

Conversation
Series



Neuroscience & the Media

How non-scientists can spot the hype in media coverage on neuroscience

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It is an exciting time for neuroscience. New technologies (e.g., fMRI) can explore the brain in unprecedented ways, and insightful research is accelerating the quest for possible cures to devastating disorders, such as Alzheimer's disease and schizophrenia. But the truth about these advances can be stretched by exaggerated news headlines—the phenomenon of hype. Hype can lead to troublesome consequences for science and society. This conversation series seeks to help non-scientists identify hype in media coverage on neuroscience. And become responsible consumers of science.

Spotting hype

Understand the “hype pipeline”:

Hype can enter the scientific communication process from numerous sources at multiple points. From academic papers to news pieces to social media, a “hype pipeline” fuels exaggerated claims about scientific findings.

Be wary of images & terms that lack good argument:

Sometimes authors use complicated or overly technical jargon to make an argument, hoping that their scientific veneer will convince you. Are there other possible explanations for the images or scientific findings? Is the author's logic sound?

Identify exaggerated claims:

Be on the lookout for claims that sound too good to be true, for example, suggesting imminent “cures” for complicated diseases or that new technologies can solve crimes or predict behavior.

Look for complete and balanced perspectives:

When reading an article covering the findings of a recent study, look for the inclusion of opposing views or perspectives from scientists who did not conduct the study.

Validate the headline:

If a headline grabs your attention, read the article and compare the content with the heading. Does the heading reasonably match the content? Is the content actually true, or does it seem exaggerated?

Responding to hype

Compare the claims against the evidence:

Complicated or overly technical jargon should not replace clear arguments. When a claim is made, examine the evidence used to support that statement. To evaluate the quality of a study think about whether the methods and findings really support the claim. What are the limitations of the study?

Check the facts:

It can be difficult to evaluate a news story or blog post without other information sources. If you are skeptical, find the original studies referenced by the article and other reputable sources or studies on the topic.

Develop your scientific literacy:

Many claims about neuroscience can be understood without an advanced degree. Read available reports, studies, and educational materials. Increasing your scientific literacy will help you critically interpret media reports.

Discuss with others:

Science is a shared resource, affecting and belonging to all citizens. Deliberations not only strengthen community and citizenship; they also educate. Discuss the topic with others to hear and evaluate new perspectives.

An example of hype: “This is your Brain”

The *New York Times Magazine* published an article in January 2015 about a researcher attempting to map all of the neural connections in the brain. The magazine's cover depicts the words “This Is Your Brain” in letters formed by illustrated neurons. Prominent captions on the magazine's cover and article cover page suggest that we could learn “everything” about ourselves through such a map, and ask, “If he succeeds, could we live forever as data?” Less prominently, in its final paragraphs, the article presents critiques from scientists who argue that brain mapping would be “absolutely necessary but completely insufficient” to fully understand the human brain.

Cook, Gareth. (2015, January 8). Sebastian Seung's Quest to Map the Human Brain. *The New York Times Magazine*. Retrieved July 18, 2016 from <http://www.nytimes.com/2015/01/11/magazine/sebastian-seungs-quest-to-map-the-human-brain.html>.