



# **Using science to improve climate communication and education**

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# The public already believes climate change is a threat . . .



**75% of people** across **19 countries** said climate change is a **major threat**.  
We don't need to convince our visitors

*Pew Research Center 2022*

# . . . and museums are trusted sources

Museums are considered to be highly trustworthy.

Museums are rated as significantly **more trustworthy** than researchers and scientists, news organizations, the government, corporations, and social media.

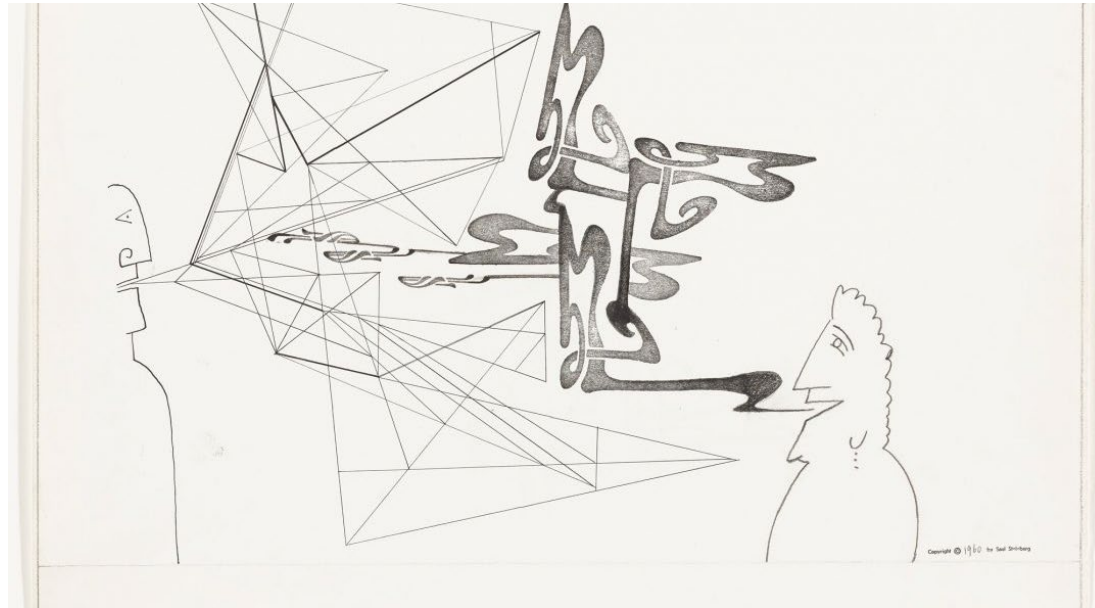
*AAM 2021*

**Climate Concern + Trust**

**=**

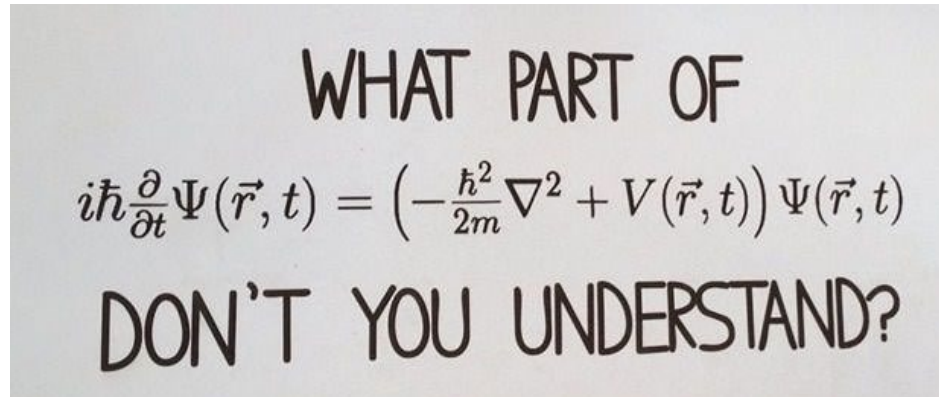
**Responsibility**

# Too often we are failing to connect



“One of psychology’s strongest results  
is that we exaggerate  
how well we understand one another”

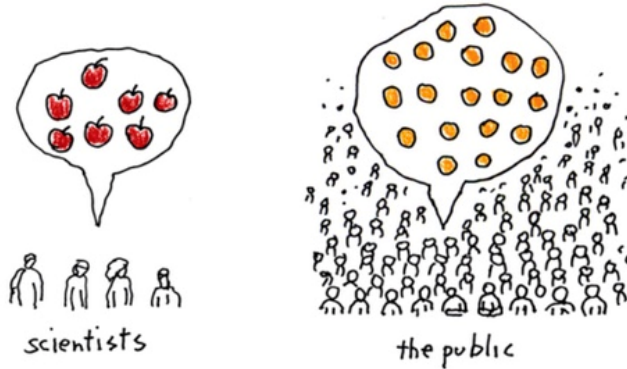
Social Psychologist Dr. Baruch Fischhoff



# We all “think differently”



# Tip # 1: Don't leave it to the scientists



Scientists will likely be ineffective communicators because most lack skills and understanding of effective science communication techniques.



# Why?

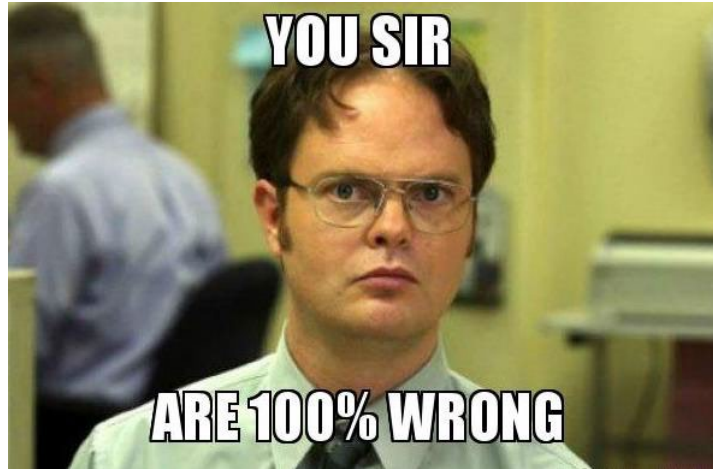
Most scientists have limited direct contact with the public.

Most scientists may not realize whether they are communicating well or poorly and they often don't know how to do better.

Co-creation and collaboration is essential -- scientists working together with informal education experts employing sound science communication techniques.

*Fischhoff 2011*

# Tip # 2: Resist the urge to debias by contradicting beliefs



Unsurprisingly, this is ineffective.  
But worse it is often counter effective.

# Why?

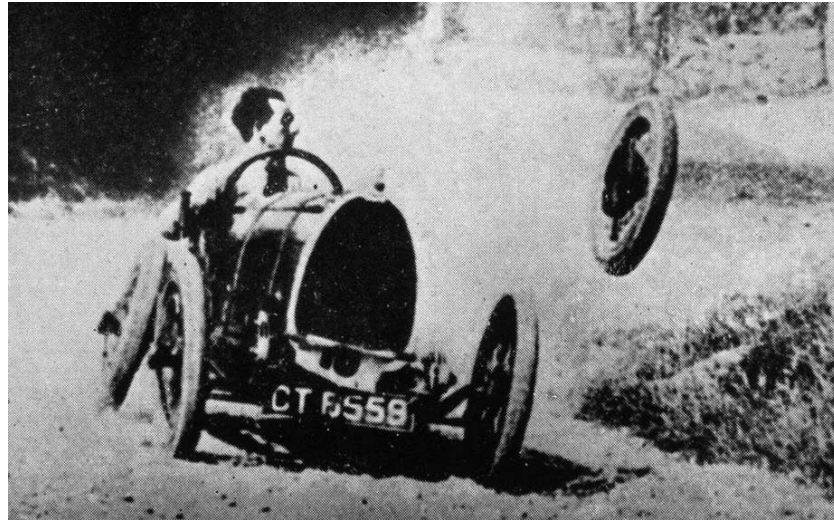
Debiasing efforts towards people with strongly held beliefs can do harm – when not inclined to revise their beliefs, their erroneous beliefs can be strengthened!

Rather than contradicting to prove a point and urge them to revise their understanding, consider ‘nudging’ individuals to make climate friendly choices and incrementally shift their view.

*Lewandowsky et al 2012*

# Tip # 3: Test, revise, test again

It is always humbling when, after careful preparation, things don't go according to plan . . .



# Why?

“It’s a common reaction when we try to communicate and it doesn’t work: we blame our audience”

*Fischhoff 2020*

**Test your planned approach with the expectation that testing will lead to revisions and improvements.**

Do some exhibits or activities work well for adults? Youth? Teenagers?

What phenomena are relevant to the local community?

Will visitors leave with awareness of what they can do, what others are doing, and interest in policies that address climate change?

*Parker et al 2018*

# Tip # 4: **Make it easy to read**

Are the terms in your labels, the font, the graphic design, and graphs or diagrams user-friendly or user-challenging?

If your label font is difficult to read, if the sentences and terms are challenging to understand, if the graphs are crowded with details, you will **unintentionally convey the sense that the content is less real and true and possibly too difficult to act on.**

Although changes to the earth's climate are natural, current changes are a result of increasing human populations and activities.

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# Why?

When reading a text, people are sensitive to their feelings of ease or difficulty. But they are not aware of the cause of those feelings.

A font that is difficult to read, low contrast text, or a challenging graphic design can influence whether the **content** is judged as difficult to understand, less believable, or harder to act on.

*Song and Schwarz 2010*



# Tip # 5: Repeat, repeat, repeat



Repetition helps make a concept familiar, memorable, and easily “accessible”.

# Why?

- **Familiarity** gives the sense that the concept is **real**.
- Concepts that are **easier to remember** are judged more likely to be **true**.
- When I can easily **access** the concept it becomes part of my **world view**

Metacognition (how you feel about what you are thinking) is embedded in reasoning. Familiarity, ease of remembering, and ease of access are important metacognitive qualities.

*Schwarz et al 2007*

# Tip # 6: **We are in this together**

- Go beyond preaching to the choir
- Go out to other communities and be willing to learn from others experiences.
- Bring in influential members of other communities with other values: spiritual, business interests, agricultural, intergenerational, historical preservation
- Build relationships

Science is not the only way of knowing what is important in the world and what is at stake with the climate crisis.

# Why?

It is critically important for public engagement for all to:

- Feel respected
- Feel comfortable to speak candidly about their own views on climate change
- Have the opportunity to learn about climate science and policy
- Have the opportunity to learn about other perspectives based on personal values
- Have the opportunity for open discussion to hear other perspectives

Communication across “the divide” is a real challenge but we must have broad input and participation to devise, support, and implement climate solutions.

# To reprise

- 1) It's too important to leave to the scientists
- 2) Resist the urge to debias by contradicting
- 3) Test, revise, test again
- 4) Make it easy to read
- 5) Repeat, repeat, repeat
- 6) We are in this together



**Thank you**

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