# Week 15 (Bonus Lecture) Does Social Media Support or Worsen Mental Well-Being?

CS 3001-A: Computing, Society, and Professionalism Munmun De Choudhury | Associate Professor | School of Interactive Computing

Apr 17, 2024

# Final Exam

- Friday Apr 26, 12-1pm ET
  - In-person
  - Classroom
  - Closed book, notes; on Canvas
  - Same format as midterm
- Makeup final on Apr 29, time TBD



### The Benefits of Facebook "Friends:" Social Capital and College Students' Use of Online Social Network Sites

Nicole B. Ellison Charles Steinfield Cliff Lampe

Department of Telecommunication, Information Studies, and Media Michigan State University

### Social Media as Social Transition Machinery

OLIVER L. HAIMSON, University of Michigan School of Information, USA

Social media, and people's online self-presentations and social networks, add complexity to people's experiences managing changing identities during life transitions. I use gender transition as a case study to understand how people experience liminality on social media. I qualitatively analyzed data from transition blogs on Tumblr (n=240), a social media blogging site on which people document their gender transitions, and in-depth interviews with transgender bloggers (n=20). I apply ethnographer van Gennep's liminality framework to a social media context and contribute a new understanding of liminality by arguing that reconstructing one's online identity during life transitions is a rite of passage. During life transitions, people present multiple identities simultaneously on different social media sites that together comprise what I call *social transition machinery*. Social transition machinery describes the ways that, for people facing life transitions, multiple social media sites and networks often remain separate, yet work together to facilitate life transitions.

Received: 13 April 2017 | Revised: 12 July 2017 | Accepted: 29 August 2017

#### ORIGINAL ARTICLE

Exploring opportunities to support mental health care using social media: A survey of social media users with mental illness

John A. Naslund<sup>1,2,3</sup> | Kelly A. Aschbrenner<sup>2,4</sup> | Gregory J. McHugo<sup>4</sup> | Jürgen Unützer<sup>5</sup> | Lisa A. Marsch<sup>3,4</sup> | Stephen J. Bartels<sup>1,2,6</sup>

<sup>1</sup>The Dartmouth Institute for Health Policy and Clinical Practice, Dartmouth College

> for young people wi who self-identified a health and to identif **Methods:** We asked ness to participate i pants' mental health mental health progr

Aim: Social media h

### Social Technologies for Digital Wellbeing among Marginalized Communities

Michael A. DeVito Ashley Marie Walker Jeremy Birnholtz Kathryn Ringland Northwestern University Evanston, IL 60208, USA devitom@u.northwestern.edu amwalker@u.northwestern.edu jeremyb@northwestern.edu

#### Sean Munson

Calvin Liang University of Washington Seattle, WA 98195, USA smunson@uw.edu cliang02@uw.edu

### Social Network Activity and Social Well-Being

Moira Burke Human-Computer Interaction Institute Carnegie Mellon University 5000 Forbes Ave., Pittsburgh, PA 15213

WILEY

Cameron Marlow and Thomas Lento Facebook 1601 S. California Ave. Palo Alto, CA 94301 {cameron, lento}@facebook.com

4,15], which is based on self-reports of time online and r of friends, along with six attitude items like ook has become part of my daily routine." One of the of this study is to determine how well people self-report values by comparing them with Facebook activity logs. ew exceptions [14], these kinds of studies have focused lege students, and so we also test whether previous g generalize to older users and those outside the U.S.

CSCW'19, November 9-13, 2019, Austin, TX, USA

Kathryn Macapagal Ashley Kraus Northwestern University Institute for Sexual and Gender Minority Health and Wellbeing Chicago, IL 60611, USA kathryn.macapagal@northwestern.edu ashley.kraus@northwestern.edu

Herman Saksono Northeastern University Boston, MA 02115, USA hsaksono@ccs.neu.edu

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## Lawmakers confront TikTok, Snapchat and YouTube about eating disorder content

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Amanda Silberling @asilbwrites / 7:08 PM EDT • October 26, 2021



## Parents Sue TikTok, Saying Children Died After Viewing 'Blackout Challenge'

The suit, involving girls ages 8 and 9, claims TikTok knew or should have known that its product was "addictive" and was directing children to dangerous content.

≡ menu Q Hollywood

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## Instagram, Snapchat, TikTok Cause Mental Health Problems in Teens, Lawsuits Claim

The plaintiffs take aim at social media platforms' product features, alleging that the companies amplify dangerous content that prioritizes engagement over safety.

Markets Yee Media Success Perspectives Videos

Instagram promoted pages glorifying eating

Socrate State

Image: Construction of the state

Image: Construction of the

# NETFLIX AND SUICIDE: THE DISTURBING EXAMPLE OF "13 REASONS WHY"

By Stephen Marche

May 6, 2019

# Our relationships are essential to our health and well-being.

Learn more at SurgeonGeneral.gov/Connect2Heal

## Our Epidemic of Loneliness and Isolation



2023

The U.S. Surgeon General's Advisory on the Healing Effects of Social Connection and Community



![](_page_5_Picture_7.jpeg)

Office of the U.S. Surgeon General Does Social Media Support or Worsen Mental Health of young people?

![](_page_6_Picture_1.jpeg)

## When Social Media Supports Mental Well-Being

![](_page_7_Picture_1.jpeg)

# Social pathways to care

![](_page_8_Picture_1.jpeg)

(Ernala, Rizvi, Birnbaum, Kane, De Choudhury, CSCW 2018)

# Social media self-disclosures of mental illness yields therapeutic benefits

![](_page_9_Figure_2.jpeg)

Topical coherence improves following a social media disclosure of a diagnosis of schizophrenia

(Ernala, Rizvi, Birnbaum, Kane, De Choudhury, CSCW 2018)

![](_page_10_Figure_1.jpeg)

- Readability improves following a social media disclosure of a diagnosis of schizophrenia
- Linguistic complexity increase following a social media disclosure of a diagnosis of schizophrenia
- Repeatability decline following a social media disclosure of a diagnosis of schizophrenia

## (De Choudhury, Kiciman, Dredze, Coppersmith, Kumar CHI 2016) Media Health Support in Social Media Alleviates Risk of Suicidal Ideation , Why does no one like me? (self.depression)

I feel invisible so often; like an extra in a movie, always on the sidelines. I don't have any genuine friends, just acquaintances. And not even just friends, I haven't had a genuine conversation with anyone of the opposite gender in years. The worst part is that I delude myself into thinking I have a chance with people who are out of my league. I just feel so alone.

comments share

[-] **badasset312** 3 points 12 hours ago

This post very relatable to me as well. Feel better friend, I'm rooting for you.

permalink embed

[-] emb13 4 points 12 hours ago

i am in a similar situation. I have 0 friends because of pretty awful social anxiety. I have no one to do things with, so i am completely depressed and bored with life right now. I'd like to think things will get better someday, but i've been saying that to myself for years. at least we're alone together  $-(\gamma)/$ 

permalink embed

## (De Choudhury and Kiciman, ICWSM 2017)

Propensity score matching on linguistic data in comments

40

comments

#

Comments related to esteem or network support tend to reduce one's risk to suicidal ideation in the future

35 MH 30  $MH \rightarrow SW$ 25 20 Esteem Ack. Emotional nformational Network nstrumental

## When Social Media Hurts Mental Health

![](_page_13_Picture_1.jpeg)

(Razi, AlSoubai, Kim, Naher, Ali, Stringhini, De Choudhury, Wisniewski; CHI EA 2022)

![](_page_14_Picture_1.jpeg)

outh Study About Us FAQ's

Help Resources Contact us

### Now Recruiting Teens and Young Adults.

![](_page_14_Picture_5.jpeg)

We are conducting a study to understand the activities that teens and young adults engage in on social media. Participants will receive a \$50 Amazon gift card for completing the study.

### Start Study

### Who can Participate?

- Participants must be teens or young adults between 13-21 years old.
- · Participants must be English speakers based in the United States.
- Participants must have had an Instagram account for the time period specified below:

- Under age 18: At least 3 months

- Age 18: At least 2 years
- Age 19: At least 3 years
- Age 20: At least 4 years
- Age 21: At least 5 years
- · Participants must have exchanged direct messages with at least 15 people.
- Teens under 18 need parental consent to participate in this study.
- Participants must have received at least 2 direct message conversation that made them or someone else feel uncomfortable or unsafe.

## https://stirlab.org/youth\_study

![](_page_14_Picture_21.jpeg)

![](_page_14_Picture_22.jpeg)

(Razi, AlSoubai, Kim, Naher, Ali, Stringhini, De Choudhury, Wisniewski; CHI EA 2022)

## Instagram Data Donation System Architecture

![](_page_15_Figure_2.jpeg)

![](_page_16_Picture_1.jpeg)

Image credit: Mozilla

# Dataset

- Dataset of Instagram data archives downloaded and donated by youth participants
- All participants were verified
  - Aged 13-21
  - Had active Instagram account during their teenage years
  - At least 15 direct message conversation of which at least two were deemed unsafe
- Each participant self-flagged the private message conversations on a message level, identifying messages that they felt contained online risk

![](_page_17_Picture_8.jpeg)

# Approach

![](_page_18_Figure_2.jpeg)

# Approach

- Difference-in-Differences (DID) analysis
- Quasi-experimental approach to compare the convergence pattern of the treatment group to that of the control group
- Examine the difference between pre-OH/post-OH in the treatment and control groups

![](_page_19_Figure_5.jpeg)

# Harassment Increases Mental Health Concerns

- Absolute magnitude of change was greater in the treatment group compared to both control groups
- Larger fluctuation of mental health expression zscores in treatment group

Days	D_tr	D_wc	D_bc	D_tr-D_wc	D_tr-D_bc
7	0.1542	-0.31312	-0.00096	0.46732	0.15516
14	0.11036	-0.28799	0.02534	0.39835	0.08502
21	-0.00958	-0.27335	0.01196	0.26377	-0.02154
28	0.00910	-0.18009	0.01802	0.18919	-0.00892

# Harassment Increases Mental Health Concerns

![](_page_21_Figure_2.jpeg)

# Harassment Increases Mental

![](_page_22_Figure_2.jpeg)

### (Verma, Bhardwaj, Aledavood, De Choudhury, Kumar, Nature Scientific Reports)

## COVID-19 misinformation online has caused different levels of anxiety in different individuals

![](_page_23_Figure_2.jpeg)

![](_page_23_Figure_3.jpeg)

### Relative treatment effect in all subgroups

![](_page_23_Figure_5.jpeg)

### World Health Organization Health Topics 🗸 Countries ~

![](_page_23_Figure_7.jpeg)

Newsroom v

Emergencies ~

Data 🗸

(\*) 🗃 (f) 🕑 (+)

About Us

**Fighting misinformation in the** time of COVID-19, one click at a time

![](_page_23_Figure_9.jpeg)

# It's Complicated...

![](_page_24_Picture_1.jpeg)

## (Online/Offline) Social lives of people

![](_page_25_Picture_2.jpeg)

Management of the illness & recovery

## Re-establishing social connections

"I mean, you know, just trying to stay away from many things, just like keeping a low profile...I meant to just relax [...] It makes me have a good plan.Yeah, just like no pressure at all." [PI3]

"I don't know what I'm expecting and [how] people may react to the news that I'm back, and then, bearing in mind that it was difficult for them to understand me." [P8]

## Online social lives intertwined with management of the illness

"I felt as if I was spending too much time on my phone, to the point where I was not physically present in the conversation or like I just needed time that I wasn't being bombarded by, you know, advertisements, friends from high school doing this, friends and colleagues doing this, comparing yourself to other people." [P16]

"I've been trying to avoid Facebook ever since because I will admit that some of my triggers come from seeing how other people are doing so well and I feel like I'm stuck." [PI2]

## Negative aspects of social tech use

![](_page_28_Figure_1.jpeg)

Emotional triggers

Negative interactions

# Finding Solutions is Hard...

![](_page_29_Picture_1.jpeg)

EMILY REYNOLDS BUSINESS 14.03.2016 04:04 PM

## Instagram's pro-anorexia ban made the problem worse

![](_page_30_Picture_3.jpeg)

# Some Reflections

![](_page_31_Picture_1.jpeg)

# Are we Doing Enough?

### Everything okay?

If you or someone you know are experiencing any type of crisis, please know there are people who care about you and are here to help. Consider chatting confidentially with a volunteer trained in crisis intervention at <u>www.imalive.org</u>, or anonymously with a trained active listener from <u>7 Cups of Tea</u>

It might also be nice to fill your dash with inspirational and supportive posts from <u>TWLOHA, Half of Us</u>, the <u>Lifeline</u>, and <u>Love Is Respect</u>.

#### Go back

View search results

### **Everything okay?**

If you or someone you know is struggling with thoughts of suicide, the <u>Lifeline</u> is here to help: call 1–800–273–8255

If you are experiencing any other type of crisis, consider chatting confidentially with a volunteer trained in crisis intervention at <u>www.imalive.org</u>, or anonymously with a trained active listener from <u>7 Cups of Tea</u>.

And, if you could use some inspiration and comfort in your dashboard, you should consider <u>following the Lifeline on</u> Tumblr.

### Go back

View search results

### Everything okay?

If you or someone you know is struggling with an eating disorder, <u>NEDA</u> is here to help: call 1–800–931–2237 or chat with them online.

If you are experiencing any other type of crisis, consider talking confidentially with a volunteer trained in crisis intervention at <u>www.imalive.org</u>, or anonymously with a trained active listener from 7 Cups of Tea.

And, if you could use some inspiration and comfort in your dashboard, go ahead and <u>follow NEDA on Tumblr</u>.

Go back

View search results

#### September 10, 2018

How Facebook AI Helps Suicide Prevention

![](_page_32_Picture_20.jpeg)

"While the web has created opportunity, given marginalised groups a voice and made our daily lives easier," he writes, "it has also created opportunity for scammers, given a voice to those who spread hatred and made all kinds of crime easier to commit.

"It's understandable that many people feel afraid and unsure if the web is really a force for good. But given how much the web has changed in the past 30 years, it would be defeatist and unimaginative to assume that the web as we know it can't be changed for the better in the next 30. If we give up on building a better web now, then the web will not have failed us. We will have failed the web." -- Tim Berners-Lee