

Q&A with Michael Specter: Transcript

Interviewed by Joelle Seligson

The science writer and ASTC 2011 speaker on denialism, vaccine phobia, and why organic food won't save the world

In the face of today's massive organic movement, Michael Specter lauds synthetic drugs and genetically modified foods. Specter, staff writer at the *New Yorker* and author of the 2009 book *Denialism: How Irrational Thinking Hinders Scientific Progress, Harms the Planet, and Threatens Our Lives*, does not factor political correctness into his crusade to conquer fear with facts.

Here's a taste of what he'll discuss as a featured speaker at the 2011 ASTC Annual Conference (conference.astc.org) in Baltimore, hosted by the Maryland Science Center, October 15–18.

Aren't we supposed to go organic?

Who said we're supposed to go organic? Is that written down somewhere? I don't even know what it means to "go organic." If you're asking, "Is organic food good for you? Is it healthy? Is it good for the environment?"—there are answers to all those questions, and they vary depending upon the circumstances. It tastes good. I buy it because it tastes good. I buy it because I'm a rich Western person. I don't think it's going to be very useful to a lot of people who have no protein and are going to bed hungry every night.

Why would we eat genetically engineered food or, say, take a new wonder drug when we have the option of organic farms and dietary supplements?

First of all, dietary supplements are almost universally shown to be worthless, so I'm not sure why that would be an option anyone would want. Organic farms—show me somewhere where organic farms make people healthier than other types of farms. Genetically modified food is food that we all eat. We don't eat anything that isn't genetically modified. It's just a question of how we modify it. People are objecting to us moving molecules around in a lab rather than in a field through husbandry and that seems rather shortsighted to me. The question is: What are you trying to get, and what do you want?

If our thinking is that natural trumps artificial—

What does "natural" mean? If you can tell me what natural means, I'll answer the question, but since no one has ever offered a definition—there certainly isn't a legal definition—I don't know what that means.

What about the fear people have after hearing stories of others who have gotten sick from pesticides and new vaccines? Aren't we better safe than sorry?

Yeah, we are better safe than sorry, and if we choose not to vaccinate ourselves then hundreds of millions of people can die, because vaccines are the most effective public health measure in the history of the world. So, it depends what you mean by "safe." If what you mean is to engage in no risk whatsoever, there's nothing that entails no risk. And the biggest risks are usually the things we don't do, which we never consider. So you don't want to vaccinate your kid? It's fine with me—just keep your kid away from my kid. If you want your kid to die or be seriously ill, I can't stop you, but I can prevent you from going near my kid.

What is "denialism"? How is it affecting science and innovation today?

Denialism is just a refusal to accept factual reality and a clinging to beliefs that make you feel more comfortable in the face of lots of evidence to the contrary. It's hurting science and our lives in any number of ways. California just had the biggest pertussis outbreak in 70 years because people won't vaccinate their children. We have a measles outbreak now in Minnesota. We will have more. This is because people are afraid of a measure that is inarguably one of the safest and most effective in the history of medicine. As long as we do that, as long as we are afraid of things rather than look at the data, we're going to suffer. It doesn't mean that vaccination is 100% perfect, it doesn't mean people can't be made sick, and it doesn't mean there won't be errors. But you always have to look at what the opportunities are and what the costs are, and we tend to look at one or the other.

How do you think this phenomenon affects science centers and museums who are trying to educate the public about science?

It's hard. It's hard to educate the public about science when people don't want to listen to the facts, which is why we live in a country where 40% of the people say they won't vaccinate their children and get the flu shot, and where about the same number say they don't believe in evolution. It doesn't matter how much data we have to show that evolution is something that we don't really need to have a theoretical discussion about. So, it's hard to do—and it's also impossible not to do. We need to convince people that the scientific method, which is what we're talking about, has been the most successful enterprise we've ever undertaken intellectually and that it continues to be successful, and that it's of more value than the alternatives. We sometimes forget to make that case, and we have to make the case, even if we think we're right.

How do you think science centers and museums specifically could help make that case?

They do have and could have lots of demonstrations, exhibits—something like vaccinations, for instance. Let people know that measles killed 150,000 people in the world last year, just not in this country, or that it used to be a serious scourge—or that in this country polio was

a very serious illness that frightened us all until just a couple generations ago. These things are gone now, essentially. We don't think about them because vaccines have been so effective. The museums can show us. This is history, and that's what museums do, and they do it really well. Other things they can do—they have done wonderful things about evolution. They give lessons. They should continue to do that and they should reach into the schoolkid age, because that's where you're going to be most effective.

Is this along the lines of what you're planning to tell science center and museum staff at the ASTC Annual Conference?

To some degree. I might want to talk a little bit about what they could do differently that they're not doing now. But I want to save a little bit for the speech.

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