

## Project Proposal:

### Harnessing the Power of Emerging Technologies to Promote Social Engagement

#### Background

This project was prompted by The Sightlines Project, an ongoing effort by the Stanford Center on Longevity to reveal dynamic changes in the U.S. populations that have long-term consequences for our aging society. The project is based on multiple, nationally representative data sets that track cohorts of Americans over time. Sightlines focuses on three domains, each of which predicts length and quality of life: financial security, healthy living, and social engagement. The inaugural report was released in February, 2016, and featured in TIME Magazine. A summary of findings can be accessed at <http://sightlinesproject.stanford.edu>.

Among the most intriguing patterns revealed was that across traditional indicators, some Americans today are less socially engaged than their counterparts just 20 years ago. One key limitation in the analyses, however, is that they fail to capture virtual communication. The advent of electronic communication is simply too recent to have been captured in large national surveys we used. Subsequently, we decided that Stanford is the optimal place to pursue ways in which new forms of social engagement are replacing and/or complementing traditional way of interacting with the world, along with potential benefits and risks of novel modalities and the potential ramifications for long lived societies.

#### The Prevalence of Social Tech

As the availability and use of personal electronics increases over time, so does the prevalence of social networking sites (SNS) and other social technology platforms. Facebook has over 2.2 billion active accounts<sup>1</sup>; Snapchat users send an estimate of 3.5 billion messages per day<sup>2</sup>. The popularity of dating applications have increased dramatically since their inception, with 27% of 18-24 year olds and 12% of 55-64 year olds utilizing these services<sup>3</sup>. Research even suggests that relationships formed through dating apps may result in longer, stronger, and happier romances<sup>4</sup>. By 2022, the number of users that use ridesharing applications, like Uber and Lyft, is expected to eclipse 72 million people<sup>5</sup>. The last few years have also come with the rise of virtual reality, with

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<sup>1</sup> “Number of Monthly Active Facebook Users Worldwide as of 4th Quarter 2017 (in Millions).” *Statista*, Facebook, [www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/](http://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/).

<sup>2</sup> “Number of Photo Messages Created by Snapchat Users Every Day from 3rd Quarter 2016 to 3rd Quarter 2017 (in Billions).” *Statista*, Snapchat, [www.statista.com/statistics/257128/number-of-photo-messages-sent-by-snapchat-users-every-day/](http://www.statista.com/statistics/257128/number-of-photo-messages-sent-by-snapchat-users-every-day/).

<sup>3</sup> Smith, Aaron, and Monica Anderson. “5 Facts about Online Dating.” *Pew Research Center*, Pew Research Center, 29 Feb. 2016, [www.pewresearch.org/fact-tank/2016/02/29/5-facts-about-online-dating/](http://www.pewresearch.org/fact-tank/2016/02/29/5-facts-about-online-dating/).

<sup>4</sup> Ortega, Josue, and Philipp Hergovich. “The Strength of Absent Ties: Social Integration via Online Dating.” *MIT Technology Review*, 2 Oct. 2017.

<sup>5</sup> “Ride-Sharing.” *Statista*, Statista Inc., Sept. 2017, [www.statista.com/outlook/368/109/ride-sharing/united-states#market-users](http://www.statista.com/outlook/368/109/ride-sharing/united-states#market-users).

nearly a million headsets sold in 2017<sup>6</sup>. Looking forward, social technology will continue to play a significant role in the lives of current and future generations.

### **Social Tech and Outcomes**

Current research has indicated that the use of social technology can have both positive and negative outcomes. The goal of SNS is, on the surface, simple: to facilitate and enhance connections. There is a wealth of empirical evidence that is in support of SNS and its positive effect on interconnectivity. For example, a study published in the *International Journal of Human-Computer Studies* found that families that used Facebook to connect reported higher satisfaction in in-person relationships and phone calls<sup>7</sup>.

However, many studies also suggest that SNS could hinder social connection, as well as have a negative influence on emotional affect. In one study of college aged youth, excessive Twitter use was positively correlated with loneliness and negatively correlated with social interaction<sup>8</sup>. Another study on women in cohabiting relationships found that “technofence,” which occurs when technology interrupts in-person interactions, was associated with lower relationship satisfaction, more depressive symptoms, and lower life satisfaction<sup>9</sup>.

Clearly, this is not a black and white issue, with a significant amount of nuance regarding the impact of social networking sites. The impact of SNS is a dynamic process, varying from person to person.

Unfortunately, there is not much empirical research addressing the social impact of ride sharing applications, wearable technology and VR/AR. This is something we hope to discuss further in our conference.

### **Cross Generational Engagement**

One typically overlooked factor in social technology research is age - the vast majority of cited research has been conducted on participants between the ages of 18-25. Generational differences in norms and use of various social network sites could result in a wide variety of effects on users. For example, the news feed of a millennial and a Baby Boomer will likely look completely

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<sup>6</sup> Matney, Lucas. “Virtual Reality Headset Unit Sales Are Slowly Improving.” *TechCrunch*, TechCrunch, 28 Nov. 2017, [techcrunch.com/2017/11/28/virtual-reality-headset-unit-sales-are-slowly-improving/](http://techcrunch.com/2017/11/28/virtual-reality-headset-unit-sales-are-slowly-improving/)

<sup>7</sup> Cornejo, R., Tentori, M., & Favela, J. (2013). Enriching in-person encounters through social media: A study on family connectedness for the elderly. *International Journal of Human-Computer Studies*, 71(9), 889-899. doi:10.1016/j.ijhcs.2013.04.001

<sup>8</sup> Ndasauka, Y., Hou, J., Wang, Y., Yang, L., Yang, Z., Ye, Z., . . . Zhang, X. (2016). Excessive use of Twitter among college students in the UK: Validation of the Microblog Excessive Use Scale and relationship to social interaction and loneliness. *Computers in Human Behavior*, 55, 963-971.

<sup>9</sup> Mcdaniel, B. T., & Coyne, S. M. (2016). “Technofence”: The interference of technology in couple relationships and implications for women’s personal and relational well-being. *Psychology of Popular Media Culture*, 5(1), 85-98. doi:10.1037/ppm0000065

different. One might be filled with memes and internet phenomena, while the other would have photos of grandchildren and close friends. It is possible even if their feeds were identical, differences in impact and interaction with the media would conjure a spectrum of emotions/affect due to natural age differences in goals and motivations. Therefore, scientific findings that may hold true for younger generations would not necessarily apply to older ones.

### **The Plan**

In 2018, the Stanford Center on Longevity will launch a program that supports research on key unanswered questions about social technology and social engagement. The aim of the project is to identify areas for future research as currently, limited research has examined the impact of social technology engagement across generations and the related effects on social engagement.

We will begin by convening a small group of distinguished experts who represent medicine, engineering, psychology, sociology, law, government, health economics, health policy, industry, technology and advocacy to elaborate key issues, compile existing evidence and identify questions to which answers are needed in order to guide research, inform policies and improve products and services.

The SCL has developed a model of “launch” conferences that is different from a traditional academic meeting: instead of focusing on what experts have learned and know as a means of sharing scholarship, a launch conference is a means of identifying new opportunities for advances in scholarship, policy, and practice, by focusing on what experts don’t know and should learn, and how. Launch conferences consist of directed discussions based on clear and results-oriented agendas. The goal is to address key questions that lead to consensus-building and concrete next steps. We would identify the key areas of focus for future research.

The Social Tech Project at the Stanford Center on Longevity will include developing research and policy program around the following questions:

#### **Cross Generational Engagement:**

- What platforms are each generation using the most and why?
- What are some findings that may be true for younger generations that don’t apply to older generations and vice versa?

#### **Interactions with Social Media Platforms**

- How do different generations interact with dating apps? Social networks? VR/AR? Rideshare apps? Wearable tech?
- For what purpose is each platform most beneficial and detrimental to people across generations?

#### **Social Tech and Outcomes**

- How can social technology help manifest or combat loneliness? Depression? Interconnectivity? Esteem? Confidence?
- Where do we draw the line between “use” and “addiction?”
- What sort of interventions can people take advantage of to maintain a healthy relationship with their smartphones and technology?



The results of this project will provide actionable insights into how social technology facilitates and hinders social connectedness across the lifespan. Data and resources collected by the Social Technology and Engagement Project may serve as a starting point for sources of information applicable to social engagement and determine future research. Ultimately, the Social Technology and Engagement Project seeks to better understand overall psychological, physical, and cognitive well-being based on human interactions with social technology as it becomes more pervasive in our social lives.