



National Center for Science Education

Defending the Teaching of Evolution in Public Schools

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Guide to *Episode 1: Darwin's Dangerous Idea*

For a 45–60 minute dialogue on Episode 1 of *Evolution*

By Phina Borgeson, M.Div.

“It is interesting to contemplate an entangled bank, clothed with many plants of many kinds, with birds singing in the bushes, with various insects flitting about, and with worms crawling through the damp earth, and to reflect that these elaborately constructed forms, so different from each other, and dependent on each other in so complex a manner, have all been produced by laws acting around us. These laws, taken in the largest sense, being Growth with Reproduction; Inheritance which is almost implied by reproduction; Variability from the indirect and direct action of the external conditions of life, and from use and disuse; a Ratio of Increase so high as to lead to a Struggle for Life, and as a consequence to Natural Selection, entailing Divergence of Character and the Extinction of less-improved forms. Thus, from the war of nature, from famine and death, the most exalted object which we are capable of conceiving, namely, the production of higher animals, directly follows. There is grandeur in this view of life, with its several powers, having been originally breathed into a few forms or one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved.”

— Concluding paragraph from *On the Origin of Species* (first edition) by Charles Darwin

Image

When Emma Darwin is playing the piano and Charles engages her in conversation, she says, “Can your theory account for the way my eyes and ears and hands and heart combine to reproduce the sounds that Chopin heard in his head? Isn't that a God-given gift?”

Dig

This dialogue helps to point up some of Darwin's inner struggles about the conventional faith of his culture and what he was coming to understand about evolution. Stephen Jay Gould describes Darwin as “the intellectual radical and the cultural conservative.”* Biographers and historians of science have interpreted the evidence of Darwin's struggle in various ways, but most do suspect that Emma's beliefs may have tempered the expression of his growing agnosticism. What other evidence of this tension did you see in the episode?

* Stephen Jay Gould, *Full House* (New York: Harmony Books, 1996), 144.

Dialogue

Can Darwin's theory of evolution account for Emma's gifts as a pianist?

What might it contribute to understanding her abilities?

How does your theology account for Emma's skills as a pianist?

Can you think of ways in which assumptions of faith and assumptions of evolution might each contribute something to the phenomenon Emma describes?

Some people make the distinction that science answers “how” questions and faith answers “why” questions. How might that apply in this case?

Explore

1. Learn more about the history of the acceptance of Darwin’s theory and the forces that stimulated his detractors. A primer which can help you review the high points of Darwin’s story and thought is *Darwin for Beginners* by Jonathan Miller and Borin Van Loon (New York: Pantheon Books, 1982). The definitive biography, formidable in size but readable, is *Darwin: the Life of a Tormented Evolutionist* by Adrian J. Desmond and James Moore (New York: Warner Books, 1991).
2. Why was Darwin’s idea dangerous? The title of this episode is taken from a book by Daniel C. Dennett. Certainly Darwin’s idea was dangerous from the perspective of religious authorities in Darwin’s day, and still seems dangerous to some conservative and fundamentalist people of faith. It also seemed dangerous to the academic establishment of Darwin’s day. And it may still seem dangerous as people extend the concept beyond the life sciences. Consider the implications of this statement by Professor Dennett: “...before Darwin we found meaning coming from above, from the top down. With Darwin’s theory we now see design and purpose coming from the bottom up without any direction at all.”

Act

Do some research. Where in the media you use, in the world around you, in the folk wisdom of people today, do you see this conflict, epitomized by Charles and Emma Darwin, still going on? How might you, as a person of faith interested in the theory of evolution, speak to this?

Please send comments on these guides, and any questions about ideas and resources for extending the conversation, to:

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