Lewis College hosts Kevin Elliott to speak on the importance of values in science

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Science is held by a good many people, to be an objective—or at least one of the most objective—practices in which we can engage. It is for this reason that often it is seen as advantageous or even necessary to remove personal, social, and commercial values from the process.

Kevin Elliott, an associate professor at Lyman Briggs College at Michigan State University and author whose book, "A Tapestry of Value: Inevitability and Social Goals," being released January 2017, argues against this notion. He presented his arguments to the Illinois Tech populous in a talk hosted by Lewis College of Humanities in the Rettaliata Engineering Center (Crawford) Auditorium entitled "Values in Science: How to Throw Out the Bathwater and Keep the Baby," on Friday, September 23, at which ample refreshments were provided, drawing in students and faculty alike.

Elliott began the presentation proposing two projects for the talk: defending "science values" and arguing that values should not be excluded from the process of doing science. Values, he defines, are desirable qualities or states either of a personal or societal nature, such positive health, environmental protection, etc. The problem, as well as much of the criticism, comes when these values start to influence scientific reasoning.

He lists some popular examples for how valuation has been of detriment to science: citing studies showing that over half of research fail reproductions and instances of design bias, publication bias, falsification of data, and misleading rhetoric. He also spoke to the all too well known cases of corporate biasing of science, such as has been committed by certain pharmaceutical and pesticide companies about the effectiveness and harm of their products as well as by the tobacco industry about the dangers of the substance.

However, Elliott claims that values, in addition to being unavoidable in some sense, have a huge relevance to scientific work given the role of science in society. By the nature of values, they often result in research being done to fit social priorities. It may be said that scientists have something of an obligation on what questions to focus their attention. What is studied possibly has a huge social impact, and choosing what to study (maximizing the yield of a crop,) how to study it (how long to run the experiment, scales,) and how to interpret the available data (whether it is better in any given situation to overestimate or underestimate effects) are all questions that require evaluation.

Thus, Elliott proposed, instead, for a focus on three criteria for the evaluation of science that will, ideally, help with the negative effects of valuation within it: transparency, reproducibility, and critical review. He then proceeded comment on each one.

For transparency, he concluded that the attempts at it has had mixed success. The Food and Drug Administration (FDA) enacted in 2007 that all pharmaceutical companies were required to register all of their trials after reporting results. The effectiveness of this suffered due to spotty compliance, exceptions from this act, limited requirements within the act itself, and that it was not retroactive. Attempts have been, according to Elliott, even less effective in chemical safety as well as other sectors where it is necessary.

As for reproducibility, there is an interesting dynamic where industry laboratories actually have more reproducible data than independent/academic ones due to more access to funding. However, Elliott said that there are problems even with this, arguing that "results can be reproducible without addressing the questions being asked." Inadequate endpoints, doses, and lack of population variability in experiments severely limit the real world applications of many of this research. As an example, he cited that although a few academic tests, particularly one published in Andrology, have shown endocrine disruptive effects associated with Bisphenol-A (BPA), very little is being done because the vast majority of journal accepted results are the ones being done by industry that do not show these effects. These are signs of a systematic problem with the way experimental results are being verified and accepted.

As a response to these issues, Elliott proposed the necessary practice of critical review in quality controlling research, with an emphasis on the word critical. This can be best done with oversight from boards of qualified individuals making sure that the research and results that are approved are up to snuff and are, more importantly, relevant to the questions that they are proposing.

Strengthening critical review relies on strengthening the involvement of regulatory agencies, advisory boards and panels, and funding boards and governments. These organizations can—and should—focus more on informatively deciding what studies are good studies, and making sure that the criteria for being so do not discount academic and independent researchers or studies that are actually relevant in comparison to ones that may seem more reproducible at face value.

Elliott concluded by reaffirming that he firmly believes that science should try to exclude values, but needs to be scrutinizing them with effective critical review. There are numerous limitations, he admits, as nearly two-thirds of scientific funding comes from industry, which makes legitimate review much more difficult to impose. However, he sees this as the best method to ensure science can thrive given its heavy role in society.

ITT's abrupt closure may permanently put decades-long confusion to rest

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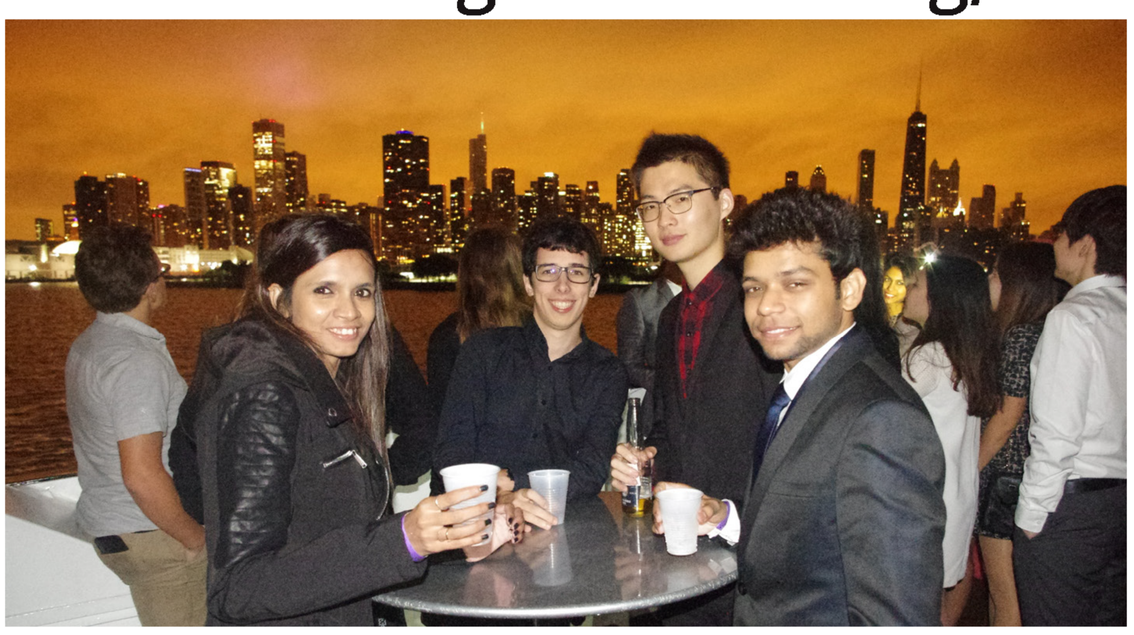
For years, the acronym for Illinois Institute of Technology (IIT) has been confused with that of another, more well-known institution. Many have seen the commercials on TV: "ITT Technical Institute, education for the future." For over twenty years since the for-profit college started airing commercials, the two institutions have been easily mistaken for one another. Many students here at IIT may know from first-hand experience that this confusion is widespread among the general population. This is never more obvious than when students are asked by loved ones or friends which college they are attending. The student must reluctantly either use the full name of the university or use the acronym but then specify that it is different from the one on television. Even Google, known for its accurate searches, has trouble discerning the two schools as links to IIT can be found when searching ITT and vice versa.

With this ever growing problem of confusion and misidentification, the school has begun the transition from IIT to Illinois Tech, which has steadily caught on amongst students and faculty alike. The transition to this new shorthand term for the university still has a long way to go, as numerous signs, advertisements, and logos seen across the campus still bear the IIT acronym. The confusion between ITT Technical Institute and IIT may soon come to an end, however, as recent developments suggest that one player is out of the running for good.

Last month, ITT Technical Institute shut down all of its nationwide campuses and their online computer servers without so much as a warning. This has left many of their enrolled students questioning their future as their college has left them up a creek without a paddle. The collapse was not without warning signs, however, as the school in recent years had been plagued with numerous complaints from students, declining enrollment numbers, and investigations by the court system for suspected fraud on the part of the school's executive board. Many of these problems created a negative reputation for the school in recent years, something IIT Office of Admissions wanted no ties or connection to whatsoever. With the end of the for-profit school and their barrage of commercials on television, the confusion may soon pass with time as ITT Technical Institute fades away from mainstream knowledge.

The use of IIT may still prove to be a problem internationally however, as the acronym is shared by another institution in the country of India: The Indian Institute of Technology. While it is usually unheard of in the United States, the same cannot be said for the one billion people living in India. With over 60,000 students and 23 campuses across this large and populous country, the school is a behemoth when compared to our relatively small university, with a student population of less than 8,000. In addition to the IIT in India, the acronym is used by several other smaller universities and colleges around the world such as the Institute of Investigative Technology in Madrid, Spain and the Islamic Institute of Toronto in Canada. Even here in the United States, the acronym is also used by the Indiana Institute of Technology. All of these schools lack the mainstream knowledge of existence, and therefore are nowhere as near a problem for Illinois Tech as ITT Technical Institute has been for the past two decades.

RHA hosts night of dancing, casino games at annual boat cruise



Photos by Jamshid Tokhirov