

## TRANSCRIPT

### Environmental Insights

**Guest:** Emma Rothschild

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**Emma Rothschild:** Climate change is really immediate to people in their early 20s or late teens thinking about their own lives and thinking about, “What can I do with all the knowledge I'm acquiring, all the skills that I have, to do something?”

**Rob Stavins:** Welcome to [Environmental Insights](#), a podcast from the [Harvard Environmental Economics Program](#). I'm your host, [Rob Stavins](#), a professor here at the [Harvard Kennedy School](#) and director of the program. Although most of my guests in this podcast series have been academic economists, I've also had the privilege and the pleasure of talking with some leading lights from other disciplines, including ones that seem adjacent to economics such as political science and law, and also some that are certainly further afield such as physics and chemistry.

Today we have an opportunity to delve into a realm that bridges the humanities, in particular history, and social science, in particular economics, by talking with a star in the field of economic history -- [Emma Rothschild](#), the Jeremy and Jane Knowles Professor of History at [Harvard](#), where she is the director of the [Joint Center for History and Economics](#), and a fellow at [Cambridge University](#). Welcome, Emma, to [Environmental Insights](#).

**Emma Rothschild:** A great pleasure to be here, Rob. Nice to talk to you.

**Rob Stavins:** So, in a few minutes, I'm eager to hear all about your explorations in the environmental realm, including, of course, your recent work on the economic history of methane emissions. But first, our listeners always find it interesting to know about my guest's background. So let's start with where did you grow up?

**Emma Rothschild:** I grew up in Cambridge, England. So, the movers when I came from there to Cambridge Mass. were very amused.

**Rob Stavins:** I imagine they were. And then what we would call the United States primary school and high School, were those in Cambridge?

**Emma Rothschild:** By insistent pestering of my parents, I actually managed to go to a boarding school, which I sort of liked. I don't think the family liked the idea, but it was interesting. So, I went to a boarding school in the West of England but left at 15. So, that was an achievement.

**Rob Stavins:** And then on to college, which was at Oxford?

**Emma Rothschild:** I went to Oxford. Yes.

**Rob Stavins:** And there you did PPE, is that right?

**Emma Rothschild:** I did PPE, but when you said at the outset that most of the people you talk to are economists, but sometimes you see other people, well, I had a sort of shudder because I did start as an economist some years ago. I actually came to MIT to do a PhD in economics, and I've always had a kind of feeling maybe one of these days I'll go back.

**Rob Stavins:** So, speaking of coming to MIT, that was as a Kennedy Scholar, which as I understand it is essentially the reverse of a Rhodes scholarship, British graduates coming to Harvard or MIT for a couple of years of study. Is that right?

**Emma Rothschild:** That's right. And I came in the late 1960s, so not long after President Kennedy's assassination when the program was new. It was a very exciting time to be here. And it was interesting. The scholarships went to MIT as well as to Harvard because of the late Jerome Wiesner who was President Kennedy's science advisor, and he was an important figure in setting up the program.

**Rob Stavins:** Now, please forgive my ignorance, Emma. Does the Kennedy Scholar program continue to exist today?

**Emma Rothschild:** My goodness, yes. There are outstanding Kennedy scholars right there in the Kennedy School and in the Law School, and they continue to find really fantastic young people who are here at Harvard and at MIT.

**Rob Stavins:** Well, that's great. Now I'll be sure to watch out for them. So you went back to Oxford for graduate school. Is that right?

**Emma Rothschild:** No, this is a complex story and the opposite of a model for the modern world. I came to MIT for graduate school, decided I didn't want to do the PhD in economics. So, I became a journalist at that point and I wrote a book. And at that point I thought, "Well, I do want to do a PhD in economic history." So, I had tea in New York with the late Eric Hobsbawm who was teaching at London University, in fact in an adult education part of London University, and I said, "I want to come back to England and do a PhD in economic history with you." And he looked at me and he said, "You are much too old, and you've already written a book. So that's a silly idea." I was 26 at the time.

**Rob Stavins:** My gosh.

**Emma Rothschild:** So, I was probably the last person hired on the MIT faculty who didn't have a PhD because I went back to MIT in 1978 and was there on the faculty for 10 years before being back again to England.

**Rob Stavins:** So, your first academic position then was professor of humanities at MIT. Is that correct?

**Emma Rothschild:** Well, initially in humanities, and then in the science, technology, and society.

**Rob Stavins:** I see. And then you had many other positions over a period of years. And then visiting professor of history at Harvard, which evolved, I believe in 2008 into the position you now hold the Jeremy and Jane Knowles Professor of History. Have I got that straight at least?

**Emma Rothschild:** That's right. Well, 2007 I came [inaudible 00:06:24]. Actually didn't have many positions between MIT and Harvard.

**Rob Stavins:** Here you are now.

**Emma Rothschild:** Yeah, here I'm now.

**Rob Stavins:** So, with that, let's turn to your scholarly work in history, in particular economic history. A question I always ask my guests, although I know it's like asking one to identify a favorite child, is what's the one research publication of yours, which in your case might be a book, an article, or something else, or an endowed lecture perhaps that you gave somewhere, the one that you're most proud of. What would that be, Emma?

**Emma Rothschild:** I'm very fond of an article called [An Alarming Commercial Crisis in 18th Century Angouleme](#). It sort of turned into my most recent book called [An Infinite History](#). But it was the first time I really tried to use micro history, in this case of a small financial crisis involving high interest rates and allegations of usury and tried to take that as the basis for telling a much larger story about the economic history of France.

**Rob Stavins:** And what was the smaller story, the actual event that you described there?

**Emma Rothschild:** After the Seven Years' War, there were a lot of highly indebted borrowers, some of them military contractors. They alleged that their creditors were charging usurious rates of interest. And in fact, these were standard rates of interest. But by unenforced old religious regulations, they could be accused of usury. And it was a celebrated case which led to blackmail and allegations of attempted murder. It became a kind of nationwide and to some extent Europe-wide, cause célèbre, and was also the occasion for one of the most important works of economic theory on the deregulation of financial markets. And it's always been seen as just this sort of bizarre little local episode, which set off so many important issues in economic policy. So, I got interested in what had actually happened and who these people were. They were sometimes given only initials. I wanted to find out who they were and where they lived and why it really happened, and it was just fascinating. I think I like to do micro/macro history, and that was the first time I really sort of tried to do it in a very detailed way.

**Rob Stavins:** That's fascinating. So let's move fast-forward and turn to environment and climate change. I actually don't know. How is it that you became interested and involved in this sphere?

**Emma Rothschild:** Well, my first book, the book that stopped me from getting a PhD in Hobsbawn's view was about the history of the American automobile industry.

**Rob Stavins:** Yes.

**Emma Rothschild:** It was actually published exactly 50 years ago. You probably know that in the early 1970s, there was major national concern about the environmental consequences of a system of transport that was based on private vehicle traffic, so the book was substantially about that. It wasn't about climate change, which while kind of visionary thinkers were talking quite a bit about climate change in the early 70s, I wasn't in this book. So, really I never stopped being interested. I did a lot of writing in the *New York Review of Books* in the 1970s and 1980s on the end of crisis and environmental questions. I then had a period as a sort of very minor policymaker as a member of the Royal Commission on Environmental Pollution in the UK. So, it's really been a continuing interest throughout my work. And I must say, one of the things that makes me very optimistic now about my field is that so many people interested in economic history are now seeing that the environment and climate is part of economic history and vice versa. Environmental historians are seeing that they have to think about how the economy evolves.

**Rob Stavins:** I can't help but mention that... So when I did my PhD in the Harvard Economics Department, and graduated, I guess, in 1988, and one of the requirements at the time was to do two one-semester courses in economic history and/or the history of economic thought. And I did my two courses in economic history with Jeff Williamson, which turned out, although it wasn't environmental economics which is what I was geared towards, those turned out to be two of the most important courses that I ever took because they were essentially laboratories of economic research. It was the place where I learned how to do economic research, which otherwise is not taught per se. I think unfortunately, and maybe I'm wrong about this, Emma, that requirement in the economics department no longer exists, but I don't know.

**Emma Rothschild:** You are absolutely right, but what you say is so interesting. And I do think that young economists, the sort of people who are looking for jobs right now, are in a way voting with their feet because I've been extremely struck by how many of the top candidates this year actually have either environmental papers, climate papers, or history papers as part of their portfolios, and in many cases, both actually. I just think the PhD students are kind of understanding this much faster than perhaps the educational establishment. And I don't know, perhaps there's also a hopeful sign in Claudia Goldin's very recent Nobel Prize because-

**Rob Stavins:** Yes.

**Emma Rothschild:** ... her important work really is about the history of women in economic life, and she has occasionally, almost single-handedly held up economic history in the Harvard Econ Department. So, I'm very upbeat about the extent to which this is going to be important in coming years.

**Rob Stavins:** Yes, she came to Harvard as economic historian, as I recall.

**Emma Rothschild:** Her wonderful papers that are cited by the Nobel Committee are an example of exactly what you described, sort of doing economic research by using data, thinking about evidence, finding new kinds of evidence, and doing economics out of that.

**Rob Stavins:** Now, something that really struck me, Emma, I don't know if it was in your CV or biography or something I was reading about you, was that under the umbrella of a project [Visualizing Climate and Loss](#), you have written about Adam Smith in that regard. Do I have that straight? And if so, can you say a few words about it?

**Emma Rothschild:** I wrote a book mostly about Adam Smith about now almost 20 years ago, and I've continued to be very interested in him. This year is the 300th anniversary of his birth. I'm very struck by the extent to which commentary on Smith now says something that seemed to me to be so weird, namely, "Adam Smith is to blame for global climate change." It's sometimes phrased in a more general way like, "Smith is responsible for worldwide capitalism or worldwide materialism, and that in turn is responsible for climate change."

Now, this is a level of generality but I'm not at all comfortable with, but more specifically, I became interested in the question, "Well, did he say anything that could conceivably have led people to think this? And what did he, to the extent that we can discern this, think about the origins of the industrial revolution in relation to a more plausible, causal story about how industrial growth of the late 18th century actually did lead to contemporary climate change?" So [the short essays](#) are about that. What would-

**Rob Stavins:** I see.

**Emma Rothschild:** Adam Smith have thought about climate change? What did he say about externalities? What did he say about the distant effects of our own actions? And this is in his work on moral philosophy. So, it was really fun to investigate this empirical story.

**Rob Stavins:** So, I recently read a biography of Adam Smith, but because I tend to read nowadays on a Kindle, I never know. I always forget the title of the book and the author of the book because I don't see it. Was there a recent biography of Smith that came out?

**Emma Rothschild:** There's a huge Smith industry-

**Rob Stavins:** Yes.

**Emma Rothschild:** ... and the 300th anniversary has been just wild around the world. But I am sorry. I'm sure there are books by friends and colleagues of mine that I should be mentioning, but there's a very good sort of classic biography by Nicholas Phillipson, but that's a few years old.

**Rob Stavins:** Well, I'll try to dig them up and include some links here in addition obviously to links to your own work and your projects. Speaking of your projects, I want to turn to [Methane In 1,800 Histories](#), which would be, that's a surprising title for a project, I bet, to our listeners. So can you tell us about that?

**Emma Rothschild:** Your listeners undoubtedly know that methane is an extremely potent greenhouse gas, and it's been described in a lot of policy documents as a low hanging fruit for climate policy. This project came about really opportunistically when I saw a very good article that was the cover piece in *Science* a little over a year ago by some French climate scientists who were actually able to map almost 1,800 sites of ultra methane emissions worldwide. A lot of this has been done for the U.S. and for other countries. They were able, using satellite data, to give a literally worldwide overview of where the largest methane emitters were. So, as someone who's interested in the micro and the macro, I became intrigued by the question, "Well, what's happening in each of these apparently disparate locations? Why are there so many methane emissions in this particular spot in Kazakhstan or somewhere in the Central Valley in California?"

I actually sort of cold called or cold got in touch with the French scientists. They sent me their data, and I literally, sitting at home here in Cambridge Mass., started crunching it a bit myself and became more and more intrigued. And this turned into a collaborative project. We'd done a big visualization of all the sites. And the aspiration is that young historians, young economists will actually investigate each of these sites and thereby contribute to an understanding of the history of why climate change is happening. And, of course, thereby in turn, start to think in a practical and local way about what can be done about the sites. We got started with this as investigation really in economic history, in understanding, and thanks in large part to the connection with [the] [Salata \[Institute\]](#), we've been taking much more seriously the possibility that understanding these local histories can in fact be helpful for policy.

So, through the Salata connections, I'm now in touch with people, for example, in Southwest Pennsylvania who are trying to do something about methane emissions there. This is very much a global project. We have a lot of contacts in Bangladesh with people who are working both on our micro histories and with policymakers. And I'm happy to say that the next micro history we're going to be uploading is actually about one of the methane emission sites in Ukraine written by young Ukrainian historian who's very involved with projects for environmental reconstruction once the tragic war there comes to an end.

So, this has been something that's been really interesting in terms of the extent to which it has captured students' imagination. I teach a course here at Harvard called [Writing Histories of Climate Change](#). One of the exercises in that class was to pick one of the sites on the map and write your own micro history, and some of the students did just wonderful pieces. And one of the tasks for the next couple of months is to go back to those students and help them with editing the pieces, add more references, and then upload those to the website. I think it's captured people's imagination because it seems doable. And part of what's so difficult about climate change is that the instruments, mainly global policy change, seems so beyond the capacity of individuals or groups to affect. And it's related really to the problem with Adam Smith's reputation after 300 years. If the problem that has caused climate change is materialism or capitalism, then what can one do about it?

**Rob Stavins:**

And now as part of the Harvard Salata Institute's university-wide initiative in reducing global methane emissions, you're co-leading with Steve Wofsy, professor of atmospheric and environmental science at Harvard, a project on using remote sensing data to inform micro histories of methane release sites, which is very exciting. Can you say a few words about that?

**Emma Rothschild:**

Well, this has been my favorite collaboration since I arrived at Harvard all those years ago. It's been just great to work with Steve and his team. We have these kind of cluster meetings where either some young economists and historians traipse over to his lab and talk and talk and talk, or sometimes his team comes over to the social science building and we sit in the basement and talk and talk and talk. And it's spun off a number of collaborations, which Steve and I aren't even directly involved with. So, I think this is extremely promising.

To give you one example, there was a particular location in Colorado which Steve's airplane was going to be flying over. They were very concerned because of the methane emissions, and it came up that we had a student who was not far from that site in Colorado. He recently graduated from Harvard College. He's pre-med. And so, I got in touch with him and asked him, "You don't want to take a few days and go to X site and look around while Professor Wofsy's airplane is looking from above." And yes, he wanted to do it, and he wrote a fantastic piece. This is the sort of collaboration that we hope is going to be possible, including on an international scale when the methane satellite is launched early in 2024.

**Rob Stavins:**

So, it is indeed very exciting. And I'm really struck by the number of students with whom you're working, both graduate students and Harvard College undergraduate students. My sense is that there's just greatly increased interest amongst students in climate change and sustainability more broadly. And I assume you would say that you have personally experienced that?

**Emma Rothschild:**

To an extraordinary extent. I mean, this new course, Writing Histories of Climate Change, was, I think, much the most intense teaching experience I've had at Harvard, because climate change is really immediate to people in their early 20s

or late teens thinking about their own lives and thinking about, “What can I do with all the knowledge I'm acquiring, all the skills that I have, to do something?” And there were students from really right across the range of disciplines who took this course. I mean, we certainly had someone who was working on polar cause, we had a brilliant young biologist who's now writing a book about microbes and climate change coming out of work she did in the class. We had poets. We had people interested in policy in Argentina. I mean, it was fantastic.

And the students who worked as course assistants on this class, I don't think the faculty involved would've been so bold, but they think we should try to have a college-wide climate histories class. So, let's see. We're going to be developing it on a larger scale next year. Professor Victor Seow from the History of Science department, who's a wonderful economic and environmental historian of coal mining in China, is teaching it, taught it with me and will continue to teach. And Professor David Yang, who's the co-director of our center and is a really interesting professor in the econ department, whose own work uses historical data very interestingly, even though he wouldn't think of himself as an economic historian.

**Rob Stavins:** Well, that's very exciting. And so let me bring things to a close just by saying thank you so much, Emma, for having taken time to join us today.

**Emma Rothschild:** It was a real pleasure, Rob. Look forward to seeing you around.

**Rob Stavins:** Our guest today has been [Emma Rothschild](#), the Jeremy and Jane Knowles Professor of History at [Harvard University](#). Please join us again for the next episode of [Environmental Insights: Conversations on Policy and Practice](#) from the [Harvard Environmental Economics Program](#). I'm your host, [Rob Stavins](#). Thanks for listening.

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