



S2E3: Elsie Gregory MacGill with Dr. Crystal Sissons - Transcript

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You're listening to the official podcast of the Engineering Students Society of Lakehead University. We're here to facilitate engineering themed conversations outside of the classroom and connect you to other students, faculty and alumni. Today we're talking about Elsie Gregory MacGill, and our guest is very well versed in all things Elsie. Dr. Crystal Sissons is Elsie's biographer and she completed her master's and PhD at the University of Ottawa, which led her to spend more than a decade researching Elsie's life. Dr. Sissons has also studied right here in Thunder Bay. She holds degrees in education and history from Lakehead, so I'm so pleased to have her on the show today.

To start off, for those of us who may not know about Elsie, can you give us a brief look into her life and her accomplishments?

Dr. Sissons

Not a problem? Elsie Gregory MacGill was born in 1905 in British Columbia, actually in Vancouver. And that was exactly two years after the first powered flight at Kitty Hawk in 1803. And this is significant because Elsie became, as far as we know, probably the world's first woman aeronautical engineer, so when you think about the fact that she was born in 1905, and she went on to be an aeronautical engineer working on powered flights and various different aircraft, that's pretty incredible. But I can make it sound even more incredible by saying before Elsie passed away in 1980, there was a man on the moon. So to have that trajectory in her life, technology and that technological change to go from just a dream of flying slightly before she was born to suddenly we've got a man on the moon. That's pretty amazing. So she lived through all that technology change. She also lived through things like a TV showing up for the first time. That was a big thing for her. The radio was amazing. When that became something, first she wanted to be a radio engineer because she thought that's where the future was going. Because I like to say that her radio was like the iPod or iPhone of her generation. It was so big, you know, and since you got really into that, she was doing all of this stuff. At the same time, there was a lot of interesting things going on because she became a chief aeronautical engineer in the middle of World War Two. That was huge for a woman at that time to be in that type of position for anyone really, but especially for a woman. And she did some remarkable things with aircraft adaption and design at that point. And just before she was working on different



models, and that the fact that she was also the first practising woman engineer in Canada is a very important point. And there's a lot of other things we go into on the engineering side, but I can never just talk about the engineering because she was also a prominent Canadian feminist. And that's something that's really important because normally we look at the literature. Women engineers and feminism go in two different directions like for and with work. Elsie, she brought it together and merged it. So that's really important. And we can talk a little bit more about how that showed up in real life as we go on.

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For sure. Yeah. It definitely gives me shivers, the thought of all the technological change that happened over her life. So, now to dive a little bit more into your character, your book is titled Queen of the Hurricanes: the fearless Elsie MacGill. So if you were to choose another adjective besides for us to describe Elsie what would it be?

Dr. Sissons

Determined! Dogged determined! I'd say that that'd be the best one for her because her mother was often known as being dogged determined and she had a very close relationship with her mother and she followed in her footsteps in many respects, in feminism and social change advocacy. And her mother was known as a joiner and Elsie could be considered a joiner in many senses and that being that she just got involved in so many different organizations. And when she was involved in an organization, she was involved. She wasn't just someone who took on a membership and renewed her fees every year and she might have got the magazine or the newsletter, and you know, that was the extent of it. She was involved. She was in there, she was doing things she was advocating. And she was even doing a sense of social engineering because she liked to do things from behind the scenes. She liked to work on resolution. She liked to work on how to make the organization function better. And she thought about all the different ways that you had to do that and look at the architecture of the organization and was it working properly with this bylaws like she was right in there and she was in the crux of it. She might not have always been out front being the lead but she was definitely there and making a lot of important changes within the organizations.

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When I just read about all the different places that she had contributed to it's mind blowing, and determined is so spot on. I think for me, I thought tenacious. She was so persistent in her attempts to gain membership to all the engineering organizations like the Institute of aeronautical sciences. And that was so so cool for me.

Dr. Sissons



One of her colleagues put it really well they said that she loved challenges, and she didn't see an obstacle is something that stopped you. You could go around it, you could go over under it and if necessary, go through it, but you weren't going to stop because there was something in your way. And that was something that was very clear with Elsie; she didn't let anything stop her. Even if we can talk about a little bit more later, but she was a polio survivor and she didn't let that stop her from going on in aeronautical engineering, which you would think would definitely put the brakes on her but it didn't.

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Yeah. And to touch more on her ties into feminism what skills do you think Elsie developed during her engineering studies that helped her to succeed both as an engineer and as a woman's rights activist?

Dr. Sissons

Oh, there's many that we could talk about, but I think that some of the big ones are she learned how to work really well with people, especially both men as women. And I think that's a powerful point of what she was able to achieve because of the fact that when you learn how to work with different groups like that, you're able to bring them together and you're able to help them understand different points of view, even if they're a little bit hard from what you would normally be used to like she could help women understand the importance of technological change who may not have been exposed to it. The idea that automation was coming, it was going to have an effect on the workforce. Women had to be prepared for that. And within the Canadian Federation of business and professional women, she helped them to see the importance of being aware of technological change, and the fact that you needed to adapt to that you needed to ready yourself and it was your responsibility as much as society's responsibility to help you in that area. As I've already mentioned, she's also building some of these organizations and making sure that they were able to stand the test of time so that's kind of how the engineering I would say weaves its way into the feminism and then if you flip it the other direction, she was able to in time to see what she could bring as a feminist into engineering in some respects. It was a challenge for her because she was battling against the idea of being a woman engineer. Because the reality is, is that most times what was happening was she was called a woman engineer as if the engineer was a secondary thing. And people had to get past a woman part first, so she would in some cases do the whole Yeah, woman check. Engineer, what's your engineering problem? Let's talk about that, because that's what we're here for. and her colleagues that got to know her realized very quickly that the fact that she was a woman, the fact that she was a polio survivor, or minor details and she didn't want them in a situation where she was drawing attention to either she wanted to be who she was and be an engineer. And because of that she didn't ignore really, really let the feminism come into the engineering if though she's you're seeing the engineering come



into the feminism, but in 1975, that was the International Year for women at the UN declared that year. And that was important because at that point, she stopped and she started to reflect on what it meant to be a woman in engineering. And she started to realize that well, she hadn't encountered so many difficulties herself. At least she thought she hadn't. there were difficulties and for some people, they were bigger than her own. And in some cases, she was actually finding a situation where old scenarios were popping up in her head and she was realizing Yeah, actually, I was discriminated against, but I didn't think about it. And one of the ways I like to look at that to better understand that situation is I've talked to other women engineers who are pathbreaking in their fields, and they've said like you know, you are so busy with your studies, you were so busy with your practical experiences and trying to get a summer job trying to get a job once you finally get out of school, trying to make sure that you've got your professional designation checked off and everything you do not go home at night and say was like a discriminated against today. No, they don't have time for that they're too busy. So it took something that really is to stop her and make her think you know, have time later on in your career 1975 to say, oh, yeah, there were those cases where Yeah, I was discriminated against, you know, the fact that people did ask questions about you know, whether she, whether she could do something because she was women, etc. And those are things that she didn't get into great detail about, but at least she started to understand them. She started to admit that that was there. And she started to understand what that can mean for other women in her field. It helped her work through that if she'd gone on past 1980 I think she would have developed it even further but it's a it's a big sea change to go from. No I wasn't discriminated against. I just sailed right through to think there was something going on. There. And now how do we move past that but she did understand that there was something going on there that needed more assessment.

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And that reminds me you worked on that Heritage Minute on Elsie MacGill, which was released in 2020. And in it The reporter asked her like, Well, I think he refers to her as a woman engineer. And she kind of has a little retort and says "It's just an engineer". So what did you want to highlight about Elsie in that minute?

Dr. Sissons

Well, I argued for that, that part of the Minute because I really wanted to emphasize the fact that yes, she's an engineer first and foremost at that point in time. The fact that there were women on the plant floor there was many of them brought in to work on the plant floor. That was an important thing for women during that period that they were able to get more work. They were actually in a plant doing men's jobs for the most part and it's a very important part for women's history. However, Elsie was in a class by herself, because she had previous professional training that allowed her with the masters of aeronautical



engineering to be selected as a chief aeronautical engineer. So she was working with the other engineers, she was overseeing design, construction, etc. And while the other women's work was very important, I will not say that it was not - it was extremely important for the war, extremely important for advancing their own position in society - it was different than, at a different level than what she was doing because of her previous training, pre-war. So interesting, dynamic and different, but definitely important because it was the springboard that really put her on the national stage because during that point, that's where you get the *Queen of Hurricanes* popping up. She was working on the Hawker Hurricanes when the plant in Fort William, Ontario, currently Thunder Bay, Ontario, received that contract. And so she's working on those and the media grabbed it. They just loved it. They thought it was fantastic because they had a news story. A woman is a chief aeronautical engineer in the middle of World War Two. This is going to be news! But it also scared them because what is a woman doing as a chief aeronautical engineer in World War Two? So they wanted to reassure everybody and we call this normalizing or normalization. So what they would do is when they wrote articles and they wrote stories, they would say you know, chief aeronautical engineer, Elsie McGill, and she knits or she has a cat, or she bakes or something, they'd add anything they could to basically reassure the public that she's still a woman. She is normal, things are going to go back to normal. It didn't end up that way. There was a percentage of normality post war that did happen But things had changed dramatically during World War Two to have everything go back into the nice neat box that it did beforehand. And even before World War Two, the box wasn't completely closed. Yeah, so she became queen of the hurricanes and she actually got this that moniker from a US comic strip, which picked up her story and called her the queen of the hurricanes and ever since it stuck.

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Yeah, and I encourage any people listening to go and check out the comic, you can still find it. It's pretty cool. So I wanted to talk a little bit about Elsie's humility. It shines through in everything that she does. As president of the Canadian Federation of Business and Professional Women Clubs. She was always open to feedback and new ideas, and she once wrote: "We hear the phrase exceptional women who haven't made it in a man's world. Well, there are no exceptional women and no exceptional men either. The person referred to as a normal person or man with more degrees of freedom than most normal people have". So despite her over successful career, as a minority in our field that has a reputation for fostering elitism, not to mention the social change she accomplished. She managed to remain humble. So how do you think she maintained true humility?

Dr. Sissons

Well, that's a very good question. I think she was able to manage that because she was able to connect with a lot of different people. She was able to continue connecting with students. She did that through the Engineering Institute of



Canada. She helped with young women that were coming up, she would connect with them. She was raised in a family that fostered that kind of context as well, because her mother was like a sort of first generation feminist who was suffragette. So she's fought for women's rights to have the votes in Canada, amongst other things, and she also went on to become the first woman judge appointed in British Columbia. She had that context from her mother, her mother, who was also a pioneer in women's education and earning degrees before other people were able to earn them. So that sounds elitist, however, because her mother was Judge of the juvenile court, so working with children that were getting into trouble working with families that were getting into trouble, and the law associated around that. She was able to have those those stories were shared in her family context around the dinner table and her father was into law and also the Anglican Church and he was into news reporting and that and they dealt with all different kinds of discrimination in British Columbia around especially the Asian population of the climate, other situations. So these contexts and ideas were brought into the family house and they were talked about, and feminists came into the house and talk to talk to the groups that Helen, her mother, Helen was involved with. And they were able to share these stories and so like Elsie's sister, Helen Jr., actually said at one point, you know, feminism just kind of walked in the house, you know, and it was there and that it brought all different groups of people and she was able to see in action more than any pamphlet or speech would have done is she saw that connection growing up and then she was a part of seeing that as she went along throughout life and being a part of it. The different organizations she became a part of work out to help people in different ways, shapes and form whether it was to help them in engineering, or to help them in the business and professional women's area. That's the concept of what we do as we go along. That included students all the way up into professional women. So there was a lot of different contexts that way, but another context that would have helped her a lot was she was a commissioner of the Royal Commission on the Status of Women. So she was able to hear from Canadians coast to coast to coast about the challenges they had as women and what that meant and the different walks of life that they came from. So she was listening and learning during that time period and that was really important. And then as I've mentioned before, being a polio survivor, she was open to understanding the challenges of people with disabilities and what that meant. So you bring all of these things in and I know I'm missing a lot because there was so many different aspects that she brought in but just those ones alone, you're looking at life through so many different facets that you're able to see and relate to people in a whole different way. That's really important. And on top of that, she's relating, and she's thinking and she's trying to move things forward. Because one thing you need to think about is not only was she watching the technological change going at lightspeed throughout her life, but she was watching social change too. She saw women get the vote, she saw women be declared persons, she saw these different things happening with the Royal Commission of the Status of Women.



And there's one phrase and I'm just paraphrasing up top my head right now, but basically she says that Canadians can have the same speed on social change in Canada if they want it. And that's the question, you know, do they want it because it's possible. She's seen technological and social change and that's important.

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And I think to her, she was well aware that the technological change that evolves from engineering was interconnected with that social change. It was all happening at the same time and technological change, kind of pushed the social change along as well, which I think was really important for her to have. So in the epigraph of your afterword is a fantastic quote from Judy Steed. I think she's a journalist, but she wrote, it's clear that deep down McGill is convinced that there's nothing special about her knowledge or her strength, that's certainty and the unconscious generosity of spirit that assumes we're all equal. There's no doubt at the heart of her success. Yet, if she's so ordinary, how has she managed to lead such an extraordinary life which I think kind of ties into her humility? I really love that quote. So in commemoration of her extraordinary life, and 2019 Durham District School Board opened Elsie MacGill public school in 2020, Ecole Elsie Macgill opened in Thunder Bay, and in 2022, MacGill became eponym of another secondary school in Milton. So how do you feel hearing about McGill being celebrated and recognizing these ways?

Dr. Sissons

From my experience from what I've seen researching her life and talking to people who knew her, I couldn't think of a better way to recognize Elsie than to name a school after her. Because I remember at one point, there was some question about some people talking about the idea of having an Elsie Gregory McGill statue somewhere, maybe in Thunder Bay or in Toronto, they weren't sure where but there was an idea of it. And I was asked what I thought and I said, you know, it's a nice idea, but I'd rather see something else associated with Elsie. There's a lot of plaques out there, which are great, but a statue doesn't, it recognizes but there's more that can be done. And when you think about how important education was to Elsie, and the fact that it gave her so much, and she fought so hard to see boys and girls and men and women have equal access to education in whatever profession they wanted. The idea that schools are being named after her I couldn't think of anything more appropriate to commemorate her by because it embraces the ideas of advancement. She gave many addresses at graduation ceremonies, where she really was looking to that future. And I think that's another thing about Elsie is she always had a future looking way of seeing the world in the middle of second wave feminism, which largely focus on you know what they could do advance women's rights and move things ahead at that point in time. And it was, it was many mainly a white middle class women's movement. Elsie was already seeing the potential for third wave feminism and the possibility of splintering of the movement and asking about what about Black



women? What about Indigenous women? like she was asking these questions, before anybody was thinking about them. She did the same thing with you know, she's an aeronautical engineer, but she was fascinated by space. And if she could have done it again, she would have been doing something in relation to astronautics and different things like that she would have been in there. If she'd had the opportunity that she was always thinking ahead of the curve. And I think that is something that education allows you to constantly re-envision and re-educate yourself. And she was a proponent of lifelong learning and it's just it's a wonderful thing. I really can't say enough good about it. And the fact that there's one in Thunder Bay now as well, I think that's perfect because it's very close to where she worked as well, which is really impressive for me.

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Like you said it's wonderful that these young people have Elsie MacGill to look up to, they'll know about her because the name of the school and it's all for him to have those role models in your life, just like the perfect one. So is there anything else that you want to talk about? We could talk about her polio?

Dr. Sissons

Well, I would say basically, for Elsie what that really was was an obstacle. She didn't allow it. To stop her. And I think that's a really good example of it. She was struck by polio right at the end of her Master's of aeronautical engineering. It's a time where she should have been anticipating going forward into a career right away or some kind of Advanced Studies and she was trying to figure out if she'd ever walked because we don't understand what polio was basically eradicated now that we're seeing some of it pop up a little bit now. But for the most part, we've eliminated it but at the time, there wasn't anything that they could do except basically cope with the situation once it arrived, and depending on the person, it could be extremely debilitating. Elsie was at the point where she was in a wheelchair. Doctors didn't have any good indication if she ever walked again. There was some people worse off than her that actually, they were in a huge contraption called an iron lung that actually helped them breathe. So Elsie was a little bit more fortunate in that case, but here's what the determinism comes in and being so determined because she really really wanted to get going with life. She wanted to get moving on. And but the thing is, well, I do emphasize the fact that she had a lot of drive is that family support that came in at the same time that we made this even more possible for her because it was her sister, and her sister's husband that helped her get back to DC where she could recuperate. She recuperated in her family home so she had the support and the network around her of, you know, love and support to reboot her life in a new version that it had become. And she went from wheelchair to walking with two canes. And she was determined to keep moving on. So even while she's recovering, she's writing engineering articles, she's drafting, and she was writing for Chatelaine and Vanity Fair talking about air flights and women's potential role in it amongst other things.



So she knew she had to keep herself up to date and well informed because we're talking about a very fast moving industry with aviation, and she had to stay informed. But she also knew that despite all she was doing, like drafting designs and that, convalescence, she didn't have the most up to date information because she was no longer in school. She was not in the industry yet. So she decided to go back and do additional training at MIT. You know that she just kept pushing herself. And one of the things I really love is that when she was working, when she finally got back in Canada, she was with Fairchild Aircraft Limited and she was driving from Montreal area to Ottawa, sometimes in the middle of the winter, taking her models to be tested at wind tunnels. It's the National Research Council. And, you know, basically one of our good colleagues, Dr. John Green basically said: "You know, you learn not to ask her if she needed help, she would let you know because she was able to get to what she had to do". And throughout her life, she minimised any possibility of polio, eclipsing her. For instance, when she had to go to different conventions and conferences. She planned ahead and made sure that her hotel room was beside an elevator. You know, she made sure that she was able to get around relatively well. And she also like she joked about it, like when she became national president of the Canadian Federation of Business and Professional Women, some reporter asked her, you know, like, what does this mean for you like with polio, and she's like, well, I gonna have to be a little bit more on time for things because I can't run to the meeting. I have to actually be at the meeting. So some are planning in the end. I know one person I talked to said, you know, it was so hard to say no, to Elsie. You know, you get so busy and overwhelmed. You don't think you could possibly take on another thing. And here comes Elsie in her wheelchair in her later years. She had to go back to a wheelchair on occasion. And she's got like a stack of paper on her lap. She's actively using her chin to hold it in place. She's wheeling along. And she goes and she says: "I've got a job for you". Are you actually going to be able to say no to her at this point in time? So really, you know, really pushing for that and near the end of her life. There was the International Year of the Disabled and Elsie got involved in you know, she didn't get to see that come into full delivery but she was there getting involved in it. So she knew the importance as well of making sure that people who were disabled or differently abled had the opportunity to do just as much as everybody else. Because if you have the right ways of looking at things in society and you make sure that people don't just have equal opportunity, but have equal access to things in the right supports that they need to give them equal access, then everybody can do wonderful things if they have that support.

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For sure, yeah. And I remember reading about that. That quote that she said to the reporter that she can't run the last couple metres or so. So she's always gonna be a little bit more early, but she was funny. So you're afterward includes an extra from Elsie's letter to Lakehead's then President, William Tamblyn, of Lake Tamblyn fame, and in the letter, she expresses her how she hopes her



mother, a prominent activist herself, as as you mentioned, and in the biography of her mother that Elsie wrote would inspire future Lakehead students which I was thrilled to see that Lakehead connection. And, and then you express the same wish for your biography. That it will and I quote: “encourage many other women and men to be bold and pursue their life's work and their ideals”. I wanted to finish off by saying how grateful I am that a book like The Queen of the Hurricanes: The Fearless Elsie McGill exists. It was such a pleasure to explore Elsie’s life, so thank you for sharing your many, many, many years of research.

Dr. Sissons

It's been a pleasure and I would be happy to speak with you again in the future.

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We hope you enjoyed this episode of The Lakehead ESS’s podcast. If today's discussion piques your interest (which I know it has) we’ve left more awesome resources to explore in the description. Visit ess.lusu.ca To learn more about the society and access podcast transcriptions and remember to follow us on social media to stay up to date on all of our events. See you next time.