An Interview with Pamela Wisniewski: Making the online world safer for our youth

INNOVATION LEADERS

by Bushra Anjum

Editor's Introduction

Dr. Pamela Wisniewski is an assistant professor at the University of Central Florida's Department of Computer Science and an inaugural member of the ACM Future Computing Academy. As a human-computer interaction researcher, she studies privacy as a means to protect people, but more importantly, as a social mechanism to enrich online interactions that people share with others. She is particularly interested in the interplay between social media, privacy, and online safety for adolescents. Being a survivor of childhood sexual abuse, she is committed to protecting at-risk youth from online sexual predation risks, as well as empowering vulnerable youth online, so that they can garner the resources and support they need to overcome adversity and succeed in life.

An Interview with Pamela Wisniewski: Making the online world safer for our youth

INNOVATION LEADERS

by Bushra Anjum

Bushra Anjum: What is your big concern about the future of computing to which you are dedicating yourself?

Pamela Wisniewski: The internet is a double-edged sword; it facilitates new opportunities for our youth but also amplifies risks. For instance, teens can benefit from online interactions that allow them to explore their self-identities, seek social support, and search for new information. The Crimes against Children Research Center reports that 1 in 4 youth in the U.S. have experienced unwanted exposure to internet pornography, 1 in 9 have been victims of online harassment, and 1 in 11 report receiving unwanted sexual solicitations online [1]. Meanwhile, rates of depressive symptoms, self-harm, and suicide of teens in the U.S. have also dramatically increased with the rise in adolescent digital media use [2].

And, unfortunately, technologies, such as social media and mobile smartphones, that connect our youth to new experiences and people have outpaced the ones designed to keep teens safe while doing so. For instance, the current paradigm for keeping teens safe online through the use of parental control apps focuses heavily on “abstinence-only” approaches that rely on direct parental oversight through authoritarian and privacy-invasive features that monitor and restrict a teen’s online activities [3]. Parents don’t have enough time to track everything their teens do online. Additionally, this approach is often ineffective, and even detrimental, to the trust relationship between parents and teens [4]. There is little evidence that these technologies keep teens safe online, nor teach teens how to manage online risks effectively [5].

Further, focusing on parental mediation as the primary means for keeping teens safe online neglects the fact that the teens who are vulnerable to the most serious online risks (e.g., sexual predation and cyberbullying) are often those who often lack engaged and supportive parental supervision both on and offline [6]. Thus, there is a wide sociotechnical gap between what we know about healthy adolescent development, effective parental mediation strategies, and the

current systems designed to support adolescent online safety. The goal of my research is to help close this gap.

BA: How did you become interested in the issues related to the adolescent online safety?

PW: I first became interested in the topic of adolescent online safety during my post doc at Penn State University. This project was focused on developing effective parental mediation strategies for helping teens regulate their information disclosures online. The central idea was that if teens disclosed less information about themselves online, they would be safer. After doing some research in this space, I realized the literature portrayed two common narratives that I thought were flawed: 1) Increased information privacy can keep adolescents safe online, and 2) Parental mediation is the key to protecting teens from online risks.

First, the narrative that teens are putting themselves at risk online because they are disclosing too much personal information felt a lot like victim blaming to me. There is a widely accepted privacy paradox where individuals' stated privacy concerns do not match their information disclosure behaviors [7]. As a privacy researcher, the biggest lie that we tell ourselves is that privacy is essential to end users. In actuality, privacy is almost always a secondary goal to the primary purpose of socially connecting with others or seeking information online. For instance, no one joins a social media platform because they want to be more private. And, this is no different for teens versus adults.

Ironically, we have created a new privacy paradox for teens as we struggle to keep them safe online. On the one hand, we are telling teens that they need to care about their online privacy to stay safe, and on the other, we are taking their privacy away for the sake of their online safety. You see, this "privacy as prevention" approach to online safety has resulted in privacy-invasive parental control apps that allow parents to directly monitor and restrict their teens' online behaviors, which increases the privacy tensions between parents and teens [8]. If many parents are uncomfortable reading their teen's personal diary, then why would we think parents would be comfortable reading each conversation their teen has with others online? We need to find more reasonable solutions that support families in keeping their teens safe without talking about their agency and treating teens like young children.

Second, after growing up as an "at-risk" youth myself, the idea that parental mediation is the only key to keeping teens safe online dripped with privilege. I am from the Oregon Trail generation, someone who was slowly introduced to technology and the internet in my late teens. My low-income, racial minority mother, who also suffered abuse when she was a child,

could not keep me safe from her boyfriend, much less monitor what I was doing at school, on the phone, or online. I was living on my own by my senior year of high school, so parental mediation was just not a factor in my life, as it is also not a factor in the lives of many teens who are now growing up in an always-connected digital world. How can we protect these teens who are at the highest risk of physical or emotional harm resulting from unmediated internet and social media use?

BA: What initiatives are you currently leading that have the potential to mitigate some of these online risks and also to teach the teens how to manage them effectively?

PW: I was recently selected as the first computer scientist ever to receive the William T. Grant Scholars Award for my proposed research on helping at-risk youth such as those who are socio-economically disadvantaged, racial minorities, or foster youth in the child welfare system, be more resilient against online sexual predation risks. In this project, I will examine the risk and protective factors that contribute to the online sexual risk behaviors of young girls (ages 12-15) through a mobile diary study. Then, I will examine private message conversations to understand how these risks unfold and can be detected. The final phase of this research will be to develop a socio-technical intervention that helps teens manage these types of risky interactions in the moments when they need help the most.

I am also starting a new project that was funded by the National Science Foundation's Partnerships for Innovation. I will lead a multi-disciplinary team of researchers, clinicians, and industry partners to build, evaluate, and commercialize state-of-the-art technologies that proactively detect adolescent online risk behaviors, including mental health issues, sexual solicitations, and online harassment, to mitigate these risks and preventing harm. We will accomplish this by using a human-centered approach to machine learning to uncover the ground truth meaning of adolescent online risk, develop theoretical and computational models, and train algorithms to improve risk detection. This work will enable real-time online safety interventions that protect and empower teen internet users.

Finally, as my career-long goal, I want to design more teen and family-centric technical solutions that can be embedded in social media and other web-based platforms to act as proactive online safety interventions for adolescents. For instance, what if we could develop intelligent agents that coach teens how to get out of an uncomfortable situation online, so they don't send that naked picture that they would later regret? Instead of focusing on increased

parental monitoring and control, the emphasis would be on teaching teens how to self-regulate their online behaviors and cope with online risks, so that they are resilient from harm.

I hope that we can find a way to leverage technology to benefit humanity and curtail anti-social and abusive behaviors. To do this, however, we need to be innovative by unlocking the goodness in people's hearts instead of trying to police people to do what is right.

As a global digital society, we now have to find a way to negotiate norms and values at a global level, while celebrating diversity and inclusion of all people. My goal is to be part of this effort, and I invite you to be part of it with me. If you are a young woman or first-generation college student who wants to use technology to make the world a better place, or a teen who has ideas about how we can make the online world safer for our youth, I would love to talk to you. Let's work together to accomplish these goals.

References

- [1] Jones, L.M. et al. trends in youth internet victimization: findings from three youth internet safety surveys 2000–2010. *Journal of Adolescent Health* 50, 2 (2012), 179–186. DOI:<https://doi.org/10.1016/j.jadohealth.2011.09.015>.
- [2] Twenge, J.M. et al.. Increases in depressive symptoms, suicide-related outcomes, and suicide rates among U.S. Adolescents after 2010 and links to increased new media screen time. *Clinical Psychological Science* (2017), 2167702617723376. DOI:<https://doi.org/10.1177/2167702617723376>.
- [3] Wisniewski, P. et al. Parental control vs. teen self-regulation: is there a middle ground for mobile online safety? *Proceedings of the 2017 ACM Conference on Computer Supported Cooperative Work and Social Computing*. ACM, New York, 2017, 51–69.
- [4] Shin, W. and Ismail, N. Exploring the role of parents and peers in young adolescents' risk taking on social networking sites. *Cyberpsychology, Behavior and Social Networking* 17, 9 (2014), 578–583. DOI:<https://doi.org/10.1089/cyber.2014.0095>.
- [5] Jia, H. et al. Risk-taking as a learning process for shaping teen's online information privacy behaviors. *Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing*. ACM, New York, 2015, 583–599.

- [6] Whittle, H. et al. A review of young people’s vulnerabilities to online grooming. *Aggression and Violent Behavior* 18, 1 (2013), 135–146. DOI:<https://doi.org/10.1016/j.avb.2012.11.008>.
- [7] Acquisti, A., and Gross, R. Imagined communities: awareness, information sharing, and privacy on the Facebook. In *Privacy Enhancing Technologies*. Springer Berlin Heidelberg. 36–58.
- [8] Erickson, L.B. et al. 2016. The Boundaries Between: Parental Involvement in a Teen’s Online World. *J. Assoc. Inf. Sci. Technol* 67, 6 (2016), 1384–1403. DOI:<https://doi.org/10.1002/asi.23450>.

Biography

Bushra Anjum is a software technical lead at Amazon in San Luis Obispo, CA. She has expertise in Agile Software Development for large scale distributed services with special emphasis on scalability and fault tolerance. Originally a Fulbright scholar from Pakistan, Dr. Anjum has international teaching and mentoring experience and has served in academia for over five years before joining the industry. In 2016, she has been selected as an inaugural member of the [ACM Future of Computing Academy](#), a new initiative created by ACM to support and foster the next generation of computing professionals. Dr. Anjum is a keen enthusiast of promoting diversity in the STEM fields and is a mentor and a regular speaker for such. She received her Ph.D. in computer science at the North Carolina State University (NCSU) in 2012 for her doctoral thesis on Bandwidth Allocation under End-to-End Percentile Delay Bounds. She can be found on Twitter [@DrBushraAnjum](#).

DOI: 10.1145/3301323