

CS 8803 Data Analytics for Well-being: Behavioral Science and Well-being

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Some Logistics

- Signup link:
piazza.com/gatech/spring2016/cs8803
- Piazza class page:
<https://piazza.com/class/ijd4hi7tg7u4q2>
- Office hours: 1-2pm Wednesday, or by appointment
- Location: TSRB 341
- Class website (including readings):
<http://www.munmund.net/CS8803.html>
- Email announcements will be made over the course page on T-Square

Writing About Emotional Experiences as a Therapeutic Process

Motivation

- A process common to most therapies is labeling the problem and discussing its causes and consequences
- Further, participating in therapy presupposes that the individual acknowledges the existence of a problem and openly discusses it with another person
- Writing helps these kind of therapeutic efforts

The Writing Paradigm

For the next 3 days, I would like for you to write about your very deepest thoughts and feeling about an extremely important emotional issue that has affected you and your life. In your writing, I'd like you to really let go and explore your very deepest emotions and thoughts. You might tie your topic to your relationships with others, including parents, lovers, friends, or relatives; to your past, your present, or your future; or to who you have been, who you would like to be, or who you are now. You may write about the same general issues or experiences on all days of writing or on different topics each day. All of your writing will be completely confidential. Don't worry about spelling, sentence structure, or grammar. The only rule is that once you begin writing, continue to do so until your time is up (15 to 30 minutes).

Main Idea

- The writing paradigm demonstrates that when individuals are given the opportunity to disclose deeply personal aspects of their lives, they readily do so.
- Even though a large number of participants report being deeply upset by the experience, the overwhelming majority report that the writing experience was valuable and meaningful in their lives.

Benefits

- Writing had comparable psychotherapy benefits as verbal therapy.
- Both subjective and objective benefits to health and well-being were observed post writing therapy.
- Effects on outcome parameters:
 - Psychological distress, depression showed decline
 - Reduced visits to medical centers/physicians
 - Behavioral markers – improved GPA, reemployment after job loss, reduced absenteeism from work

Why does writing help with
trauma recovery?

Do you think writing (okay posting) on social media have the same effects?

Can social media writing (or posting) have counter effects? What platforms are designed to help and which ones are likely not to?

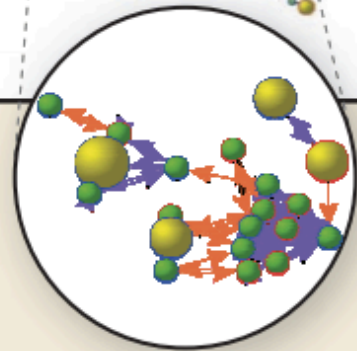
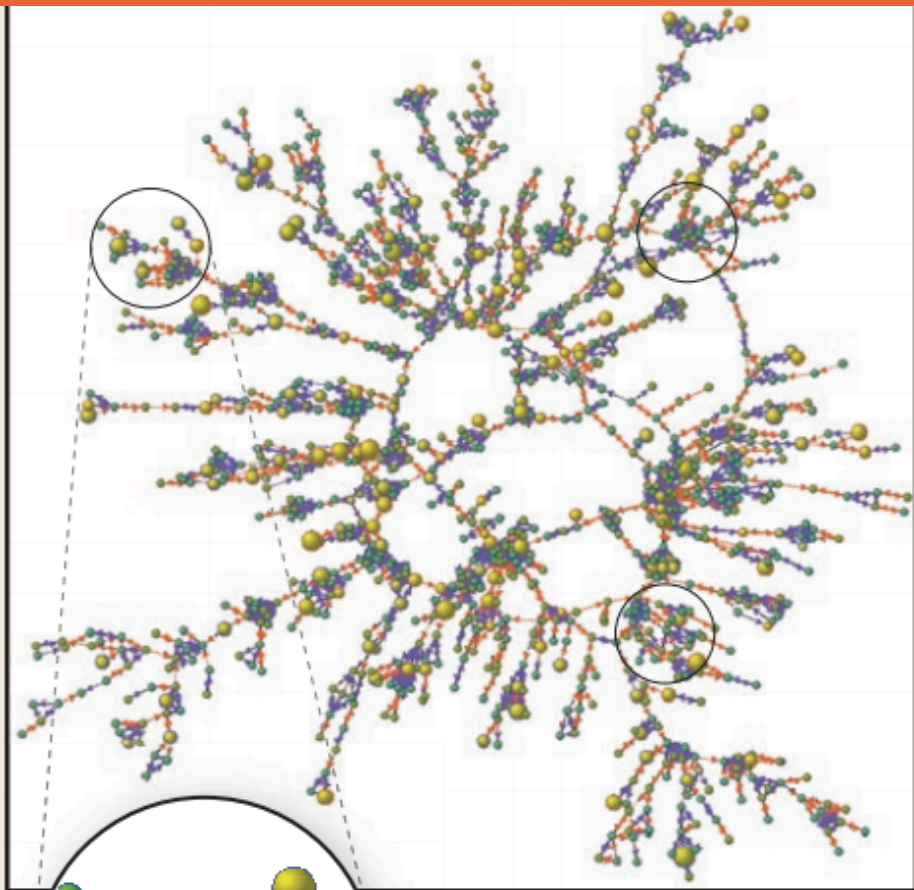
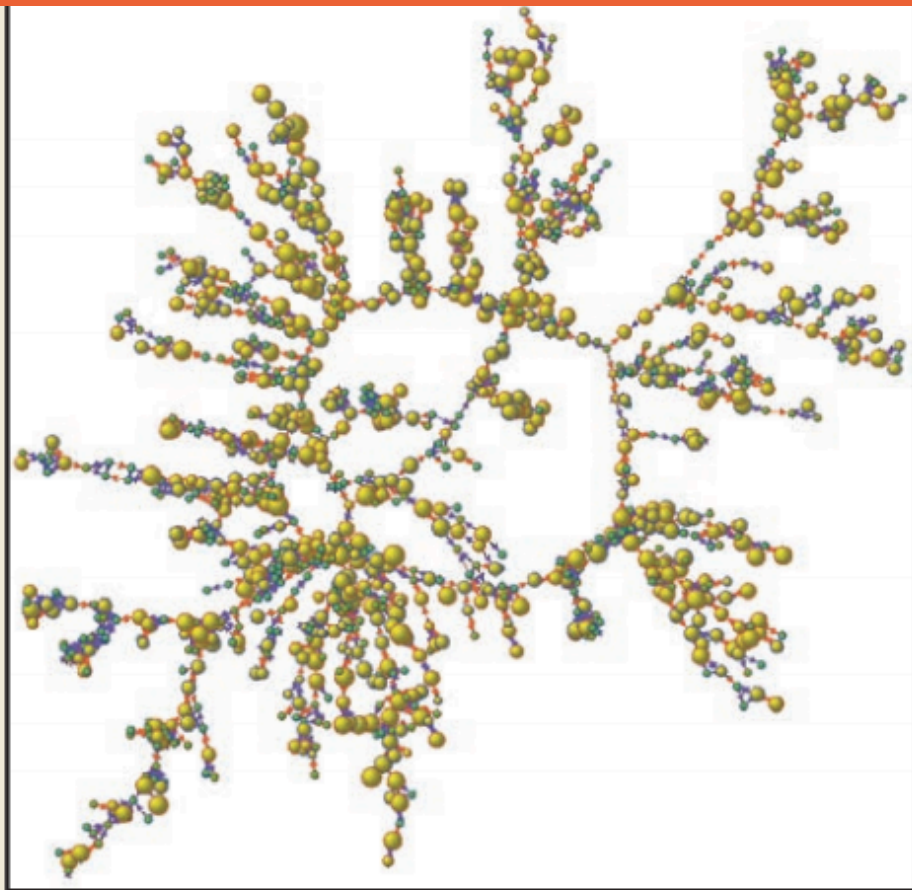
What kind of writing (or posting) on social media is likely to help the most toward psychological well-being?

Can writing (or posting) on social media have other psychosocial benefits or detrimental effects?

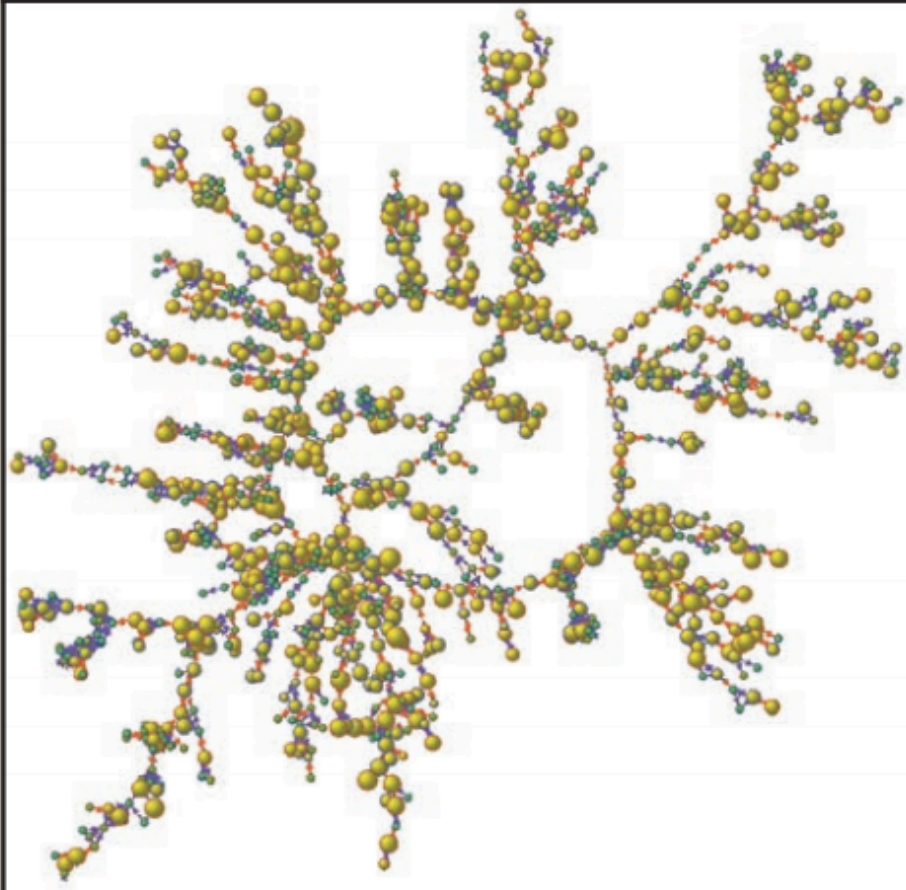
The Collective Dynamics of Smoking in a Large Social Network

Background

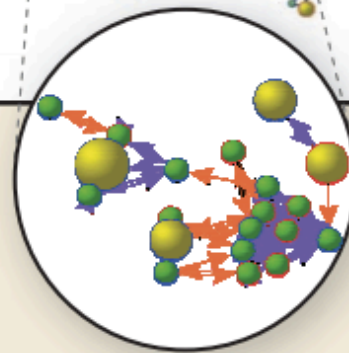
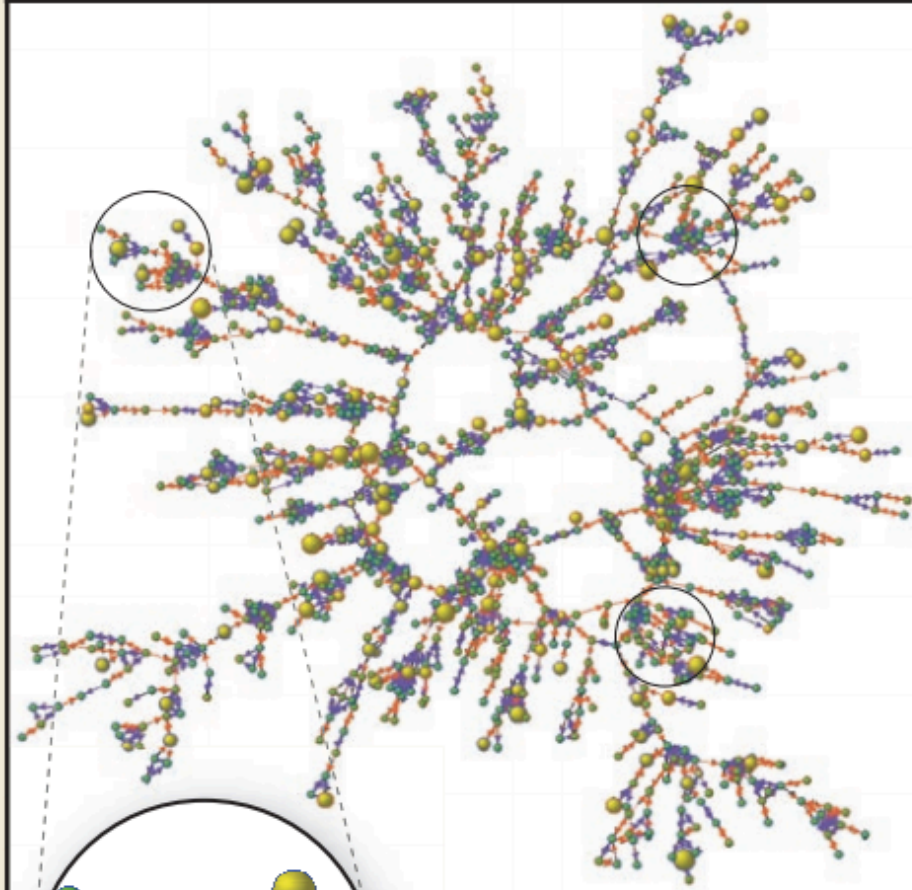
- One of the earliest social network analysis works on health behaviors (smoking)
- The paper examines the extent of the person-to-person spread of smoking behavior and the extent to which groups of widely connected people quit together
- Specifically, the authors studied a densely interconnected social network of 12,067 people assessed repeatedly from 1971 to 2003 as part of the Framingham Heart Study.
- The paper used network analytic methods and longitudinal statistical models



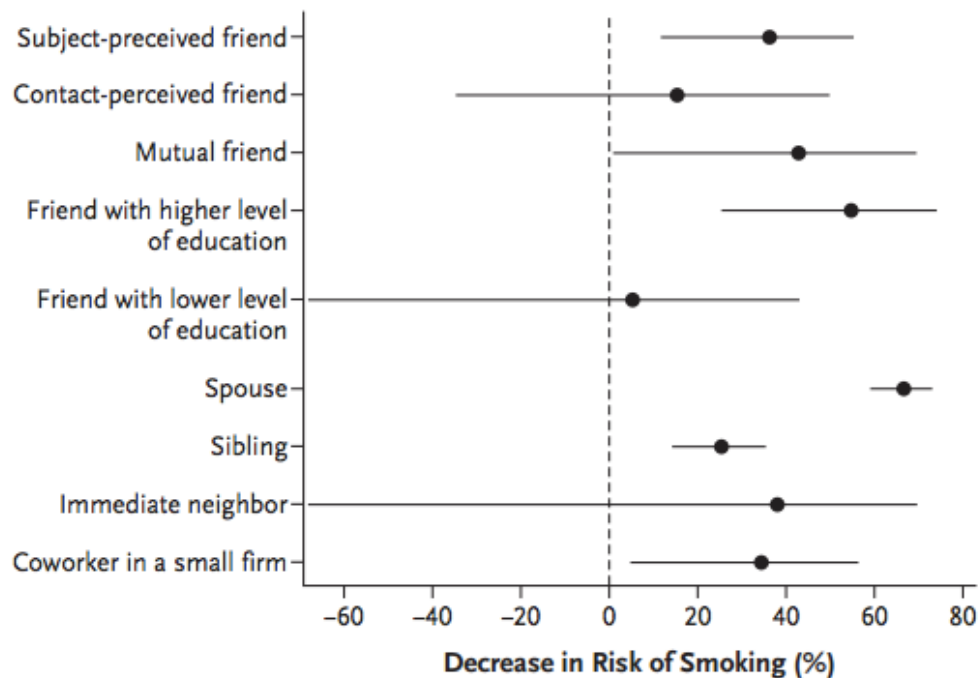
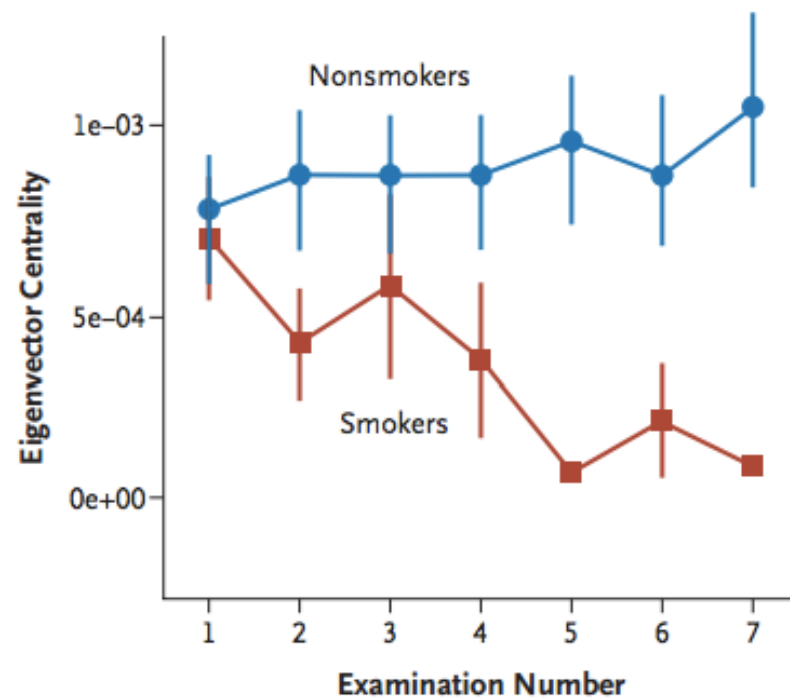
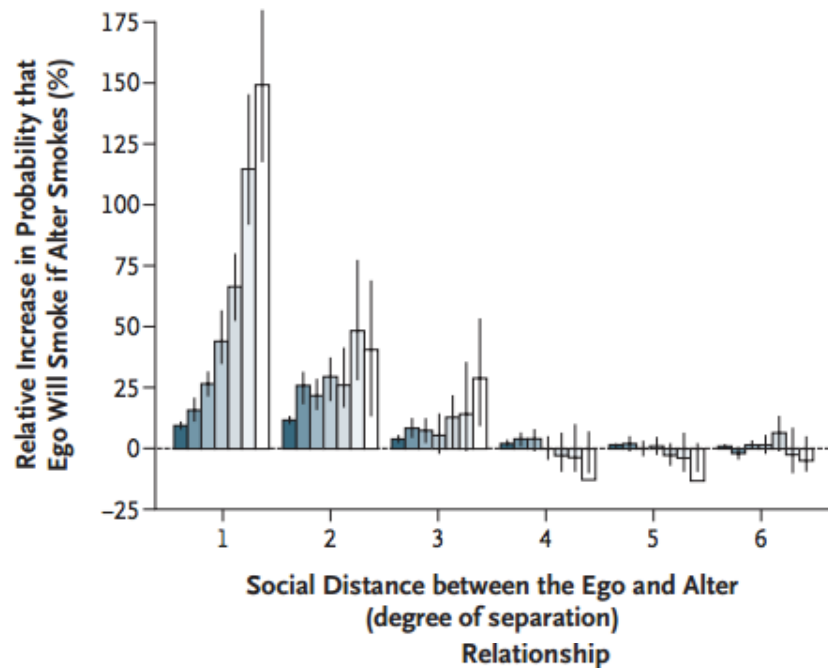
1971



2000



A Social Distance



Findings

- Network structure:
 - Discernible clusters of smokers and nonsmokers were present in the network, and the clusters extended to three degrees of separation.
 - Despite the decrease in smoking in the overall population, the size of the clusters of smokers remained the same across time, suggesting that whole groups of people were quitting in concert.
 - Smokers were also progressively found in the periphery of the social network.
- Network factors that increases changes of cessation:
 - Smoking cessation by a spouse decreased a person's chances of smoking by 67%
 - Friends with more education influenced one another more than those with less education. These effects were not seen among neighbors in the immediate geographic area.

If you were to replicate this study on social media, what would be an appropriate platform and (network) data source to use?

The Framingham Heart Study had data (self-reported and otherwise) about health and well-being status of the participants, including their smoking patterns. How can other non-intrusive modalities of data be leveraged in their place? What are their advantages and disadvantages?

One of the findings of the study is that smokers were increasingly marginalized socially (over time). Would you expect to observe that in **online** social networks too?

If marginalization of smokers were to exist online too, how would recovery programs that leverage social media be affected?

Another finding was that smokers and non-smokers cluster together. How can this finding be leveraged toward smoking cessation in online platforms?