

Scientific Knowledge Approach:

- Although science is mostly distinguishable from pseudoscience, that might not be so evident to the public, and sometimes even the ‘safeguards’ of science fail (cc: Simine Vazire article; comic distinguishing the two and Wikipedia page)
- All models are wrong (e.g., StackOverflow page):
 - Models are a simplified way to think about a structure or process and can help us understand, visualize, and explain a neurocognitive phenomenon.
 - Even though all models are wrong, models can be predictively useful
- The public has certain conceptions of science, and some of the findings that they may have liked the most have turned out to be demonstrable false by the standards of science (e.g., Dorsa Amir thread)
 - Science communication can create gaps between popular and real science if it is too sensationalized (e.g., headlines; Mozart effect)
- Stories of genius almost always have some underlying background context that we are missing (e.g., Albert Einstein thread)

What does this mean for us?

- We are reading mostly academic articles, and many of them are recent. Some of them may not have had the benefit of time to establish reliability and validity.
- Remember that science is always a team effort and is subject to human biases. Keep a critical eye out.
- We will use models to think about how cognition is organized and generated, but all models are wrong. We can read papers with the assumption that they are wrong and then evaluate the evidence that support one model over another. That is a part of the slow progression of science and the hope that it is self-correcting.