houghts on omen-in- cience rganizations

BY ALISON LIOU

It is no news that there is a predominance of men in the fields of science, technology, engineering, and math (STEM). Not only have studies shown this to be true, but a quick glance around a roomful of students in a STEM class can easily confirm this fact. In fact, a study at Yale University published in late 2012 revealed that unconscious biases lead STEM faculty to give females a lower rating than males when they have identical credentials (1). In response, organizations with missions to empower and attract more women into STEM fields have been on the rise. While these groups have worthy goals of raising awareness about our unconscious biases towards women in STEM so that we can do our best to avoid them, there are a few potential problems to consider.

Bringing together an all- or mostly-female community for women-in-STEM gatherings may help empower women who are in these fields, but such an action inevitably separates out women from the overall science community. Because STEM fields have been predominantly male, it is important for both genders to become used to and comfortable with mingling and working closely together in STEM settings. Doing so would certainly help eliminate biases toward women in science when women perform well. Psychological principles also support integration, as it has been shown that people tend to like and accept something or someone more with increasing familiarity. This is known as the mere exposure effect.

The second potential problem to consider is that these organizations could unintentionally negatively color women's perceptions when they enter STEM fields. When women go into STEM fields with the mindset that there will be gender-related hurdles to jump over, it becomes easy to over-analyze gestures as being gender discriminative when, in reality, they often had no such intentions behind them. Such a mindset fosters oversensitivity in situations, especially those involving constructive criticisms, which could negatively influence work and relationships.

In attempts to attract more women into STEM fields, organizations can also easily end up sending misleading, and even counterproductive, messages. A good but extreme example is the European Commission's controversial video for its "Girls in Science" campaign, which featured models strutting around lab equipment with sunglasses, and various shots of colorful make-up products (2). Not only does this type of advertising falsely represent STEM fields, but it is also reinforces gender stereotypes, which does nothing to help alleviate gender biases. Organizations may think that incorporating glamorous images attracts more female attention, but these types of messages end up being counterproductive on the grand scheme of things. Science may be beautiful or cool, but it is certainly not a glamorous occupation due to the nature of the work. If we want to attract more women to STEM fields, making science seem glamorous is not the way to do it – we would only be misleading them. Women who want to enter STEM fields should also not be choosing to do so because of how glamorous it appears to be.

The last problem to consider is more of a question of thought regarding equal opportunity versus equal outcomes: while there should definitely be equal opportunity for men and women in STEM, does this necessarily mean that it will lead to equal outcomes? And if equal opportunity does not lead to equal outcomes, is that necessarily a bad thing - especially if the reason for such an outcome is that women, as a group, just tend to be more passionate about other fields? What is the best metric to use to determine whether or not unconscious gender biases have been eliminated?

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References:

1. M. Urry, Why Bias Holds Women Back. (CNN Opinion, 2012).
2. O. Khazan, EU's 'Science, It's a Girl Thing' Campaign Sparks a Backlash. (The Washington Post, 2012).

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