

SARAH PARCAK INTERVIEW PART TWO

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Hello again, Ars Technica listeners. This is the second installment of a three-part interview with with astroarchaeology pioneer, Sarah Parcak. We'll start with a re-run of the last several seconds of yesterday's episode just to get you oriented.

And here we go.

TRANSITION MUSIC

Repeated part in Green

- Rob Reid: Wow. I had not realized that. So the program is online and it's very accessible to YouTube, so I would recommend it to anybody because it is a fascinating. It's over an hour long and gets, it's pretty [crosstalk 00:33:35].
- Sarah Parcak: Yeah, It's a 90 minute program.
- Rob Reid: Remind me of the full title. So people would Google it.
- Sarah Parcak: So it's Egypt's Lost Cities.
- Rob Reid: Got It. That's so cool that they actually helped fund it. Now So the scope of that discovery, how many months did that unfold over? Like how many months were you working on?
- Sarah Parcak: I can't remember exactly how long, but I had a team of four students and a full time researcher and myself, so it probably took us six or seven months.
- Rob Reid: Got It. And you found literally thousands of sites or candidate sites, right?
- Sarah Parcak: Over 3,100 potential sites.
- Rob Reid: And these are things that people had simply not been aware of previously.
- Sarah Parcak: Correct.

Rob Reid: That is just an astonishing amount of detection. And in doing this broader project with the BBC, you also made what could prove to be a major discovery in the field of Egyptology. Could you tell us a bit about [Egyptawi 00:34:21].

Sarah Parcak: So I've been fascinated with ancient Egyptian settlements and settlement archeology mean that's what Barry did it Cambridge. He's a settlement archeologists and that's the training I received.

So I'm very interested in ancient human settlements in Egypt and their environmental interactions and how my [inaudible 00:34:38] certain cities were inhabited and then abandoned over time. So one of the crazy things in Egyptology, one of the big kind of mystery questions is where was Egypt's capital in the middle kingdom? The middle kingdom was there great renaissance. There great period of art and architecture and literature. And this city was located about two hours south of Cairo next to this very large middle kingdom cemetery. So these two kings, I'm an [inaudible 00:35:07] the first and some was the first founded this major dynasty, dynasty 12 and the thousands and thousands of tombs are in and around their pyramids. And we know Egyptologists have known for over 100, 150 years. The capital city was located somewhere in the flood plain to the east of the site of Lisht, which is the main cemetery site.

But where was it? And because it was in the flood plain, a lot of Egyptologists had written it off and said there's no way anyone could ever potentially find it. It just, it's too large. We don't know, it's gone forever.

Rob Reid: And this is some 40 miles south of Cairo, roughly 40, 45.

Sarah Parcak: Yes, yes, yes. But like nothing is ever gone forever in archeology. And just because you think it's there and it's gone, but you can't find, it means that you haven't done enough logic and thought through the tools and technologies you might need to find it. So that's what I kind of got obsessed with this city as an Undergrad and I thought what if it's there and they can't find it, it means it's there could be found, I'd like to find it. So anyways, initially, as part of this BBC program, we use radar data to look at subtle topography changes. We're able to map the old location of the Nile River and there are a couple areas that were slightly higher.

Rob Reid: Really?

Sarah Parcak: Yes, couple areas that were slightly higher to the west of the Relic river course, and we did something called coring or auguring onto essentially you go down in 10 centimeter, you use a 10 centimeter wide device where you're popping out bits of earth and we went down and down and down and about four meters down we hit a dense layer of elite middle kingdom pottery as well as worked semi-precious stone. We found a suburb at [inaudible 00:36:48].

Rob Reid: That is amazing. So basically you were able looking at the satellite imagery to more or less established where the Nile had been at the time when [inaudible 00:36:57] would have been the capital city, it was capital city for about 400 years.

Sarah Parcak: Correct.

Rob Reid: So very, very significant site, I mean 400 years even in ancient Egypt is an awful long time. And so you were able to establish where the river was, make educated guesses about where the highlands would've been that would've gotten drowned in the annual flood. And based on that satellite imagery, you dug and you found like you said a lead to pottery, which meant that there were not just anybody but metropolitan, relatively wealthy people living there.

Sarah Parcak: Yes. So what are the chances of taking this device anywhere in the flood plain and sticking, 10 centimeters wide, and finding something, it's a million or billion to one.

Rob Reid: Because of the satellite imagery, you were able to essentially strike pay dirt. It'll almost literal sense. And You found a precious stone that was pretty indicative. Correct. Something big was here.

Sarah Parcak: Right. So typically when you're doing the coring work, you're looking for old courses of the Nile, potentially you may find pottery that because you're working in a settlement that's known already. So in archeology where for the most part I called pottery the top order of the ancient world just because everyone used it and based on the form and style and function, even if the fragments were able to figure out that the types of activities that took place on sites from places and there's certain types of pottery that your richer individuals would use versus your middle class or lower class individuals.

It's like today, not everyone drives a Mercedes. So similar thing in antiquity and in that dense sort of deposit in which we called we were able to find not just elite middle kingdom pottery, but worked amethyst and Carnelian and agate and a lot of jewelry in the middle kingdom had carnelian and I get so yeah, I think maybe we were working in a potential, jewelry workshop.

Rob Reid: Wow. Which is very, very indicative. Of course. That was the capital. Now there've been a couple of BBC specials that followed that one in Rome. There was a viking one as well.

Sarah Parcak: Yes.

Rob Reid: But somewhere in there you became a Ted Fellow. So let's talk about that because that has led to something quite extraordinary.

Sarah Parcak: So yeah, it's a funny story and I don't know that I've ever shared it before. So, this is gonna be new.

Rob Reid: Cool.

Sarah Parcak: So like many professors, I watched Ted Talks, I knew what Ted was, but I had no idea that they had this Fellows Program where they picked your 20 or so kind of game changing individuals that kind of begin reaching the apex at the beginnings of their careers. I didn't know this program existed, so I had been doing a bit of filming in New York with Brendan Frazier as you do. And so this is during the summer. Most professors at State University, we don't tend to get some or paychecks. We use that time to do research and you're writing. So I hadn't gone into my university office in months and in New York, my uncle randomly happened to be there at the same time and he was coming to Birmingham to participate in a conference.

Through on the same flight and we comes in and we have a nice weekend together. And so as he's leaving on the Sunday, he goes, "Oh, show me your lab, show me your office." Before I go to the airport. I'm like, "Phil, just, now come on. It's like an office. It's got computers, it's not that exciting." And he bugs me and bugs me. So I take him to the lab in a show and I show him the lab, he is like "Show me your office, show me your office." I'm like "Phil, It's an office that has a computer and books." So he poked me enough to where I go in my office and I see that I have a message. A message I haven't been in here in months. I pick up the phone and listen to my messages. It was The Ted Fellows Team reaching out to me to apply to be a Ted Fellow. The deadline was the next day.

Rob Reid: Oh good. The timing.

Sarah Parcak: So that's ... Yeah it was crazy and so I applied something on a wing and a prayer had an interview and then got named a Ted Fellow

Rob Reid: And the Ted Fellows program for those who don't know is, as you described it, it's 20 ish people a year. Right?

Sarah Parcak: Yes.

Rob Reid: Who come to Ted free of charge, which is no small thing because Ted tickets are really expensive and then you basically become something like a class or a cohort and it's an extraordinary diversity of people, people in the arts, people in the sciences, people who are doing things in politics, not for profit, et cetera. And it is really to me as somebody who goes to the conference as sort of like a normal attendee. The bar to become a ted fellow is incredibly high. I don't even want to think how many people apply for each slot, but it is a very incredible group of people who end up getting curated as a result of that. And so that's when you and I met actually. I'll tell this story because this was 2012, right?

Sarah Parcak: That's right.

Rob Reid: So we both ended up speaking on the main stage that year. I had been an attendee for a number of years, but I gave a talk that year. And you were brought up on the main stage that year as well. We're you?

Sarah Parcak: Yes. To give a very short talk.

Rob Reid: To give a short talk. Well mine was short as well, so we both gave short talks, but oh my God, talking about terrifying. I don't know. I don't care how many minutes you're on that stage, but what's unusual is the Ted fellows have their own sessions and they give their talks and it's early in the, it's before the formal official beginning of the conference. So they're a little bit more lightly attended because people are still coming in. Everybody who's in tries to attend. But there's something that's a little magical that the main stage. So you got plucked from your group to talk to the whole of Tad. Remind me what you spoke of, because it was about a four, five minute talk, you talked about the field of space archeology basically. Right?

Sarah Parcak: So, yes. So for my Fellows Talk, I talked about space archeology and actually the discovery of what might potentially be a suburb of [inaudible 00:42:41]. So I knew that was going to be my talk subject and I had no idea that I was going to be asked to speak on the main stage. So I get this email out of the blue-

Rob Reid: And you didn't, because we ended up having lunch together. And you didn't know it then either. I don't think.

Sarah Parcak: I did know.

Rob Reid: You did. Okay. You already freaking out.

Sarah Parcak: Yeah.

Rob Reid: I got it.

Sarah Parcak: I can't believe I had nightmares. I call them Ted mares by the way, which is the trademark to me, just awful. So I knew it was a super short talk so they encouraged me to think about how to present differently. And so I took the challenge to heart. So instead of just showing slides, I used Google Earth and combine that with video. And as I was speaking, I had video animation of zooming in from the Ted theater at Long Beach over to Egypt where we zoom in and it was the discovery that I'd made it of [Tenas 00:43:31]

Rob Reid: And you did not charter a space shuttle for that video footage. And I thought you had, I'm disappointed to hear that that was really animation.

Sarah Parcak: I am sorry. I was writing on a satellite.

Rob Reid: So the actual satellite archeology.

Sarah Parcak: It's like that was one of the most terrifying moments of my life. And I was warned beforehand by the Ted Fellows director, Tom Riley, he said, "Muscle memory practice at over 100 times. When you go up on that stage, you will completely freak out if it's not muscle memory, you're in trouble." And it was right. I got up on that stage and I just remembered like hundreds of hands coming towards me and they pulled me out of myself and then I walked off stage.

Rob Reid: Good. That worked very well. And then was it about this time that you also got involved with National Geographic?

Sarah Parcak: Yes. So 2012 was a seminal year, so I wasn't just named a Ted Fellow in that year, but I was selected to be an emerging explorer at the National Geographic Society, so that program's a little bit different than that Ted Fellows program, although there's some crossover, so they pick between 10 and 15 explorers from across the world.

People doing work in conservation, in science outreach and communication, archeology, anthropology, videography, photography. And it really is a globally diverse class and you get invited to national geographic for a week. It's called the explorer's week. It's an extraordinary week in June, workforce from all over the world who were part of the National Geographic family. And again, similar to Ted, you give a short talk, but you get very intensive mentoring in public speaking, in science communication. And again, you're part of this cohort. They provide some funding for your research. So yeah, that was a crazy year in my life. It was also the same year my son was born.

Rob Reid: Oh, that's cool. That is a very big year. And you've in a sense, gone up a level of the explorer ranks since then. Correct.

Sarah Parcak: Right. So now I'm an archeology fellow, so there are three levels of explorers in national geographic. So at the top you have people like Jane Goodall, or members of the leaky family. These eminent individually explorers, you know them by name, the great oceanographer, Sylvia Earle, as well as for they're called explorers and residents, kind of the mid-level is called a fellow and you work with National Geographic unmet projects. So I am an Archeology fellow right now.

Rob Reid: So 2012, very, very big year. Also the year after the Arab spring and the beginning of a kind of an industrial scale of looting, in Egypt and other places and that really in many ways change the trajectory of at least part of your career. Let's talk about that a little bit.

Sarah Parcak: So prior to the Arab spring, I'd done a little bit of cultural heritage work anytime you work in archeology of course you ended up doing cultural heritage work.

And I had work with assorted partners and colleagues on strategies and thinking through how do you protect archeological sites in times of conflict.

But it really wasn't what I did mainly, but January 25th, 2011. I like everyone in my field was just glued to my screen because Talk to your square is really kind of are our own shared backyard. You have the Cairo museum, you have the time, the Hilton hotel where a lot of us would meet for lunch. You have the American and other embassies in Garden City a little bit-

Rob Reid: AUC

Sarah Parcak: AUC right.

Rob Reid: American university in Cairo.

Sarah Parcak: So it's an area where we typically stay. So it felt like there was a revolution in our backyard and we didn't really think anything of it until a couple days later when we woke up, when we heard that the Cairo museum had been looted. And my first thought was, oh my God, this is like the museum in Baghdad. And I had visions of King Tut's head being carried through [inaudible 00:47:15] and tens of thousands of objects gone and my heart just broke. Now ultimately it turned out that just a few dozen objects were stolen, still terrible but not as bad as it could've been. And then we started getting reports that sites were being looted.

Rob Reid: Sites or digs were being looted?

Sarah Parcak: Ancient, so major sites like Saqqara, Dashur. But we absolutely didn't know through the veracity of those claims. All these rumors are going on. Pro-Mubarak Anti-Mubarak who's telling the truth, who's not. So I, well there's a group of us sort of about 100, 150 of us we all got on this email list server. I have no idea who created it. I was the only Egyptologist and a lot of the archeologists were getting kind of worked up and they started sharing rumors and everyone was getting worked up and worked up. And I stepped in as the Egyptologist and said, "Hold on everyone.

There was no way that we're going to know one way or the other, whether or not there is looting until we get people there on the ground. So until then, calm down. We don't know." At that point, Chris Johns and then CEO of National Geographic reached out and said, "Oh, well you know, you do work with satellites, can you tell whether or not there's looting." And I go, "Be careful what you ask for." So they very kindly provided some funding, working with Digital Globe and at the time this foundation called GOI and they provided very high resolution satellite imagery to me that was just taken and I had just finished up the BBC program a few months earlier, so I had tons and tons of data through 2010 and I was able to compare-

Rob Reid: So you had free looting imagery by sheer happenstance for year before the Arab spring started.

Sarah Parcak: Yes.

Rob Reid: So you had the before pictures and now National Geographic funded the after picture.

Sarah Parcak: Yeah. So I was able to compare images within a few months of each other and there was clear alluding that had happened at multiple sites south of Cairo.

Rob Reid: Wow. And you basically, it's looting pits that you're able to [inaudible 00:49:03] describe what you see that is evidence of looting.

Sarah Parcak: So typically on sites, I mean it's kind of bumpy, you know there are tombs or other structures below the ground more or less flat ish, but from space when you look down you before image and it's flatter sandy, maybe you see dense concentrations of [inaudible 00:49:20]. So ground is stained slightly red because of the pottery. And then the after image you see dark holes or squares surrounded by a circle of earth. So it's where the tomb shaft is that the looters have gone down into and the circle of earth around it is the debris from the tomb that they've just looted.

Rob Reid: just as we imagined like a grave digger in a horror movie. They're digging and digging into the circle of dirt emerges around it. That's what a looting pit looks like.

Sarah Parcak: Yes.

Rob Reid: And I've seen satellite images. They're basically these tiny black specs, they look like doughnuts really.

Sarah Parcak: They are. And they are not difficult to map, and anyone could pick them out. It's not like I provide with some satellite imagery Mumbo jumbo and applied algorithms and your honor, I swear it's alluding pit, these are very, very clear.

Rob Reid: There is no question that this ... And characterize, a before, a typical or if there's one very specific one that's burned into your mind a before and after image that will sort of exemplify the degree of looting that happened post Arab spring.

Sarah Parcak: In some places in Egypt there are open tomb shafts, right? These are things that have been excavated and they're typically may be some kind of walling system around them.

In other words, those are protected by Egypt's Ministry of Antiquities. Well then you've got this vast expanse of earth or sand around one side I'm thinking of just south of Dashur, so this is about an hour and a half south of Cairo, a massive,

rich pyramid fields area. And imagine if a landscape that's mostly kind of creamy yellow to brown sands, you see undulations in the before imagery, but it's clear that it hasn't been touched in thousands of years. And then imagine the whole landscape turning into Swiss cheese with hundreds and hundreds of these pits.

Rob Reid: Hundreds of looting pits.

Sarah Parcak: 800, 1000, 2000.

Rob Reid: Describe the amount of work that would go into, let's say I am looter. How many person hours of digging would you imagine it takes to create one of these pits? Yeah.

Sarah Parcak: So as an example.

Rob Reid: It is a lot of work that's-

Sarah Parcak: Its massive work. So imagine this a typical modern excavation, let's just say you were working in a tomb shaft, right? You were professionally excavating one of these tombs with full permission of the Ministry of Antiquities. So you're working with a team, you're very carefully going down, going down, going down. You're recording everything, maybe you get down to the tomb and maybe you'd start to record it and that would take you two or three seasons and then you would conserve it. So typically a single tomb shaft, a single tomb may take you a couple of seasons of work with a crew of 40 to 60 to 80 people. These guys would come in and in a single night would loot two to three of these tombs.

Rob Reid: So they would dig as deep as that.

Sarah Parcak: They would just go 100 miles an hour. Sometimes they'd have mechanized equipment, sometimes they wouldn't, but they just, we're hell bent on getting to that tomb and yanking out [inaudible 00:52:10] of [inaudible 00:52:10] guy, statues, inscribed fragments, anything that they could sell.

Rob Reid: Now if we're looking at a site that has a thousand pits, that's not because there's a thousand tombs that's like exploratory surgery. In that case they're digging, hoping to hit something, I assume.

Sarah Parcak: No, they know exactly where to go.

Rob Reid: Really. So when there's a thousand looting sites or hundreds of looting pits, each one of those was carefully chosen?

Sarah Parcak: More or less. I mean that's what I've found working in the pyramid fields. I'm working at Lisht. They're surgical precision.

Rob Reid: Wow.

Sarah Parcak: With what they're doing. So each looting pit, maybe not 100% but 95 to 98% of the looting pits at Lisht can be connected to a specific tomb or series of tombs.

Rob Reid: That Lisht is the modern city. That is in the area where you've been doing a lot of your work.

Sarah Parcak: Yes.

Rob Reid: Just south of Cairo. So there is extraordinary surgical precision. These are not randomly dug holes then.

Sarah Parcak: No, no, not at all.

Rob Reid: And also I know and some of the satellite images there's bulldozers, there's traces of actual bulldozers and heavy moving earth equipment that has gone through there.

Sarah Parcak: Correct. So typically in the ancient Egyptians on the sites. So you either have this shaft tombs that are cut into the bedrock or if you're a more elite, if you have sway with the king's court, instead of having a shaft tomb somewhere in the bedrock within striking distance of the pyramid, the king would give you another rock cut tomb, except it would be along the edge of the landscape where the rock would be a bit better. So you could dig into rather than just down and those tombs tended to be a bit richer while they're covered over with sand, it's easy for a bulldozer to come in and expose five or six of them at a time and that's what happened.

Rob Reid: So we've got surgically chosen sites, we have bulldozer work. These are clearly inside jobs?

Sarah Parcak: Well, so looting is complicated. We have to be careful how we categorize looting. So there are different kinds of looters in different parts of the world and people loot for different reasons. Some people treat the site's a bit like piggy banks, you can kind dip in and take a few things and go with it. So Lisht, we had a couple different kinds of looting, you have locals that organize, they'll split the proceeds, these are not bad people. And by the way, don't think of these individuals as kind of desperate for money. Think of it as a side job. So local collectives will go in and they'll loot. Well, then you've got more organized looting done by mafioso elements.

Rob Reid: So that first proceed, you said don't think of them as ... So these are folks who are not necessarily starving, but they're folks who are local who are augmenting their income, but they are quite poor by western standards.

Sarah Parcak: They're definitely poor, because the currency is been devalued, there's been so much inflation in Egypt, they may say, "Well, we're going to run short on funds to send our kids to school this month." So it's not like these people are not buying TVs and expensive cars with this money. They're going to-

Rob Reid: They're covering necessities.

Sarah Parcak: Right, "My uncle needs a surgery, my kid needs to go to school and maybe this month we can afford to buy meat." So yeah, I discourage any kind of black or white painting. It's very gray. Well, the mafia people are a little different, they're organized groups. They come in so the collectives they'll get what they get when they sell them to middlemen and they'll split the proceeds.

Rob Reid: Collectives, is that the term that you've used?

Sarah Parcak: I just use it-

Rob Reid: Got it.

Sarah Parcak: People who are cooperating to split the proceeds versus the Mafia type folks and these men will be paid a set amount per night with bonuses depending on the things that they find, so they have incentive to get down to that bottom of the tomb shafts.

Rob Reid: So this is a totally different group of diggers, better organized, better funded that we're talking about?

Sarah Parcak: Yes. And I think they're the ones that have the mechanized equipment just from what I've heard.

Rob Reid: Got it.

Sarah Parcak: And they'll go in and they'll dig faster. They have larger groups, they'll often be armed with machine guns.

Rob Reid: Really.

Sarah Parcak: So, there have been a lot of deaths all over Egypt.

Rob Reid: Really?

Sarah Parcak: From fights between looters and people protecting the sites.

Rob Reid: Wow. Between [inaudible 00:56:08] of the sites and, I mean between rival gangs of looters as well or?

Sarah Parcak: I haven't heard of that, but a lot of the guards on sites where they've risked their lives trying to prevent these looters from taking over.

Rob Reid: Now, one of the points that you've made in some of your talks is not so much the stuff that's coming out of Egypt, but a lot of the stuff that's coming out of Mesopotamia, is quite liberally funding Isis. Correct?

Sarah Parcak: So this is a big debate in my field, so we know there's been wide scale looting across sites in Syria and Iraq and even in Afghanistan. So there's a question of the extent to which that looting is helping to fund ISIL and what they'll do and what we know is, ISIS themselves, they don't know anything about digging. So they'll hire professional looters from Iraq and they'll rent out archeological sites and essentially charge overhead on whatever they fund so they get a cut. But yeah, there's been massive smuggling over the Turkish border, a lot of stuff that's sitting in auction houses, but a lot of stuff on the market now is hot, if you see an object, Christie's or Sothebys or elsewhere, and it's from somewhere in the Middle East. I would say there's a pretty good chance that's hot. It's come from that illegal digging.

Rob Reid: And I was going to ask who in the world is making a market in this stuff because obviously this stuff has to connect with monied people who are saying, "Boy, I want that relic, I'm going to pay a lot of money." So it is ultimately being channeled through traditional auction houses and other modern markets.

Sarah Parcak: Yes. So, whether it's big auction houses like Christie's or Sothebys or smaller private houses. I've learned for example, that a lot of antiquities is from the Middle East go through Thailand. When I first heard that, I was like, what? That makes no sense except Thailand has no rules or regulations over antiquities import and exports. So it's a great place to ship objects because there are no rules.

Rob Reid: Antiquity laundering, as it were.

Sarah Parcak: Yes.

Rob Reid: Interesting. And it was really, I'm just going to assume that the general lawlessness and chaos that ensued in 2011 that led the looting to explode in the immediate wake of the fall that Mubarak government, is that really the trigger?

Sarah Parcak: You'd think that would be the story, but it's actually much more interesting.

Rob Reid: Oh really?

Sarah Parcak: I think that the story is much more related across the Middle East to climate change and economic instability.

Rob Reid: Okay.

Sarah Parcak: So in Egypt, we have 12 years of satellite data that we look at from 2002 to 2013, 2014.

Rob Reid: Yup.

Sarah Parcak: And you'd think that in 2011, the looting would be pretty stable, a little bit of looting has gone on since antiquity and then it would explode. That's not the case. Started picking up in 2007, 2008 and then 2009, 2010 that S shaped curve starts taking off.

Rob Reid: So it was a process. It was well under way with the Arab spring happened?

Sarah Parcak: Yes.

Rob Reid: Interesting.

Sarah Parcak: And I wouldn't know this because I don't map looting in Syria and Iraq, but the whole Arab spring happened as a result of climate change of post 2006. So people are losing access to water, massive political instability, the government is not allowing certain farmers to have access to wells and water because they hold diverse political views. So people start leaving their traditional olive groves, they are moving to cities, there's tension building up and then one day a gang of young men because they were angry and they saw no future, they wrote graffiti on walls. They were disappeared by the government, by Assad. And that's what-

Rob Reid: [inaudible 00:59:40]

Sarah Parcak: I'm totally oversimplifying it, but I think there was a lot of looting already going on in Syria as a result of economic instability and climate change in 2008, nine and 10.

Rob Reid: But you do know factually that that was the pattern in Egypt-

Sarah Parcak: 100%

Rob Reid: ... because you had this huge database from the BBC work that you did and then you augmented it with the post Arab spring data.

Sarah Parcak: Yeah. So in that case we used open access satellite and imagery from Google Earth just because no where we had tens of millions of dollars.

Rob Reid: So this is yet another project?

Sarah Parcak: Totally different project.

Rob Reid: You started this actually now this is coming back when you started this in 2014, right? The leading survey or a little earlier?

Sarah Parcak: Yeah, it started 2013 to 2014. Yes. So this was funded by national geographic.

Rob Reid: Got It. Okay. And this was a specific. This was kind of a follow on to that semi spontaneous work that you did shortly after the Arab spring and you got its 12 years of satellite data for each of the sites that you were looking at?

Sarah Parcak: Right. So yeah, so we looked at not only the 3,100 sites that we had in our database, but the thousands and thousands of other sites that we knew about that we had. So we just looked at every site carefully and systematically and mapped out looting pits and sites of looting pits, and also damage to sites. And then once we had all the numbers, we crunched it and looked at changes over time.

Rob Reid: And that lead directly into your Ted Prize, if I'm not mistaken, right?

Sarah Parcak: Yeah, I think it was a contributing factor. Yes.

Rob Reid: So there's 12 years of day, there were just two of you looking at all these satellite images and counting the looting pits?

Sarah Parcak: Three of us.

Rob Reid: There's three of you, so that your eyes, you probably closed your eyes at night and saw little looting pits, right?

Sarah Parcak: Yeah, I like rocking the ball, this PTSD from looting mapping.

Rob Reid: So let's talk about the Ted Prize because that was something that fed right into this. I mean, that was the last major project you did before you were awarded it, correct?

Sarah Parcak: Correct.

Rob Reid: So now, just to be clear to listeners, this is distinct from the Ted Fellow program. So you've become a Ted Fellow in 2012. You're a Ted Fellow for two or three years and now we're toward the end of that period and then the Ted Prize comes along.

Sarah Parcak: Yeah. I was kind of wrapping up my Ted Fellowship, my Ted Senior fellowship, when I found out. Well first, I found it I was nominated for the Ted Prize and frankly that was enough, right? To even get a nomination.

Rob Reid: Describe what the Ted Prize is for those who don't know.

Sarah Parcak: So it's a million dollar prize that's given to one person every year and that person is invited to make a bold wish to change the world.

Rob Reid: And then Ted enables that wish to come true with a million dollars of funding and then also perhaps at least a significantly, if not more, access to the vast head Rolodex, which is significant because there are almost 2000 attendees of the conference and all kinds of people who are friends of Ted and so forth.

Sarah Parcak: That's right. So, you work not just with the Ted team that specifically at Ted, there's a whole Ted Prize team. So I got to work very closely with the Annenberg Gaze who's the Ted Prize director and her extraordinary team. I love them all. They become like another family. And so they mentor you, they work with you, they help you develop your wish until you get to present your wish at Ted. So this would have been Ted 2016.

Rob Reid: February 2016.

Sarah Parcak: February 2016. Yes.

Rob Reid: And you had known that you had wanted for a few months prior to that, correct?

Sarah Parcak: Yes. Correct.

Rob Reid: Yeah.

Sarah Parcak: So I was working on my talk because this was an actual proper 18 minute full on Ted Talk.

Rob Reid: Yes. And also you were presenting your wish to the world and hopes that it will rally not just the Ted community, but millions of people are going to see your Ted Talk and might come forward with resources and so forth to be able to help you.

Sarah Parcak: Correct.

Rob Reid: How long is the application process?

Sarah Parcak: So-

Rob Reid: Or the nomination part, you're nominated, you don't apply.

Sarah Parcak: I think I found out I was nominated in July of that summer and I remember I was sitting on a bench on an island in Western Scotland. The one place on the island where I actually get Internet access and I saw this email, "Congratulations Ted Prize." I said, "What's this?"

Rob Reid: Were you in the Hebrides? Which island were you on?

Sarah Parcak: I was on an island called Papa store. So it's the western most island of the Shetland islands.

Rob Reid: Oh, okay. The Shetlands Papa store. Great Name. Just gotta throw that out. Yes.

Sarah Parcak: It is a great name.

Rob Reid: Great name.

Sarah Parcak: Mama store waiting to be found.

Rob Reid: Waiting to be found. Yeah.

Sarah Parcak: So I get this email, "Oh my God, what?" And I sort of sat there in shock for about five or 10 minutes thinking, "Oh, I might even be nominated. This is amazing." So there's a short, I don't even want to call it an application. It's what's your wish? What's your dream? How will you work with the Ted community? A couple of pages long. And I should note even as a Ted Prize winner, the whole process, they're very careful about keeping it confidential. But I'm able to share this with you. So you sort of, you start working with the Ted Prize team or committee and they work with all the nominees to help you to refine your wish. You should have put it in. And then at some point it sort of feels like you're kind of going down a chute. And then there's a final interview with the jury a month or two later and then I got a phone call the middle of that September. That totally changed my life.

Rob Reid: And you then had a few months to get ready for the talk in which you presented your wish. So let's fast forward to that. Now, it is the big day you are at Ted, it is time for you to give this major talk. I would imagine the biggest talk of your life.

Sarah Parcak: By a long shot it was the biggest talk of my life.

END INTERVIEW ELEMENT OF PART TWO

Hey Ars Technica listeners - that was at least a minor cliff-hanger right? Tomorrow we'll talk about Sarah's TED talk, and also conclude this conversation. But if you can't wait to hear the rest of it – or, if you'd just like to browse my other three dozen-ish episodes, you can just head on over to my site, at after-on.com. Or, type the words After On into your favorite podcast player.

And finally, before we wrap up, I'd like to note that throughout October, [Medium.com](https://medium.com) is running a series of essays that I've written on the subject of existential risk. Which is to say, the grim, yet perversely fascinating possibility that our technological creations might just annihilate us.

Although I'm of course biased, I do think I have a novel take on all this, and present some arguments and analytic lenses that are new to the discussion about existential risks. If this might interest you, please go to [Medium.com/@RobReid](https://medium.com/@RobReid). That's medium.com; then a slash, followed by the @ symbol; followed by RobReid. There's also a link on the webpage that's hosting this player. The first article in the series went up last week. The second should go up sometime this week, and there will be a total of four by the end of the month.

I should note that Medium is running this in their editorially-curated, paid, members-only section. The good news is, they give everyone access to a few free articles per month with essentially zero friction.

That's it for now. I hope you'll join me tomorrow for the conclusion of this conversation with Sarah Parcak.

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