

TO SHARE OR NOT TO SHARE - A EMPIRICAL STUDY OF WEARABLE TECHNOLOGY, PRIVACY AND USER'S INCENTIVE TO SHARE SENSITIVE DATA

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ABSTRACT

The goal of this project is to study the incentives for people to adopt wearable technology and share sensitive data with others.

INTRODUCTION

Wearable technology and electronics are devices incorporating computer and advanced electronic technologies. Popular ones are smart watches (Motorola and Apple planned watches), wristband and various other devices using sensors to monitor humans. Connected wearable technology is quickly becoming the next major wave of consumer electronics. Research firm ABI predicts that by 2017 the market for wearables in the sports and health sectors will grow to around 170 million units. Currently fitness and personal health is the major power behind the wearable health wave to help educate and empower patients to take control of their health.

More importantly these wearables can share data with outside world including physicians, nurses, and third party service providers by logging and transmitting their users' daily activity and well-being. For example, some wearable technology sends data about organ function and disease markers right to physicians to monitor and diagnose disease. Another common trend is sharing data with others with similar medical conditions on Internet-based groups such as PatientsLikeMe or Crohnology. The immediate benefit is an increased knowledge about mutual health concerns, as well as participation for shared experiences.

However, sharing sensitive data often gives rise to concerns of hacking and misuse of data. Currently, HIPAA's privacy regulations don't yet apply to wearable industry. The introduction of health-data software repositories like Apple's HealthKit has raised at least some questions around how mobile health platforms and apps will operate when it comes to sharing sensitive information. In addition, people can still get some meaningful data and advice from their wearables even if they option not to share.

The research question is then what makes some people to share their personal data in spite of the privacy concerns. There are potentially several explanations. Some people like to share to contribute to the society. Just like voting, where the probability of a single vote determining an election is extremely low, contributing to a society with one's personal data may not be very useful to the entire society. Still the altruism theory of voting, a model of voter behavior which states that citizens have "social" preferences for the welfare of others, suggests that the concern of privacy will be overcome by the collective benefits society will get from the sharing.

Another possible explanation is that people react to tangible rewards. Studies have shown that people would be more inclined to share personal information in exchange for something they value. For example, companies like AutoDesk have already implemented opt-in wellness programs by handing out Fitbit devices to track their fitness activity and decrease health premiums of those who choose to share data.

While acknowledging the validity of the above explanations in some circumstances, we believe that when sharing data, if a person can receive individualized services based on the data he or she shared, one may have a stronger incentive to share. For example, a person who is serious about fitness and well-being will

share if he or she can receive valuable individualized exercise regimen from an external service based specifically on the his or her daily activity data shared. Wearable devices are capable of monitoring individual activities and potentially giving individualized services and feedbacks. With proper application and services, people can receive useful individualized information once the data is shared and analyzed. We believe that these people have stronger incentives to share than those who do not receive individualized feedbacks. We suggest that after all, perceived value of individualized services can be a major factor influencing the act of sharing.

This project will propose multiple hypotheses on why do people share data about their personal data. One of the hypotheses is that the more valuable and more highly individualized services or feedbacks as a result of sharing, the more likely a person will share in spite of privacy concern. There have been several researches on wearable devices and privacy. However, few focus on the incentives and drivers of consumers sharing data through wearable technology. We believe that we are among the first to study this topic. We will conduct an empirical study using survey and focus group to obtain valuable first-hand data. The analysis of the result can lead to publications in journals. Beyond its intellectual significance, this research also has important policy implications for health care privacy and incentives.

BIOGRAPHY

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