The big news on the ISIS front last week was the identity of “Jihadi John,” the guy who has been cutting off heads in the ISIS videos. He is Mohammed Emwazi, who grew up in London, immersed in British culture. He attended the University of Westminster, earning a degree in computer science.

Computer science at the undergraduate level works to create certain habits of thought. In both writing software and building hardware, the tools and the objects created follow rules. Once the student understands the rules and their interaction, they can make something that works the same way every time.

Computer science is a type of engineering, and there is a striking link between terrorists and engineering. Terrorist leaders usually have a higher degree, and that degree is more likely to be in engineering than in any other field. Two of the masterminds of 9/11 were engineers. Further analysis in 2009 by professors Diego Gambetta and Steffen Hertog revealed 44 percent of known educated terrorists had engineering degrees.

How can we explain this link? A lack of job opportunities provides a partial explanation, pointing to a frustration of expectations and a need to seek other options. But, why turn to Islamic terrorism?

In a nutshell, engineers do not study enough humanities or social sciences. Most engineering education contains few courses that teach about human beings as individuals and groups. The engineering curriculum is notorious for requiring as many courses as possible in the technical area and for resisting any course not providing directly relevant knowledge. But, so what?

Engineering is like computer science; it builds things. To build successfully within the physical world, engineers must work with an extremely complex array of rules.

Engineering’s ability to build reliable bridges, roads and skyscrapers, or more cool things like space rockets and iPhones, repeatedly demonstrates how engineers have mastered the physical, chemical, and other rules of materials, and put them together in increasingly useful ways.

Is human behavior equally rule driven? Do individuals and groups have that same predictability and reliability? No, of course not. None of the humanities or social science disciplines would claim that.

To be sure, fields from political science and sociology to literature and religious studies make general observations about the character of human activity, but those observations focus on how humans make choices from the variety of possibilities before them, rather than follow biologically hard-wired rules. Study in any field reveals the wide variability of human activity and belief.

Religions, however, are different. Available to most of the world’s people, even those lacking education, religions lay out guidelines for belief and behavior. Religions claim their rules apply universally and are reinforced by a god -- or gods -- in both the natural and the supernatural worlds.

Religions such as Christianity, Islam and Buddhism, for example, organize humanity into those who belong and those who do not, providing instructions for how members should behave among themselves and how they should treat outsiders.
In western religions, those distinctions are often formulated in terms of sin, of whether a person’s behavior is good or evil. And true justice, as defined by the religion, can only be found within the religion.

Of course, every religion contains many groups with different guidelines. In my small hometown, the phone book contains 44 different churches. That is 44 different sets of guidelines about good and evil. Think about how many options there are among the billions of the world’s people!

So, “Jihadi John” receives a higher education that teaches him how to think with rules, but exposes him neither to modes of thought that lack such rules or to ways of thinking about humanity.

When John finishes his degree and fails to find a job, he starts thinking about human beings and injustice -- especially injustice to himself. Where does he turn? To his religion, for it is the only relevant mode of thought he knows.

Led in his naiveté by radical Muslim recruiters, he follows the rules they teach him to their logical end. God has divided humans into the good and the wicked, a.k.a. the believers and the infidels. God has ordained that, although the infidels control the world, the believers will overcome them and the wicked will be eliminated. So, he concludes, literally, off with their heads.

What can prevent this scenario? As leading engineering colleges such as MIT and Harvey Mudd have understood, more education in humanistic disciplines, learning how to think about human nature and society, and learning that humans do not conform to a limited set of precise rules. That would provide some way, other than religion, to think about the character of human life.

Note: This essay draws from Diego Gambetta and Steffen Hertog, “Why are there so many Engineers among Islamic Radicals?” European Journal of Sociology 2 (2009): 201-230.