

## **Some Sources of Information related to the Jan. 6, 2021 APS Session**

### *Communicating Science to Nonscientists in Post-Election & Post-Pandemic America*

Compiled by Kip Thorne with advice from the panelists April Burke, Alan Alda, Brian Greene and Cailin O'Connor, and also Robert Cialdini

- **Post-pandemic science and education**
  - The guest editorial about this by Roger Blandford and me (Kip), in *American Journal of Physics*, is at <https://aapt.scitation.org/doi/full/10.1119/10.0001390>
- **Techniques of science communication, particularly tight connection to one's audience:**
  - The website of the Alan Alda Center for Science Communication at Stony Brook University: <https://aldacenter.org> . See especially the Professional Development page, which has information about training programs such as one day in-person or on-line workshops.
  - For a wonderful webinar by Alan Alda, in conversation with leaders of the Alan Alda Center, in which Alda describes the motivations and genesis of his communication techniques and of the Alan Alda Center, see <https://www.youtube.com/watch?v=WAXOWQUu9xg>
  - Also enjoyable and interesting is Alda's acceptance speech when he received the National Academy of Science's 2016 Public Welfare Medal: <https://www.youtube.com/watch?v=ij1qBJwPOEk>
  - The AAAS Center for Public Engagement with Science & Technology offers workshops and seminars on communicating science. See <https://www.aaas.org/programs/communicating-science>
- **Inspiring non-scientists about science, and in the process conveying to them messages such as the power and epistemology of science.**
  - The World Science Festival is wonderful for this: <https://www.worldsciencefestival.com>
  - One of my (Kip's) favorite examples is Brian Greene's description of the discovery of gravitational waves — in conversation with Stephen Colbert: <https://www.youtube.com/watch?v=ajZojAwfEbs>
  - Among podcasts, I like Sean Carroll's Mindscape <https://www.preposterousuniverse.com/podcast/> and Alan Alda's Clear+Vivid, and also Science Clear and Vivid (available wherever you get your podcasts).

- For nonscientists already hooked on science, World Science University is a great resource, <https://worldscienceu.com> as is Quanta Magazine, <https://www.quantamagazine.org>
- **Communicating science to resistant communities, sometimes in the presence of misinformation purveyors**
  - I have found especially informative and interesting the book *The Misinformation Age: How false beliefs spread*, by Cailin O'Connor and James Owen Weatherall (Yale U. Press, 2019).
  - Cailin O'Connor recommends two books:
    - *Stuck: How vaccine rumors start — and why they don't go away*, by Heidi J. Larson (Oxford U. Press, 2020).
    - *Merchants of Doubt: How a handful of scientists obscured truth on issues from tobacco smoke to climate change* by Naomi Oreskes and Erik M. Conway (Bloomsbury Press, 2020).
  - Robert Cialdini, Regents' Professor Emeritus of Psychology and Marketing at Arizona State University, is an expert on the social psychology of communicating with resistant people. Among his writings that I have found interesting and useful are:
    - "The science of anti-science thinking" by D. T. Kenrick, A. B. Cohen, S. L. Neuberg, and R. B. Cialdini, *Scientific American*, July 2018, 319(1):36-41 DOI: [10.1038/scientificamerican0718-36](https://doi.org/10.1038/scientificamerican0718-36)  
For an interesting, open-access commentary on this article see D. T. Kenrick, *Psychology Today*, <https://www.psychologytoday.com/us/blog/sex-murder-and-the-meaning-life/201807/the-science-antiscientific-thinking>
    - Chapter 3, "Liking" from a forthcoming edition of Cialdini's influential book *Influence*, which is an exposition related to the following article:
      - "Celebrity opinion influences public acceptance of human evolution" by Steven Arnocky et al, *Evolutionary Psychology* (2018) <https://doi.org/10.1177/1474704918800656>
  - Cialdini also pointed me to this fascinating article from the social psychology literature:
    - "Why facts are not enough: understanding and managing the motivated rejection of science" by Matthew J. Hornsey, in *Current Directions in Psychological Science* 29, 583-591 (2020) <https://doi.org/10.1177/0963721420969364>

- **Communicating science to members of congress and other policy makers; science advocacy in Washington**
  - For an understanding of how Congress works, April Burke recommends *How Laws are Made and How to Research Them*, <https://www.usa.gov/how-laws-are-made>
  - April Burke's colleague Michael Ledford offers the following recommendations:
    - The Engaging Scientists and Engineers in Policy (ESEP) Coalition is a good resource: <http://science-engage.org/index.html>. They are an umbrella organization working to engage STEM leaders in policy.
    - The Journal of Science Policy & Governance (JSPG) has opportunities to serve, new series on international and intersectional science engagement, etc.: <https://www.sciencepolicyjournal.org/>
    - #BlackinSciPol is a good twitter handle for events associated with Black members of the science policy community and new opportunities.
    - The National Science Policy Network is a relatively new organization focused on science policy fellowships for graduate students: <https://scipolnetwork.org/>
  - The website of Lewis-Burke Associates may be informative: <https://lewis-burke.com3>