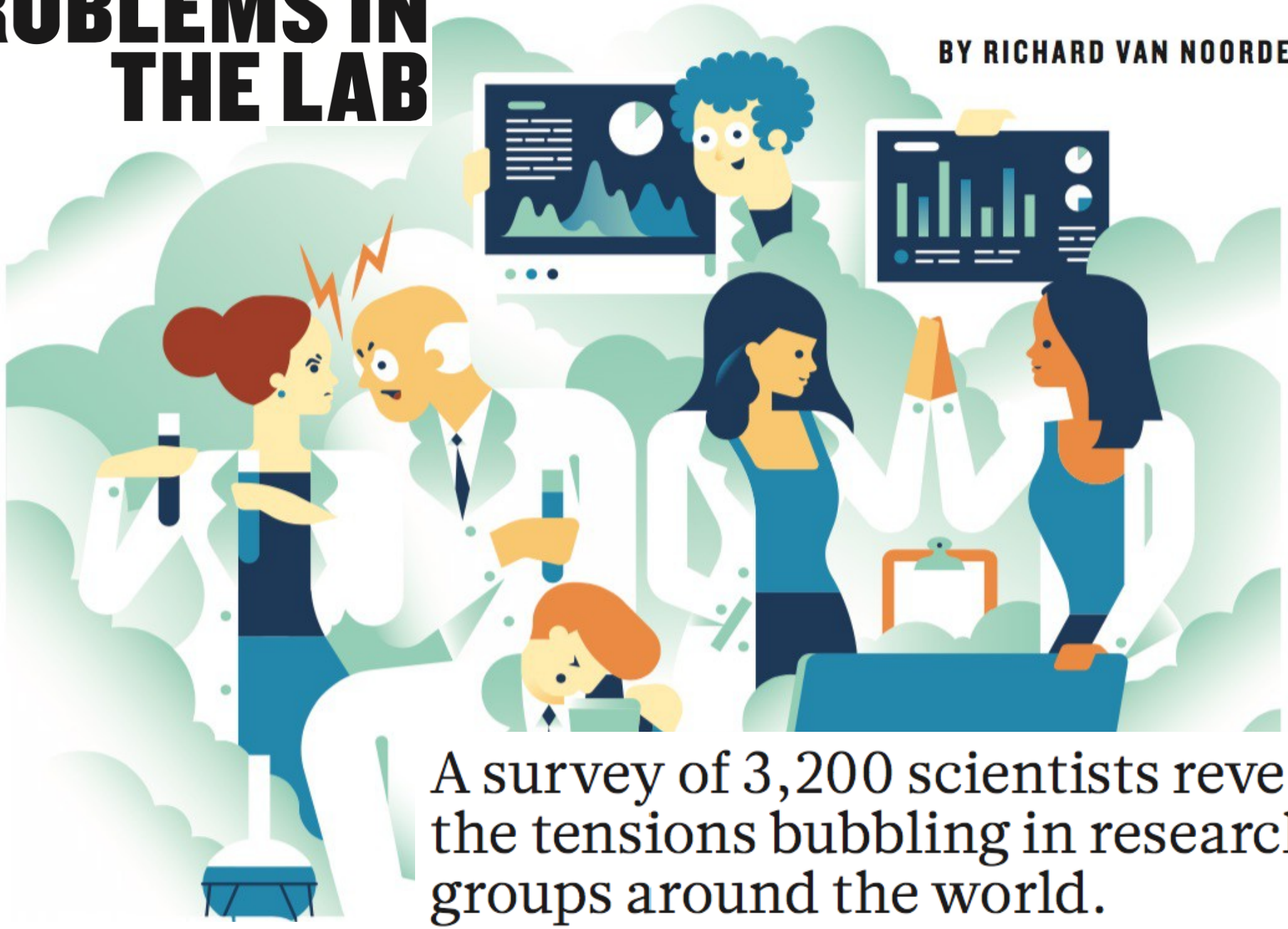
US-NIH funded researchers

33% of the participants (scientists) **admited** Questionable Research Practices

LEADERSHIP PROBLEMS IN THE LAB

http://bitly.com/CNIC22NOV19

BY RICHARD VAN NOORDEN



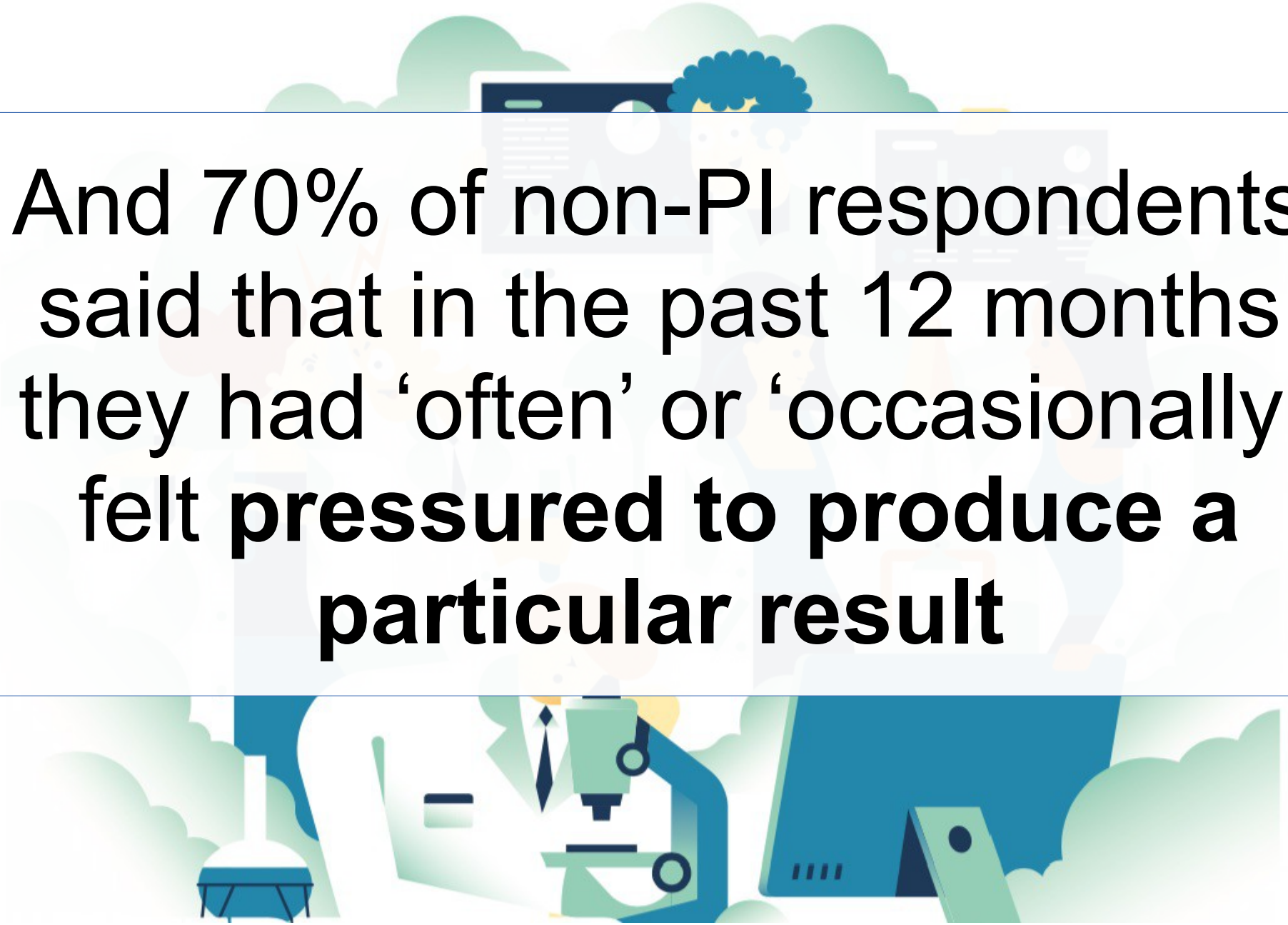
A survey of 3,200 scientists reveals the tensions bubbling in research groups around the world.

LEADERSHIP PROBLEMS IN THE LAB

BY RICHARD VAN NOORDEN

«Some hard numbers on science's leadership problems», Nature (2018)
DOI: 10.1038/d41586-018-05143-8

A survey of 3,200 scientists reveals the tensions bubbling in research groups around the world.



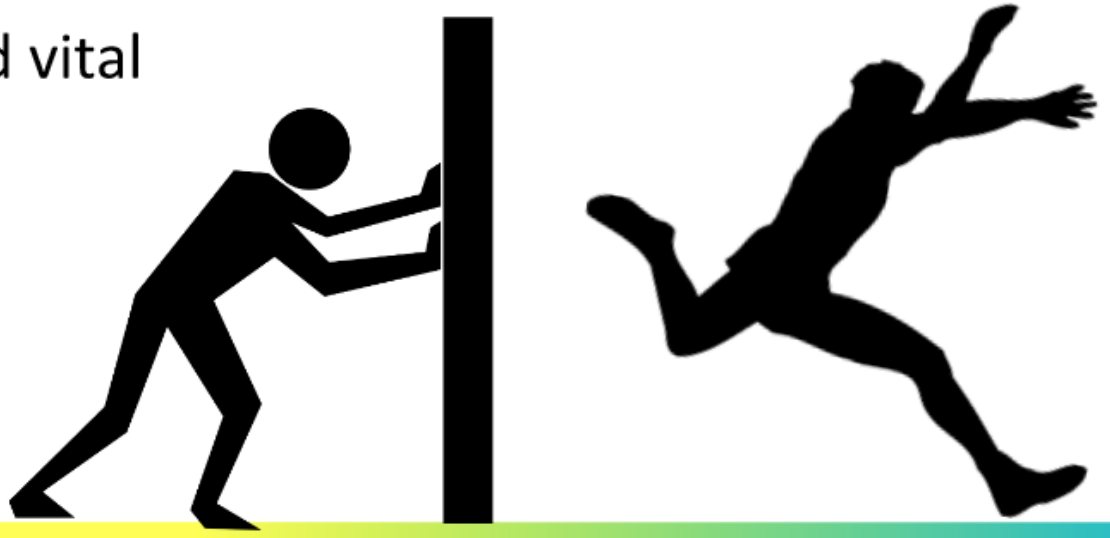
And 70% of non-PI respondents said that in the past 12 months they had ‘often’ or ‘occasionally’ felt **pressured to produce a particular result**

Joaquín Sevilla's metaphor

Las dos modalidades de engaño personal

Siguiendo a F. di Trocchio

La ciencia como actitud vital



La ciencia como profesión

Intachable

Corrupto

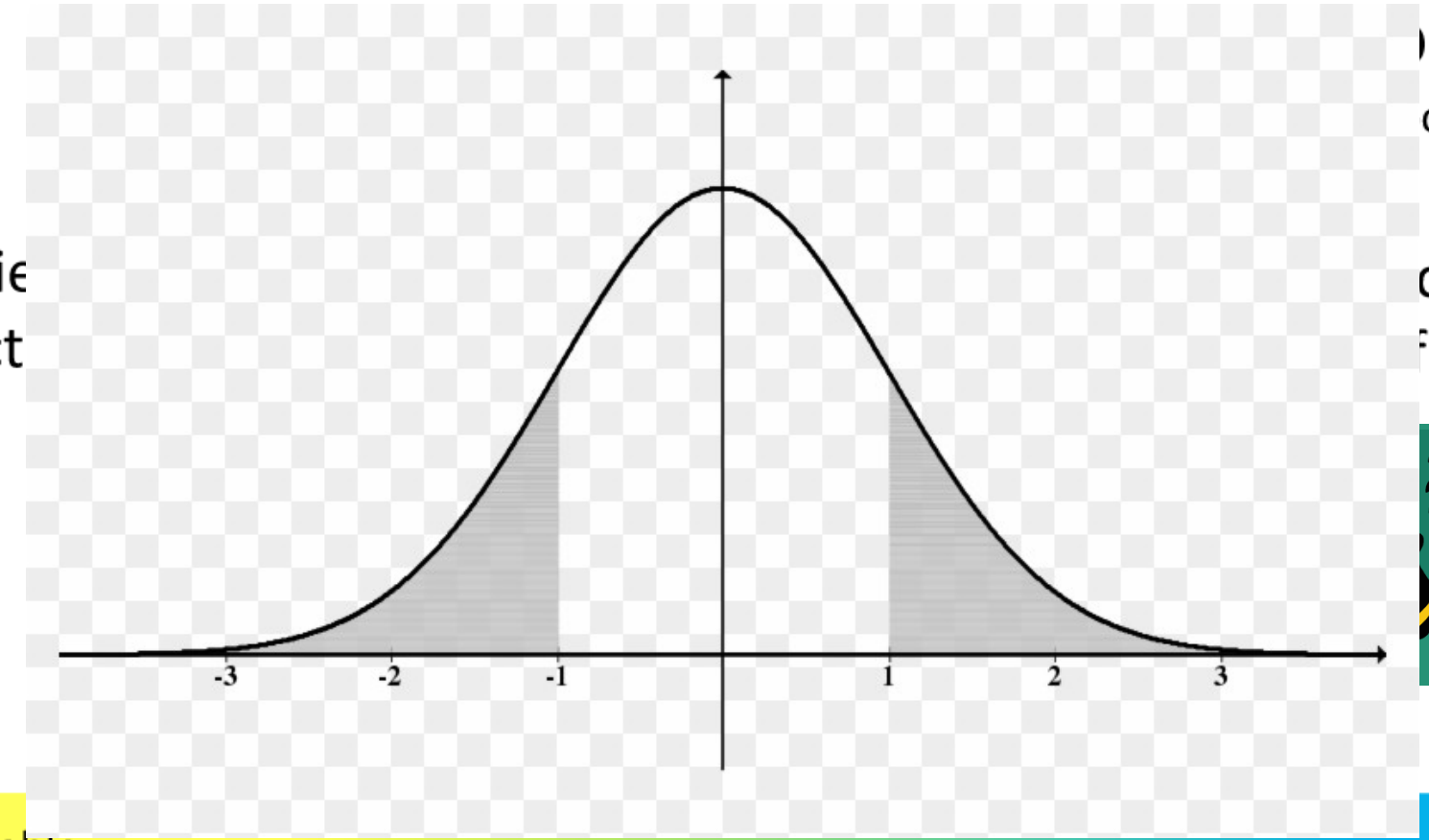
Obcecado con demostrar la veracidad de su hipótesis

Umbral de lo aceptable

Obcecado con conseguir resultados valiosos en la carrera profesional

http://joaquinsevilla.blogspot.com/2017/03/ciencia-patologica-y-patologia-editorial.html

Joaquín Sevilla's metaphor



nal

cchio

La cie

act

cia como

fesión

Intachable

Corrupto

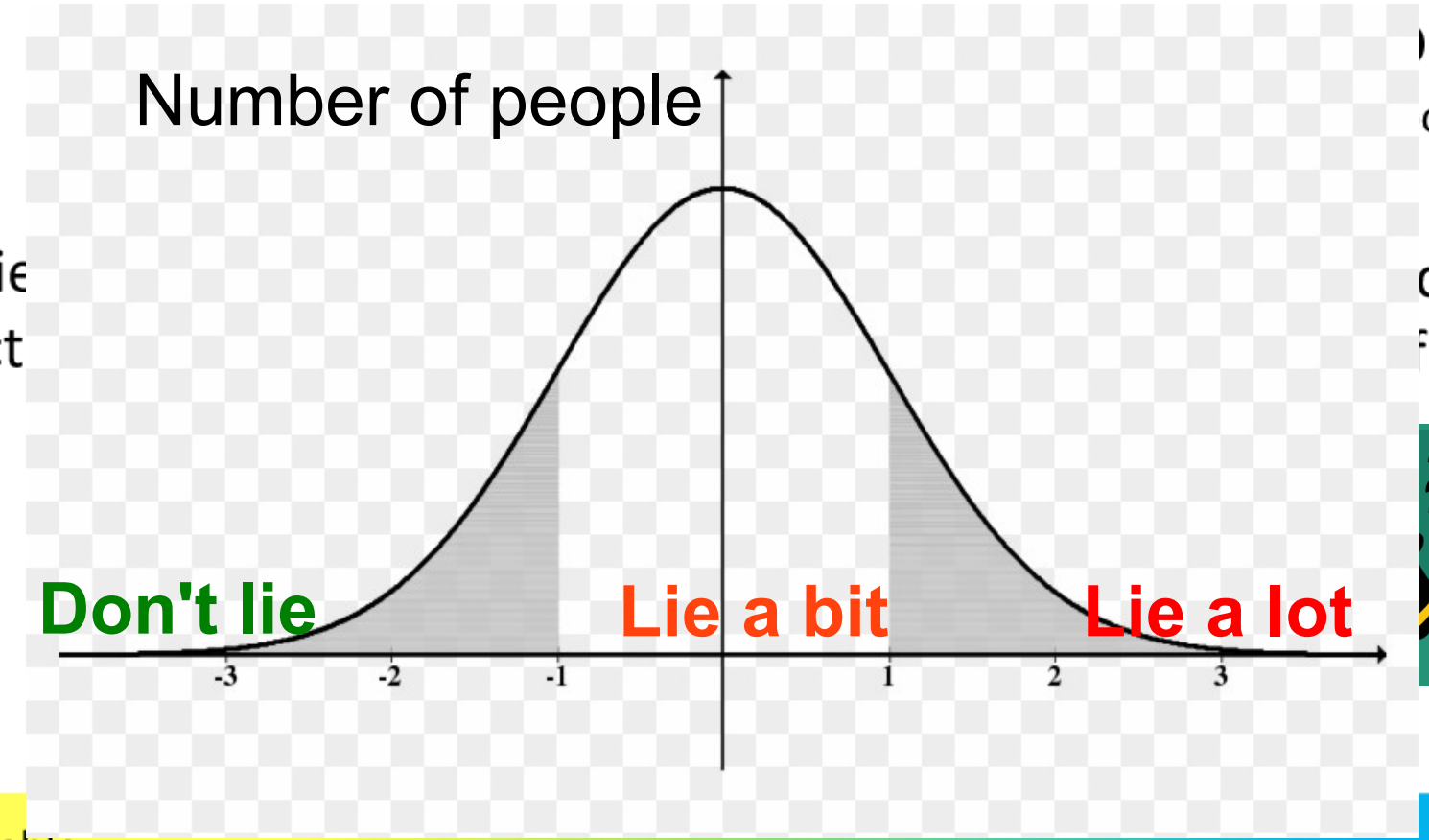
Obcecado con demostrar la veracidad de su hipótesis

Umbral de lo aceptable

Obcecado con conseguir resultados valiosos en la carrera profesional

http://joaquinsevilla.blogspot.com/2017/03/ciencia-patologica-y-patologia-editorial.html

Joaquín Sevilla's metaphor



La cie
act
nal
cchio
cia como
esión

Intachable

Corrupto

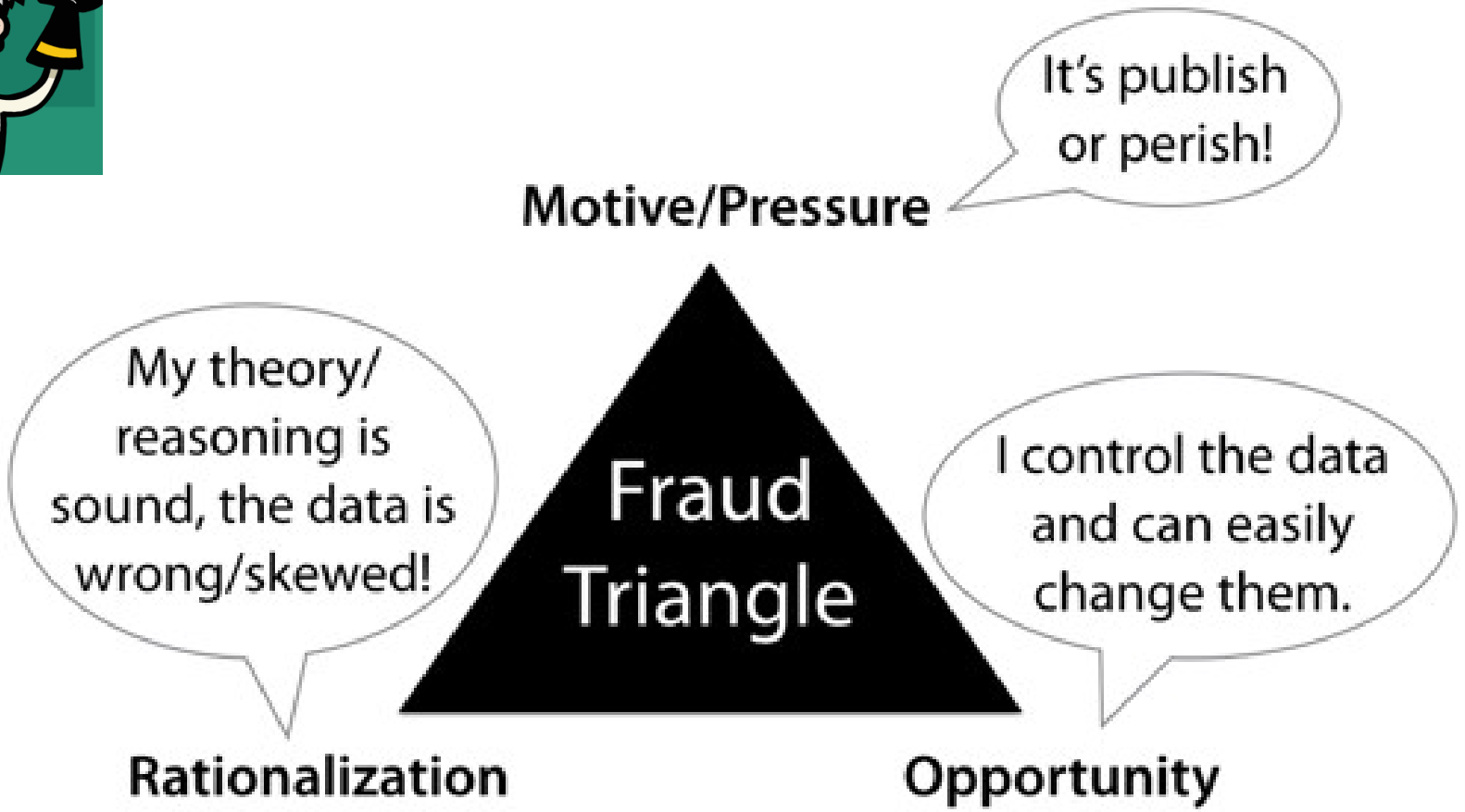
Obcecado con demostrar la veracidad de su hipótesis

Umbral de lo aceptable

Obcecado con conseguir resultados valiosos en la carrera profesional

http://joaquinsevilla.blogspot.com/2017/03/ciencia-patologica-y-patologia-editorial.html

The problem of the aggregated behaviour



Fraud Triangle (by Donald R. Cressey) adapted to Scientific Misconduct

Adapted by Daniel Wessel. Available from: http://www.organizingcreativity.com/2014/08/using-the-fraud-triangle-to-explain-scientific-misconduct/

Yes, scientists are human beings :)

Adapted by Daniel Wessel. Available from: http://www.organizingcreativity.com/2014/08/using-the-fraud-triangle-to-explain-scientific-misconduct/

Research Integrity

Be careful: “integrity” is different to “ethics”

Research misconduct

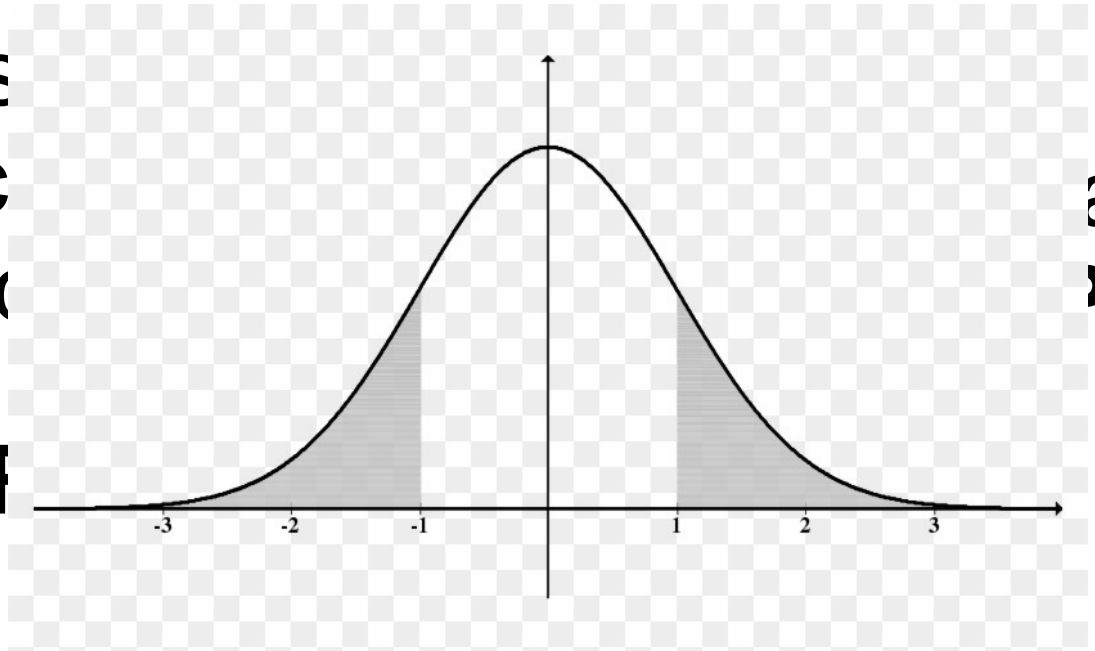
Framework

- **R**esponsible **C**onduct of **R**esearch
  - **R**esearch **E**thics
  - **R**esearch **I**ntegrity
- **Q**uestionable **R**esearch **P**ractices
- **F**abrication
- **F**alsification
- **P**lagiarism

Framework

- **R**espons
  Conduc
  Resear

abrication
alsification
lagiarism



Research
Ethics

FFP

65 FR 76260

Executive Office of the President (OSTP)
Federal Policy on Research Misconduct

Research misconduct is defined as fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.

- **Fabrication** is making up data or results and recording or reporting them.
- **Falsification** is manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.
- **Plagiarism** is the appropriation of another person's ideas, processes, results, or words without giving appropriate credit.

Research misconduct does not include honest error or differences of opinion.

https://www.govinfo.gov/app/details/FR-2000-12-06/00-30852/summary

QRPs

Questionable Research Practices

Leslie K. John et al. (2012)

1. In a paper, failing to report all of a study's dependent measures.
2. **Deciding whether to collect more data after looking to see whether the results were significant**.
3. **In a paper, failing to report all of a study's conditions**.
4. Stopping collecting data earlier than planned because one found the result that one had been looking for.
5. In a paper, "rounding off" a p value (e.g., reporting that a p value of .054 is less than .05).
6. **In a paper, selectively reporting studies that "worked"**.
7. Deciding whether to **exclude data** after looking at the impact of doing so on the results.
8. In a paper, **reporting an unexpected finding as having been predicted from the start**.
9. In a paper, claiming that results are unaffected by demographic variables (e.g., gender) when one is actually unsure (or knows that they do).
10. Falsifying data. <--- FFP!

«Measuring the Prevalence of Questionable Research Practices With Incentives for Truth Telling». Leslie K. John et al.
DOI: 10.1177/0956797611430953

QRPs

Questionable Research Practices

Leslie K. John et al. (2012)

1. Re-running a study that didn't work, getting a significant result, and failing to report the study that didn't work.
2. Failing to report all of a study's conditions in a write-up.
3. Failing to report dependent measure(s) that showed null effects or effects that contradicted one's hypothesis.
4. Deciding whether to collect more data after looking to see whether the results were significant.
5. Stopping collecting data earlier than planned because one found the result that one had been looking for.
6. Reporting an unexpected finding as having been predicted from the start.
7. Falsifying data.
8. Dropping cases based on unplanned criteria, after looking at the results.
9. Reporting that a marginally significant p-value was, in fact significant (e.g. reporting that an observed p value of 0.06 was actually 0.049)
10. Failing to report condition(s) that showed null effects or effects that contradicted one's hypothesis.
11. Failing to get new IRB (i.e. research ethics) approval after having made significant changes to an initially-approved study.
12. Changing stimuli mid-way through running a study and failing to report this in a write-up.
13. Failing to keep data containing identifying information secure (e.g. failing to store them in a locked place).
14. Running a study without obtaining IRB (i.e. research ethics) approval.
15. Running a study without obtaining IRB (i.e. research ethics) approval, and reporting that one had, in fact, obtained it.
16. Preventing a person from participating in a study because one believed the person would not provide evidence in support of one's hypothesis.
17. Deciding which condition to assign a subject to in a 'randomized' study.
18. Excluding data (e.g., the last 10 subjects) just to make the results significant.
19. Reporting in a write-up that a research assistant was blind to the hypotheses when in fact, he or she was not.
20. Ignoring violations of model assumptions (e.g. of normality of distribution) when the results were consistent with one's hypothesis.
21. Failing to debrief participants in a study where debriefing was warranted.
22. Letting data coders know the hypothesis prior to having them code the data.
23. Reporting an interpretation of the data that one doesn't really believe.
24. Using a research idea from someone (e.g. a colleague or student) and failing to properly acknowledge them.
25. Deciding whether to exclude outliers after seeing how their exclusion affects the hypothesized results.

«Measuring the Prevalence of Questionable Research Practices With Incentives for Truth Telling». Leslie K. John et al.
DOI: 10.1177/0956797611430953

More specifically

HARKing
Hypotesizing After Results are Known

p-hacking, data dredging, data fishing, data snooping, data butchery

Fudging, massaging, cooking

Cherry picking data

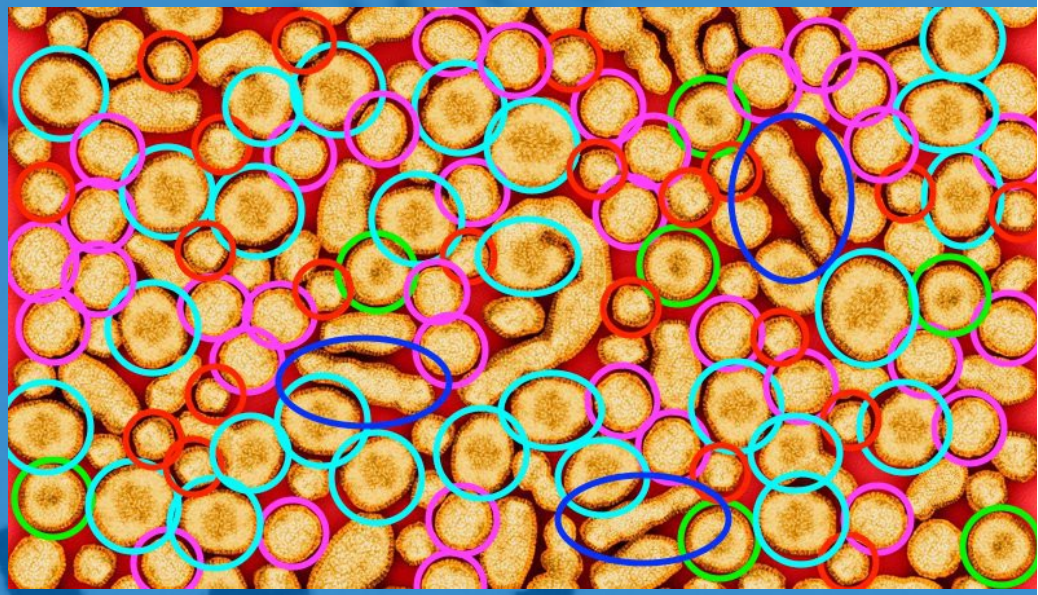
Salami or trivial publication, salami slicing

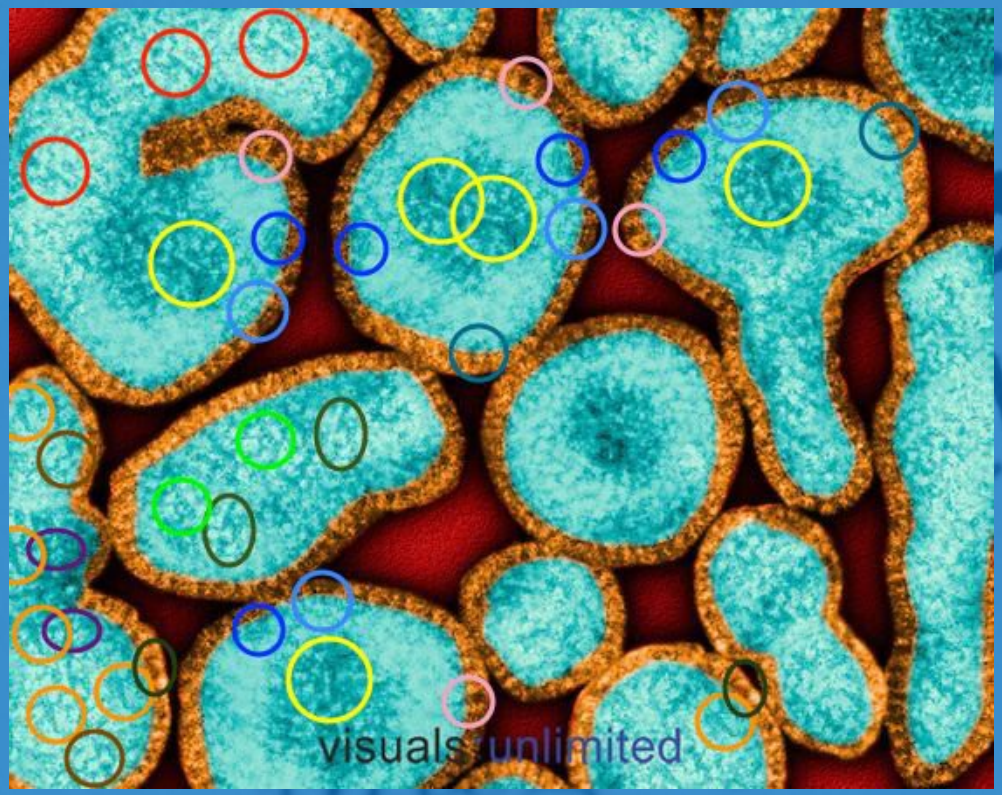
Publication Bias

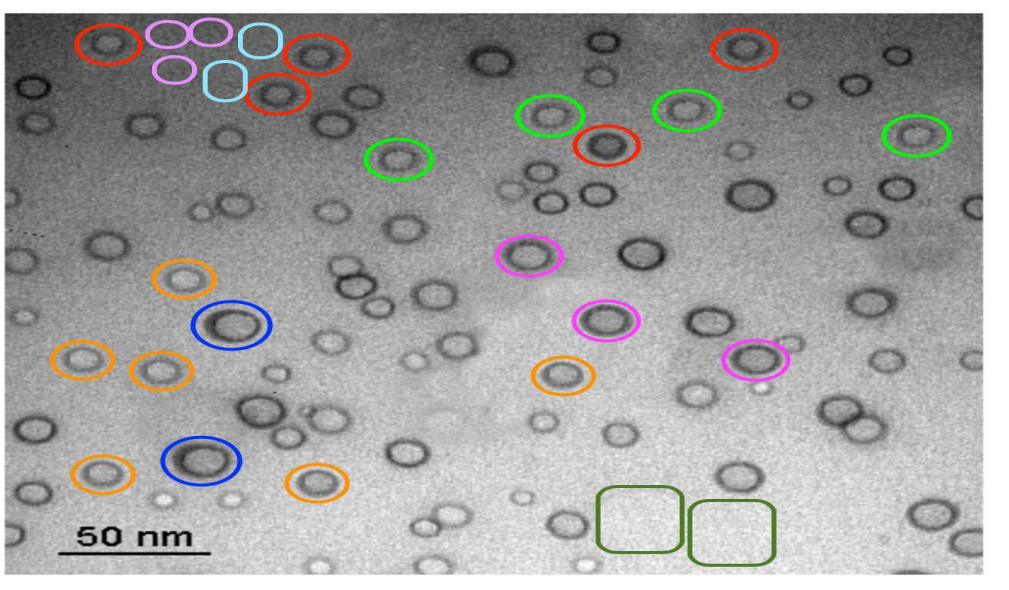
Verification Bias

...and in Biology...

photoshoping







https://threadreaderapp.com/thread/1127260133015183360.html
https://twitter.com/MicrobiomDigest/status/1173107685593513984

photoshoping

...and in Biology...

The Prevalence of Inappropriate Image Duplication in Biomedical Research Publications

Elisabeth M. Bik, Arturo Casadevall, Ferric C. Fang

L. David Sibley, Editor

DOI: 10.1128/mBio.00809-16

The images from a total of **20,621** papers published in 40 scientific journals from 1995 to 2014 were visually screened. Overall, **3.8%** of published papers **contained problematic figures**, with at least half exhibiting features suggestive of **deliberate manipulation**.

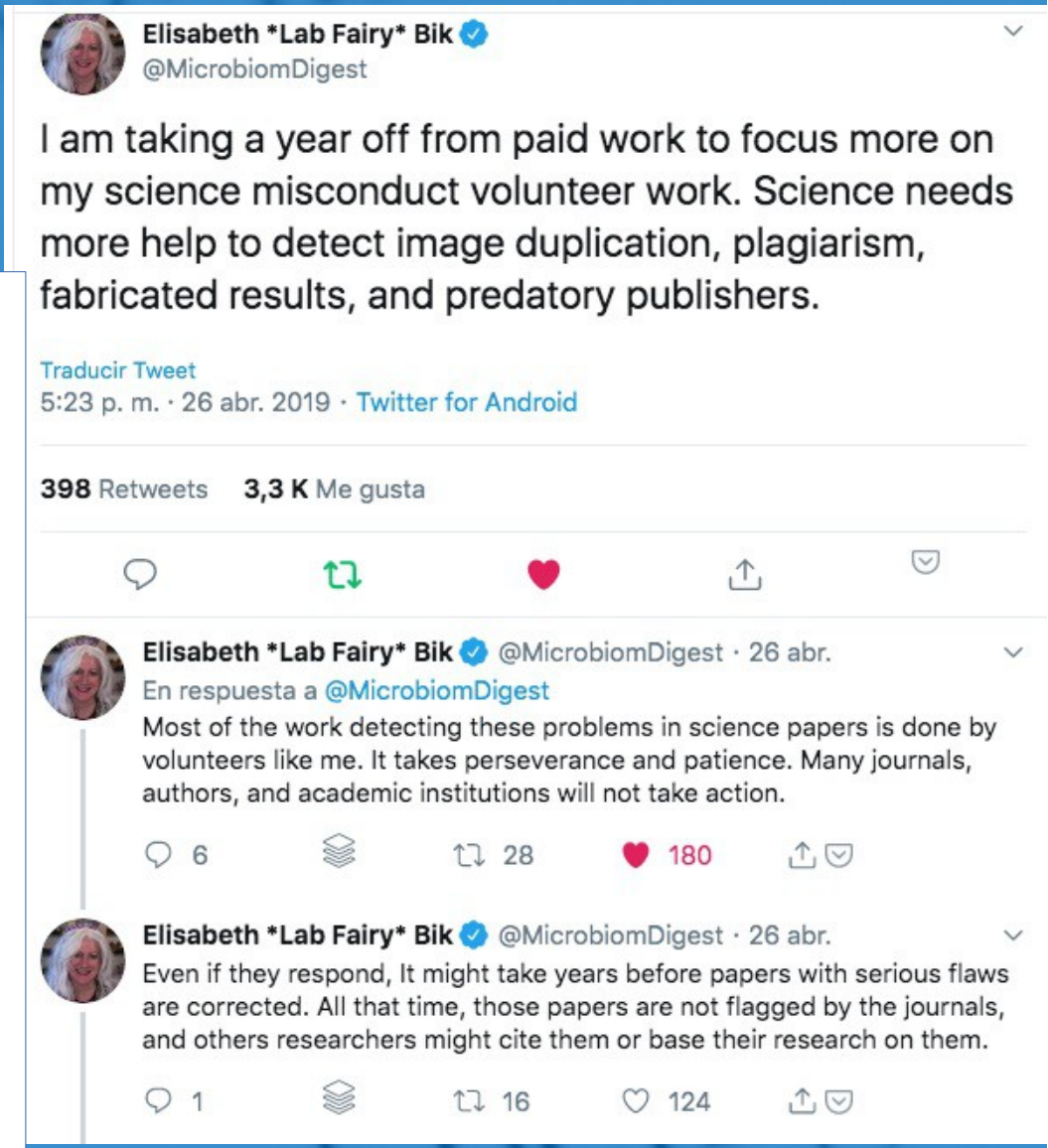
...and in Biology...

photoshoping

Elisabeth Bik

@MicrobiomDigest

https://www.the-scientist.com/news-opinion/eye-for-manipulation--a-profile-of-elisabeth-bik-65839

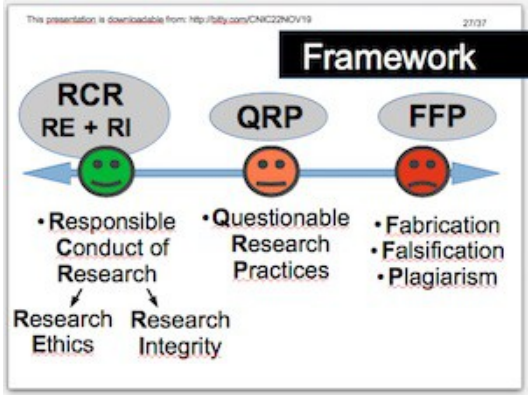


https://twitter.com/MicrobiomDigest/status/1121796872794820610

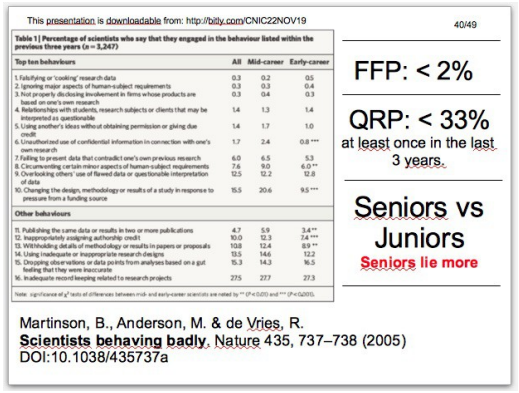
This presentation is downloadab

A breath... So far...

Part 1:
Personal motivation



Part 2: Framework
What is what?



Part 3: Evidence
Some studies

- Claxton, L. D. (2005). **Scientific authorship: Part 1. A window into scientific fraud?** Mutation Research/Reviews in Mutation Research, 589(1), 17-30. DOI: 10.1016/j.mrrev.2004.07.003Martinson, B., Anderson, M. & de Vries, R. **Scientists behaving badly**. Nature 435, 737–738 (2005) DOI:10.1038/435737

- Steneck, N. H. (2006). **Fostering integrity in research: Definitions, current knowledge, and future directions.** Science and Engineering Ethics, 12(1), 53-74. DOI: 10.1007/PL00022268

- Fanelli, D. (2009). **How Many Scientists Fabricate and Falsify Research? A Systematic Review and Meta-Analysis of Survey Data**.
  PLOS ONE, 4(5), e5738. DOI: 10.1371/journal.pone.0005738

- John, L. K., Loewenstein, G., & Prelec, D. (2012). **Measuring the Prevalence of Questionable Research Practices With Incentives for Truth Telling**. Psychological Science, 23(5), 524-532. DOI: 10.1177/0956797611430953

- Carlisle, J. B. (2017). **Data fabrication and other reasons for non-random sampling in 5087 randomised, controlled trials in anaesthetic and general medical journals.** Anaesthesia, 72(8), 944-952. DOI: 10.1111/anae.13938

- Brown, «Nicholas J. L.», & Heathers, «James A. J.» (2017). **The GRIM Test: A Simple Technique Detects Numerous Anomalies in the Reporting of Results in Psychology**. Social Psychological and Personality Science, 8(4), 363-369. https://doi.org/10.1177/1948550616673876

- Brainard, J., & You, J. (2018, octubre 18). **What a massive database of retracted papers reveals about science publishing's 'death penalty'**. Science | AAAS. Recuperado de https://www.sciencemag.org/news/2018/10/what-massive-database-retracted-papers-reveals-about-science-publishing-s-death-penalty

- Grieneisen, M. L., & Zhang, M. (2012). **A comprehensive survey of retracted articles from the scholarly literature**. PloS one, 7(10), e44118. DOI: DOI: 10.1371/journal.pone.0044118

- Banks, G. C., Rogelberg, S. G., Woznyj, H. M., Landis, R. S., & Rupp, D. E. (2016). **Editorial: Evidence on Questionable Research Practices: The Good, the Bad, and the Ugly**. Journal of Business and Psychology, 31(3), 323-338. DOI: 10.1007/s10869-016-9456-7

- Bik, E. M., Casadevall, A., & Fang, F. C. (2016). **The Prevalence of Inappropriate Image Duplication in Biomedical Research Publications**. MBio, 7(3), e00809-16. DOI: 10.1128/mBio.00809-16Ioannidis, J. P. A. (2005). **Why Most Published Research Findings Are False**. PLOS Medicine, 2(8), e124. DOI: 10.1371/journal.pmed.0020124

- Baker, M. (2016). **1,500 scientists lift the lid on reproducibility**. Nature News, 533(7604), 452. DOI: 10.1038/533452

- Baker, M. (2016, abril 22). **Problematic images found in 4% of biomedical papers.** Nature News. https://doi.org/10.1038/nature.2016.19802

- Open Science Collaboration. (2015). **Estimating the reproducibility of psychological science**. Science, 349(6251). DOI: 10.1126/science.aac4716

How to estimate?

1) Surveys

2) Big data

3) Number of retractions

Table 1 | Percentage of scientists who say that they engaged in the behaviour listed within the previous three years ($n = 3,247$)

Top ten behaviours	All	Mid-career	Early-career
1. Falsifying or 'cooking' research data	0.3	0.2	0.5
2. Ignoring major aspects of human-subject requirements	0.3	0.3	0.4
3. Not properly disclosing involvement in firms whose products are based on one's own research	0.3	0.4	0.3
4. Relationships with students, research subjects or clients that may be interpreted as questionable	1.4	1.3	1.4
5. Using another's ideas without obtaining permission or giving due credit	1.4	1.7	1.0
6. Unauthorized use of confidential information in connection with one's own research	1.7	2.4	0.8 ***
7. Failing to present data that contradict one's own previous research	6.0	6.5	5.3
8. Circumventing certain minor aspects of human-subject requirements	7.6	9.0	6.0 **
9. Overlooking others' use of flawed data or questionable interpretation of data	12.5	12.2	12.8
10. Changing the design, methodology or results of a study in response to pressure from a funding source	15.5	20.6	9.5 ***
Other behaviours			
11. Publishing the same data or results in two or more publications	4.7	5.9	3.4 **
12. Inappropriately assigning authorship credit	10.0	12.3	7.4 ***
13. Withholding details of methodology or results in papers or proposals	10.8	12.4	8.9 **
14. Using inadequate or inappropriate research designs	13.5	14.6	12.2
15. Dropping observations or data points from analyses based on a gut feeling that they were inaccurate	15.3	14.3	16.5
16. Inadequate record keeping related to research projects	27.5	27.7	27.3

Note: significance of χ^2 tests of differences between mid- and early-career scientists are noted by ** ($P < 0.01$) and *** ($P < 0.001$).

FFP: < 2%

QRP: < 33%

at least once in the last 3 years.

Seniors vs Juniors

Seniors lie more

Martinson, B., Anderson, M. & de Vries, R.
Scientists behaving badly. Nature 435, 737–738 (2005)
DOI:10.1038/435737a

Fanelli's Meta-Analysis of 2009

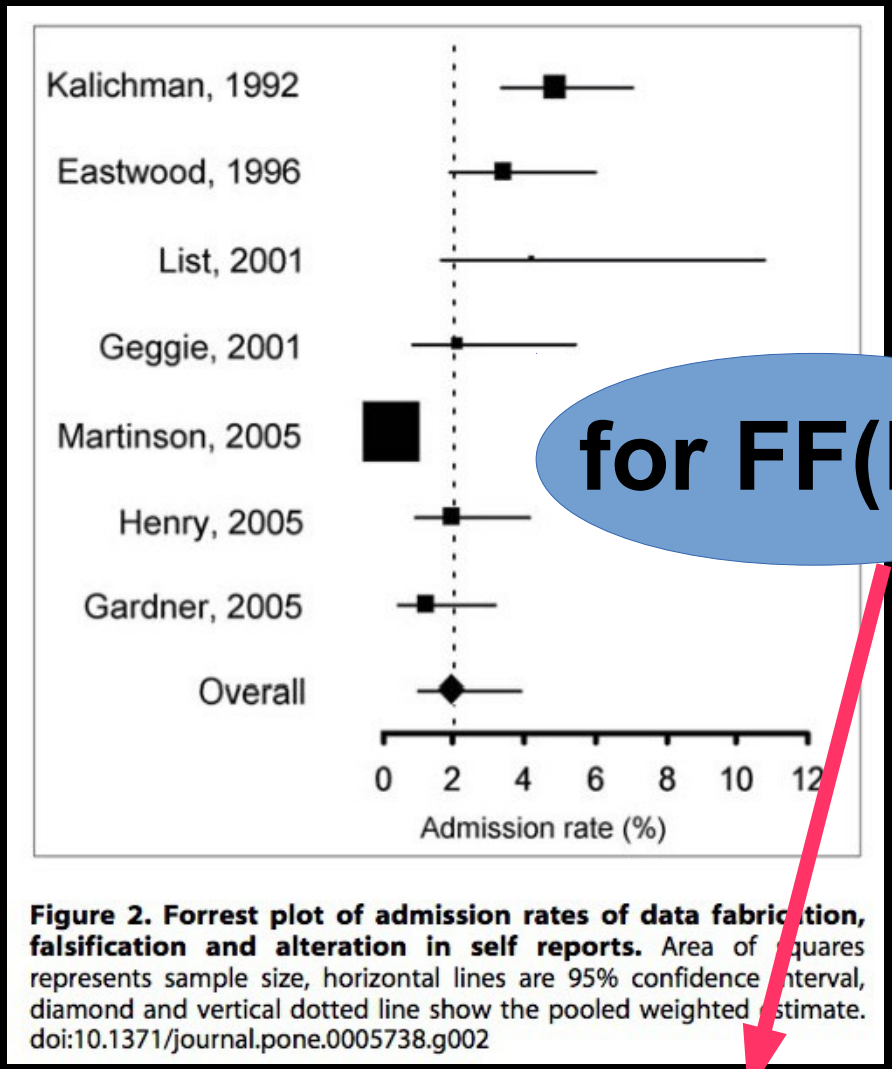


Figure 2. Forrest plot of admission rates of data fabrication, falsification and alteration in self reports. Area of squares represents sample size, horizontal lines are 95% confidence interval, diamond and vertical dotted line show the pooled weighted estimate.
doi:10.1371/journal.pone.0005738.g002

for FF(P)s!

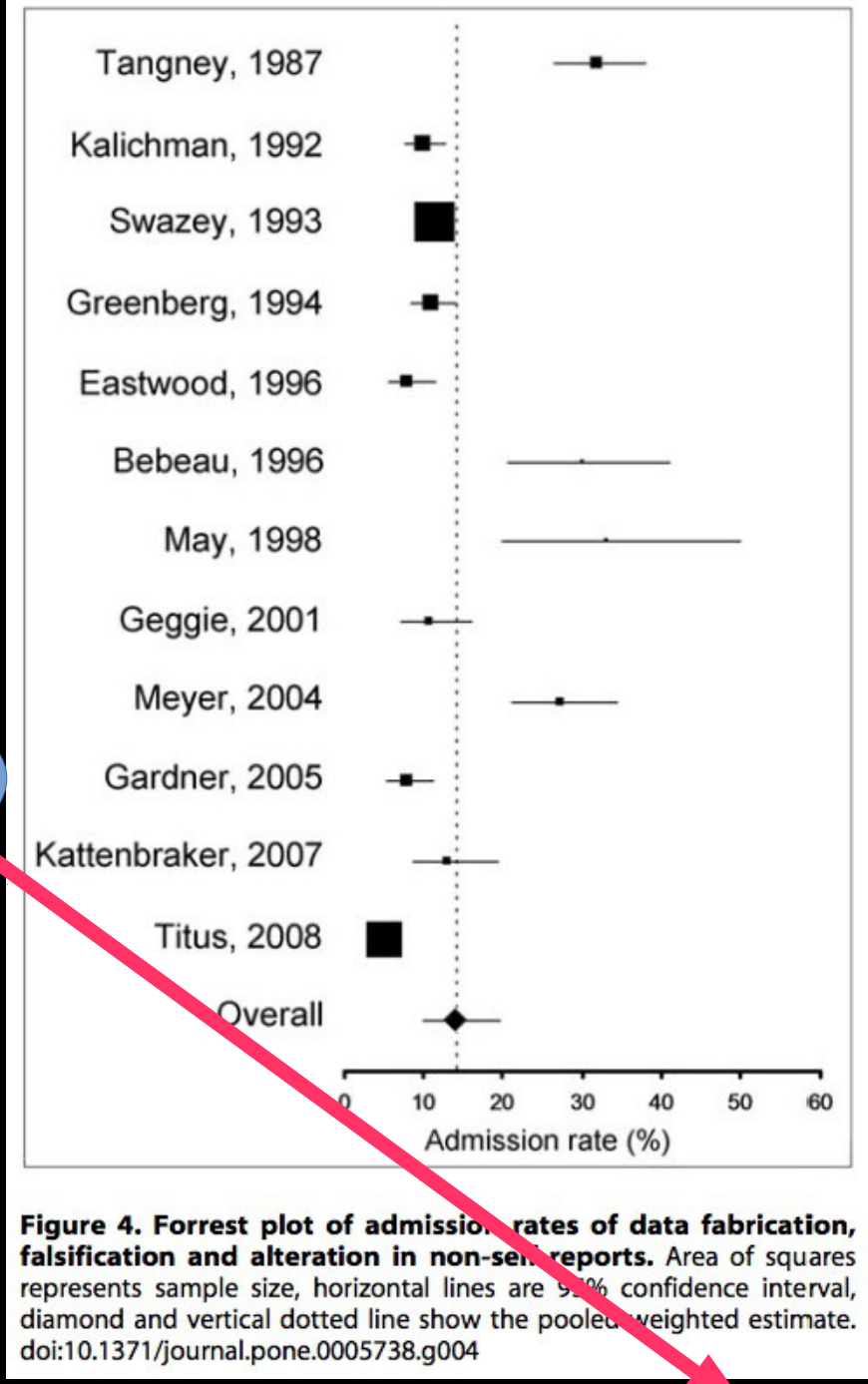


Figure 4. Forrest plot of admission rates of data fabrication, falsification and alteration in non-self reports. Area of squares represents sample size, horizontal lines are 95% confidence interval, diamond and vertical dotted line show the pooled weighted estimate.
doi:10.1371/journal.pone.0005738.g004

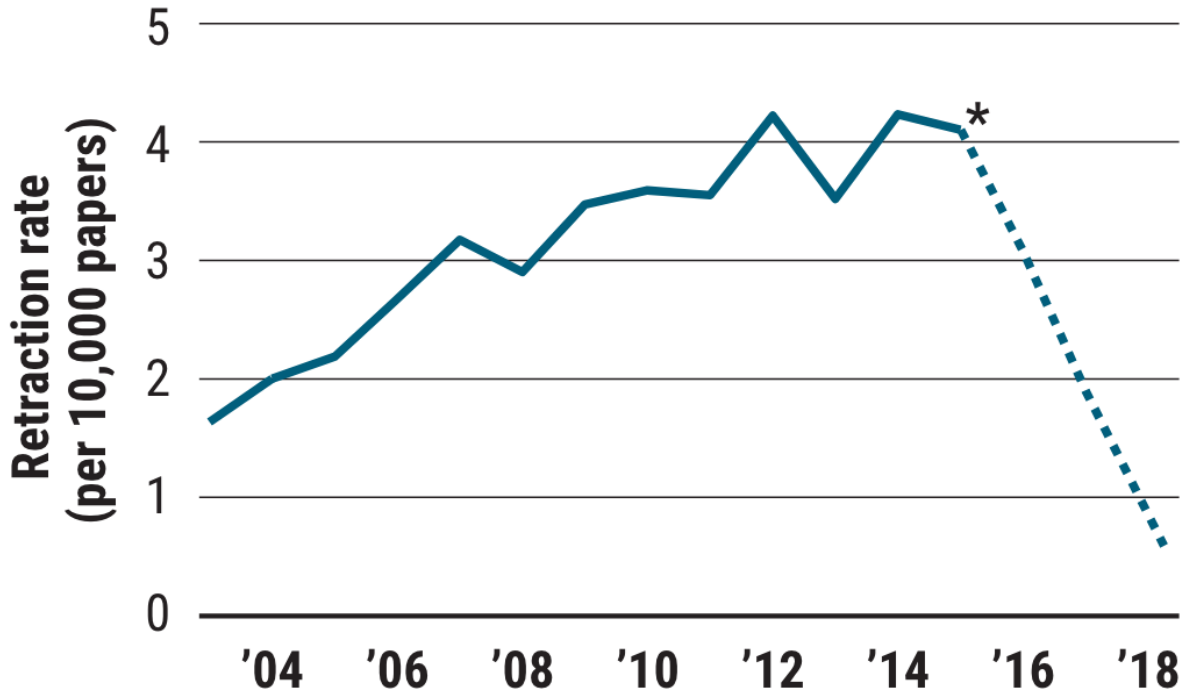
Self-reports: 2%

Non Self-reports: 14%

Fanelli's Meta-Analysis of 2009

	self-report	non self-report
FF(P)s	2%	14%
QRPs	**33,7%**	**72%**
	self-report	non self-report

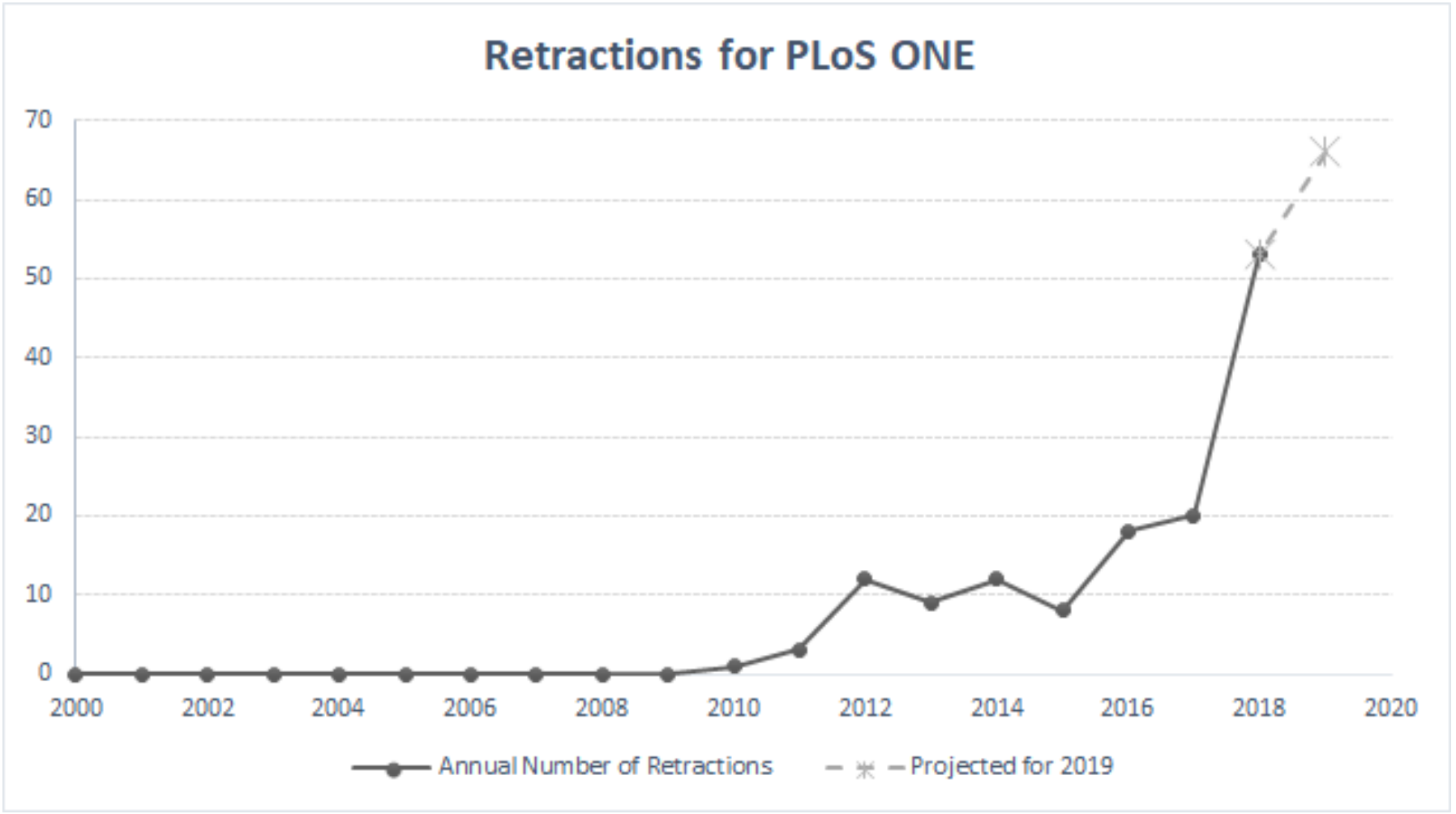
Number of retractions



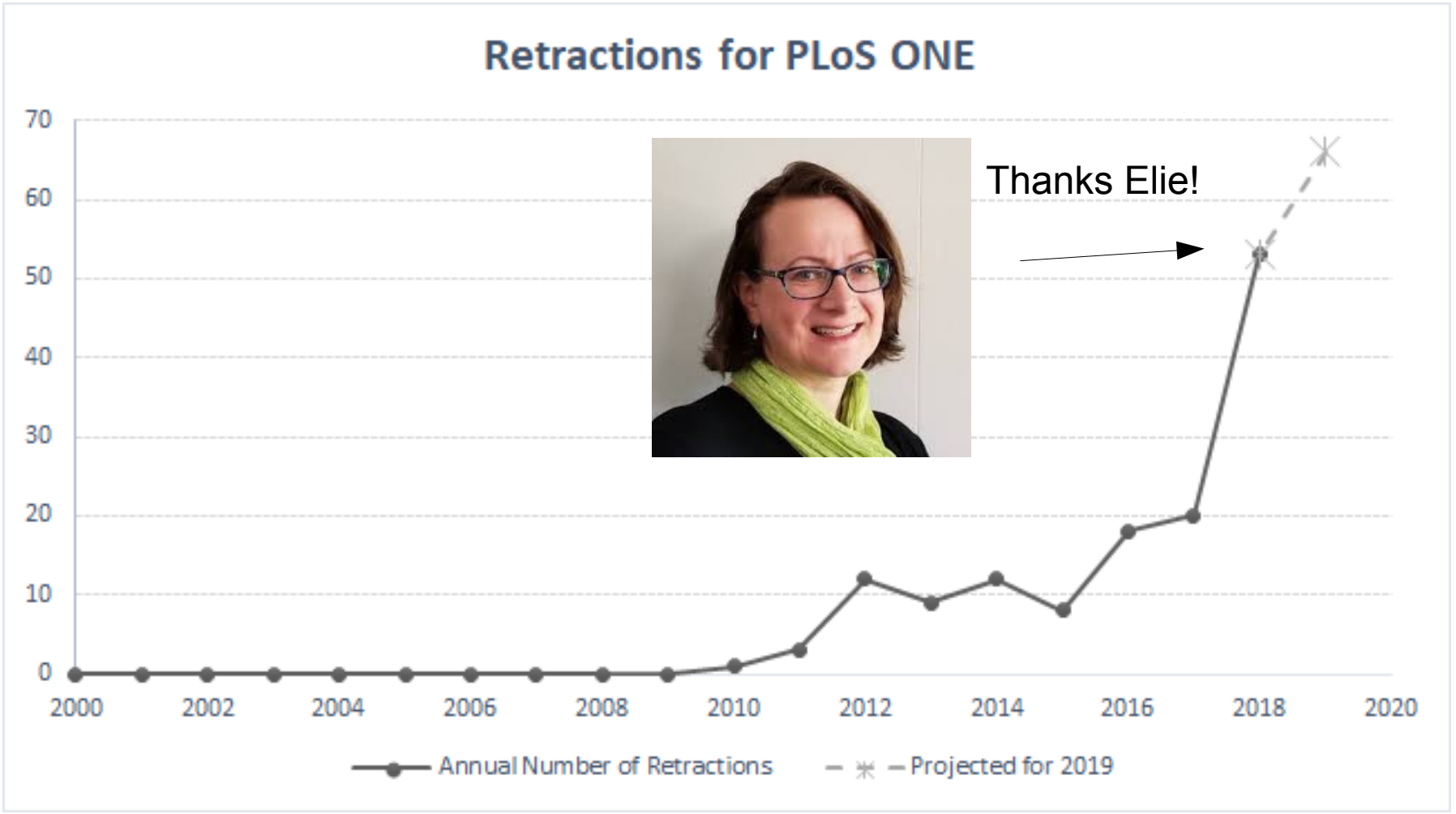
*The rate appears to decline after 2015, but numbers are almost certainly incomplete because of delays in publishing retractions.

(GRAPHIC) J. YOU/*SCIENCE*; (DATA) RETRACTION WATCH AND NSF; **METHODOLOGY**

Source: https://www.sciencemag.org/news/2018/10/what-massive-database-retracted-papers-reveals-about-science-publishing-s-death-penalty



Source:
https://retractionwatch.com/2019/04/25/how-one-journal-became-a-major-retraction-engine/

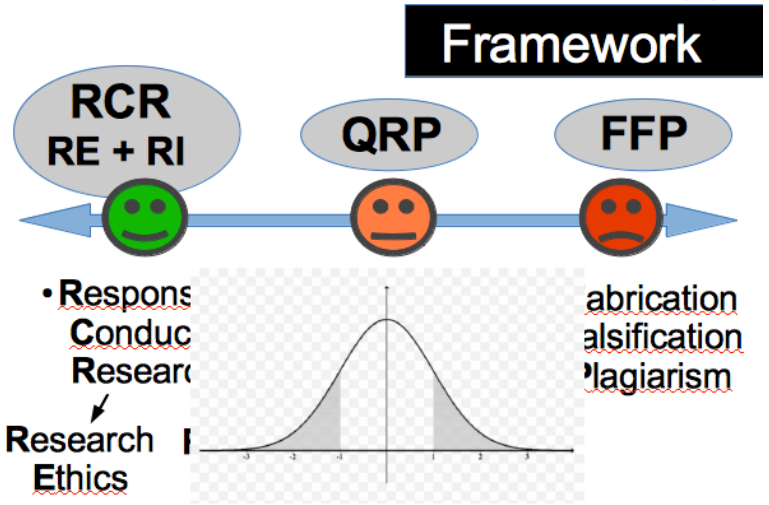


Source:
https://retractionwatch.com/2019/04/25/how-one-journal-became-a-major-retraction-engine/

Leaderboard

1.Yoshitaka Fujii (total retractions: **183**)
2.Joachim Boldt (**97**)
3.Yoshihiro Sato (**87**)
4.Jun Iwamoto (**67**)
5.Diederik Stapel (**58**)
6.Yuhji Saitoh (**53**)
7.Adrian Maxim (**48**)
8.Chen-Yuan (Peter) Chen (**43**)
9.Fazlul Sarkar (**41**)
10.Hua Zhong (**41**)

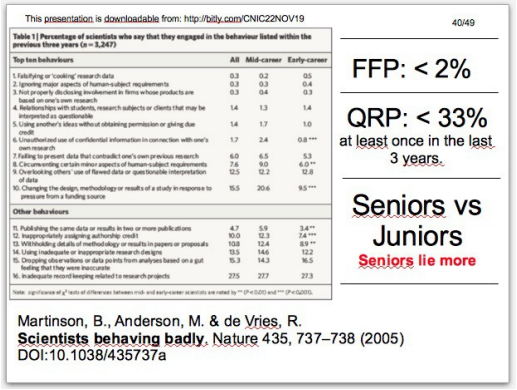
In short...



Few people lie a lot
a lot of people lie a few

This presentation is downloadab

And finally


This presentation is downloadable from: http://bitly.com/CNIC22NOV19

40/49

Table 1 | Percentage of scientists who say that they engaged in the behaviour listed within the previous three years (n = 3,247)

Top ten behaviours	All	Mid-career	Early-career
1. Falsifying or 'cooking' research data	0.3	0.2	0.5
2. Ignoring major aspects of human-subject requirements	0.3	0.3	0.4
3. Not properly disclosing involvement in firms whose products are based on one's own research	0.3	0.4	0.3
4. Relationships with students, research subjects or clients that may be interpreted as questionable	1.4	1.3	1.4
5. Using another's ideas without obtaining permission or giving due credit	1.4	1.7	1.0
6. Unauthorized use of confidential information in connection with one's own research	1.7	2.4	0.8 ***
7. Failing to present data that contradict one's own previous research	6.0	6.5	5.3
8. Circumventing certain minor aspects of human-subject requirements	7.6	9.0	6.0 **
9. Overlooking others' use of flawed data or questionable interpretation of data	12.5	12.2	12.8
10. Changing the design, methodology or results of a study in response to pressure from a funding source	15.5	20.6	9.5 ***
Other behaviours			
11. Publishing the same data or results in two or more publications	4.7	5.9	3.4 **
12. Inappropriately assigning authorship credit	10.0	12.3	7.4 ***
13. Withholding details of methodology or results in papers or proposals	10.8	12.4	8.9 **
14. Using inadequate or inappropriate research designs	13.5	14.6	12.2
15. Dropping observations or data points from analyses based on a gut feeling that they were inaccurate	15.3	14.3	16.5
16. Inadequate record keeping related to research projects	27.5	27.7	27.3

Note: significance of χ^2 tests of differences between mid- and early-career scientists are noted by ** (P < 0.01) and *** (P < 0.001).

Martinson, B., Anderson, M. & de Vries, R.
Scientists behaving badly, Nature 435, 737–738 (2005)
DOI:10.1038/435737a

FFP: < 2%

QRP: < 33%
at least once in the last 3 years.

Seniors vs Juniors
Seniors lie more

Part 4: Someone worried?

source: https://www.orp.pitt.edu/sites/default/files/landing-images/RI_6.2.jpg


THE OFFICE OF
RESEARCH
INTEGRITY
ORI
®


ORI
THE OFFICE OF
RESEARCH
INTEGRITY
®


WCRI
WORLD CONFERENCES
ON RESEARCH INTEGRITY

THE OFFICE OF RESEARCH INTEGRITY®

WCRI WORLD CONFERENCES ON RESEARCH INTEGRITY

Singapore Statement on Research Integrity

Preamble. The value and benefits of research are vitally dependent on the integrity of research. While there can be and are national and disciplinary differences in the way research is organized and conducted, there are also principles and professional responsibilities that are fundamental to the integrity of research wherever it is undertaken.

PRINCIPLES

Honesty in all aspects of research
Accountability in the conduct of research
Professional courtesy and fairness in working with others
Good stewardship of research on behalf of others

RESPONSIBILITIES

1. Integrity: Researchers should take responsibility for the trustworthiness of their research.

2. Adherence to Regulations: Researchers should be

10. Public Communication: Researchers should limit professional comments to their recognized expertise when engaged in public discussions about the application and importance of research findings and

Research Integrity Offices


UKRIO
UK Research Integrity Office

TUTKIMUSEETTINEN
NEUVOTTELUKUNTA

FORSKNINGSETISKA
DELEGATIONEN

FINNISH NATIONAL BOARD ON
RESEARCH INTEGRITY TENK

TUTKIMUSEETTINEN
NEUVOTTELUKUNTA

FORSKNINGSETISKA
DELEGATIONEN

FINNISH NATIONAL BOARD ON
RESEARCH INTEGRITY TENK

TUTKIMUSEETTINEN
NEUVOTTELUKUNTA

FORSKNINGSETISKA
DELEGATIONEN

FINNISH NATIONAL BOARD ON
RESEARCH INTEGRITY TENK

ÖSTERREICHISCHE
AGENTUR FÜR
WISSENSCHAFTLICHE
INTEGRITÄT

confidential
independent
objective

That is what the Austrian Agency
for Research Integrity stands for

TUTKIMUSEETTINEN
NEUVOTTELUKUNTA

ÖSTERREICHISCHE
AGENTUR FÜR
WISSENSCHAFTLICHE
INTEGRITÄT

confidential
independent
objective

That is what the Austrian Agency
for Research Integrity stands for


ENRIO
European Network of Research Integrity Offices
ENRIO brings together experts who are dealing with questions about research integrity.
More about ENRIO

We are ENRIO.

Ethics Committee of the Spanish National Research Council (CSIC)

Founding year	2007
History	The Ethics Committee of the Spanish National Research Council (CSIC) was created by Royal Decree 1730/2007 as a permanent and advisory collegiate body tasked with reflecting, issuing reports and making recommendations on ethical principles concerning research. The Committee is not a decision making Body. The Operating Rules and the initial composition of the CSIC Ethics Committee were approved by CSIC Governing Board Resolution dated July 28, 2008. Since then, the Committee has been renewed once. Currently, the Committee has eleven members.
ENRIO member since	2011
Structure	Established by Royal Decree

https://www.research-integrity.admin.cam.ac.uk

UNIVERSITY OF CAMBRIDGE

Study at Cambridge | About the University | Research at Cambridge | Quick links

Research Integrity

Home | Research Integrity | Research Ethics | Research Misconduct | Research Governance

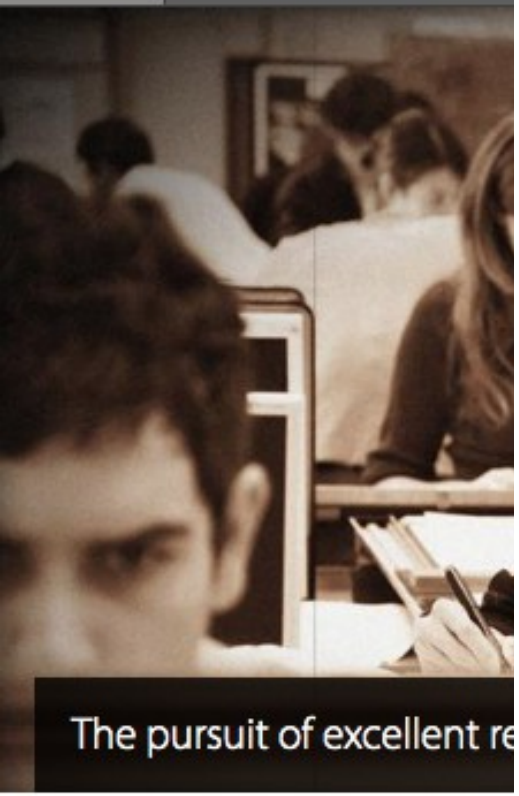
https://www.research-integrity.admin.cam.ac.uk

UNIVERSITY OF CAMBRIDGE

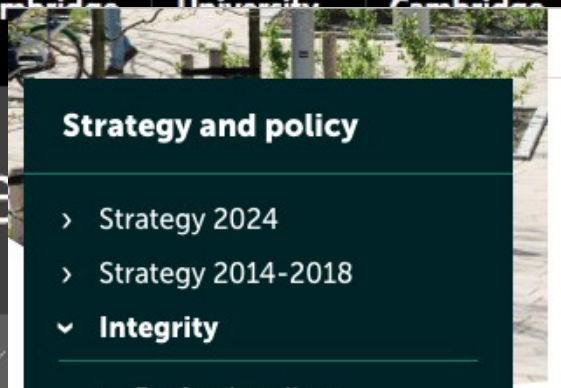
Study at Ca | About the U | Research at Ca | Quick links | Se

Research Inte

Home | Research Integrity



The pursuit of excellent re



Strategy and policy

- Strategy 2024
- Strategy 2014-2018
- **Integrity**
  - Professionalism
  - Teamwork
  - Fair play
  - **Scientific Integrity**
    - Integrity coordinators
    - Dilemma game
  - Undesirable behaviour
  - Contact
- Regulations and guidelines

Scientific Integrity

Within Erasmus University Rotterdam, everyone involved in education and research is responsible for maintaining our scientific integrity. Compliance with the general principles of a professional scientific approach is required at all times.

The Netherlands Code of Conduct for Scientific Practice elaborates these principles, which are also recognised by the EUR and apply as guidelines for the university.

- Netherlands Code of Conduct for Research Integrity
- The complaints procedure is recorded in the EUR Scientific Integrity complaints procedure.
- The National Board for Research Integrity (LOWI) advises on complaints relating to violations of scientific integrity. The LOWI only handles complaints about which the institute has already made a decision. (Regulations LOWI in Dutch only)

Scientific research confidential advisor

You can contact the scientific research confidential advisor, professor Patrick Groenen with questions concerning scientific integrity, suspicion of violation of scientific integrity or misconduct. The advisor can be reached via Riëtte te Lindert Msc,
secretary: coordinator.scientificintegrity@eur.nl of (010) 408 8805

Summarizing

1) Scientists are people

Summarizing

1) Scientists are people
2) People lie

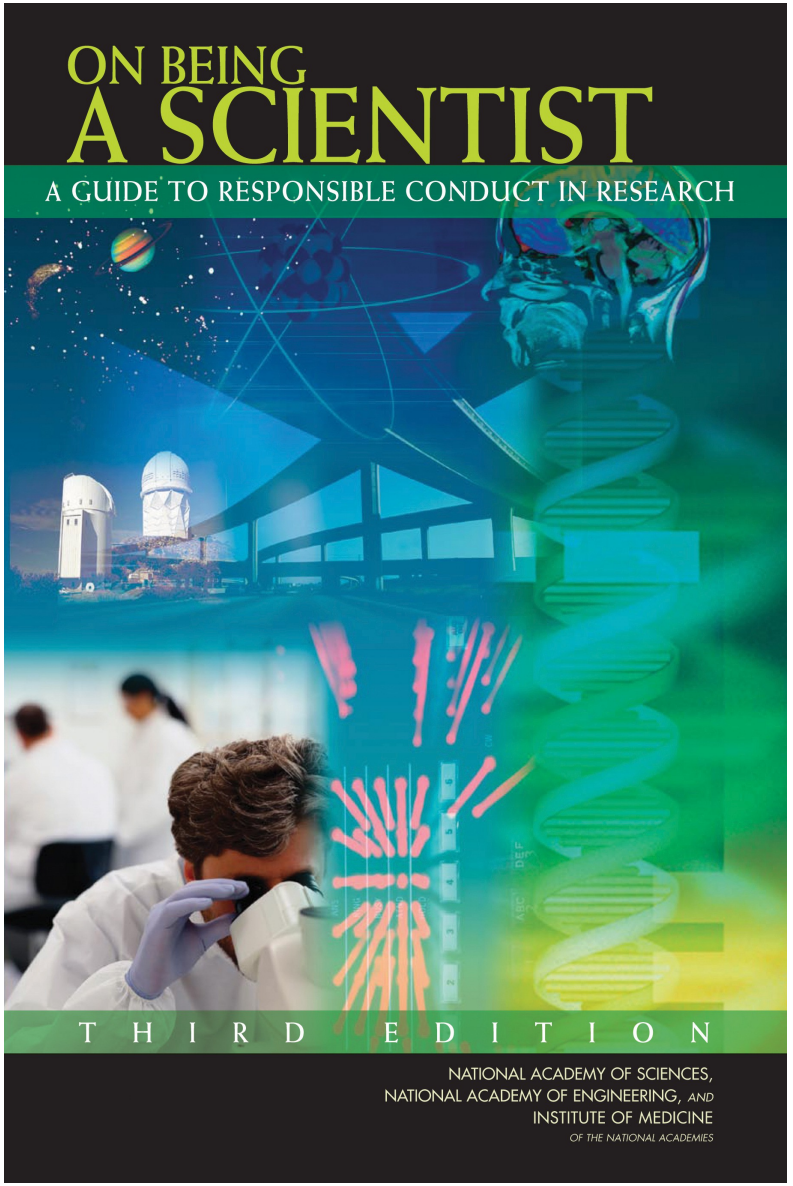
This presentation is downloadable from: http://bitly.com

Summarizing

1) Scientists are people
2) People lie
3) Change is possible:

new generations + new education = new culture

source: https://www.cnic.es/sites/default/files/foto_web.jpg



I encourage you :)

video: https://youtu.be/fNMWd-AX42o

The scientific enterprise is built on a foundation of trust. Society trusts that scientific research results are an honest and accurate reflection of a researcher's work. Researchers equally trust that their colleagues have gathered data carefully, have used appropriate analytic and statistical techniques, have reported their results accurately, and have treated the work of other researchers with respect. When this trust is misplaced and the professional standards of science are violated, researchers are not just personally affronted—they feel that the base of their profession has been undermined. This would impact the relationship between science and society.

On Being a Scientist: A Guide to Responsible Conduct in Research presents

Thanks!

aabrilru@gmail.com