The Head and Heart of Science Communication
Sage Advice from Alan Alda


Practical books that address the unique communication challenges faced by scientists are becoming more commonplace (e.g., 1–8). However, those that are fun to read are rare. In his latest book, Alan Alda, a well-known actor and science advocate, may have found the holy grail of communication advice. After years of reflecting on his own professional journey and studying the attributes of outstanding communicators, he says we must know two things about the audience before trying to reach them with our message: 1) what are they thinking (e.g., their desires, interest in the research, hidden biases), and 2) what are they feeling (e.g., are they happy, angry, afraid). All other aspects of communication, such as avoiding jargon, body movement, and good visuals, are based upon knowing whom you are talking/writing to and why what you are telling them is important.

Knowing what the audience is thinking and feeling is not a skill that we normally pick up in our training as scientists. Alda says that to get our message heard, we need to dig deeper into the head and heart of the audience. He takes us on a story-filled excursion of why we need to relate to others and how to do it. Learning to relate to others can make us superstars in the boardroom, lab meeting, and science cafe. On the other hand, failure to effectively relate to others can lead to personal frustration, bad government policies, lost research funding, and uninformed students. Alda repeatedly reminds us that responsibility for effective communication belongs to the person speaking, not the person listening.

Actors spend years learning how to mentally and emotionally relate to other actors and the audience, because effective communication demands such human connections. Alda encourages us to play improvisation games to move us from our usual science-based cerebral/rational level to a more visceral/emotional one in order to improve connections with our listeners, advice also offered by other authors (e.g., 2, 7, 8). Alda explains how actors master these relational techniques through intense concentration and extensive practice, like for any performing art. He provides anecdotal evidence from acting classes, neuroscience research, and studies done at Stony Brook University’s Center for Science Communication that the more these techniques are practiced, the better people become at communicating science to any audience.

As championed by others (e.g., 2, 3, 5, 7, 8), Alda urges us to promote and reward good communication skills. He asks university leaders: “Do you think it would be possible to train students in the skills of communication while they’re learning science? Do you think your university could turn out accomplished scientists who are also accomplished communicators? Will young people choose to study science if they don’t hear from scientists themselves how exciting it is?” Too often the apology he gets is simply, “We have too much science to teach and not enough time to include communication classes.” For the sake of the entire field of science, we need to integrate science communication into our educational and career development programs.

As much as I enjoyed the book, I do have four concerns. First, the data are mostly anecdotal and are begging for more experimental confirmation, which fortunately is underway (9). Second, what Alda describes took a long time for him to learn and could take us years before we get similar results. We should aim for incremental improvements over time, not immediate perfection. Third, it is still unclear to me how you get into all those heads and hearts of a large audience. Understanding one person (e.g., a spouse/parent/child) is hard enough, let alone a group of strangers. Fourth, scientists are diverse. What factors (e.g., age, culture, gender) determine our abilities to feel empathy and read the minds of others? Are they inherent? Why are some of us capable of knowing how others think and feel, while others lack these skills?

Alda’s book gives us unique insight from an actor’s viewpoint on how to reach audiences in ways far deeper than we do now. We can learn much from Hollywood actors, screenwriters, and directors about connecting with the heads and hearts of people (see also 7, 8). Sit back and enjoy Alda’s book… it’s an easy read with advice that will help you communicate science to everyone!

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REFERENCES