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Interview of Laura Clerx

Laura Clerx 00:00

So why are all the same people who are people in the early scientific societies in the United States, also the ones who whose names are listed on the acts of incorporation for different economic projects, right? Because this is a time when a number of people are working very hard to sort of expand markets in the US, to create a kind of sense of a national economy, and that really got me thinking and asking the questions about the relationship between commercial projects and maybe how, how the sort of drive to develop a commercial economy shaped the science that was taking place in the early republic.

Samuel Hurwitz 00:36

[Intro music fades in] Historians and Their Histories is a podcast by the Massachusetts Historical Society. It introduces listeners to our community of researchers. We learn about the paths they took to become a student of the past and the projects they are working on at the MHS. I'm Sam Hurwitz Podcast Producer and Editor here in the research department at the Massachusetts Historical Society. Today, we are sitting down with Laura Clerx, a PhD candidate at Boston College and recipient of the Andrew W. Mellon Fellowship from the MHS.

Samuel Hurwitz 01:12

So, Laura, thank you very much for coming. Can you just tell us a little about yourself?

Laura Clerx 01:17

Yeah, thank you for having me. So, I grew up in a small town in southeastern Massachusetts. I attended Harvard College for undergrad. I majored in evolutionary biology. So, it's been quite a kind of transition for me to come to history.

Samuel Hurwitz 01:36

Why did you decide to major in biology for your undergrad? Did you have a different path, different goal during undergrad than compared to today?

Laura Clerx 01:44

Yeah. So, it was never my plan to become a historian. The plan was to be a scientist. And growing up, I spent a lot of time outdoors. I loved the natural world, so I thought, I thought maybe I'd be a marine biologist or an ecologist or something like that. And so that was the path that I took, going into undergrad, going into college. And while I was there, I worked in various research labs throughout my time. And in particular, I worked in a botany and plant physiology lab and really enjoyed it. I really learned a lot, and I became really interested in sort of experimental design, and why we choose to ask certain questions in the sciences, and how we approach the answers to those.

Samuel Hurwitz 02:30

Were you interested in history? Did you take a lot of history classes while you were a student at Harvard or was it all biology, botany, science classes?

Laura Clerx 02:39

Yeah, so that's a great question. Harvard has a history department, but they also have an academic department that's devoted entirely to the history of science. And so, this is something a few universities have, and then at others, it's kind of wrapped up into the history department. So, while I was there as an undergrad in the evolutionary biology department, I learned that there was a certain amount of crossover and connection between the history of science department and the biology department. Part of that has to do with faculty members who were there. So, Janet Browne is an authority on Charles Darwin. She

was there at the time, working in history of science. It also has to do historically with some of the scientists at Harvard. So, the paleontologist Stephen Jay Gould, he was very influential in sort of writing science, about science for popular audiences. And really kind of tried to impress upon the, I think his readership, that science, and especially evolutionary biology, paleontology, is, by its nature, historical. And so, I was interested, kind of getting interested in in these questions while at Harvard, but honestly, just wasn't, hadn't known that that was a field that one could study before starting undergrad.

Samuel Hurwitz 03:52

To what extent does someone need a background in science to do history of science work?

Laura Clerx 04:02

Yeah, so that's a great question. I guess in this way, I am actually a bit old fashioned because my sense is that a lot of scholars who study history of science today come to it through the humanities or through history, not necessarily from a STEM background, so you don't need it. There are actually pros and cons, right, because I think the upside is that if you have a background in science, you have some sense of what drives inquiry into the natural world. Why that's fascinating. You know how kind of wonky and contingent some experimental design and setup can be. But the downside is actually that you might be tempted to sort of project backward onto history your own scientific conclusions about what we know about the world. And there is actually an advantage to sort of taking the science that was done in the past and the way that people approached inquiry into the world in the past as and kind of keeping that in the sort of realm of otherness, right, because a lot of times their motivations were very different, and even the way that they saw what they were doing was different. So, we talked at the beginning of the podcast about science, the term science being a little bit anachronistic, right? It wasn't actually developed or used in this way until the 1830s and so the people that I study had this more broad conception of science, where it's, you know, I'm

organizing knowledge, I'm inquiring into these different domains, and one of which happens to be the natural and physical world, but I could be doing the same thing in the economic world or the political world, and so pros and cons.

Samuel Hurwitz 05:44

How did you make that transition of becoming a historian from a science undergraduate background to applying to graduate school and going down the history PhD route?

Laura Clerx 05:55

Yeah, so toward the end of my time in college, I read Thomas Kuhn's 1962 book, The Structure of Scientific Revolutions and, you know, just was totally captivated by the idea that, so he's a physicist turned historian of science, right? That you could spend your academic career asking these kind of epistemological questions, of like, how do we know what we know about the natural and physical world? How have we accumulated this knowledge over time? What are the kind of historical factors that condition what we know? And so, I was really fortunate I had faculty members at school who kind of encouraged my interest, and, you know, made me feel like I wasn't totally crazy to switch career paths and so so I'm thinking of like Missy [Michele] Holbrook was the director of the lab I worked for, and then William (Ned) Friedman out at the Arnold Arboretum, who I did some history of science research for before applying to grad school, Janet Browne, Andrew Berry, in the evolutionary biology department. And then, actually, I had an English professor, Deidre Lynch, who I remember very clearly, I had taken her Jane Austen course. And just kind of, you know, it was, I loved it, but she was working on the Victorian naturalist Gilbert White at the time. And so just like seeing these people who did this thing that I, you know, it, just seeing that made me say, like, 'Oh, this is something that I, I want to be able to do.' And so, it's a kind of a long story, but I ended up at Boston College, where I'm currently a PhD candidate, and I work with Conevery Bolton Valenčius, who's a historian of science and

medicine in the United States. It was a surprise my fascination with history growing up, to be quite honest, I actually I found like studying history from a textbook in grade school to be quite boring. And I was a I was a very well-behaved student, but I think one of the few times that I got in trouble in school was for putting a historical fiction novel inside my history textbook and reading it. And so, it's very funny, but it's taken me, it's been a thoroughly pleasant surprise to now being where I am.

Samuel Hurwitz 08:08
So can you tell us a little bit about what you're currently researching at Boston College, and what you're researching here at the Massachusetts Historical Society.

Laura Clerx 08:17
I am studying the US in the post-revolutionary period, so 1780s to about 1830, 1840 and I look at scientific societies up and down the Atlantic seaboard. So, some folks in Maine, but about you know Boston to Philadelphia, a little bit in Maryland and Delaware, and then their projects, which sometimes take them into the western territories, so bounded by kind of the what in the 1780s would have been the western territories, but what is now the like Ohio, Western Pennsylvania area. I'm writing a dissertation on the relationship between scientific knowledge and economic projects in the early United States. My dissertation is entitled, 'Nature's Properties: Science and Commerce in Early America.' And basically, it builds off the work of scholars who are interested in the connection between knowledge production and economic, you might say, progress in the kind of era of the Industrial Revolution. So, and in this time of transition to what we might call a more capitalist economic order, right? So, in the American context, you could think of the work of Emily Pawley. In the continental European context, there's Lisbet Koerner, who has a book on [Carl] Linnaeus and the administrative, cameraless state, and then in this sort of like broad overview of the British Industrial Revolution, I think of like Joel Mokyr, who has a very large set of works on

the relationship between Enlightenment and Intellectual Enlightenment and economic progress. My work departs in various ways from all those authors, but just to give listeners, kind of like a context for the themes that I'm interested in.

Samuel Hurwitz 09:59
How did you get into this topic?

Laura Clerx 10:01
Okay, so I came to grad school wanting to study the history of early American science. And what happened is, as I was sort of reading biographies or snippets on these different people who we remember for their intellectual and scientific contributions, I kept noticing that there would often be sort of an aside, or, like a hurried mention of like, oh, and this person was from a merchant family and worked in overseas trade for a number of years, you know, upon their graduation from college, or this person was one of the first proprietors in a transportation a land company in the early United States. And it happened so many times that I just made me start to ask, like, what is it about the sort of social milieu of the time, or, like, intellectual order that bounds it so closely to the economic order, right? So why are all the same people who are people in the early scientific societies in the United States, also the ones who whose names are listed on the acts of incorporation for different economic projects, right, because this is a time when a number of people are working very hard to sort of expand markets in the US, to create a kind of sense of a national economy. And that really got me thinking and asking the questions about the relationship between commercial projects and maybe how, how the sort of drive to develop a commercial economy shaped the science that was taking place in the early republic.

Samuel Hurwitz 11:28
What exactly does the state of science look like in early America?

Laura Clerx 11:33

Yeah, that's a fantastic question, actually. So yeah, when I say science now, we kind of understand what that means, that it refers to the sort of study and experimentation surrounding the natural and physical material world in the late 18th and early 19th century, that the word science actually would have had a very different resonance, right, because you could have had a science of political economy, for example, a science of theology, a science of politics, so on and so forth, a science of government, right? And so, then it, in the era that I study, it refers more to this sort of organization of knowledge around certain principles. So, you're looking at the world, and you're collecting kind of observations, evidence, and you're asking what principle or cause explains the outcome. And so, people were doing this in the natural world, right, to say, like, oh, I saw that the plants in this region, you know, bloom a month earlier than the plants back home. What's the cause of that? But they would do that kind of across different domains of knowledge. So, they would say, for example, why did the people in this town rebel against the government, but people in the other town do not right? And there was this great faith in the sort of concept of science as a way of organizing knowledge, and that it could explain phenomena, not only in the material world, but also in the sort of human I guess it's also material, but the human, economic, social world as well.

Samuel Hurwitz 13:11

So, they're not necessarily setting up experiments and testing a hypothesis or they are?

Laura Clerx 13:17

In some cases, they are. I will say, in the American context, a lot of the science that I look at has more to do with people making observations, collecting data, almost a sort of survey, like sending out surveys to constituents in different parts of the United States to collect data. There are some experiments going on, and they're watching very closely. There are kind of

colleagues across the across the pond, right, and at the Royal Society, at the French Academy of Science, they're following the experimental science that's taking place there. But they also recognize that what they kind of lacked in maybe like experimental apparatus or instruments, they could make up for in the fact that they had what was, in their eyes, a sort of fresh start to kind of collect data that was maybe environmental, ecological from all these different regions of the United States. When they do conduct experiments, they are almost indistinguishable from economic experiments. So, this is one of the things that's most fascinating to me because sometimes in a scientific society journal, you'll see an article published that refers to an experiment on dying cloth, right? And perhaps what might be of interest to someone reading that through a scientific society is this idea that, oh, we found this plant, and this plant appears to contain this color dye, right? However, there's also often this commercial aspect to it, which is, oh, we found this plant, and it might be a feasible dye, and we could, could we use it in manufacturing? And so, there's often this, like, double sided like, interest in in a lot of the experiments that get performed.

Samuel Hurwitz 15:04

Compared to their European counterparts are these early American scientists, are they thinking more in terms of practical applications compared to the Europeans? I mean, would you say, like, there's a noticeable difference?

Laura Clerx 15:18

That's a great question. I think, in the past, that is how the history has been written, right? So early American science is kind of like an older generation of historians has construed it as sort of limited, maybe like a little bit of a backwater enterprise concerned more with the practical than with the theoretical. However, what I've seen in my research is actually that there is quite a lot of interconnection, sort of transnational connections, between the communities of scientists in Europe and the scientists in the United States. They are almost

universally interested in the practical application of their inquiry because, like I, as I mentioned earlier, there is this great faith in the ability of knowledge to kind of help organize the world and so concerns about political economy, how do we organize industrial economies and how does that, you know, how could we find out more about nature, which we could then incorporate into our industrial economies. That is actually shared across in both Europe and the United States.

Samuel Hurwitz 16:22

What are some of the most challenging issues you have faced as a historian?

Laura Clerx 16:26

For me, I think just personally coming into the history doctoral program without a really strong background in history, a lot of legwork. I did a lot of reading just to catch up and sort of feel like I had a sense of what the historiography was and what conversations had already been taking place among scholars. And then I think maybe this other challenge is probably pretty universal, but just the challenge of kind of bounding a dissertation project. So, you know, you want to be as comprehensive as possible about the time and place that you're studying, but at a certain point, like practically and then also analytically, it makes more sense to say, okay, but which of these very, very many fascinating sources, you know, at places like the Mass Historical Society, is going to help me tell the story that I that really responds to the set of questions that I'm asking.

Samuel Hurwitz 17:18

How has your background in science helped you with your research as a PhD candidate?

Laura Clerx 17:27

That's a good question, and it's one that I haven't reflected on explicitly before, but I think just offhand, a lot of what I did when I was working in research laboratories had to do with kind of organizing large amounts of data. And in the period that I'm working in the late 18th and early 19th century, we do have a lot of data. We have many, many sources. And so, I think that sort of sorting through evidence and kind of analyzing trends has actually been something that that has helped me quite a lot.

Samuel Hurwitz 18:07

Can you tell us about the sources you're using here at the MHS?

Laura Clerx 18:10

Yes. So, the Mass Historical Society holds the papers of so many individuals who played a really significant role in in both the intellectual and the economic order of the day in the in the period that I look at. They also hold the papers of organizations and sort of corporate or voluntary associations that were dedicated to the purposes of advancing and disseminating knowledge. And so, for example, the Massachusetts Society for the Promoting Agriculture would be one example, something like that. There are also mechanics institutes and things of that nature. Some of the collections that I've found really useful are the papers of individuals and their families who were highly involved in these intellectual and commercial networks. So, one example would be the Vaughan family papers. The Vaughans were a family of merchants who had connections and family members living in [mispronounces London], sorry excuse me, London, living in London, Maine, Philadelphia, Jamaica and Boston, and so they were able to really take advantage of those familial connections and economic trade networks to also disseminate and accumulate what they would have considered to be scientific knowledge about the natural world. So that's been it's been really fascinating to follow those patterns. So, when I was looking at these Caribbean estate valuations that that

are in the Vaughan Family Collection holdings, it also it kind of, what it does is it brings to the fore, and in other contexts, you know, I've seen payrolls for transportation companies, things like that. It makes very real the contributions of enslaved people and of day laborers and others to the projects that merchants like the Vaughan family really depended upon in order to be able to collect and accumulate knowledge about the natural world.

Samuel Hurwitz 20:11
Do you have any favorites out of the collections that you've been looking at, intellectually or personally, that's that you've just really enjoyed?

Laura Clerx 20:20
I think one of my favorite things has just been the kind of unexpected finds of seeing how much a part of people's daily life, this kind of conversation about the natural world could be and was. For example, I was looking through the papers of a military general who was involved in putting down a rebellion in Massachusetts, right, and kind of looking just for the economic side of things in that context and I came across a letter where he's writing to his son, who is a lawyer in Boston and has recently graduated from Harvard, and he is just explicitly tells him pay attention to natural history. It's going to tell you a lot about the economic value of these different regions in the United States. And so, things like that are just, it's really cool to have those connections confirmed. And then there have been kind of, I wouldn't call them pleasant surprises, but unexpected and really kind of stunning surprises about just the kind of interconnectedness between economic projects and regions in the early United States. So sometimes we think of sort of scientific and technological innovation in the context of this sort of like northern manufacturing, Free Soil, cultural, progressive milieu. But in the collections that I've looked at I'm looking at individuals who have filed, you know, things like patents for their technological innovations, alongside estate valuations that list the prices of the people that they have enslaved and who are working on their

plantations in Jamaica. So, it's really stunning to see those two things alongside each other, and to realize how it actually is these networks and these connections, like all these things, depend upon one another. And that's how, for example, the Vaughan family is able to compare botanical specimens from regions around the world. It's through these connections that are reinforced by trade and by commerce.

Samuel Hurwitz 22:25

How do you think your research will help audiences better understand the past?

Laura Clerx 22:29

Well, I think that Americans are thinking a lot about political economy these days, whether or not they would phrase it in those terms. And I also think that because of the scientific reality of climate change, we're being confronted with a lot of questions about what the relationship between scientific knowledge and economic progress should be. I think we see this in both the outgoing and the incoming administrations in fairly different ways. And so, I guess I hope my research offers people a point of comparison to just a chance to take a step back and look back at this past society and say, see that they were also very concerned about the orientation of this sort of human economic world to the scientific world and vice versa. And just have a chance to step back and see how other people have dealt with questions about how economies should be organized, and what role science and technology should play in their in their organization. One thing that I hope my research can bring to the fore, at least in a small way, is the just I hope it can offer people a glimpse into the ways in which the knowledge we have about the natural world often, at least in part, reflects and is sort of shaped by what a society values in a given time and place, right? So, what political and economic structures and societal norms, how those kind of inform what we what we deem worthy of study, and also how we study it and what kinds of questions we ask about it.

Samuel Hurwitz 24:00

[Outro music fades in] Historians and Their Histories is produced by the research department at Massachusetts Historical Society. We would like to thank Laura Clerx at Boston College, and I've been Sam Hurwitz, your Podcast Producer at the MHS. Music in this episode is by Podington Bear. See our show notes for details. Thank you for listening and please rate, review and subscribe to both the MHS produced shows wherever you listen to podcasts.