

What is STEM Interest?

An Interview with Julia Metag

On March 14, 2018, [John Besley](#), the Ellis N. Brandt Professor of Public Relations at Michigan State University, interviewed [Julia Metag](#) to understand her thinking and work on the topic of STEM interest. Dr. Metag is an Associate Professor of Communication Science at the University of Fribourg in Switzerland. Much of her research has focused on audiences for science and science communication. A video of Dr. Metag's interview, as well as interviews of other researchers, is available at InformalScience.org/interest.



You've done a lot of work around audiences for science and science communication. How does this work address the idea of interest in science?

Well, we did a [survey](#) in the Swiss population about the attitudes people have toward science in Switzerland. Then we tried to find groups or segments of groups within this population that differ in their attitudes toward science. The way that we conceptualize interest in our work is that it's one core variable of attitudes toward science, and those different groups or segments that we found in Switzerland—and in other countries—differ with regard to their interest in science. So interest is one of the defining variables that explains differences between these groups.

Why is understanding those differences important?

If you know what groups exist and how they differ with regard to interest, other variables, and other attitudinal structures, as well as the way they behave

and the way they look for information, you can then target these groups quite well from a science communication perspective. If you know that some people show high interest in science, for example, and they're also highly educated and use scientific information a lot, you know how to reach them. Others are less interested in science. If you know what defines them, then you can target them more properly to try and reach them.

How is an interest in science similar to or different from identity as a scientist or motivation to engage in science?

I think interest is different from science motivation or science identity. With regard to science motivation, I think that motivations lie behind interest, so people might be interested in science, for example, because they need scientific information for their school work, their homework, or whatever. So the motivation for why they're looking for information about science is an element or preceding element of why science would interest

them in that situation. Regarding identity, I think that to me identity is constructed over a longer period of time and also has to do with what kind of beliefs and values people have, so it's a more general construct and it's a more stable trait of an individual person. In contrast, interest can change more quickly depending on the situation someone is in. Of course identity and interest can correlate, so probably people with a strong scientific identity also have a high interest in science in most cases. But I think interest can change from time to time. People might be interested in some scientific topics but not at all in others, even if they identify themselves as a scientist or as someone close to science.

How can practitioners—museum educators or other communicators—use this type of segmentation research that you're doing?

They can use it in the sense that these segments have been differentiated as target groups. They can look at whether there are similar groups in the population they're interested in, whether it's in an entire country or whether it's only in a certain region for which they are responsible. Then they can try and tease out these groups and target them with specific communication strategies. It also helps them to understand what other variables are related to scientific interest or what other characteristics of these groups are correlated with scientific interest. For example, whether people who are interested in science also have higher trust in science, whether they use information more often. For example, if they know that highly interested people look for information on the internet more and that people with lower interest maybe only coincidentally locate scientific information, then they can adjust their communication strategies accordingly.

What are some of the clusters or segments that

exist in the Swiss population and other populations?

What we found for Switzerland is that there are four different groups. We have a cluster that we call the sciencephiles, who are really highly interested in science and generally feel very, very positive toward science. A second group is quite similar; we call them critically interested, and they also show high interest, but they are a little bit more impartial toward science. There's a large cluster that we call the passive supporters, who are the mainstream. They show medium interest. Then we have a small fourth cluster that we call the disengaged, and these people have the lowest interest in science. There aren't many segmentation studies out yet on attitudes toward science, but according to the ones I know, this group of disengaged people with low interest is found in every country. If this is where most people are, then communication practitioners might be interested in how to reach this group and get them interested in science.

Where do you see research like this going in the next 10 years?

I think that research, as well as, for example, work that foundations are doing in this field, is aimed at developing strategies to reach this disengaged group, the people who have low or little interest in science. We need to find the right ways to test communication strategies so we can reach these people better. This might mean researching with different methods and using different measures of how people actually come into contact with science in their everyday lives. What academics are doing, as we did in our survey-based research, is including more behavioral observations of people to find out how they actually get in touch with science in their everyday lives. We're studying people from these different groups, what differences exist in their everyday lives, and how they get in contact with science.



This material is based upon work supported by the National Science Foundation (NSF) under award nos. DRL-0638981, DRL-1212803, and DRL-1612739. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of NSF.