

# Exploring Anonymity Online

Fernando Serrano Doncel and Patrick Gage Kelley  
Department of Computer Science  
University of New Mexico

## Abstract

Tools and methods to make anonymous or pseudonymous actions online have grown in tandem with the rise of the internet. However, as we continue to hear that consumer's privacy has been invaded by data breaches, government surveillance, and corporate data mining and behavior advertising, we have not seen an increased interest or use in anonymity tools.

We conducted an online survey (n=426) to investigate consumer's attitudes towards anonymity including: their understanding of anonymity conceptually, actions they take to protect themselves online, and details on their awareness, use, and concerns around several different anonymity tools.

The survey was designed iteratively adapting existing instruments and refined through two rounds of pilot testing (n=158). The final survey was conducted on Amazon's Mechanical Turk, included approximately 75 questions and took our participants an average of 21 minutes to successfully complete.

At a high level, 70% of our respondents reported that they believe it is impossible to be completely anonymous on the Internet. However, they did believe anonymity was possible in specific instances, with roughly 45% believing it is possible to leave either an anonymous comment or send emails anonymously; as well as 50% who said anonymous blogging is technically possible. Though the vast majority of participants, 86%, said they have never wanted to have an anonymous blog or send an anonymous email. Participants were likely to report that they took steps to be less visible, however these were more ad hoc and behavior based, not using a more specific anonymity or privacy-enhancing tool. Interestingly, even participants who were taking steps to protect some of their information online did not see any reason to, for example, send an anonymous email.

Participants did believe that anonymity and rights around privacy were important, and in many cases they believed these should be strengthened (largely through legal, not technological processes). Additionally, the recent revelations of US government surveillance do seem to have increased concerns though there is little evidence that they have directly changed people's behavior online.

Overall, we see that consumers are conceptually aware of anonymity, but generally do not use tools to help them secure identity protections. There are several reasons for this, including participants either opting for other self-protection methods or believing they do not personally need protections (variants on "nothing to hide"). Based on our results it seems possible that increased guidance on the benefits of anonymity tools, with example use cases, may encourage them to be more commonly adopted.