

CULTURE, HISTORY AND SOCIETY OPINION AND REVIEWS

Why telling bigger stories is the only way to counter misinformation

 22 Jan 2025 **Robert P Crease**

People often respond to scientific findings by invoking “stories” of dubious truth. **Robert P Crease** wonders if anything can be done about it



Sense making Humans understand the world by taking information and fitting it into pre-existing stories that might be right or might be wrong. (iStock/Laurence Dutton)

If aliens came to Earth and tried to work out how we earthlings make sense of our world, they'd surely conclude that we take information and slot it into pre-existing stories – some true, some false, some bizarre. Ominously, these aliens would be correct. You don't need to ask earthling philosophers, just look around.

Many politicians and influencers, for instance, are convinced that scientific evidence does not tell the reality about, for instance, autism or AIDS, the state of the atmosphere or the legitimacy of elections, or even about aliens. Truth comes to light only when you “know the full story”, which will eventually reveal the scientific data to be deceptive or irrelevant.

To see how this works in practice, suppose you hear someone say that a nearby lab is leaking x picocuries of a radioactive substance, potentially exposing you to y millirems of dose. How do you know if you're in danger? Well, you'll instinctively start going through a mental checklist of questions.

Who's speaking – scientist, politician, reporter or activist? If it's a scientist, are they from the government, a university, or an environmental or anti-nuclear group? You might then wonder: how trustworthy are the agencies that regulate the substance? Is the lab a good neighbour, or did it cover up past incidents? How much of the substance is truly harmful?

Your answers to all these questions will shape the story you tell yourself. You might conclude: “The lab is a responsible organization and will protect me”. Or perhaps you’ll think: “The lab is a thorn in the side of the community and is probably doing weapons-related work. The leak’s a sign of something far worse.”

Perhaps your story will be: “Those environmentalists are just trying to scare us and the data indicate the leak is harmless”. Or maybe it’ll be: “I knew it! The lab’s sold out, the data are terrifying, and the activists are revealing the real truth”. Such stories determine the meaning of the picocuries and millirems for humans, not the other way around.

Acquiring data

Humans gain a sense of what’s happening in several ways. Three of them, to use philosophical language, are deferential, civic and melodramatic epistemology.

In “deferential epistemology”, citizens habitually take the word of experts and institutions about things like the dangers of x picocuries and exposures of y millirems. In his 1624 book *New Atlantis*, the philosopher [Francis Bacon](#) famously crafted a fictional portrait of an island society where deferential epistemology rules and people instinctively trust the scientific infrastructure.

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We may think this is how people ought to behave. But Bacon, who was also a politician, understood that deference to experts is not automatic and requires constantly curating the public face of the scientific infrastructure. Earthlings haven’t seen deferential epistemology in a while.

“Civic epistemology”, meanwhile, is how people acquire knowledge in the absence of that curation. Such people don’t necessarily reject experts but hear their voices alongside many others claiming to know best how to pursue our interests and values. Civic epistemology is when we negotiate daily life not by first consulting scientists but by pursuing our concerns with a mix of habit, trust, experience and friendly advice.

We sometimes don’t, in fact, take scientific advice when it collides with how we already behave; we may smoke or drink, for instance, despite warnings not to. Or we might seek guidance from non-scientists about things like the harms of radiation.

Finally, what I call “melodramatic epistemology” draws on the word “melodrama”, a genre of theatre involving extreme plots, obvious villains, emotional appeal, sensational language, and moral outrage (the 1939 film *Gone with the Wind* comes to mind).

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Melodramas were once considered culturally insignificant, but scholars such as [Peter Brooks](#) from Yale University have shown that a melodramatic lens can be a powerful and irresistible way for humans to digest difficult and emotionally charged events. The clarity, certainty and passion provided by a melodramatic read on a situation tends to displace the complexities, uncertainties and dispassion of scientific evaluation and evidence.

One example from physics occurred at the Lawrence Berkeley Laboratory in the late 1990s when activists fought, successfully, for the closing of its National Tritium Labeling Facility (NTLF). As I have [written before](#), the NTLF had successfully developed techniques for medical studies while releasing tritium emissions well below federal and state environmental standards.

Activists, however, used melodramatic epistemology to paint the NTLF’s scientists as villains spreading breast cancer throughout the area, and denounced them as making “a terrorist attack on the citizens of Berkeley”. One activist called the scientists “piano players in a nuclear whorehouse.”

The critical point

The aliens studying us would worry most about melodramatic epistemology. Melodramatic epistemology, though dangerous, is nearly impervious to being altered, for any contrary data, studies and expert judgment are considered to spring from the villain’s allies and therefore to incite rather than allay fear.

Two US psychologists – [William Brady](#) from Northwestern University and [Molly Crockett](#) from Princeton University – recently published a study of how and why misinformation spreads ([Science 386 991](#)). By analyzing data from Facebook and Twitter and by conducting real experiments with participants, they found that sources of misinformation evoke more outrage than trustworthy sources. Worse still, the outrage encourages us to share the misinformation even if we haven’t fully read the original source.

This makes it hard to counter misinformation. As the authors tactfully conclude: “Outrage-evoking misinformation may be difficult to mitigate with interventions that assume users want to share accurate information”.

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In my view, the best, and perhaps only, way to challenge melodramatic stories is to write bigger, more encompassing stories that reveal that a different plot is unfolding. Such a story about the NTLF, for instance, would comprise story lines about the benefits of medical techniques, the testing of byproducts, the origin of regulations of toxins, the perils of our natural environment, the nature of fear and its manipulation, and so forth. In such a big story, those who promote melodramatic epistemology show up as an obvious, and dangerous, subplot.

If the aliens see us telling such bigger stories, they might not give up earthlings for lost.



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