

Review of: "Visual Science Communication: The next generation scientific poster"

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Potential competing interests: No potential competing interests to declare.

I like the ideas of this article, but some of the information could go deeper or be couched in a way that suggests a greater complexity to the phenomena it engages. For example, in the first paragraph, the authors propose that visuals were used long before a written language while suggesting that the prehistoric cave paintings served as messages for future generations while still influencing us today. There are unexplained assumptions and misleading information here that should be addressed.

To begin with, because this is “pre” history, the evolution of language, whether written, spoken, or visual can only be assumed based on archaeological findings. There are many other ways that visual and verbal communication might have evolved. There’s the possibility that a verbal or vocal/sound form preceded visuality and written forms of communication.

They may have even evolved simultaneously. Moreover, nonverbal communication consisting of facial displays, hand gesturing, and various forms of body language was probably around well before cave painting. Jewelry, body painting, piercing, scarification, and other visual forms of communication were also likely around before cave painting. My argument here is that the authors open on too simplistic an idea that needs to be “complexified” if you will. Or they could have alluded to the idea that things are much more complex than what they seem to indicate.

Along this same idea, to say that cave painting served as a message for future generations is only to say a small part of what their likely purpose(s) was/were. Some cave paintings may have served an instructional role for novice prehistoric hunters, but it is also possible that they served to tell the stories of a successful hunt, or they played a ritualistic role in a form of worship of the animals the paintings depicted. But also, paintings of animals in the caves of Lascaux in France, and Altamira in Spain, among many others around the world, are only the most well-known, and a small sample of the types of cave paintings that have been found. The most common types of paintings were not unlike today’s forms of profane graffiti, portraying prehistoric juvenile drawings of exaggerated male and female genitalia among other body parts. This is all to say that it is unlikely that cave painters were thinking of future generations when they made their creations. Perhaps the authors meant to say they serve that purpose primarily for us today.

I think the authors miss the contributions of a whole paradigm of visual communication and its research contributions. But am glad to see the work of Edward Tufte is referenced. He is one of the foremost experts on graphical design. It is nice, however, to see that researchers in the natural sciences are discovering the importance of visual communication in their field. It is a superb chance to draw linkages between the work already done in the humanities to the research and the need to present information from the natural sciences.

Typos, exclusions, and minor fixes:

1. there are some exceptions, but generally, punctuation goes inside quotation marks not outside (see <https://www.grammarly.com/blog/quotation-marks/>).
2. missing opening parenthesis around “Frahm 2019; Hauser et al. 2017).”
3. Why not include a link to an interactive poster, or embed one in the online article?
4. You mention a supplementary video, but where is it?
5. “. . . what are the contents should be communicated . . .” awkward phrasing.
6. No closing quotation marks for: “user stories are formulated in a creative process.
7. “Its target group are . . .” should be “Its target group is . . .”
8. A “supplementary” is mentioned but not included: “(see supplementary for the list of the topics).”
9. “(Figure 2, above section)” would be better to say “upper section” because I thought you meant above the section I was reading, not the upper section of the Figure. Same idea when you mention “Figure 2, below section.” It’s generally confusing. Later, in the section “Narration in ‘Explore the Ocean,’” you do the same confusing this by saying “(Figure 2, below)” when Figure 2 is “above.”
10. Figure 2 is not readable. The text and imagery are too small to be useful in this format.
11. When saying “. . . and confirmed in several studies . . .” or “Numerous studies of user experience . . .” and you reference only one study, it leaves me as a reader wanting to know what other studies there are. Don’t shortchange the reader in this way.
12. The bullet-pointed “Fundamentals in visual science communication” is helpful.

Overall, I like what this article tries to do. Making scientific information understandable to a broader audience has never been more critical in our world of misinformation, disinformation, non-information, and general distrust of scientific information disseminated in the media. But it could use closer proofreading and better, more readable figures, and a link to the interactive visual display would be a great addition.