



Science

Our philosophical science correspondent

Massimo Pigliucci tries

Crossing The Divide

A colleague of mine was once asked “What is the definition of a philosopher?” His answer was, “Anyone whose paycheck comes from a department of philosophy.” This may not pass rigorous analysis, but according to that standard, as of this past September I am in fact a philosopher. The reason I am writing about it has nothing to do with me being glad of having found an employment with good benefits (and tenure!), although that is certainly nothing to scoff at these days. Rather, it is because until last semester I was a biologist. This means that my new job represents a (somewhat unusual) instance of someone purposefully crossing C.P. Snow’s divide between the ‘two cultures’. Moreover, according to Snow, and to several of my former colleagues, I’m actually going in the wrong direction. What’s gotten into me, you might fairly ask?

A good part of the answer is that I firmly believe that I can make more of a difference by teaching philosophy than science. This may sound rather strange, but consider the difference for a minute. A lot of the teaching in science, especially in biology, and particularly at the introductory level, is about factual knowledge. Despite all the talk about teaching students how to think, or how to appreciate the scientific method (whatever that may be), the grim reality is that lower-division courses in biology are meant to convey a lot of information in a small amount of time, often to very large audiences (especially at public institutions). That is not really teaching, but much more akin to telling your students to memorize the equivalent of a phone directory, so that, come exam time, they can spit back to you a large number of factoids that are completely irrelevant to their lives and to society at large.

But, you might say, science plays such an important role in society that surely we can benefit from a young citizenry that has a better understanding of science and how it works? Yes, we could – particularly in a country like the United States, where large portions of the population reject evolution

and global warming while believing in ghosts and alien abductions. The problem is that a good number of studies have shown that science teaching as it is often practiced in school has no effect whatsoever on people’s understanding of science.

Which brings me to philosophy – a discipline that is given a chance to make an impact on young minds much later than science, for the simple and inane reason that it is not taught until college level. (There are partial exceptions in some

European countries, but even so students the world over are exposed to literature, math and science much earlier than they come in contact with philosophy.) Philosophy is not about teaching facts, but rather ideas – how they are developed, and how well they withstand scrutiny or fail to do so. In other words, one way to conceive the teaching of philosophy is as one long course in critical thinking.

In *Manufacturing Consent*, which he co-authored with Edward Herman, Noam Chomsky famously said that citizens of a democracy ought to engage in “a course of intellectual self-defense” – without which politicians and the media would be able to manipulate public opinion for whatever purpose they deem appropriate, with the result that democracy would be hijacked by demagoguery. I do not know whether you have paid attention to the news coming from North America recently, but this is precisely what has been happening for some time in the United States. Reasonable political discourse and rational dissent have given way to the mindless repetition of simplistic slogans, and most outrageously, to prominent politicians and media figures simply making up lies to cynically further their positions. These tactics find

such fertile ground precisely because most American citizens do not take a course in intellectual self-defense – with the result that the self-appointed ‘greatest democracy in the world’ may be a few steps away from collapsing into chaos or paralysis.

It is therefore not by chance that the first course I decided to teach at my new job is called ‘Critical Reasoning’. It’s being taught to kids in the Bronx. This is a student population made up largely of minorities, often the children of first-generation immigrants, and equally often much more interested in pursuing the American dream by becoming doctors, lawyers or businesspeople rather than indulging in the writings of Plato or John Stuart Mill. And yet those same students become incredibly excited when we talk about logical fallacies, and are eager to know how to upgrade their baloney detector kit so that others will not be able to take advantage of them.

I am under no illusion that philosophy can change the world all by itself. But this world needs reason more than technical expertise; and as astronomer with a strong philosophical bent Carl Sagan used to say, reason is like a candle in the dark, always in danger of being extinguished by ignorance and the violence that ignorance breeds. We want science to make our lives better and to help us understand how the world works; but we need philosophy to aid us in figuring out what is important in life and where we ought to focus our efforts. What is so strange, then, about a scientist crossing the divide between the two cultures, to become a philosopher?

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