Minnesota native Mara Hvistendahl learned Mandarin because of her mom's history in China. Later as a reporter in Shanghai, Hvistendahl read about a Chinese man found behaving suspiciously in the middle of an Iowa corn field. That odd little story led Hvistendahl on a two year reporting journey that uncovered a massive FBI industrial espionage investigation into the theft of genetically modified corn seeds by Chinese agribusinesses. Hvistendahl's journey also had an unexpected personal twist.

Chitra: Hello everyone. I'm Chitra Ragavan and this is When It Mattered. This episode is brought to you by Goodstory, an advisory firm helping technology startups find their narrative. Joining me now is Mara Hvistendahl, author of the book, The Scientist and the Spy. Mara, welcome to the podcast.

Mara: Thank you so much for having me here.

Chitra: You became a Mandarin speaker because of your mom's amazing story. What was that story?

Mara: Sure. My mom was a missionary's daughter. She spent some of her high school years in Asia and then moved back to the Midwest and had kids, got married. After she divorced my father when I was four, she decided to spend a year applying to schools and studying Chinese again. The woman who became her Chinese tutor was also a single mom with a son around the same age as me and my brother.

Mara: She's living in the dorm at a St. Olaf College in Southern Minnesota and nobody there knew that she had a child. Her name was Hung-yu, and so my mom thought, let's get her out of the dorm. Hung-yu and my mom ended up moving in together and co-parenting me and my brother and my Chinese brother for a number of years, for five or six years. We became quite close as a kind of blended family.

Chitra: You took Mandarin in college and then you decided to move to Shanghai. Why did you move?

Mara: I decided in college that I wanted to become a journalist. I took Mandarin, though, more just because of this personal interest and I'd always loved the language and the culture. Then I went to journalism school and I was in New York trying to freelance. I was working as a nanny and a waitress on the side and an editor said to me, "Do you speak some Chinese? You probably should just go to China and see if you can get your start there."
Mara: I packed up one or two bags and just moved. I had a commitment from Harper’s Magazine to pay me $200 a month to do some research for the magazine. I found an apartment that cost $150 a month, so, that left $50 for noodles. I ate a lot of noodles and at that time it was pretty affordable to live in China, and it was just a really, really fascinating place. I was in Shanghai.

Chitra: You spent the next eight years, almost, a period of eight years reporting a tremendous amount of stories, very innovative stories, because you were there at the right time and there was a deep appetite for it. How did you come across the story of Robert Mo, this Chinese national found behaving suspiciously in the middle of an Iowa corn field?

Mara: That was relatively late into my time in China. By then I had a husband and a baby. My daughter had been born and my daughter was maybe a year, a year and a half old. I was looking for bigger projects again and I came across the story of a man named Robert Mo who was found in this cornfield in Iowa. I remember sitting at my desk in our high rise in Shanghai and reading about it in the New York times.

Mara: At that point I was working for Science and my job involved doing a lot of interviews with Chinese scientists and following them into the field, but here was this sort of unique situation where suddenly these abuses in the sciences would become a national security focus for the US government. I hadn’t seen a case quite like that before. It turned out that there would be dozens of them brought over the coming years. Being from the Midwest and having found this case in China, I just kept feeling pulled back to it. It was like I was meant to write a story about it.

Chitra: So who was Robert, where was he from and why was he in that corn field, and why did it become literally a federal case?

Mara: He’s an engineer from Sichuan Province who had moved to the United States like many well educated Chinese to pursue a job in the sciences. He went to get a second PhD there in the field of thermodynamics and had this kind of classic academic story where he could not find a tenure track position, and so through nepotism, he got a job at a Beijing agricultural company that his sister worked for. And that company had hatched this somewhat harebrained plan to literally steal seeds out of the ground in the United States and reverse engineer the seed lines of Monsanto and DuPont Pioneer, another seed company.

Chitra: Why was this such a big deal for this company? I think you said there were other similar cases with other companies. Why were these genetically engineered seeds from Monsanto and DuPont so, so precious for Chinese businesses and for the Chinese government?

Mara: Well, China was at a point where, as it’s developing people were, higher and higher up the food chain, eating more and more like Americans. To get meat, you need animal feed, which often comes from corn and soy and China did not have the kind of high quality seed lines that were needed to make that. One way would
have been to spend years of research developing them. DBN, the company that Robert worked for, saw this shortcut of going to the United States to steal them.

Chitra: I guess China is the biggest importer of soy and corn for this particular reason, right? They have more and more affluence and people wanting to eat meat.

Mara: That's right. That's right. The plan that they came up with was elaborate and also very silly at the same time. It involved buying farms in the Midwest, posing as farmers there, at one point trying to smuggle seeds back to China in microwave popcorn bags. The reaction of the FBI was equally outsized.

Mara: They spent two years investigating Robert Mo and his colleagues and they used car chases, surveillance planes, so these sort of unmarked planes registered under fake company names that the FBI would fly in circles over the Midwest to keep track of the suspects. They even collected evidence using a FISA warrant, which is meant to be reserved for extreme national security threats, so this became a major case for the United States.

Chitra: What was interesting about the reason they were using planes was, and you can talk a little bit about the drama and the craziness of all this, is because of these vast miles and miles of Iowa landscapes where there's not a car in sight, and so if they had been surveilling him by car, oftentimes they would be seen, so they had to resort to these crazy devices and techniques.

Mara: That's right. It was either that or really low speed car chases, because the problem was that Robert and his colleagues were driving fairly slow because they were looking for specific fields and then they would stop in the field, gather a few years of corn, some seeds, and then get back in the car.

Mara: Then the FBI had to kind of trail behind them but inconspicuously, which turned out to be quite difficult. I went and basically retraced all the steps and scenes in this case and so, you know, I was driving those same roads and kicking up clouds of dust myself, and I came to kind of understand how that happened.

Chitra: The crazy thing is Robert actually lived in Florida, so he had to make these trips frequently. What were some of your favorite scenes of him and a couple of his accomplices going through these cornfields? It's so crazy.

Mara: He got this job because he wanted to support his wife and kids. His dream of an academic position did not work out, and initially he was hired to do legal work for the company, like sourcing animal feed, sourcing other agricultural products and then his job kind of spiraled out of control to the point where he was working on this illegal operation.

Mara: He was very uncomfortable with it. He later told me that, and there are a number of signs that he was uncomfortable and he tried to extricate himself a few times. He did not succeed, though. Ultimately there were directions from the company back in Beijing to come up with a hundred seed lines. That's a massive number when they all need to be smuggled back to China and labeled in envelopes. Sometimes they sent them through FedEx and UPS. Sometimes they tried to
carry them on the plane and sometimes they used the microwave popcorn bag approach.

Chitra: These were literally thousands of seeds. We're talking thousands and thousands. Sometimes their packaging cost was like $1,000 a box, right?

Mara: Right.

Chitra: So, Robert also ended up hiring a US national, Kevin Montgomery, who was a well-meaning seed breeder who wound up becoming an FBI informant.

Mara: That's right. I found Kevin two years into my reporting. At that point I already knew a lot of the people involved with the case. I thought I knew kind of the basic trajectory that the story would take. Then, I was driving around Southern Illinois and knocking on doors, trying to find people who had come into contact with Robert, could kind of describe him to me.

Mara: I found out that Kevin had been working for Robert and DBN for several months as a consultant, and then one day he was coming in from the fields and it was a very hot day in July, So he's wearing cutoff shorts and a tee shirt and his belt filled with tools. The FBI pulls up and he says two agents in suits and dark sunglasses get out. After that encounter he becomes an informant for the FBI. He was just a fascinating character because he had this insight into both sides.

Chitra: I think one of my favorite scenes in the book was that first conversation with the FBI agents sitting at the table and they're in suits and glasses and he's got his cutoff shorts and he's drinking glass after glass of lemonade because it's so hot, and they can't accept a drink because they can only accept drink from closed containers, so they're slowly starting to fade over five hours of questioning. I thought that was amazing color and drama.

Mara: That's right. That's right. Yeah. Kevin is very detail-oriented so he'd written a lot of this down months before I met him. He had written a play by play account of that interview for his friends, so he was a great source. I felt lucky that I was able to meet him, but I did also spend a lot of time talking to Robert Mo himself and also to the lead FBI agent on the case.

Mara: I really tried to construct this story from all of these three perspectives and to tell it through their eyes, so you have these three interwoven narratives, one of which is happening from the perspective of Robert Mo and one from the perspective of the FBI agent, Mark Benton, and then a third from Kevin.

Chitra: Tell us briefly, without giving away the end for potential readers, what happened to Robert and his accomplices? I mean, Robert always feared that he was going to get caught. What happened?

Mara: The FBI did catch him and it was a pretty dramatic arrest, one morning in December, agents swarming the house and so forth. What ensued was a extended battle in court, part of which I was able to be present for. His lawyers fought so hard that they were able to get many, many documents that give a lot
of visibility into what the US government had done in the course of this investigation.

Mara: For me as a journalist, that was really fascinating and that allowed me to turn this into a very rich story. There were several airport busts that happened in the book and I had dialogue, what the FBI said to people at those specific moments. They had also bugged the vehicles of Robert and his colleagues and so I knew what they were saying in the car to each other as they were driving around the Midwest and some of it was kind of comical.

Mara: They would joke about Jackie Chan movies and then talk about why Americans needs such big cars and why Walmart is open late and all of these very rich details came out in that process.

Chitra: It's absolutely amazing, the level of detail that you. When you started the story reporting, it was the story of Robert, but it ended up being sort of a much bigger story. How did the story evolve over time?

Mara: Well, from the beginning I was interested in this case because there were so many other cases happening at the same time. Roberts was, in a way, the most colorful manifestation of this crackdown on trade secret theft, but there were several other cases. I saw that focusing in on this one case would be a way to tell this broader story.

Mara: These range from cases where somebody stole military technology and it was quite cut and dry. Like, for example, the person had stored reams and reams of documents under his house, but two cases where the FBI showed up on someone's doorstep to arrest him and the scientist turned out to be completely innocent.

Mara: So, as my reporting went on, I was hearing from activists and others who where working on this issue that there is a lot of concern that the US government was unfairly targeting Chinese Americans and in some cases bringing cases where people were charged prematurely or charged completely unfairly.

Chitra: A startling statistic in your book was that after the FBI shifted focus from law enforcement to national security, economic espionage became such a top priority that they actually have investigations cases open in all 50 States, so this is a huge government priority.

Mara: That's right. That's right. Yeah. FBI director, Christopher Wray, said recently that there are over a thousand active investigations. I think any time our national security priorities shift, we need to examine those more carefully. As we learned after 9/11, a legitimate threat can sometimes provoke overreaction or a wrong reaction, and we have to make sure that that doesn't happen in the case of Chinese technology theft.

Chitra: One of the things you talk about is this undercurrent of racism essentially in the criminal justice system and in the court system, too, and the fact that ethnicity has become a factor in FBI investigations of Chinese scientists.
Mara: It's definitely become a factor. Even in the case of Robert Mo where he was guilty of a crime, by the time the case was winding its way toward trial, the ethnicity had become so fraught in these cases that the judge actually banned all mention of him being Chinese at trial.

Mara: The reason for that history in part is that, going back to the 1960s and 70s, the FBI really heavily scrutinized Chinese American scientists in the United States and these included US citizens. In part of my research, I was able to get documents using the Freedom of Information Act request showing that there was a dedicated FBI program devoted to surveilling Chinese American scientists. There’s a lot of resentment and suspicion now that’s left over from that era and also a factor of more recent cases, like Wen Ho Lee case, like these cases in the past few years where innocent people were arrested.

Chitra: Your book is also about the corporatization of agriculture in the global seed market and this intense amount of consolidation that's taken place. How did that play into this story and other seed theft cases? There’s this other underlying big story behind this.

Mara: That's right, and that's a story I didn't set out to find. It came up as I talked with more people who work in agriculture and farmers. Talking with Kevin Montgomery, the informant, he was himself a victim of corporate consolidation. He’d been laid off in mergers. If you look at that industry, it's been characterized by massive consolidation.

Mara: Just decades ago there were dozens or hundreds of seed companies in the United States and now there are four major global seed companies that control much of the market. These cases involving Chinese trade secrets theft are ostensibly brought to protect American innovation and keep America competitive, but it does raise the question of then why we go to such great lengths to protect an industry that is already in many ways anti-competitive.

Mara: There is this irony where by the time I finished my reporting, Monsanto was no longer even an American company. It had been acquired by Bayer, the German conglomerate, and that meant that the US government had spent untold resources defending this company that then felt no loyalty to the United States.

Chitra: I think one of the important points you make is that in the FBI’s desire to go after these cases and to make a point that they were pretty cozy with a lot of these big companies, someone like Robert had no chance, right?

Chitra: You have these huge conglomerates with with deep pockets for legal fees and you have this close relationship with the FBI. How does someone like Robert ... Obviously he did wrong, but the scales of justice seem a little bit-

Mara: US companies sue each other all the time for trade secrets theft when they pay their own legal fees and it's part of their general IP strategy. There is this fear that because the cases with China become a national security issue that people are being charged because they tried to go to a competitor or they tried to find a job
back in China and that kind of routine business behaviors are being criminalized as a result.

Chitra: The current Chinese premier, Xi Jinping actually, had a cameo role in this plot. What was it? I think he actually made a visit to Iowa, didn't he?

Mara: He did. That was another thing that made this case so appealing was that you had all of these big players come in and out of the case at various moments. At one point, just before he ascended to the role of leader, he was then the so-called vice president, Xi Jinping traveled to Iowa to give a speech on agriculture.

Mara: Robert Mo was actually sitting in the audience at that event and the FBI was waiting outside, and so Xi Jinping is inside talking about how the US and China are going to collaborate on agriculture and the two sides work out this deal for China to buy more goods from Iowa, but even at that moment you can already see that the seeds, no pun intended, of the conflict are in place.

Mara: That kind of escalates over the course of the book.

Chitra: What's the state of play today as President Donald Trump and the Chinese premier go toe to toe on all of these trade wars and technology transfer and all of these big issues?

Mara: Well, tensions are certainly escalating and it's interesting because the trade war has affected so many farmers in the Midwest. Every now and then an official will go back to Iowa and give a speech about this seed case to kind of remind people that the trade war is worth it because we're fighting this sort of agricultural espionage.

Mara: Like just last year, Mike Pompeo flew to Des Moines and talked about Robert Mo, so he continues to be this pawn in this global rivalry with China.

Chitra: Is it affecting Chinese students or scientists here, this kind of tension?

Mara: Oh, very much. Yes. Under the Trump administration, prosecutions involving China have picked up. The justice department launched something called the China initiative in 2018 and it's become a major focus. The FBI has also done a number of investigations at research institutions, even interviewing American students on study abroad programs to China.

Mara: There's a real concern there because China does have this concerted influence campaign. It came out this week that the FBI is even interested in election meddling from China. Certainly the Chinese government is doing what they can to mess up American politics and to steal its technology and so forth, but there is, again, this risk that we could overreact.

Mara: Any time that there is a botched investigation or an investigation that doesn't quite work out as planned, it feeds into the narrative in China. The state press will seize on these cases where people were innocent or where they were hounded
for several years for stealing corn and those become part the Chinese government's rallying cry for attracting people back to China.

Chitra: I think, as these court documents kind of exposed some of the trade craft and the methods employed, that can also have an impact. You have a section where you talk about Robert's sister when she brings her kids to the US for a trip to, I guess, Disneyland, happened to her and what kind of a message did that send?

Mara: Yes. Robert's sister was the one who made the introduction to the company in the first place for him. She's married to the CEO of DBN but had really stepped away from working for the company, and then she went on vacation with her kids. Her name was on a watch list and so when she arrived in America that triggered an alert to the FBI and they hightailed it to Los Angeles to arrest her on her way back to China.

Mara: The issue, though, is that she had her kids in tow so there was this difficult decision, and I really believe it was difficult for the FBI agent facing it about whether to have the kids handed over to social services in the United States or to put them back on the plane to China by themselves. The girl was, I think, five or six at the time. This was a really dramatic scene which I had visibility into because of all of the court documents and testimony that was given about it.

Chitra: I think that your underlying message of the solo American farmers being the loser in all of these games is the story of Kevin, because he is well meaning, he's incredibly hardworking, he's so detail-oriented. He loves seeds and you kind of see that he just can't go up against these big conglomerates and the big system and succeed in any way.

Mara: That's right. Yeah. In the end this issue isn't just about the United States and China. It's also about, we're in this era now where corporations have more and more power. When we look at how to make the research base more innovative, we have to keep in mind that cases brought on behalf of these companies may just help them become more powerful.

Mara: At the same time, I tried to come at this topic from a place of just sympathy for the common person, both in China and in the Midwest and to really look at who are the, who are the people on the ground who are affected by these cases. One of them was Kevin, but there are also a number of other farmers both in the US and China who I talked to.

Chitra: In the six year investigation, there was a message that was intended to be sent to China. Do you think that using Robert as the example did convey that message?

Mara: I'm skeptical that the government achieved what it wanted to with this case. In the end there were seven people charged including Robert. Five of them are still on the FBI's most wanted list. Charges against the sixth person were dropped and so only Robert ends up paying any consequences for what happened.
Mara: Meanwhile, DBN, the company that he worked for is going strong. Their stock prices took a dip initially but they recovered and the company may actually have the IP that it stole. Somebody I interviewed compared this strategy to addressing the war on drugs by just going after the low level street dealers, like arresting the guys on the corner basically, while ignoring the cartels.

Mara: I think something similar may be happening in these trade secret cases where you have these kind of low level people who are dispatched to get information or they try to maybe take a few documents and so forth and then the bigger picture, meanwhile, is left unaddressed.

Chitra: I know you learned a lot about industrial espionage and all of the related complexities of agriculture from this book, but your journey also had an unexpected personal twist on you as a person given your childhood and your background. What was that?

Mara: That, while we did end up moving back to the Midwest and sort of reliving my childhood here with my own children who are now growing up in Minnesota like I did, one thing I thought about and that helped shape the book when I came back is the experience of being a foreigner here.

Mara: I lived in China for so many years that it felt very comfortable to me. I was very comfortable with the language, was comfortable with the food and the street life and everything. After a while I would kind of forget that I didn't belong, but you could never fully forget that because then the next minute somebody would remind you and turn around and say, like, "Oh, you're, you're a foreigner."

Mara: Coming back to the Midwest, I have a feeling that must be what it's like for some ethnic Chinese people here, even in people whose families have been here for generations. It's not really analogous in the same way in that white people occupy this position of privilege in general in Asia, but it did shape how I thought about this case and about some of the scenes I was describing.

Chitra: Wonderful. Mara, thank you. That was an amazing conversation and a great book. I think everybody should read it. It's great, great context into what's going on in the world today. Thank you so much for joining me.

Mara: Well, thanks again. I really appreciate the opportunity to be on the show.

Chitra: Mara Hvistendahl is the author of the book The Scientist and the Spy: A True Story of China, the FBI, and Industrial Espionage. In addition to her groundbreaking coverage of China's renaissance in science and technology as a correspondent in Shanghai for Science, Hvistendahl's writing has appeared in the Atlantic, the New York Times, Popular Science and Wired. Her book Unnatural Selection was a finalist for the Pulitzer prize for general nonfiction and the Los Angeles Times book prize. This is When It Mattered. I'm Chitra Ragavan.

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