

Science communication 101: Being strategic isn't unethical

Most scientists say they got into science to [make the world a better place](#) and recognize this means sharing what they learn with a range of other people. But deciding to engage also means deciding what to communicate, and it's at this stage that things get complicated.

Scientists' most important communication decision may be figuring out their goals. Do they want to help shape local, state or national policy discussions? Do they want to influence individual behavior, such as diet choices, medical decisions or career paths?

Big-picture goal choice is, however, relatively simple, as it likely originates from scientists' research, resources and personal preferences.

As public engagement researchers, we suggest the quality of science communication actually hinges on a second set of decisions. Scientists need to figure out what specific, immediate objectives they want to achieve through their communication efforts.



In our view, objectives are a bit tricky because they're often left unstated and

defy easy metaphors. In planning a dinner, they're not the specific dishes you choose (we'd call those "tactics" or "activities") and they're not the goal of a satisfying meal. Instead, you set objectives in the planning phase when decisions are made to start with something savory and light, move on to something satisfying, and finish with something sweet and fun.

The importance of objectives emerges from the fact that communication doesn't, for example, directly affect whether someone supports genetically modified food. Instead, increased support might be predicted to come from communication that changes individual and collective beliefs and feelings about things such as [risks, benefits and decision-makers](#).

[Our study in the journal Public Understanding of Science](#) sought to understand what might lead a scientist to prioritize different objectives, particularly those associated with policy views.

Focusing on objectives

For a science communicator, prioritizing specific objectives means deciding where to put effort.

Objectives often include increasing an audience's knowledge and excitement about science. It could also mean wanting people to recognize a shared identity, or scientists' competence or desire to make the world a better place. Reframing how someone thinks about a topic might also be a communication objective.

Effectively achieving these types of objectives appears to influence an audience's [support of particular policy measures](#) that are informed by science.

Someone interested in [changing behavior](#), on the other hand, might focus on other objectives. A scientist might want to change someone's beliefs about what others think or do, or a person's ability to behave a particular way. Maybe the scientist would like to change how an audience thinks about the likelihood some behavior will have an impact, or their perceived risks or benefits around an activity.

In the case of trying to garner support for GMOs, a focus on objectives might mean prioritizing messages or behaviors that communicate that scientists respect and listen to public concerns alongside messages related to risks and benefits.

But when do actual scientists value these various objectives? [In our survey of scientists](#) from across multiple disciplines, we found the best predictors of how much scientists prioritized an objective are the degree to which they'd previously thought about it and the degree to which they see it as ethical.

The degree to which scientists feel an objective can make a difference also seems to be important, along with beliefs about what colleagues think.

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There's more to effective communication than just downloading information in one direction.

Why focus on objectives?

While sharing knowledge will always be a primary role of science communicators, [the social scientific consensus](#) is that increasing scientific knowledge is unlikely to substantially increase support for science-related policies or change individual behavior.

On [politicized issues such as climate change](#), those with the most scientific knowledge are sometimes the least likely to support science-based policy.

In a study from a few years ago, however, [we interviewed science communication trainers](#) and found that most training rarely broached the topic of objectives. Instead it focused almost exclusively on helping scientists transmit knowledge clearly and in way that was appealing.

Our current study suggests that training might specifically highlight the range of objectives that communication can achieve and how they might be pursued ethically.

And an interesting thing about prioritizing objectives is that doing so can help guide the third step of science communication: the tactical choice of what to actually say and do while sharing knowledge.

For example, [the social psychology literature on fairness](#) shows that people value having a voice in decision-making, even when they don't get what they want. Science communicators might therefore prioritize ensuring that people with whom they engage believe they have the potential to be heard.

Our sense is that one of the most important roles of [dialogue-based public engagement](#) – a key element of any [contemporary science communication plan](#) – is that they it can facilitate both actual and perceived listening. Much of the improvisation training pioneered by the Alan Alda Center for Communicating Science emphasizes the importance of listening to one's audience with empathy.



Actor and author Alan Alda advocates training researchers to engage in mutually respectful conversations as they communicate about their work.

Similarly, we know from [research on trust](#) that it's helpful for those seeking support to have a reputation for caring about the needs of others. So if scientists have pursued a topic out of a desire to improve the world, it may help to prioritize communication that conveys that message.

One of the positive things about an emphasis on storytelling in science communication (as in the work of Randy Olson) is likely that including a narrative lets scientists talk about their motivation.

Even little choices such as dress and the effort put into designing an attractive and appropriate talk may help shape beliefs about warmth, competence, identity and other potential objectives.

The difficulty is that prioritizing discussion or personal stories means less time for sharing facts. And well-designed, carefully planned communication takes resources. Not everything can be a priority.

Being strategic isn't unethical

In the past, when we've written about [strategy in science communication](#), some people have argued that what we suggest amounts to [unethical advertising or public relations](#). Indeed, we teach in those areas so some readers may use this as prima facie evidence of nefarious intent.

But the fact that strategic communication professionals pay attention to the potential effects of their communication choices doesn't mean the science community should ignore such effects.

It seems obvious that no one should talk about motivations he doesn't really have, say she is listening when she is not or frame issues in ways that defy logic.

The point is simply that better-quality communication seems likely to occur when communicators make careful choices about objectives that are honest and for which there is [social science evidence of effectiveness](#).

Put differently, our expectation is that scientists are more likely to achieve their goals if they think more deeply about the choices they make along the way and avoid ad hoc communication that isn't grounded in a careful consideration of the short- and long-term impact of their words and activities.

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