

The role of communication in science and astrobiology

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Misinformation is the activity of spreading misleading and non-objective information in order to deceive and modify someone's opinion about a person, a situation or a fact. Misinformation can be particularly dangerous in science. A great effort has been done (and it is still going on) by Italian scientists and communicators in order to suffocate the movement that states vaccines cause autism. A lack of scientific education and false but easy-to-believe stories lead many parents not to vaccinate their children exposing them to terrible diseases. That is why it is necessary to give people correct and reliable information about every field of science.

Science communication plays a key role in order to fight against misinformation but it can have other important roles. First, to point out how useful scientific research can be even when it seems useless (like space exploration). Second, to make science something interesting, friendly and suitable for everyone; third, to make people understand scientists are firstly moved by passion, curiosity and the desire of knowledge. Not every single thing a scientist does is necessarily "useful" to someone or something. As astrobiologists, we want to study the origin and evolution of life in the universe and we want to find extraterrestrial life. That is just because we are passionate, because we feel a connection with the universe.

The language used in science communication is essential and it must vary respect to the type of audience (children, general public, specialists) and event (birthday, conference, entertainment show). A communicator or a researcher should carefully choose the strategies to make his activity charming, so he can plan a power point presentation or take advantage of the full-dome technology of planetariums which allows people to feel involved and carried away by the images. A planetarium can be particularly suitable to talk about astrobiology, for example to represent how the Earth was when the first form of life emerged or to picture molecules and chemical reactions. In order to stay in close contact with people, a science communicator can run amazing experiments or use simple and common objects to represent difficult issues: a stone can become a meteorite or a little ball can become a bacteria. This is very successful especially when we are dealing with kids. On the other side, some specific occasions require professional instruments like telescopes for astronomical observations.

NB: Please note that I tried to match all the possible rules for the abstract template, but my abstract and, hopefully, my presentation, are very particular (e.g. I do not need equations and tables).

Short Summary

If every scientist in the world could communicate his discoveries with passion and clarity, people would be much more aware and enthusiastic about science.

"A good communication is made of 20% of what you know and 80% of what you feel about what you know."