Women who Dissented: stories of stepping outside social expectations in science

Brenna Hassett

Banu Aydinoglugil: We have another archaeologist on the line again, a close friend of mine, Dr Brenna, who will be presenting us some of the exciting aspects of women in science. Doctor Hassett is an American-British bioarchaeologist at University College London, though she's now transferred up north, actually. She's also a public speaker and one of the founders of TrowelBlazers, which celebrates women archaeologists, palaeontologists and geologists. Brenna's first book was published in 2017, Built on bones 15,000 Years of Urban Life and Death and her second book, Growing Up Human: The Evolution of Childhood, published in 2022. Actually, she had the book launch of her second book here at the Meeting House back in last October. And another interesting fact about Brennan is that her family comes from a long line of Unitarians, so maybe it's not a coincidence that she's here. Doctor Brenna Hassett, everyone.

Brenna Hassett Thank you. My grandparents would be so thrilled that I am actually at a Unitarian church at all.

So I am actually a biological anthropologist, by training an archaeologist. My real research is in your bones and teeth and what they tell about you, but this is part of a side project into women's history that I sort of have been doing with three friends of mine that form the TrowelBlazers project. Basically we realized that women were not quite getting their fair shake somehow so we set out to do some research, and I thought I would talk a little bit today about the women who quite frankly, said no to the expectations that people had of them for their time, and how that has affected scientific research and the kind of legacy of science and who gets to do it.

So let's start with some philosophy:

> *"Research into abstract and speculative truths, the principles and axioms of sciences – in short, everything that tends to generalize our ideas – is not the proper province of women." (Rousseau, 1762)*

These are not for women. No thank you. So to think of the intellectual milieu that everyone was sort of existing in, when this church was founded and came to being, we can think of the great philosophers of the Enlightenment and exactly what they thought of women, which was not much.

And you have a lovely, lovely response by, of course, Mary Wollstonecraft, who we heard quite a bit about earlier, mother of Mary Shelley. And in her work, The Vindication of the Rights of Woman, she actually has a direct riposte, which is essentially, to paraphrase: well, if you let girls have an education, they wouldn't be such ninnies. Which is quite a sort of revolutionary statement.

But Wollstonecraft, along with very few other people at the time, had very strong beliefs about education, formal education, and particularly a kind of scientific learning that would empower women to take part in their society. She believed very strongly that were women given a chance to form empirical scientific observations and beliefs, that they would be just as rational as all the Enlightenment philosophers thought that men were.

Also at this time -- I thought I would touch on briefly -- has anyone ever heard of a Bluestocking? So, I love the blue stockings. This is an intellectual cabal -- we heard about Elizabeth Gaskell earlier, she's in there; Ada Lovelace down in the corner. These are women who basically attend a salon, the sort of group who exchange ideas over tea. The rule was they couldn't talk politics, but they could talk about everything else, so they talked about natural history, and all of the sort of revolutionary new scientific ideas that were coming out at the time. They're actually called Bluestockings -- this is a bit controversial -- in a sort of equivalent way of saying “tracksuit society”. So blue stockings are the cheap stockings. They're not dyed white. They're made of rough cotton wool and essentially blue stockings are your house shoes, you know, they're what you wear to laze around the house. And famously they sort of said to one of the members, oh, don't worry that you don't have fancy enough clothes to come to this gathering, just come in your blue stockings. So essentially, it's the Tracksuit Society.

They have a fantastic impression, not only on the production of new knowledge, but on society's idea of women who do science. So this is, in the best tradition, a cartoon version of how people saw the Bluestocking society. This is actually from 1815. But from the number of punches thrown, bosoms flying, you can see that people did not really respect this particular scientific output. And this is the world that the natural sciences came into being. And I think it's really quite interesting if we think about the Enlightenment and science and women's role in it the first use of the word “scientist” applied to work done by a woman, because someone who *did* science was considered to be inferior to someone who did philosophy. Philosophy was grand ideas. Science was the stupid bit where you just picked up facts off the ground, and that wasn't difficult. So our understanding has come some way since then. There is a sort of timeline, and you can see here the scientists that now everybody knows; Mary Anning, and of course, Mary Anning just got her own statue in Lyme Regis. But for generations, she sold seashells on the seashore, and that was all anyone knew of her. She wasn't accorded the sort of statues that Darwin or other scientific thinkers of the time were.

So what was the role of women in this revolution of science? A lot of people have sort of suggested that they're essentially wives and girlfriends, like the Manchester United wives and girlfriends, just following the squad around, helping when they can and getting into expensive legal fights. The earth sciences at this time were essentially expensive hobbies. You collected curios and you didn't really have much else to do. Here is a little etching of the Bucklands, a famous geology couple. And of course, Mr. Buckland was very well respected. And Mrs. Buckland, despite the fact that she did all of the catalogues, all of the illustrations, and half of the finding was Mrs. Buckland, whatever her name was, and their son Frank, who does get his name published. Work was often credited to men, whether the men did it or not, because that was the expectation. However there is actually a legacy of women who did science that stretches way, way back.

You might have to have a slightly loose interpretation of science. My interest is in the digging sciences. So I'm going to talk about those, which is archaeology, geology, palaeontology, anything you can get at with a shovel and a trowel. But we'd like to nominate the Empress Helena. Empress Helena, the mother of Constantine, and in around 200 AD, managed to do what may have been some of the earliest archaeology. She went off on a pilgrimage to the Holy Land and directed people to dig up where she thought various biblical sites were because her son needed artifacts for his new capital city of Constantinople. So she went off to go find the artifacts, loot them, and she managed. She came back with, I think, enough fragments of True Cross to build about six true crosses. We wouldn't like her methods today but this is a very long tradition of women digging.

When we come back towards Enlightenment women, we find that actually a lot of them are from particular backgrounds in a particular time and place in society. This is the “jolly fast” marchioness, Barbara Hastings, and she was known for her money, her taste in men and her immense fossil collection. Also her gambling hobby. She actually collected like 1500 or something fossil specimens herself brought them together and we still have items from her collection in the Natural History Museum where I used to work. So despite the fact that she was basically dismissed as a sort of airhead society lady, she actually managed to do quite a lot of important collecting.

As we move through time, we start to see that women are fitting into careers-ish in the sciences in increasingly different ways. There are many ways you can come at interacting with how we build knowledge. Jane Dieulafoy is one of my favourites. She is absolutely mad and also a great self-publicist most of what we know about her, she told us herself or in a series of interviews to fancy magazines at the time. She was married to an engineer and ended up going off and excavating at the Persian site of Susa, which was very exciting. Then there was a war, her husband got called away to war; she followed him by dressing as a sharpshooter and learning how to be a sharpshooter and pretending to be a man and joining his unit. I believe she was found out, but she still managed to follow him. She actually

became so famous for her A) refusal to wear women's clothing and her exploits in the field that she was granted official permission by the French government to cross-dress. This is *a permission de travestissement*, to cross-dress. She had a formal piece of paper to go right next to her Legion of Honour. This is a terribly blurry picture for which I apologize, but you have to imagine the kind of woman this was. This is a story she told to a magazine, is that she had been going to Susa to essentially loot Iranian national treasures, because that's what happened, it was colonial times, and her barge had been knocked off course, and she'd ended up on the wrong bank of the river; and there she was surprised by bandits. She was surprised specifically by twelve bandits. But she famously had her two trusty revolvers with her. And so she shouted at them "Ha! I've got 14 shots. Come back when you've got two more guys." She was very popular in the magazines.

So this this kind of romantic figure actually turns out to slowly be, women who had a little bit more scientific influence than perhaps just selling magazine stories. But the popularization of science is something that actually women had a huge amount of influence in. This is Amelia Edwards. Amelia Edwards also interestingly famous for cross-dressing, -- her first novel, which built her name, her reputation and the fortune that she would spend on archaeology she researched by being, as a 19-year-old, cross-dressing as a man, and going inside Paris brothels to do "research". In later life she took up travel writing, and she went on a life-changing trip to Egypt with her female companion and she wrote *A Thousand Miles Up the Nile.* This was this fantastically popular plea for the world to come and see Egypt's antiquities, to save them from ruin, to study them and she was so immensely popular -- she gave speaking tours, she sold tons of books -- she actually made enough money not only to live very successfully, but to fund more archaeology. Specifically, she funded that guy, Flinders Petrie, who was absolutely the celebrity scientist. You know, think Hawkings, think Pinker, think people you'd see on the news. He was in every newspaper. Every summer he'd report back on the treasures of Giza that he'd found, or the treasures of Abydos, you know, the beautiful gold things that he had discovered. So that's Flinders Petrie right there, and Amelia Edwards actually bought him a job over at University College London, the first ever Edwards chair, which was given to Petrie.

But. It wasn't always just the rich ladies on a hobby who got to do these kinds of sciences. We start to see as we get closer and closer to this century, in the one just past, that women started to be involved on a slightly more equal footing. Places like University College London, which allowed people, no matter their religion, race or gender allowed for a lot of opportunity that wasn't necessarily available to people previously. Before you basically just had to be wealthy and take up your collecting hobby, but slowly, as women were allowed the education that Mary Wollstonecraft had advocated for, they got more and more involved. Though I will point out that since a lot of institutions around the beginning of the 1900s actually banned women PhDs, where before they hadn't had an explicit rule, because so

many women joined there are actually more female PhDs in the States in the 1890s than there were in the 1910's and 20s, which is worth thinking about.

So let me introduce to you, Margaret Murray and Margaret Murray should really need no introduction because she is mad as a hatter, but so interesting. She is just a fascinating woman. She was born in India, but she grew up mostly over here. She was not from particularly wealthy background and had to actually work for a living, but she did end up coming and studying archaeology, specifically Egyptology, with the great bearded celebrity guy and she got to go out and dig at places like Abydos with him. One of her achievements was actually to popularize something called mummy unwrapping. This was -- in the 1900s, if you wanted a good night out, there's no movies; no, no, come to the live mummy unwrapping. They were shipped back these mummies that were excavated in Egypt shipped back. And you could buy a ticket -- quite expensive -- to go sit in a lecture theatre just like this and watch someone unwrap the mummy. And they were incredibly popular. This is a picture of her doing this at Manchester, I think in University of Manchester.

She actually she sort of essentially became an expert in Egyptology. She did have this experience. Her regret was always that (she is the tiny, tiny human being. She's probably 45 in that, 45-50; she was very, very small. She had very poor health as a child (so in the apron is Margaret Murray). So Margaret Murray is one of the earliest models of a woman making a career in this kind of science. She studied under a big professor, and she got a job essentially at UCL, sort of teaching. Well, it wasn't quite UCL, but teaching hieroglyphics and occasionally earning extra money doing these kinds of spectacular sort of shows. She also had a strong interest in witchcraft. She felt for most of her life that a lot of her career was stymied by the establishment, particularly some male colleagues of hers. So, having made a study of first Egyptian folklore and then eventually more European folklore, more on which later, she decided she was actually probably a witch and started casting hexes on people she disliked. Particular male staff members who were promoted ahead of her were summarily cursed. I believe in the Institute break room, and the Kaiser during World War One, and she did maintain that she could take credit for the defeat of Germany because she had placed quite a strong hex on the Kaiser. So we do have her to thank for that.

She actually has more influence on modern day Wicca. She's considered to be the mother of modern-day Wicca because she studied prehistoric religion, in part because she never got a chance to go back and do any more Egyptian fieldwork because her place was taken by another woman who will discuss in just a second. But she sort of was lost to Egyptology because she taught everyone hieroglyphics, but she was just the tiny little lady, um, with slightly funny notions and a lot of burning candles who taught you hieroglyphics. And no one really considered much of her legacy. She was actually so underpaid by University College London that when she was finally awarded an honorary doctorate in the 1930s, her students had to pay for her robes because she couldn't afford it. That is her work on European

prehistory, and she was very interested in reconstructing these rituals and she wrote enough about them to make herself extremely popular in Wicca circles. And eventually she was recognized; this is her at the age of 99 at the publication party for her memoir, which was somewhat optimistically titled *My First Hundred Years*. I still think that's the best memoir title that I've ever heard.

This was a sort of a narrative of a lot of women of her time and her class, particularly, who didn't have the financial means to pursue science in the way they would have if, you know, if she'd been rich, she could have gone to Egypt every year but no, she needed to wait. And because she was replaced, it didn't work out for her. Because she had to teach, she wasn't able to *do*. And this is a story that happened to a lot of women. So despite the fact that every single Egyptologist for about 70 years, well, 50, learned hieroglyphics from her and no Egyptology really would have been possible by them without her, what was her contribution? She doesn't get remembered. Until now.

Here's her replacement, Hilda Petrie. She wasn't born Hilda Petrie. She married Flinders. There's quite the age difference, but she was, by all accounts, obsessed with Egyptology. Like, completely obsessed, to the point where when they did get married, they skipped their entire wedding party, went straight on the boat to Egypt, wherein Hilda realized that it is incredibly impractical to climb a pyramid in Victorian formal wear. So she just took off her skirt and climbed in her bloomers. That's somewhat scandalous. I think this picture sat in the museum for quite some time without anyone being allowed to look at it. The nice thing is, is that actually, at the end of their lives, Hilda and Margaret were quite good friends. I always assume that this is like a sort of coven of witches type meeting. I think it's actually a reception for the opening of the Petrie Museum over at UCL. But it does look rather suspicious. So Hilda came from quite a privileged family. She was quite wealthy. She went out, she married Petrie, and she never got credit for another archaeological thing except for the unavoidable “with thanks to my wife.” But she did actually still interact.

So there's two types of women who are able to contribute here in very different ways. And we have actually an absolute legacy of them. Once you start looking, this is what we found when we started this project, there's just a million women out there. It's that we don't tell their stories and we don't notice their stories because for whatever reason -- they got married, they changed their name, they left the field, they didn't have students in the same way. they didn't have the money, the legacy -- we don't know about them. This is Gertrude Caton-Thompson; dug at Petra. That's quite famous. She led an all-female team to Great Zimbabwe in 1928. An all-female excavation team to Great Zimbabwe, where she refuted the incredibly racist idea that the people of Great Zimbabwe were African and therefore not capable of building their own massive medieval fort. She actually stood up in a conference in South Africa and was roundly criticized, hugely criticized at the time for daring to suggest that perhaps the really racist explanation was not true. She brought along on that expedition

a 16-year-old as photography assistant and car mechanic. Interesting combination of roles. This was Kathleen Kenyon, who was eventually recognized, became a Dame. She had kind of an easy in, though. Her dad was a boss of the British Museum. I feel like that's cheating. But she actually, you know, she's one who touches on my own timeline. She worked at the Institute of Archaeology and my own supervisor, when I was there, remembers her storming down the halls with her terrifying dogs that would sort of jump on undergraduates.

Here she is excavating Jericho, and she's had a massive impact on the discipline. Just, you know, a few lifetimes later, you know, the generations are touching each other all the way back to these women who were absolutely ignored. And we also have, from the same time period, the first female professor in the UK of archaeology. This is Dorothy Garrod and another all-female excavation team. This is them in Mount Carmel, which is in modern day Israel. And what's really fascinating about this expedition is that they found a Neanderthal fossil. Very exciting, but specifically what we remember, what was written in all the newspapers and all the museum displays is the Neanderthal fossil discovered by Dorothy Garrod. But it wasn't. It was discovered by her local Palestinian work lady, Yusra, someone who was working cleaning the finds. An illiterate woman with several children from a nearby village who was just hired, who found the Neanderthal tooth and recognized it as any mother would as a shed baby tooth and brought it to her attention.

So when we're telling these stories, even though we're sort of, you know, celebrating generally unheard stories, we're still missing huge chunks of them because of the difference in class, the difference in literacy, and the difference in whether a Palestinian village woman gets her story told versus a wealthy Cambridge professor. This is our story of women who chose to do science in a way that they weren't supposed to; that it was out of the ordinary. And we think they don't exist. But actually we say, no, we dissent. We say there are a lot of them. There are an incredible number of women who have done; this is a one of those six degrees of separation games that you can play with Dorothy Garrod, Dorothy Garrod is that first professor in the centre and all around her are -- there's Hilda Petrie in that corner, Agatha Christie's there. Agatha Christie married an archaeologist, did some archaeology. *Murder on the Nile*? Probably a true story. That's not true. But, you know, this is a web, and this is a web of women. These are women who worked together, who published together, who dug together in a in a world that we don't suspect or remember or believe happened.

When you imagine the past, we lose so much of it because it's not how we expect the past to be remembered. It's not cited in academic publications. It's not written in a formal publication because that was not how women were remembered. But they were there, and we can remember they're there. That's what our project seeks to do. This is a tiny, tiny segment of our project, and I'd like to invite anyone who knows of a woman in the digging sciences who's been overlooked to please write us and tell us their story, and we will very slowly answer your email. There are women who are working in the Global South. There are

women who are working from indigenous communities. There are women from all walks of life who have contributed so much to science. But we put them as a footnote with “thanks to my workmen,” “with thanks to my wife.” Thank you to my wife for typing the manuscript. And that is not enough to capture what it really means to have this experience of science. Of course, if we don't realize who's doing science, then we never really realize who's *not* doing science. And we can't fix the problems that we have today with representation and women still not quite getting the recognition they deserve. So I would like to invite, if anyone has these stories to please look at our project on TrowelBlazers.com and tell us any stories or just find some of our stories. We really are community led so we don't know about these women unless people tell about us. And that is part of the problem: there are so many histories of all of these women who went out and did what Mary Wollstonecraft told them to do: get an education, be the empirical scientist, make your observations. And there are so many women who did and changed the world because of it. Thank you.

BA: Thank you so much, Brenna. Uh, and thank you. TrowelBlazers. Check out the website. They have amazing stories of female scientists from all over the world, not just Britain. So any questions? I guess we have five minutes for questions. Any questions? Anyone? David.

David Walter: Yeah, thanks. I just want to talk about Margaret E. Murray and her book on the God of the Witches. They are -- as I understand, I am not too well read -- but there was a popularisation of Wicca during the rise of the Nazis. Did she have any views about that? Because I mean, when you talk about the history of Wicca, where they talk about the history of this throwback to an ancient European tradition. It's always it's just always associated with the structure of Nazism and its mythos around the idea of its racist views about the world. Did she have any comments on that?

BH: Well, I think, um, a little bit like the talk we heard earlier, there is a very pernicious vein in kind of quasi-Victorian science, which is just straight up eugenics and these sort of Social Darwinist ideas that creep in in a lot of places. So actually, a lot of the women on our site have some deeply, deeply worrying views, if not just outright calling for eugenics; for anyone who knows, Marie Stopes, very hardcore eugenicist. Not ideal. For Margaret Murray, I don't know what her particular -- I don't think she ever wrote anything on race or what the Nazis use, which is a type of Aryanism which is a very specifically weird idea that Wiccan, pagan beliefs in certain parts of Europe represent pure Aryan tradition, this kind of thing. So it's undoubted that some of her work would have been used in this way. I don't think she herself ever really commented on this. She was a suffragette; she was, I think, quite liberal. She was mostly extremely angry about quite socialist issues. I don't know that she really commented, however, on how that work on folklore came up, but of course it was also, it was a big moment for folklore research. Otherwise she wouldn't have written like five, six books about it. So I it's not clear to me that she didn't really kick off this trend, but I think she probably

did contribute to some of the material that later got used for extremely sort of weird nation building genocidal reasons.

BA: Okay. Thank you very much, Brennan. Thank you. Thanks a lot. Well, I'm afraid we're over time, so if you have questions, catch Brenna.