

## Leeds University Business School – Research and Innovation Podcast

### International Women’s Day 2021 series

Episode 6: Women in the tech industry

Speakers: Dr Shahla Ghobadi and Dr Amber Young

Shahla: Hello, I’m Shahla Ghobadi, Associate Professor of Information Management at Leeds University Business School.

Amber: And I’m Amber Young, I’m an Assistant Professor at the University of Arkansas in the Sam M. Walton College of Business.

Shahla: And today we’re going to be talking about women in tech and especially women in information and communication technologies. This is part of series for International Women’s Day here on Leeds University Business School’s Research and Innovation Podcast. Amber, both of us have been academics in the information systems field dealing with the development and use of technology. How do you think our female colleagues have advanced the field?

Amber: That’s a great question, and I think, really, women are just killing it right now in information systems. We’re seeing a lot of contributions and just really innovative thinking coming from women, whether it’s Wanda Orlikowski’s ideas about sociomateriality or if we look at how Anne Majchrzak and Lynne Markus have really brought this concept of designing information systems to improve societal challenges and to get that kind of research recognised and published in our top journals. Really interesting stuff going on in design science with Anne Majchrzak and Lynne Markus as well, they have some background there, and Shirley Gregor is leading the way in design science. Dorothy Leidner, Sirkka Jarvenpaa, we have a lot of women who have contributed with research. Sue Newell.

And then of course as editors we have Ritu Agarwal was editor in chief of Information Systems Research, Dorothy Leidner is the current editor in chief of the journal, The Association of Information Systems. Sirkka Jarvenpaa at Journal of Strategic Information Systems, formerly, and then Liz Davidson at Information and Organisation. So, a lot of women in those very top roles just shaping how our field develops right now. So, that’s been really interesting. And even in my own department, so I’ve

been really lucky in my own department to work with Mary Lacity whose work on automation and practice-based research has gained a lot of traction, and Tracy Sykes who has had, like, 15 Financial Times... 50 hits in the last ten years.

Shahla: Yes, that's awesome. And I think whenever I think about our female colleagues' contributions it's not about different genders, it's completely beyond male or female categorisation, it's pure contribution. And I think that's the way to go.

Amber: We have a remarkable context in our field, I think, because we're a newer field than maybe some of the ingrained and entrenched norms that enforce sexism are likely to be less routinised since we are a new field. And we're seeing some really encouraging patterns from new researchers, too, right, like you're doing some really interesting work. We have Christie Chung and Nina Wong and Carmen Leong who have just put out an amazing amount of content and had a huge impact on our field in a relatively short amount of time.

So, we're seeing that our field was shaped by some senior women and that we're able to continue that pipeline with some new, younger generation of women. So, we're both teaching digital and IS topics, and you've worked in the software industry before joining Leeds. We hear that, in industry, there is a lot of need for women in tech, why is it that tech companies highlight this? In the past has there been a low number of women in the field?

Shahla: It's a very interesting question. Studies have shown that women make up 50% of users of IT products. In gaming, 50% of gamers are women, even 47% of the entire workforce tend to be women. But we see research from tech partnership... women in IT, reveals that only one in six of tech specialists in the UK are women. Even, I was reading a new report from Microsoft in 2018 revealing that women only represent 28% of the employees. Amazon I think was leading with 40%. Google was 30% and Facebook 36%, and Apple 32%.

And I think even this imbalance is greater when you take into account that a lot of, let's say, this 20, 30, 40% are people, let's say, women associated to activities such as HR, communications, marketing and not necessarily the actual development and design of technology, and that would be a really much bigger problem. And just like our field, which I wouldn't necessarily argue, our female colleagues have created

different types of theories, I wouldn't say women would necessarily make different types of products, but what matters is, let's say, technology fields such as information communication technology that is ever-increasingly changing and needs more human resources, is basically in need of 50% of the population, and this 50%, it's like its being excluded from the possibility to come to this field and expand that.

So, I believe one of the major reasons that organisations, they have realised that the lack of women in IT jobs is not just a problem for women, but it's a problem for the whole business sector, is having access to a greater pool of talent. So, as a result of that we see organisations have started to recognise the benefits of employment more women in this sector and they try to address gender imbalance in the workforce.

Another reason that I would argue is because we recognise that artificial intelligence is playing a very important role in today's environment, and of course when there is gender imbalance, let's say, in the number of women in this industry or in the number of women in executive roles in the IT sector, what happens is that this type of imbalance is being fed into our artificial intelligence and, as a result of that, this creates more imbalances and reinforces more of those sorts of issues. And, once again, as I said, I don't think these initiatives are necessarily for more diversity, more, let's say, ethical aspects, more fairness, but primarily they are deeply rooted in commercial reasons that we want to be innovative, we want to be progressive in this industry and, because of that, we need a greater pool of resources.

Amber: Yes, definitely. We saw that with Amazon's hiring algorithm, right? That they designed this bot to help them with hiring and to sort applications and it learned that their trends from the past hiring were to hire men, and so that algorithm started ruling out candidates that it figured out were women, say they had women's chess club on their resume, and things like that. So, what are some of the concerns that remain?

Shahla: I think there are still a lot of initiatives and there are still a lot of concerns and this is primarily because, when we talk about more women in this field, it's not just about any type of job, it's also about where we are talking about imbalance. So, let's say, do women have the opportunity to take senior jobs? Do women have the opportunity to be entrepreneurs? Interestingly, in the

past few years, partly because of the advocate jobs of, let's say, some CEOs, I do remember that Facebook, one of the executives, she had actually written a book about how women are really lacking in the board and, because of that, as a result of those types of activities, we have seen the number of women is increasing on boards, even, I was reading a report which was saying it seems to be more diversity, gender diversity on boards than in actual development workforce, which is partly because board type of activities for showing, like, impression management activity, that we want more females in those types of jobs.

But there are also some very interesting areas that there are still significant imbalances, one of them is supporting women to... or allowing women, actually, to be entrepreneurs of game changing products and, Amber, both of us have been teaching, let's say, digital type of topics, digital entrepreneurship and we see that... I do remember, for example, one of the best slides every semester I teach my... and I show to my students is the picture of young generations who contributed new ideas like Amazon, Facebook, Microsoft, Apple and once I noticed that all of those pictures are male entrepreneurs and then I really ask myself: so, what about female entrepreneurs? Does it mean that we don't have many women who come up with great ideas?

I was reading an article in, actually research done at Wharton Business School saying that although a lot of women initiate a lot of ideas in the industry, in tech, but what happens is that just two or three percent of those ideas are supported by venture capitalists, and the article was raising the concept of homophily, which says venture capitalists tend to be men, and men tend to support the same gender. As a result of that, even women with some really interesting ideas that have the potential to be game changing, they actually are being overlooked because of the need for venture capitalism, for, basically, money. Imagine how many great ideas are going to be dismissed because of these sorts of dynamics that exist. So, yes, there are still a lot of concerns because it's not just about the number of women, it's about the type of activities that women are supported or are excluded from actually participating in them. I wonder what do you think? Because you see a lot of women in this field and that they come and they study, how do you see the ideal situation for women in tech?

Amber:

Well, I think that there's a lot of room for improvement, still, though our field, you know, has a lot of women and is inclusive in a lot of ways. I think there are certainly ways that we could look at how women as a group may tend to be disadvantaged. I mean, certainly, everyone is an individual and the way that we experience life is very individual, but you can aggregate this and see patterns at the group level that women do potentially have more work/life conflict or do, potentially, have more responsibilities outside of work, and things like that can get in the way of us being able to progress in the field. So, I would like to see companies recognise the value of women and try to address some of the systemic issues that I feel women need some help to overcome.

Shahla:

There are a number of things that should be addressed in the future. One is, like, to me the ideal day is not just a day that we would have 50% women, 50% men, what matters to me is really raising awareness and enhancing girls' critical thinking, so that they are able to decide for themselves what they really want and they are able to distinguish between what society asks them to do and what they really want to do. So, let's say, previous generations there were a lot of voices around, you know, technology is for men and other activities are best suited for women. And now we are moving into the opposite direction. What I think matters is to raise a generation that is able to distinguish between these voices and their inner voice, and decide for themselves because it's not just about the type of job that they do, it's also about the type of colleagues that they want to have, the type of environment, the type of universe that they would live in.

So, it's important to really return to themselves and decide for themselves. Another thing I would say is, and I would say I see this less in a lot of initiatives, is to give a much greater picture of the possibilities in the tech field. So, for example, like, a lot of initiatives talk about if women participate in this industry, it's a lot about being a technical person or knowing how to code, but things are changing. We see a lot of, let's say, the software field has a lot of roles that they deal with the artistic aspects of developing software or, let's say, about the psychological aspects of user behaviours. And they are very important in the tech industry, which means not every man or every woman who wants to be in this field should be necessarily a technical person,

you can be a game changer in these fields, but not necessarily a, let's say, type of technical person.

Amber: Yes, I know that there has been work that showed that if we present IT jobs that are social and show the social aspects of that and show that you're not always just alone by yourself in front of a computer, that that can be more effective in recruiting women. Yes, so I think there are a lot of opportunities and we're going the right direction and more needs to be done, but we are moving in the right direction and I hope to see a lot more women in our field in the future.

Shahla: Thank you very much for joining us.

Amber: Thank you so much for having me, Shahla, it was really great talking with you.

Shahla: And thank you everyone for listening to us. If you are interested in getting in touch about any of the things we discussed today, our contact details are available in the description of this podcast. Thank you and have a nice day.