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The Honorable Governor Robert Taft
77 South High Street
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Atm: Mr. John Allison

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Dear Governor Taft,

I have been following the curricular controversy in your state with great interest for almost two years.

I am writing—as a member of the National Academy of Sciences—to voice my strong support for the "Critical Analysis of Evolution" lesson in your model curriculum. Your Board of Education is to be commended not only for the lesson, but for the innovative compromise they enacted to make the lesson possible.

All too often, the issue of how to teach evolutionary theory has been dominated by voices at the extremes. On one extreme, many religious activists have advocated for Bible-based ideas about creation to be taught and for evolution to be eliminated from the science curriculum entirely. On the other hand, many committed Darwinian biologists present students with an idealized version of the theory that glosses over real problems and prevents students from learning about genuine scientific criticisms of it.

Both these extremes are mistaken. Evolution is an important theory and students need to know about it. But scientific journals now document many scientific problems and criticisms of evolutionary theory and students need to know about these as well.

Many of the scientific criticisms of which I speak are well known by scientists in various disciplines. (My own work has been in chemistry and biochemistry including work on the development of antibiotics, a topic addressed in your curriculum).

I don't know why, but I have found that some of my scientific colleagues are very reluctant to acknowledge the existence of problems with evolutionary theory *to the general public*. They display an almost religious zeal for a strictly Darwinian view of biological origins.

Darwinian evolution is an interesting theory about the remote history of life. Nevertheless, it has little practical impact on those branches of science that do not address questions of biological history—the vast majority of fields. Most of the great discoveries in biology and medicine over the last century could have been made without Darwinian evolution and provide little or no support for it. Instead, for those scientists who take it seriously, Darwinian evolution has functioned more as a philosophical belief system, than as testable scientific hypothesis.

This quasi-religious function of the theory is, I think, what lies behind many of the extreme statements that you have doubtless encountered from some scientists opposing your curriculum. It is also why many scientists make public statements about the theory that they would not defend privately to other scientists like myself.

In my judgment, this state of affairs has persisted mainly because too many scientists were afraid to challenge what had become a philosophical orthodoxy among their colleagues. Fortunately, that is changing as many scientists are now beginning to examine the evidence neo-Darwinism more openly and critically in scientific journals.

Your state has created a curriculum that will allow students and teachers to exercise this same freedom of thought—the freedom to examine evidence without worries about meeting an ideological or philosophical litmus test.

Intellectual freedom is fundamental to the scientific method. Learning to think creatively, logically and critically is the most important training that young scientists can receive. Your new approach to teaching evolution will, therefore, prepare students, not only to understand current scientific arguments about evolution, but also to do good scientific research.

I commend you for your state's achievement and for your leadership in making a brighter future for science and science education possible.

Yours sincerely,

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Cc: Ms. Jennifer Sheets