



Practical Significance – Episode 3 | Celebrating the History of Women in Statistics and Data Science

Introduction: Hello, and welcome to *Practical Significance*, a podcast to inspire listeners with compelling stories from statistics and data science and to propel data-driven careers forward. Here are your hosts. The ASA is director of strategic initiatives, Donna LaLonde, and executive director, Ron Wasserstein.

Donna LaLonde: Well, welcome everyone to the third episode of *Practical Significance*. Ron and I are really enjoying the opportunity to have conversation with some of our favorite people. And this month is no exception. We are going to talk with **Dalene Stangl** and **Wendy Martinez** in celebration of women's history month. So Dalene first question to you, but before I ask the question, why don't you tell our listeners a little bit about yourself,

Dalene Stangl: I'm Dalene Stangl and I've been a statistician for about 30 years. First, I did my PhD at Carnegie Mellon and then went to Duke university where I was on the faculty there for about 25 years. And then for family reasons moved back to Carnegie Mellon, and I've been emeritus for the last couple of years.

Donna LaLonde: Great, wonderful. Well, Dalene and I've worked on a couple of projects together, but I think my favorite is the Women in Statistics and Data Science (WSDS) conference. And from the beginning, you've described WSDS as a celebration. Why is it important to you to celebrate?

Dalene Stangl: I'm going to answer this a little bit more in general, just than the women's conference and answer more of why it's important to celebrate women in history and the very simple response is that the women have accomplished as much as men, but the visibility of those accomplishments is nowhere near the visibility of the accomplishments of men, and that sort of diminishes our efforts towards gender equality in both direct and indirect ways.

I think what celebrating women does is it provides women a sense of social connection to women of the past, as well as increasing connection with their female contemporaries. I think it also increases the visibility of the diversity of female leaders who serve as role models, which makes it easier for young women today, from all races and socioeconomic classes to see themselves in positions of power and leadership while being able to maintain their own sort of individuality and authenticity. And then lastly, I think it's important to celebrate because it creates a time and a space where we can reflect upon the current forward state of gender equity and secondly, the time and space to brainstorm solutions so that we can continue to progress.

Ron Wasserstein: I'm going to turn to you now Wendy, our 2020 ASA president – so, you're past president this year and I'd like to ask you to tell us a little bit about yourself and what motivated you to get start the History and Statistics Interest Group.

Wendy Martinez: Thank you, Ron. Thank you for asking me to be here today. It's really exciting. I'm sort of like Dalene, I've been working in the area of statistics and dare I say data science for about 30 years now. And right now, I work as a research mathematical statistician at the Bureau of Labor

Statistics. And as you said, I had the honor and privilege of serving the ASA president last year. So, you asked me about the History of Statistics Interest Group. Well actually, Ron, it's your fault that I got involved.

Well, first of all, I took history classes as an undergraduate. That wasn't your fault, but I really loved history and I wanted to be a historian, but I didn't think it was really a good career move to do that. So, I eventually became a statistician, and it was about three or four years ago, Ron, you appointed me to serve on the ASA Archives and Historical Materials Committee. And that committee was focused on preserving the history of the ASA, but there was always some confusion in the minds of the committee members. We would often focus on the history of statistics rather than the history of ASA. Of course, there is some overlap because you know, ASA is about statistics, but at that time then we talked about forming an interest group that would then focus on the history of statistics itself.

So, looping back to the beginning. I get to do things now that I really love, both statistics and history.

Donna LaLonde: Wendy, I am delighted to have had the opportunity to work with you a little bit on the history of JSM when you were preparing your talk and I look forward to exploring more history. So, this question is for both of you, I just started reading this really cool memoir, *The Yellow House* by Sarah Broom. And so now I'm thinking about memoirs and what would I write? And so, my question to both of you is if you were to write your memoir, what career highlights would you include?

Dalene Stangl: Career highlights? That's a hard one Donna. If I had to pick a number one, it probably would be helping the conference, celebrating Women in Statistics and Data Science, in terms of the impact and the success and the pride that I feel – that one just really stands out. The others that I might pick would be co-editing two books with Don Barry, both on Bayesian Statistics. Bayesian Statistics and the promotion of Bayesian Statistics has been at the heart of my career – and something that I strongly believe in and have pursued. And if I picked a third one, I really enjoyed all the editorial positions I've held both in editing *CHANCE* magazine and JASA reviews. I think there, because I got to meet so many people and work with so many people, I really enjoyed that tremendously.

Donna LaLonde: I think those are great highlights. And I look forward to reading that memoir. So, I hope you are writing. Wendy, what about you? What would you include?

Wendy Martinez: Well, thank you for asking this question of Dalene first, because it gave me a chance to think about it a little bit more. But one of the highlights of my career is something that happened recently. And it's the culmination of a long journey here at the Bureau of Labor Statistics. I was able to finally get the use of R, which is a statistical computing environment, open source, get approved for the use of production, which means we can use it to produce our official statistics. So that was really exciting. And then of course the main highlight of my career and my life actually is, the chance I had to serve our profession as an ASA president, especially during such a chaotic year, but I'm very grateful to have colleagues like Ron and Donna who helped me every step of the way.

Ron Wasserstein: Thank you both for those highlights, there would be many more highlights if we continued to press you on those things. But what stands out in what you shared is the commitment that you both clearly have to serving the ASA and the broader statistics community. And so, I'll ask you both and maybe Wendy, it's only fair that you start first on this one. What motivates that? Why is serving the community important to you?

Wendy Martinez: I think this is a really good question, a good point for us to all think about. I first joined the ASA as a student and of course the membership cost is cheaper. Mine lapsed a little bit. And then finally I'd realized that this is my profession. This is my career. And if it's important to me and you're passionate about it, then you really need to support your profession and your colleagues. And I could do that through the ASA. It's important to give back through mentoring and service, and to our community.

Dalene Stangl: So, to follow on that, it's with a little nervousness that this answer sounds a little self-centered, but for me, ASA service was always an arena in which I didn't feel marginalized. And whether it was editing *CHANCE* magazine or *JASA* reviews or giving a Bayesian short courses or technical talks; or heading up the ASA Committee on Women in Statistics, or the Bayesian section, I always just felt very thankful that I was given a seat at the table; that my voice was heard. And then I felt I had something to contribute. And I always felt that what I contributed was welcomed and highly appreciated.

Donna LaLonde: Wonderful. So, this is something that just occurred to me listening to both of you. Because especially at WSDS actually a lot of young folks reach out and ask how can they get more involved in the ASA? Any advice on getting started with ASA service? And I'll just put that out there to both of you.

Wendy Martinez: Well, one thought that comes to mind is joining one of the sections or one of the interest groups. And then once you become more involved there, you could volunteer to run for a section officer's position. They're always looking for people to do that, and it's a great way to network and to provide that service and to get some experience in leadership positions.

Dalene Stangl: Only thing I can really add to that is volunteer, volunteer, volunteer. It's easy to put together topic-contributed sessions. Anything you can do to contribute your time and energy is always welcomed and increases your own visibility, so that the more you volunteer, the more they're going to come and call on you in the future. So, volunteer and follow through.

Donna LaLonde: That's great advice. And I can't resist reminding folks that abstract submission is open for WSDS 2021. So, follow Dalene's good advice and, uh, submit a proposal for a presentation at WSDS 2021. Okay. So, my final question is since we're celebrating Women's History Month, if you could host a dinner party with three women from history, who would you invite? And if you want to say why that would be great as well, and I'll start with Dalene and then Wendy will we'll hear about your dinner party.

Dalene Stangl: All right, Donna, asking me to pick three women from history is a bit like asking me to pick three grains of sand from a desert. There's just no way to pick only three. There's just so many amazing women that I can't possibly just pick three from history. I guess I would include in my list, Gertrude Cox, Susan Anthony, Shirley Chisholm, Eleanor Roosevelt, and Ruth Bader Ginsburg are some of the first names that pop into mind and that I would have loved to meet. And the reason why is that each one changed the path of history and each one of them paved roads for women that allowed them to be seen and heard in ways that women had not been seen or heard previously,

Ron Wasserstein: You want to say a little bit more about Gertrude Cox on this *Practical Significance* podcast.

Dalene Stangl: So, when you think about role models, you typically think about role models who are living, but it felt like throughout my career, I sort of lacked female role models most of my life. I grew up on a farm and, and the notion of holding a doctorate or becoming an academic didn't really come into

my thoughts until my late twenties. And I did my PhD at Carnegie Mellon. Most of the time I was there, there were no women on the faculty at Duke where I spent 25 years. Merlise Clyde and I were the only women during my first 10 to 15 years.

So, I didn't really see female role models in statistics at Duke either. But while I was at Duke, I learned a lot about Gertrude Cox, who was the president of the ASA the year that I was born. And so, I learned how much our career trajectories paralleled geographically, and otherwise we were both born in Iowa. We studied psychology before turning to statistics, and then we both moved to North Carolina and it was amazing to me how those tiny similarities provided me with a wealth of inspiration throughout my career. And so that's one of the reasons I'd really want Gertrude Cox at that dinner party.

Ron Wasserstein: Thanks for that, Dalene! Wendy let's turn to you.

Wendy Martinez: Well, I want to go to Dalene's dinner party. Those are some great people, especially Eleanor Roosevelt. That's fantastic. So, I first picked Ada Lovelace. She was born in 1815 and died in 1852. She was the daughter of Lord Byron, and she was a colleague of Charles Babbage. Some consider her the author of the first computer program or algorithm. But she's fascinating to me because of what she did at that time, as a woman. Similarly, I was going to ask, Florence Nightingale David. She was born in 1909 and died in 1993. I would love to talk to her about what she did during World War II, but then also she was around during early statistics, in the time of Pearson, Gosset and Fisher, just to hear more about how all that worked and especially as a woman.

And finally, this might seem a bit odd, but I would invite Mary Shelley, who is the author of *Frankenstein*. And I believe she was born in 1797 and died in 1851. I just find it fascinating that she could think of the concepts and ideas that she had in that story. And it wasn't just the science, I guess, but the characterizations and how we are as humans. But it just is amazing to me that, you know, she wrote the story at that time. So maybe Dalene and I could combine our dinner party and we'd have lots of good conversation.

Ron Wasserstein: That's fabulous. I was going to say Wendy, that I read *Frankenstein* when I was in college and realized that I knew really nothing about it from seeing movies and things like that. The book was so much more interesting and engaging and complicated than I ever imagined that it would be.

Wendy Martinez: It makes me want to go back and read it again and I guess that's a true test of how the importance of written work stands the test of time, right? I mean, it's been around for a long time and people still want to read it.

Donna LaLonde: Well, those are two great dinner parties. And so, Ron and I really want to thank you, Wendy and Dalene for taking time to talk with us about women's history and about your career trajectories and involvement with the ASA. And so, with that, we are ready for our closing and as our listeners know our closing tradition is to turn it over to Ron for a "Top 10."

Ron Wasserstein: So, thank you, Donna. Here we are. We find ourselves a year now into the pandemic and probably all of us – (I know I am) are struggling and maybe you've started to wonder more than a bit about your boss. What's going on in your boss' head at this point. So, to help you out here, I'm going to share with you the "Top 10 Signs That Your Boss is Insane." Here we go.

#10: He prints out his tweets and mails copies to every employee.
#9: His Zoom background is a montage of pictures of his idol, Michael Scott.
#8: After recent air travel, he decided it was ridiculous to save things to the cloud. Yeah. Okay. That's understandable.
#7: His motto is, and I quote, "It's either my way or the interstate."
#6: His latest company-wide memo bans the use of indefinite articles, or maybe I should say bans a use of indefinite articles.
#5: He plays a bugle to announce the start of a meeting.
#4: He spends hours forwarding his email to himself.
#3: He keeps hinting that he will pay everyone in the new currency he created.
#2: Declaring he is sick of all this data. He demands more anecdotes.
And the #1 sign your boss is insane. His name is Ron Wasserstein.

Donna LaLonde: Actually, Ron, I was just going to circle back and say, now I'm really worried about that bugle at the last staff meeting, but I thought I played it well though, didn't you? It was perfect. Anyway, everyone, thanks so much for celebrating Women's History Month with us. And we'll see you next month on *Practical Significance*.

Thank you for listening to this edition of Practical Significance. The podcast of the American statistical association, a new episode will be coming your way next month from Amstat News, the ASA monthly membership magazine.