

# SCIENTIFIC AMERICAN™

Permanent Address: <http://blogs.scientificamerican.com/cross-check/2013/06/20/why-study-humanities-what-i-tell-engineering-freshmen/>

## Why Study Humanities? What I Tell Engineering Freshmen

By John Horgan | June 20, 2013

What's the point of the humanities? Of studying philosophy, history, literature and “soft” sciences like psychology and poly sci? The Commission on the Humanities and Social Sciences, consisting of academic, corporate, political and entertainment big shots, tries to answer this question in a [big new report to Congress](#). The report is intended to counter plunging enrollment in and support for the humanities, which are increasingly viewed as “luxuries that employment-minded students can ill afford,” as *The New York Times* put it.

ADVERTISEMENT



Socrates teaching the humanities.

Titled “The Heart of the Matter,” the report states: “As we strive to create a more civil public discourse, a more adaptable and creative workforce, and a more secure nation, the humanities and social sciences are the heart of the matter, the keeper of the republic—a source of national memory and civic vigor, cultural understanding and communication, individual fulfillment and the ideals we hold in common. They are critical to a democratic society and they require our support.”

I find this a bit grandiose, and obscure. I have my own humble defense of the humanities, which I came up with a couple of years ago, when I started teaching a new course required for all freshmen at Stevens Institute of Technology. The syllabus includes Sophocles, Plato, Thucydides, Shakespeare, Descartes, Hobbes, Locke, Kant, Mill, Marx, Nietzsche, William James, Freud, Keynes, Eliot—you know, Greatest Hits of Western Civilization.

I love teaching the class, but I don't assume that students love taking it. So on the first day

of class I ask my wary-looking students, “How many of you would skip this class if it wasn’t required?” After I assure them that they won’t hurt my feelings, almost all raise their hands.

When I ask what the problem is, they say they came to Stevens for engineering, computer science, physics, pre-med, finance, digital music production, etc. They don’t see the point of reading all this old impractical stuff that has nothing to do with their careers. When I ask them to guess why Stevens inflicts this course on them, someone usually says, smirking, To make us well-rounded.

Whenever I get the “well-rounded” response, I want to reply, “Does ‘well-rounded’ mean, like, chubby?” But I don’t want to offend overweight students. Instead I say, “I don’t really know what ‘well-rounded’ means. Does it mean being able chitchat about Shakespeare at cocktail parties? I don’t care about that.” Then I give them my pitch for the course, which goes something like this:

We live in a world increasingly dominated by science. And that’s fine. I became a science writer because I think science is the most exciting, dynamic, *consequential* part of human culture, and I wanted to be a part of that. Also, I have two college-age kids, and I’d be thrilled if they pursued careers in science, engineering or medicine. I certainly want them to learn as much science and math as they can, because those skills can help you get a great job.

But it is precisely *because* science is so powerful that we need the humanities now more than ever. In your science, mathematics and engineering classes, you’re given facts, answers, knowledge, truth. Your professors say, “This is how things are.” They give you certainty. The humanities, at least the way I teach them, give you uncertainty, doubt and skepticism.

The humanities are subversive. They undermine the claims of all authorities, whether political, religious or scientific. This skepticism is especially important when it comes to claims about humanity, about what we are, where we came from, and even what we can be and *should* be. Science has replaced religion as our main source of answers to these questions. Science has told us a lot about ourselves, and we’re learning more every day.

But the humanities remind us that we have an enormous capacity for deluding ourselves. They also tell us that every single human is unique, different than every other human, and each of us keeps changing in unpredictable ways. The societies we live in also keep changing—in part because of science and technology! So in certain important ways, humans resist the kind of explanations that science gives us.

The humanities are more about questions than answers, and we're going to wrestle with some ridiculously big questions in this class. Like, What is truth anyway? How do we know something is true? Or rather, why do we believe certain things are true and other things aren't? Also, how do we decide whether something is wrong or right to do, for us personally or for society as a whole?

Also, what is the meaning of life? What is the *point* of life? Should happiness be our goal? Well, what the hell is happiness? And should happiness be an end in itself or just a side effect of some other more important goal? Like gaining knowledge, or reducing suffering?

Each of you has to find your own answer to these questions. Socrates, one of the philosophers we're going to read, said wisdom means knowing how little you know. Socrates was a pompous ass, but there is wisdom in what he says about wisdom.

If I do my job, by the end of this course you'll question all authorities, including me. You'll question what you've been told about the nature of reality, about the purpose of life, about what it means to be a good person. Because that, for me, is the point of the humanities: they keep us from being trapped by our own desire for certainty.

*Postscript:* My Stevens colleague Garry Dobbins, a philosopher, likes to give me a hard time, and I him, but I'm always provoked by his take on things, like this response to my post: "As to the Humanities being to teach us a healthy skepticism, we might all agree that this is indeed one of the consequences of such an education; but if this is necessary, as you make it out, because learning science alone we do not learn the importance, or necessity of 'uncertainty, doubt and skepticism,' something strange and even perverse has befallen the study of science! Those taking seriously the study of the history of science, for instance, will know that there was a time when science assumed the cultural pre-eminence it still occupies among us precisely because it did not teach dogmas, or as you put it, 'certainty.' On the contrary; scientific studies from the early modern period down to the early twentieth century, anyway, were liberal studies. Surely the justification of study of the Humanities, history, literature, philosophy and the rest, is not fundamentally different than the justification for the study of science. There are forces at work in human life, whether material or spiritual, which we seek to master, so far as possible. The language in which we express our knowledge of physical forces obeys somewhat different logical rules to that in which we express our knowledge of economics for example: but this doesn't mean that the one is less knowledge, or logical, or important, than the other, surely! That you speak of the kind of knowledge to be gained by close study of Shakespeare, Thucydides, or Plato, as 'impractical' surely goes to show a misunderstanding as to what is practical in a human life. Unless you can show good reason to believe Socrates mistaken in thinking that self-knowledge is only reliable foundation for a good life."

I responded: “Garry, you’re right that science if properly taught should incorporate skepticism. But science is becomingly increasingly dogmatic and arrogant in our era, which is why we need the humanities to foster a healthy anti-dogmatism.”

*Post-postscript:* Hear me yammer further about the humanities (and other topics) with my buddy George Johnson (also a humanities major) on a recent Bloggingheads.tv: <http://bloggingheads.tv/videos/19616?in=58:19&out=61:16>.

*Painting by 18<sup>th</sup> century painter Nicholas Guibal, Wikimedia Commons.*

**About the Author:** Every week, hockey-playing science writer John Horgan takes a puckish, provocative look at breaking science. A teacher at Stevens Institute of Technology, Horgan is the author of four books, including *The End of Science* (Addison Wesley, 1996) and *The End of War* (McSweeney's, 2012). Follow on Twitter [@Horganism](#).

[More »](#)

*The views expressed are those of the author and are not necessarily those of Scientific American.*

## TRY A RISK-FREE ISSUE

**YES!** Send me a free issue of Scientific American with no obligation to continue the subscription. If I like it, I will be billed for the one-year subscription.

Email Address

Name

Scientific American is a trademark of Scientific American, Inc., used with permission

© 2013 Scientific American, a Division of Nature America, Inc.

All Rights Reserved.

[Advertise](#)

[Special Ad Sections](#)

[Science Jobs](#)

[Partner Network](#)

[About Scientific American](#)

[Press Room](#)

[Site Map](#)

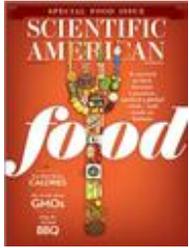
[Terms of Use](#)

[Subscribe](#)

[Renew Your Subscription](#)

[Buy Back Issues](#)

[Products & Services](#)



[International Editions](#)

[Privacy Policy](#)

[Subscriber Customer Service](#)

[Travel](#)

[Use of Cookies](#)

[Contact Us](#)