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# **Integrity in Science Advice**

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**[www.euroscience.org](http://www.euroscience.org)**

# EuroScience:

The European Association for the Advancement of  
Science



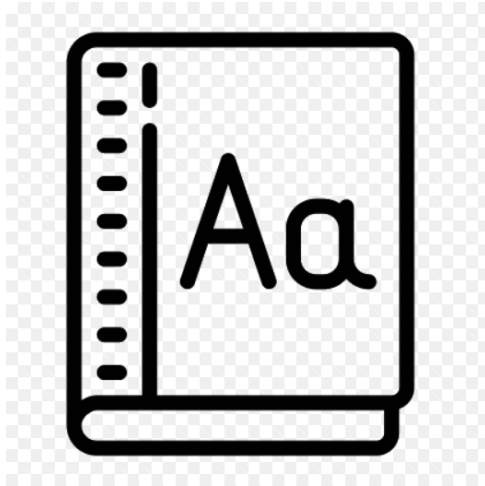
**Who we are:** more than 4000 researchers and other individuals working in and around science (policy-makers, teachers, communicators and journalists) from more than 75 countries, and from both the public and private sectors

**What we do:** EuroScience acts to empower the scientific community to strengthen its societal engagement and accountability by integrating a role for citizen involvement and scrutiny, while at the same time preserving the values of research freedom

**Why we matter:** in a world of constant change, society requires critical understanding of what science is, what science professionals do and how their work is evolving

# Science Advice and Integrity:

a definition (for this talk!)



**Science advice:** “the process, structures and institutions through which governments and politicians consider science, technology and innovation information in policy- and decision-making”

Y. Ezrahi, *Metascience* (2008), 17 (2): 177-189

**Integrity:** “is a personal choice, an uncompromising and predictably consistent commitment to honour moral, ethical, spiritual, and artistic values and principles.”

*Integrity: Doing the right thing for the right reason*, McGill-Queen's University Press. 2010. p. 12. ISBN 978-0773582804.



# Why is integrity in science advice important

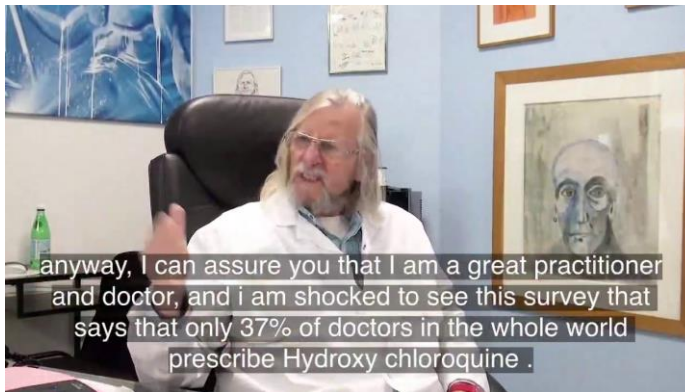
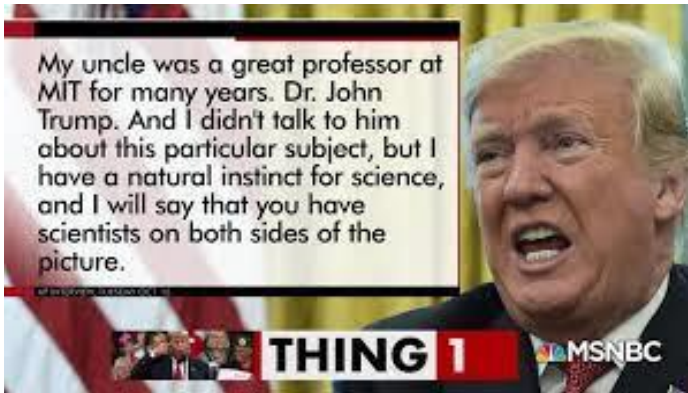


Science and technology are more necessary than ever, not only for **PROGRESS** in human society, but even for **SURVIVAL** of humanity over the long term!!

We would expect therefore that science be celebrated for the **SOLUTIONS** and **OPPORTUNITIES** it provides ...

... **BUT** is that our reality today ?

# Science is approaching a crisis!



## PUBLIC TRUST cannot be taken for granted!

# Why am I telling you all this?



# Science is no longer an exception!

## *The “Ivory Tower”:*

*Scientific research with public money has been an exception to public-policy accountability. Research communities (« disciplinary guilds ») are **self-governed with evaluation limited to expert peer review** !*

*Why ? Academic freedom! Only experts can judge!  
Leave us alone so we can think out of the box!*



## Science must and is being held ACCOUNTABLE

### Science must:

- Accept it's part of *societal responsibility*
- Integrate a role for *citizen involvement and scrutiny*

while PRESERVING the **VALUES** of research freedom :  
*open, exploratory, expert, curiosity-driven scientific investigation, with liberty of thought and expression !!*



# What does that mean?



Integrity is a personal choice, an uncompromising and predictably consistent commitment to honour moral, ethical, spiritual, and artistic values and principles.”



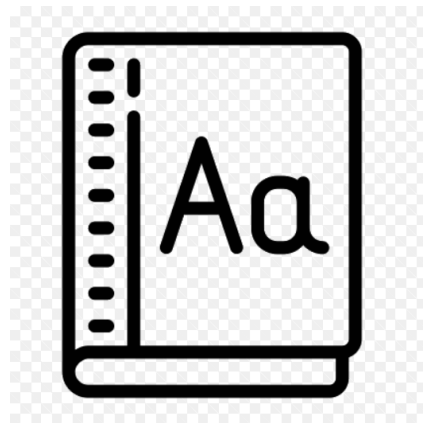
**It starts with questioning the narratives**

# Narrative: Facts and "the Truth"



*"If you want absolutes talk to a pope"*

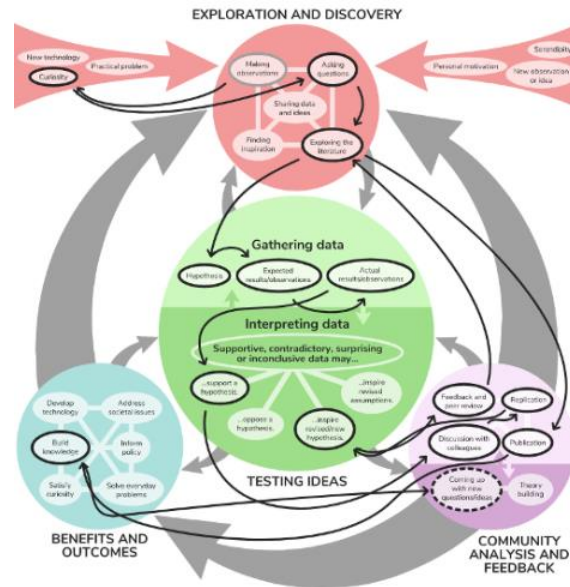
– Peter Doherty Nobel Laureate, 1996



Fact: "a thing that is known or **proved** to be true" – Oxford dictionary

Truth: " the property of being in accord with fact or reality"

# Narrative: The scientific work method



The scientific working method is complex and based on falsifiable hypotheses. A hypothesis that can't ever be disproven is not real science.

-> Decisionmakers and the public need to know and understand that!

# What can you do personally as doctoral candidate?

- **Be critical and lucid about what science is, how it works and especially about its strengths and limitations**
- **Team up! Look outside of your labs, libraries and faculties and see if you find the time to listen or even hold a lecture about the philosophy of the scientific method or just talk to each other.**
- **Get involved take the knowledge outside. Not only the factual knowledge coming from your studies but also the knowledge and abilities about the scientific world (see first point)**

# What can the University do for their doctoral candidates?



- **Break the silos: Include transdisciplinary knowledge into the curricula**
- **Encourage and prepare doctoral candidates for careers outside of academia**
- **Encourage the doctoral candidates to get involved by acknowledge activities outside the university related to science, science communication and advice in the assessment.**

# Want to discuss further?



# ESOF

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**Thank you for your attention**

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