

# Understanding faith, teaching evolution not mutually exclusive

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Discussing the relationship between science and faith, rather than avoiding the discussion, may better prepare future high school biology teachers for anticipating questions about evolution, according to Penn State political scientists.

In a series of focus group meetings with biology students at four Pennsylvania institutions—three universities and a college—students from a Catholic college appeared to be more reflective when talking about issues of faith and science.

"We suspect these students are somewhat less anxious around discussions of faith and science that come up in biology classes," said Michael Berkman, professor of political science and director of the Center for American Political Responsiveness.

Students at religious colleges often receive instruction in theology and attend lectures that integrate discussions about faith, Berkman said. While this may help ease anxiety if religious issues come up in class discussions and talks with concerned parents, it is ultimately knowledge of the science of evolution that will provide [biology teachers](#) with the confidence for effective science instruction, he added.

"If you don't have confidence in your own self-knowledge, especially in a controversial topic, your tendency is going to be to shy away from it, to avoid controversy and to not really teach the subject," said Berkman.

Critics of evolution often take advantage of a teacher's limited understanding of evolution to foster doubt in the science and make the science seem less settled than it actually is, according to Berkman, who worked with Eric Plutzer, professor of [political science](#) and academic director at the Survey Research Center. These critics need only a slight opening to sow that doubt, he added.

"You don't have to necessarily prove an alternate theory, you just have to shed sufficient doubt on the prevailing scientific consensus," said Berkman. "This is not an original idea. A variety of people and groups use the strategy of enabling doubt, in terms of doubting evolution, or climate change, or even, in the past, with tobacco research."

Although many religious denominations now accept the compatibility between religious faith and the science of evolution, students from the non-religious schools often revealed that they experienced tension between the two, according to the researchers, who released their findings in the March issue of the *Annals of the American Academy of Political and Social Science*, which is online now.

Students who have not considered the religious implications of evolution may not be prepared for questions from skeptical parents and students when they become teachers.

"Some of these students felt that they would be supplied with sufficient lesson plans and pedagogical skills when they become teachers, so that they could overcome what they don't quite understand now and answer the challenging questions that might come up," said Berkman.

Incorporating faith into discussions about evolution at Catholic and other religious institutions may be easier than at public institutions because the fields of science and religion are much more separate at the latter, he added.

In an earlier study, Berkman and his colleagues found that high school biology teachers play a critical role in forming public consensus about science. Denying evolution could, then, lead not just to doubts about evolution, but also to a broader misunderstanding of science in general, according to the researchers.

"Evolution is fundamental to biology, but more importantly we think that when you are communicating a skepticism about evolution you're communicating a skepticism about science generally," said Berkman.

The researchers conducted focus group sessions at a large research university, a medium-sized state-owned university, a historically black university and a Catholic four-year college, all in Pennsylvania. A total of 35 students took part in the focus group sessions that lasted 50 to 65 minutes.

Berkman said these focus group sessions could help lay the groundwork for more extensive follow-up surveys and studies in the future.

Provided by Pennsylvania State University

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