MONASH University

Communicating science to diverse stakeholders

Dr Lucy Richardson

FUTURE ARCTIC LIVES – 31 AUGUST 2023

Photo by Caleb Oquendo from Pexels

Key considerations

Understanding your audience:

- Climate change has a unique psychology
  - Audience segments
  - Psychological distance
  - Pluralistic ignorance
  - Dragons of inaction
- Uncertainty has a unique psychology
  - Terminology
  - Uncertainty and risk
  - Wishful thinking

Resources for strategies that can help:

- IPCC Principles for effective climate change communication
- Principles for visual climate change communication
- Best practice data visualisation
- Supporting climate-friendly behaviour change
- Countering misinformation

Photo by **Magda Ehlers** from Pexels

MONASH University

Understanding your audience

Photo by Andrea Piacquadio from Pexels

MONASH University

Audience segments: Four Europes[1]

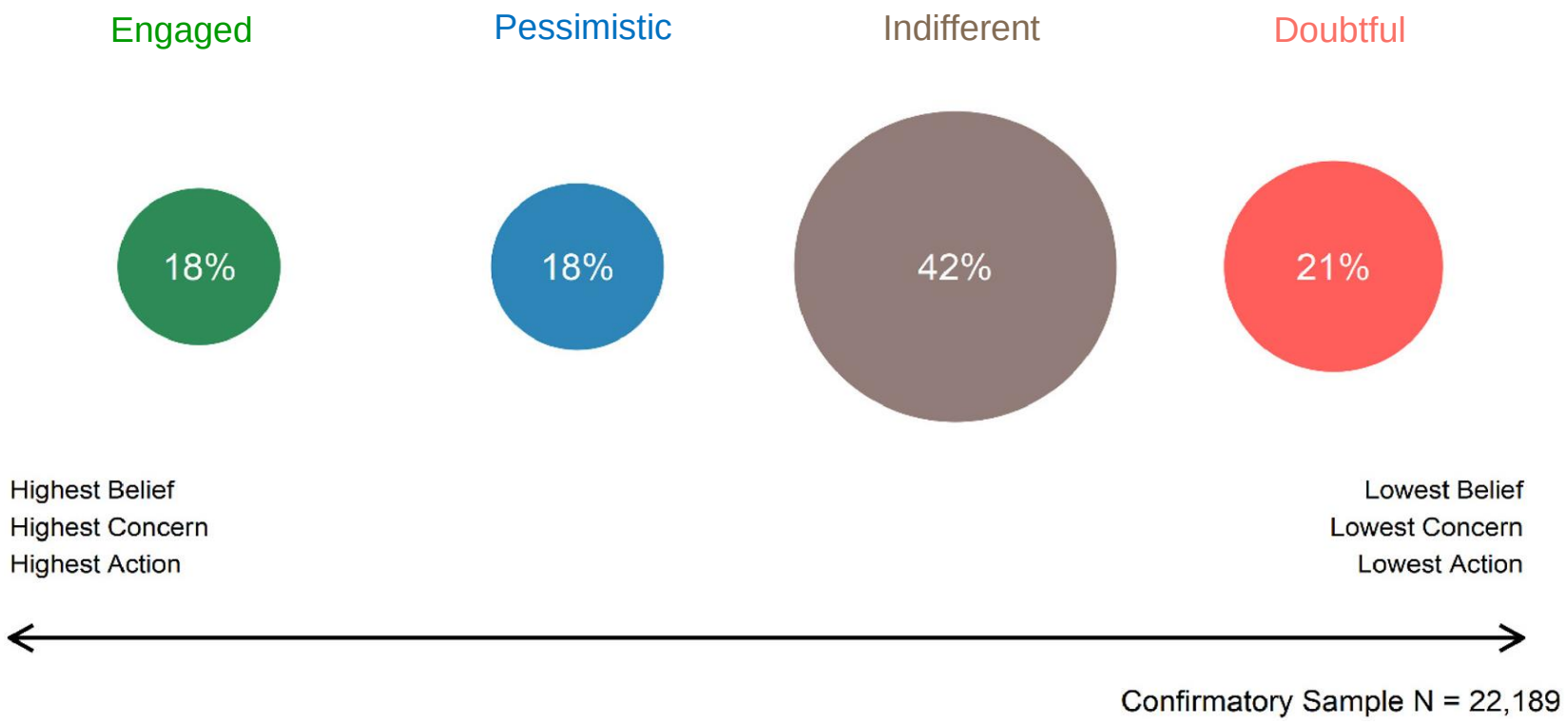


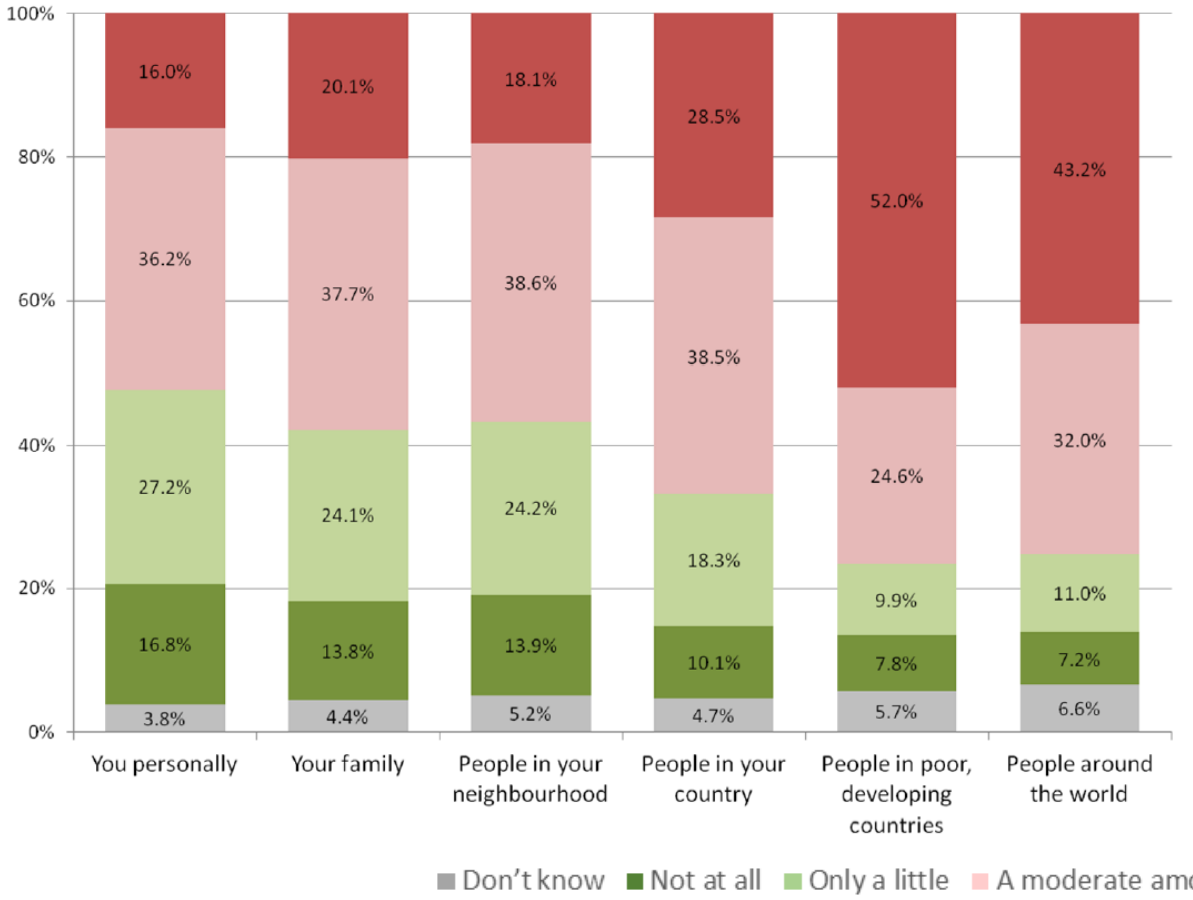
Photo by meo from Pexels

MONASH University

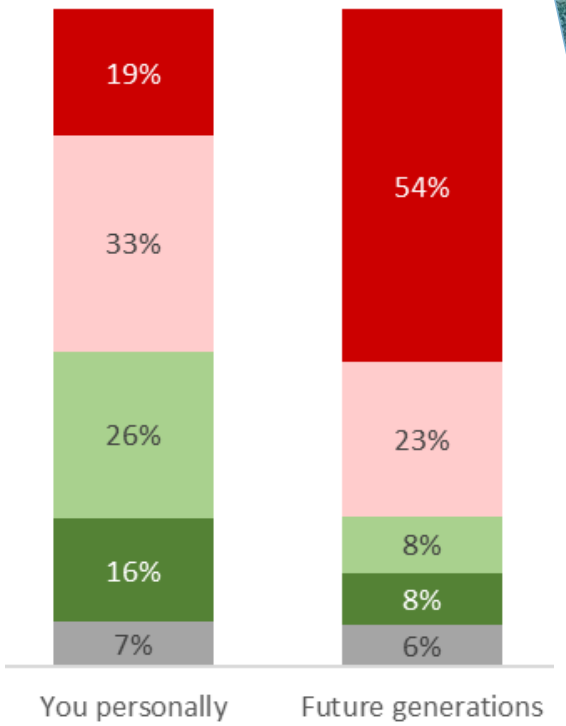
Psychological distance

How much do you think climate change will harm …

2014[2]



2022[3]

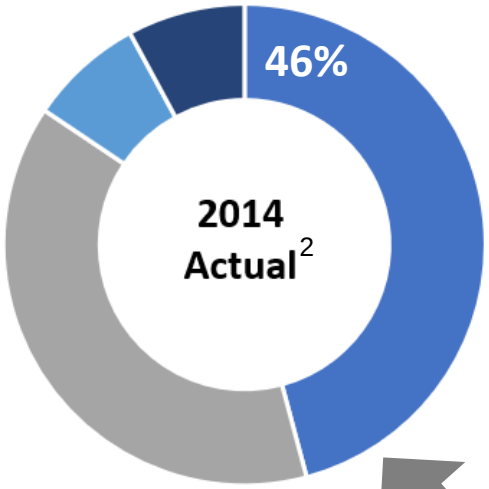


Don't know | Not at all | Only a little | A moderate amount | A great deal

Photo by **Lucy Richardson**

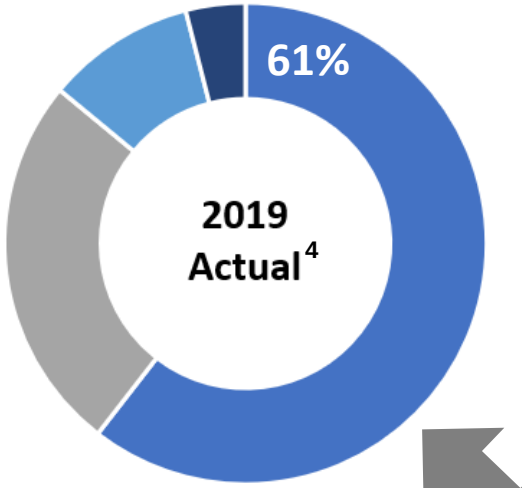
MONASH University

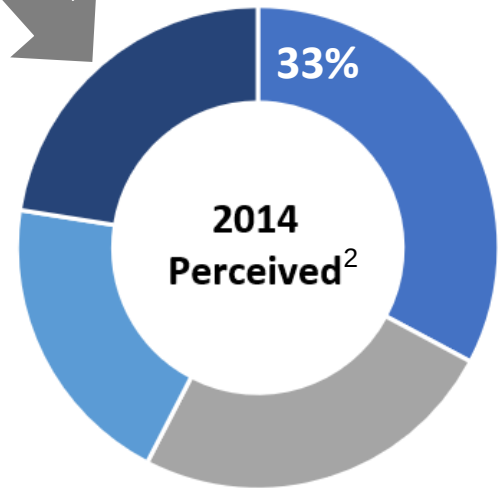
Pluralistic ignorance



Cause of climate change:

- Humans
- Natural
- Don't know
- Not happening





Young people and those who are 'very concerned' are more accurate

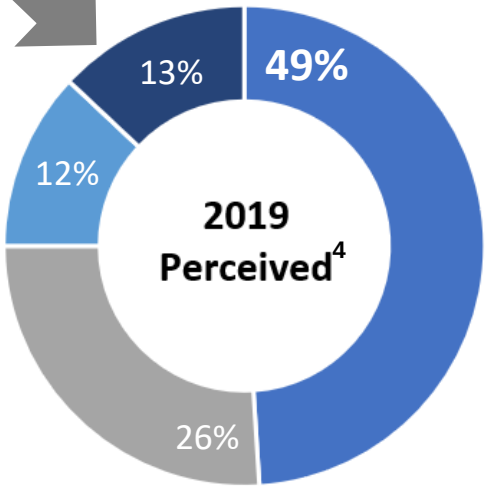


Photo by Pixabay on Pexels

MONASH University

Psych barriers: 7 dragons of inaction[5]

1. Limited cognition
   - Ancient brain
   - Ignorance
   - Optimism bias
2. Ideologies
   - Worldviews
   - Suprahuman powers
   - Technosalvation
3. Comparisons with others
   - Social norms
   - Perceived inequity
4. Sunk costs
   - Financial investments
   - Behavioural momentum
   - Lack of place attachment
5. Discredence
   - Distrust
   - Denial
6. Perceived risks
   - Functional
   - Physical
   - Financial
   - Social
   - Psychological
7. Limited behaviour
   - Tokenism
   - Moral licensing
   - Rebound effects

Photo by Eva Elijas from Pexels

MONASH University

Uncertainty

- Lay understandings of uncertainty are different to scientific uncertainty
- Just because some things are uncertain, doesn't mean all are
- Consider the nature of the uncertainty and its relationship to risk
  - In some cases, greater uncertainty means greater risk and addressing the risk reduces uncertainty
- Decision-makers deal with risk all the time – connect with these examples
- When presented with two options, wishful thinking discounts the worse case
- Remember: When uncertainty is probability – humans are bad at probability

Photo by Olya Kobruseva from Pexels

MONASH University

Resources with strategies that can help

Photo by Valeriia Miller from Pexels

MONASH University

Principles for science communication[6]

1. Be a confident communicator
   - Scientists are trusted; but be authentic
2. Talk about the real world, not abstract ideas
   - Relate to people's day-to-day, local experiences; use common ground
3. Connect with what matters to your audience
   - Relate to what is valued/local interests
4. Tell a human story
   - Use stories and anecdotes rather than statistics
5. Lead with what you know
   - Highlight what is 'known' before the 'unknowns'
6. Use the most effective visual communication
   - Refer to the principles for effective visual communication

Photo by **Lucy Richardson**

Principles for effective visuals[7]

- Show real people
- Tell new stories
- Show climate change causes at scale
- Show emotionally powerful impacts
- Understand your audience
- Show local (but serious) impacts
- Be careful with protest imagery

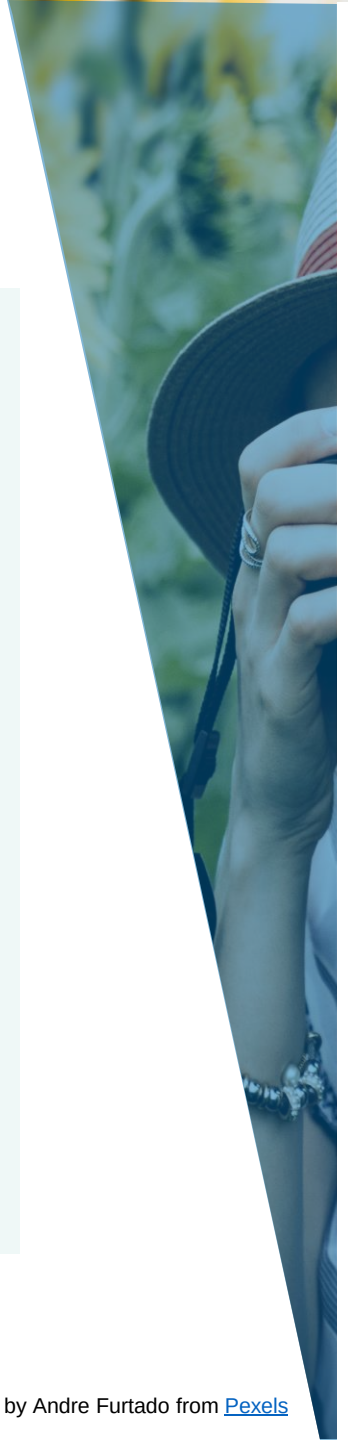


Photo by Andre Furtado from Pexels

MONASH University

Best practice data visualisation[8]

- Message – fear with hope, local focus, reinforcing social norms
- Layout – simple, consistent, familiar formats
- Language – simple, no jargon or idioms
- Colour – consider associations and differentiation, and avoid distraction
- General principles and goals – simplify, familiarity, attractiveness
- Implementation – repeated exposure, quick to grasp, easy to perceive
- Visual and audio impairment – colour differentiation, transcripts & signing
- Impact – get feedback and improve, emotion, practicality, everyday triggers
- Comparative graphs – labels/embedding rather than legends, colour coding

Photo by Dids from **Pexels**

MONASH University

Messaging for behaviour change[9, 10]

The Staged Model of Self-regulated Behaviour Change

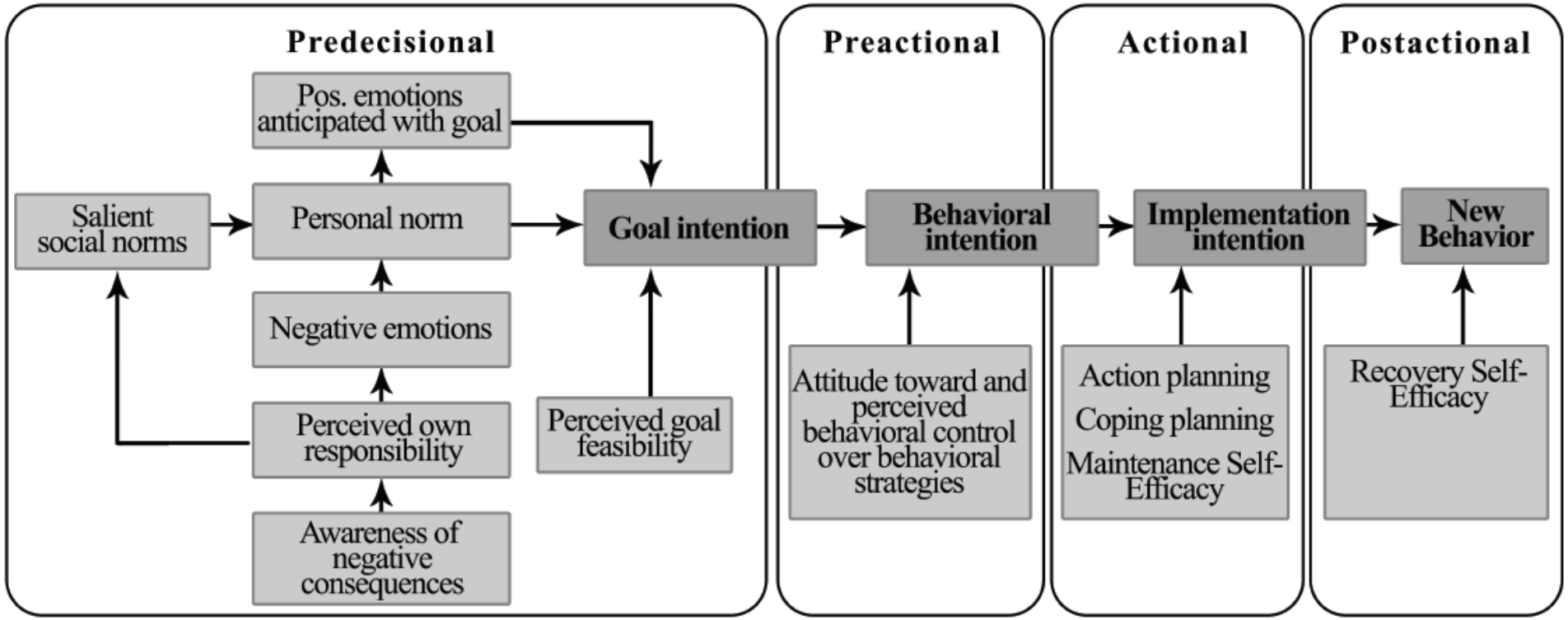


Photo by meo from Pexels

MONASH University

Countering misinformation[11, 12]

Fact-myth-fallacy technique:

- The correct fact must be sticky – plausible and complete
- You need to mention the myth so it can be mentally tagged as false
- Explain the fallacy or rhetorical technique to help resolve mental conflict

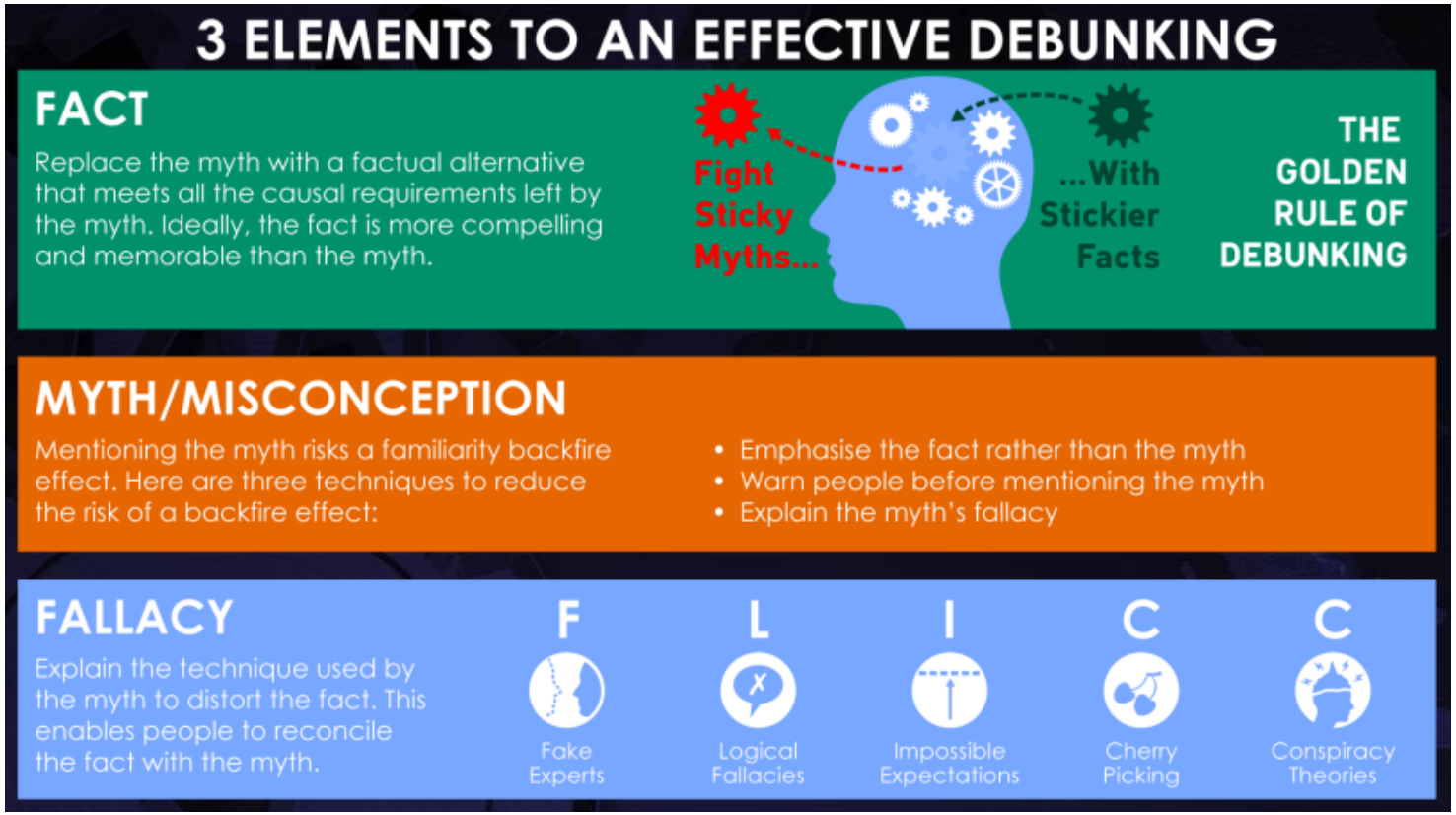


Photo by Andrea Piacquadio from Pexels

References

1. Kácha, O., Vintr, J., & Brick, C. (2022). Four Europes: Climate change beliefs and attitudes predict behavior and policy preferences using a latent class analysis on 23 countries. *Journal of Environmental Psychology, 81*, 101815. https://doi.org/10.1016/j.jenvp.2022.101815
2. Leviston, Z., Greenhill, M., & Walker, I. (2015). *Australian Attitudes to Climate Change: 2010-2014*, CSIRO, Perth, WA.
3. Monash Climate Change Communication Research Hub (2022). Unpublished survey data.
4. Merzian, R., Quicke, A., Bennett, E., Campbell, R., & Swann, T. (2019). *Climate of the Nation 2019*, The Australia Institute, Canberra, ACT.
5. Gifford, R. (2011). The dragons of inaction: Psychological barriers that limit climate change mitigation and adaptation. *American Psychologist, 66*(4), 290–302.
6. Corner, A., Shaw, C., & Clarke, J. (2018). *Principles for effective communication and public engagement on climate change: A Handbook for IPCC authors*, Climate Outreach, Oxford.
7. Corner, A., Webster, R. & Teriete, C. (2015). *Climate Visuals: Seven principles for visual climate change communication (based on international social research)*, Climate Outreach, Oxford.
8. Painter, E., Zwar, J., Carino, S., Kermonde, Z. (n.d.). *Best Practice Data Visualisation: Guidelines and Case Study*, Monash Climate Change Communication Research Hub, Melbourne.
9. Richardson, L. (n.d.). Supporting Climate-Friendly Behaviour Change. Monash Climate Change Communication Research Hub, Melbourne.
10. Bamberg, S. (2013), Changing environmentally harmful behaviours: A stage model of self-regulated behavioural change. *Journal of Environmental Psychology, 34*, 151–159.
11. Winkler, B. (n.d.). *Fact – Myth – Fallacy Compilation of Slides*, Skeptical Science, https://skepticalscience.com/docs/Fact-Myth-Fallacy-Debunkings-PDF.pdf
12. Cook, J. (2020). How to debunk misinformation. *Cranky Uncle*, 10 Sept. https://crankyuncle.com/how-to-debunk-misinformation/

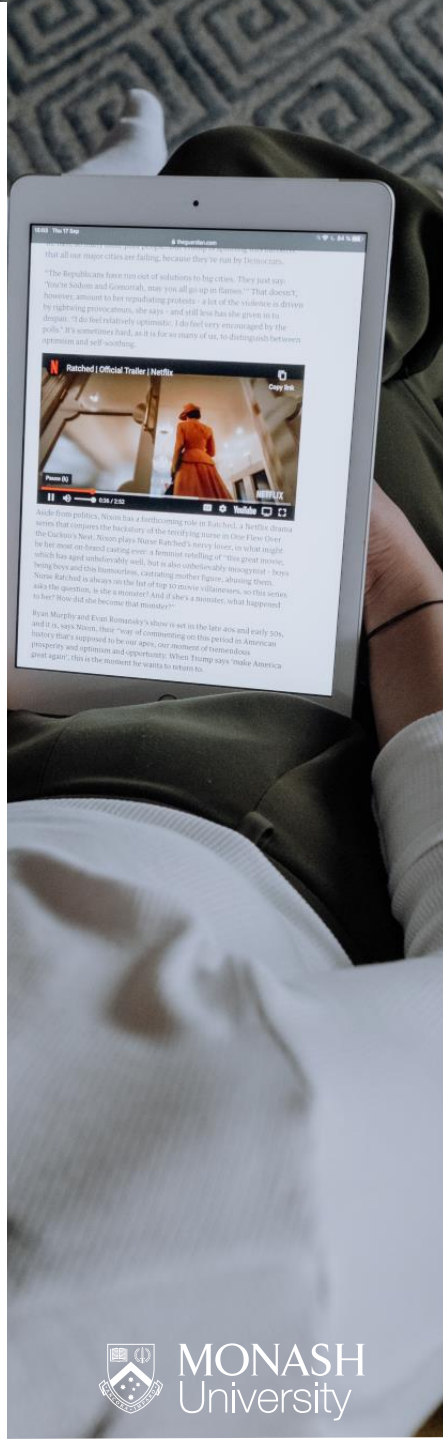


Photo by cottonbro from Pexels

MONASH University