## Investigating How University Students in the United States Encounter and Deal With Misinformation in Private WhatsApp Chats During COVID-19



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 Misinformation on WhatsApp is a unique sociotechnical challenge

## Overview

• Misinformation on WhatsApp is a unique sociotechnical challenge

 Studied how US university students responded to COVID-19 related misinformation in private WhatsApp chats









# Infodemic

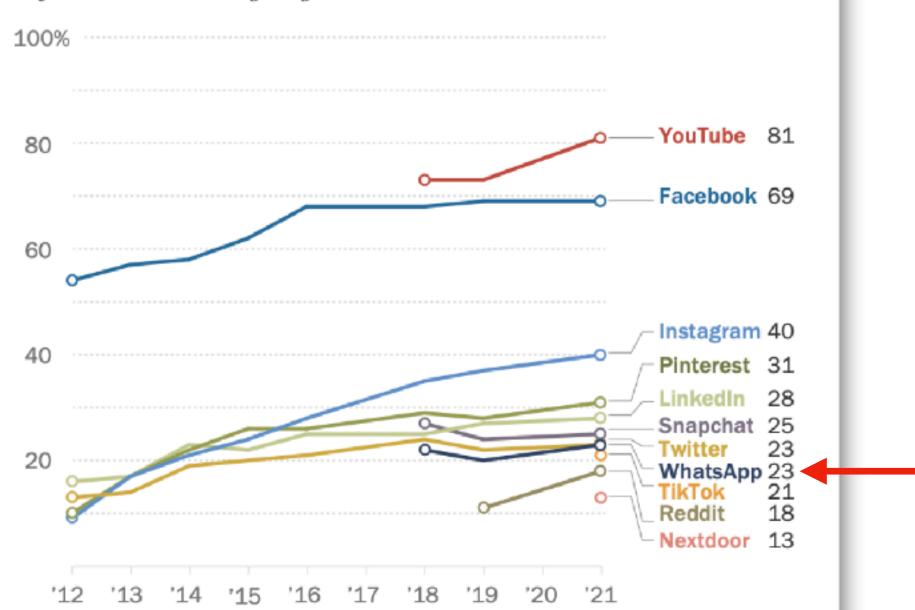
"Overabundance of information, both online and offline. It includes **deliberate attempts to disseminate wrong information** to undermine the public health response and advance alternative agendas of groups or individuals."

- World Health Organization (WHO)









% of U.S. adults who say they ever use ...

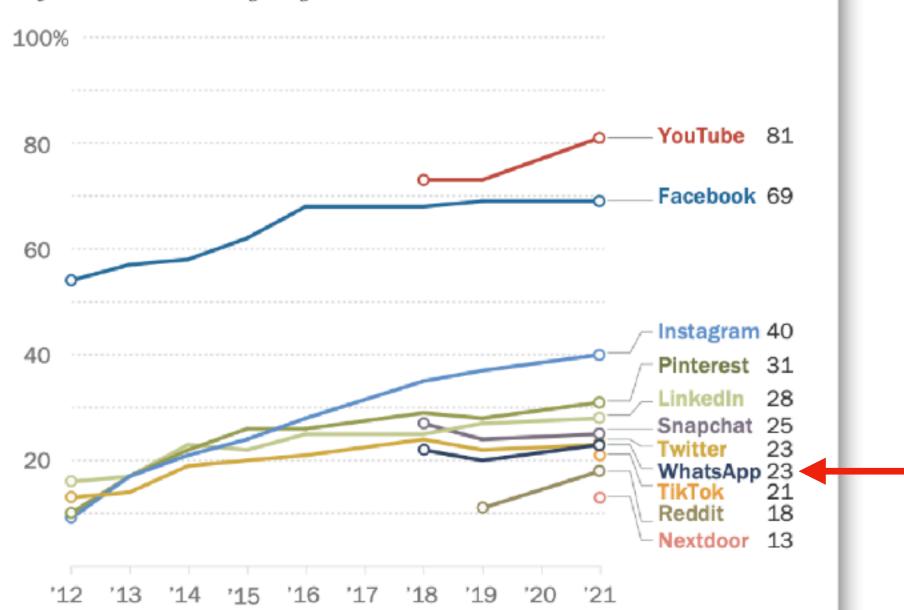
Note: Respondents who did not give an answer are not shown. Pre-2018 telephone poll data is not available for YouTube, Snapchat and WhatsApp; pre-2019 telephone poll data is not available for Reddit. Pre-2021 telephone poll data is not available for TikTok. Trend data is not available for Nextdoor. Source: Survey of U.S. adults conducted Jan. 25-Feb. 8, 2021.

"Social Media Use in 2021"

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STATE OF THE ART

#### For Millions of Immigrants, a Common Language: WhatsApp

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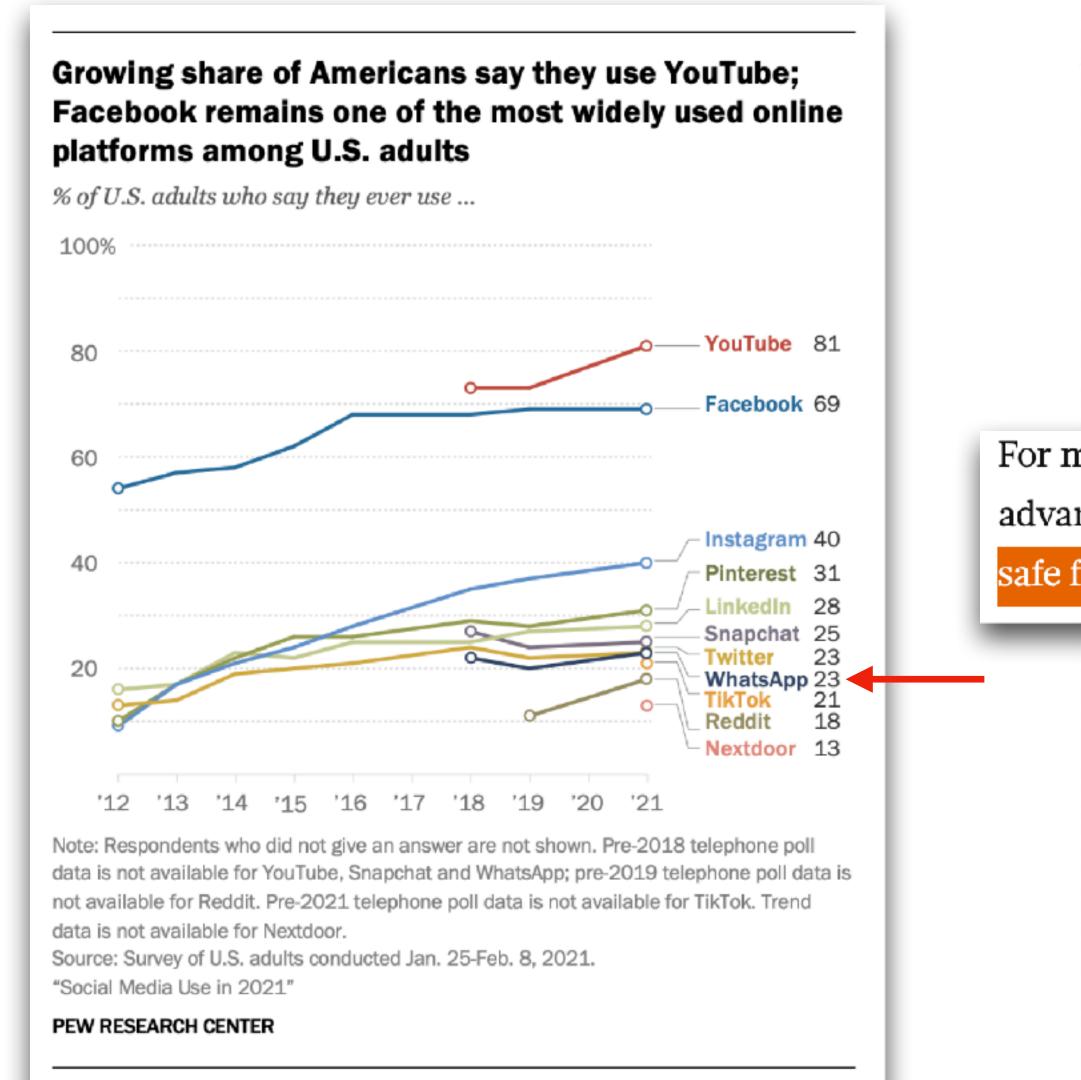


More than a billion people regularly use WhatsApp, which lets users send text messages and make phone calls free over the internet. Doug Chayka

By Farhad Manjoo Dec. 21, 2016

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PLAY THE CROSSWORD

STATE OF THE ART

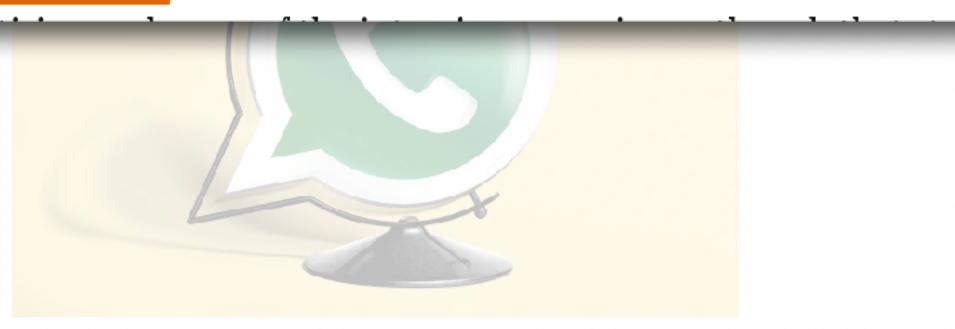
For Millions of Immigrants, a Common Language: WhatsApp

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For migrants who leave their homes out of desperation, WhatsApp offers another

advantage that many other networks lack: It's secure. The app is encrypted, making it

safe from government snoops. The company has also long been adamant about its



More than a billion people regularly use WhatsApp, which lets users send text messages and make phone calls free over the internet. Doug Chayka

By Farhad Manjoo Dec. 21, 2016











100



#### WhatsApp Monitor: A Fact-Checking System for WhatsApp

#### Philipe Melo<sup>1</sup>, Johnnatan Messias<sup>2</sup>, Gustavo Resende<sup>1</sup>, Kiran Garimella<sup>3</sup>, Jussara Almeida<sup>1</sup>, Fabrício Benevenuto<sup>1</sup>

<sup>1</sup>Universidade Federal de Minas Gerais, <sup>2</sup>MPI-SWS, <sup>3</sup>MIT, philipe@dcc.ufmg.br, johnme@mpi-sws.org, gustavo.jota@dcc.ufmg.br garimell@mit.edu, jussara@dcc.ufmg.br, fabricio@dcc.ufmg.br

#### WHATSAPP AND NIGERIA'S 2019 ELECTIONS: MOBILISING THE PEOPLE, **PROTECTING THE VOTE**

#### Authors:

Jamie Hitchen (independent), Idayat Hassan (Centre for Democracy and Development) **Dr Jonathan Fisher** (University of Birmingham). Professor Nic Cheeseman (University of Birmingham)

#### WhatsApp as a verification tool for fake news. The case of 'B de Bulo'

**B. Palomo** [CV] [Orcid] [CGGS]. Chair Professor of the Department of Journalism. Universidad de Málaga (UMA), Spain. bellapalomo@uma.es

J. Sedano [CV] [Orcid]. Doctorate student. Faculty of Communication Sciences. Universidad de Málaga (UMA), Spain. jon@uma.es

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#### Countering Misinformation Via WhatsApp: Evidence from the COVID-19 Pandemic in Zimbabwe

Jeremy Bowles,<sup>1</sup> Horacio Larreguy,<sup>2</sup> Shelley Liu<sup>3</sup>

<sup>1</sup>Department of Government, Harvard University. jbowles@g.harvard.edu. <sup>2</sup>Department of Government, Harvard University. hlarreguy@fas.harvard.edu. <sup>3</sup>Department of Government, Harvard University. shelleyxliu@g.harvard.edu.

#### A Study of Misinformation in WhatsApp groups with a focus on the Brazilian Presidential Elections.

Caio Machado Oxford Internet Institute Oxford University, Oxford, United Kingdom, caio.machado@oii.ox.ac.uk

Beatriz Kira Department of Law University of Sao Paulo, Sao Paulo, Brazil, beatrizkira@gmail.com

Vidya Narayanan Oxford Internet Institute Oxford University, Oxford, United Kingdom, vidya.narayanan@oii.ox.ac.uk

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Philip N. Howard **Oxford Internet Institute** Oxford University, Oxford, United Kingdom, philip.howard@oii.ox.ac.uk

#### Analyzing Textual (Mis)Information Shared in WhatsApp Groups

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Fabrício Benevenuto UFMG, Brazil fabricio@dcc.ufmg.br



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What can we learn from qualitative explorations of misinformation in private WhatsApp chats during the COVID-19 pandemic?





## Study Overview

### Study Overview Tailoring Our Focus

- Different experiences can come from different user demographics
- Focus on WhatsApp users in the US
- Focus on younger users (undergrad + graduate students)
  - Unreciprocated concern directed towards older family members, especially for COVID misinformation [Tandoc Jr. and Lee 2020]



#### **Study Overview**

## **Interviews to Understand Misinformation Encounters**

- Semi-structured, virtual interviews with 16 university students in the US:
  - Age 18-34
  - 9 female, 7 male
  - Regularly use WhatsApp (multiple times a week)
- 3 topic categories:
  - General WhatsApp usage
  - Misinformation encounters
  - Fact-checking strategies + design recommendations



- Misinformation in private family/friends group chats is often spread from good intentions
- Intimacy in these group chats complicates users' willingness and ability to deal with misinformation
- Users see privacy and stringent content moderation as trade-offs on WhatsApp

## Misinformation Spreads From Good Intentions

### Very easy to forward messages to many people / groups

*"almost too easy [by tapping the forward button]" — P6* 



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**Forwarded content** 

noses with saline solution to prevent COVID" - P10

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- "[Our family believed]
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### Mindset differences in senders & receivers

"She was more of the mindset that we should do whatever we can even if it's not true [...] but she also didn't consider it misinformation." – P3







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## Social Relationships in Groups Hinders Correction

Intimacy is attached to misinformation "I know [many] have their families in WhatsApp, and Users tend to trust those close to them, people tend to trust things that but also receive misinformation from the come from people close to you. same people So, I feel like it adds almost a level of genuineness to this misinformation, and then it causes people to panic, which I think is the biggest con [of using

WhatsApp]." – P6"



## Social Relationships in Groups Hinders Correction

### **Correcting older relatives is often seen** as disrespectful

Older relatives are also ones who typically send misinformation

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"Just because they are not as able to filter out fake news from real news. I mean, obviously it's presented in a more and more realistic way every single day and they just lap it up and believe in it, and also, they are not as tech savvy to be able to go and Google immediately and do a quick check on what's actually happening" -P2



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as disrespectful Older relatives are also ones who typically send misinformation **Misinformation is typically ignored** rather than disputed Active disputes sometimes happened with those of a similar age range (e.g. siblings), or parents



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## Trade-off With Privacy and Security

# Stricter content moderation would infringe upon privacy

Many participants preferred if WhatsApp did not explicitly censor or flag content



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### Privacy-focused messaging should be clear

Otherwise, can collect already-known misinformation or unreliable sources

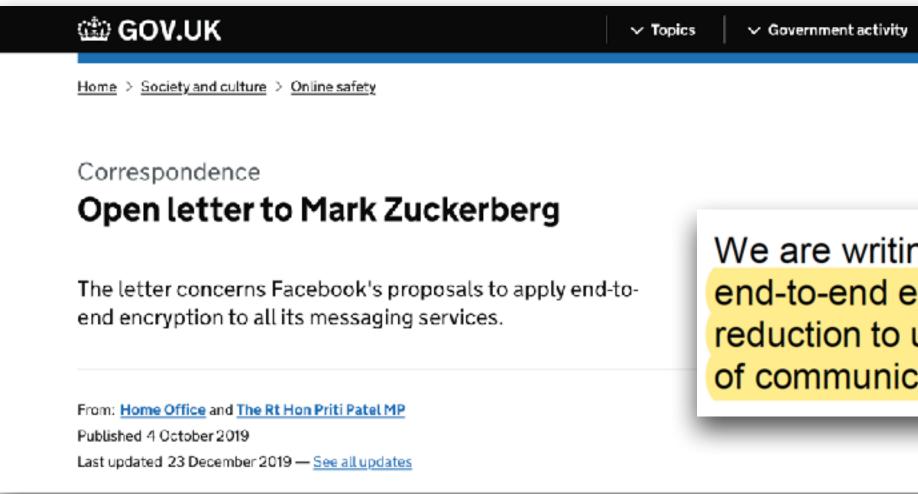




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We are writing to request that Facebook does not proceed with its plan to implement end-to-end encryption across its messaging services without ensuring that there is no reduction to user safety and without including a means for lawful access to the content of communications to protect our citizens.



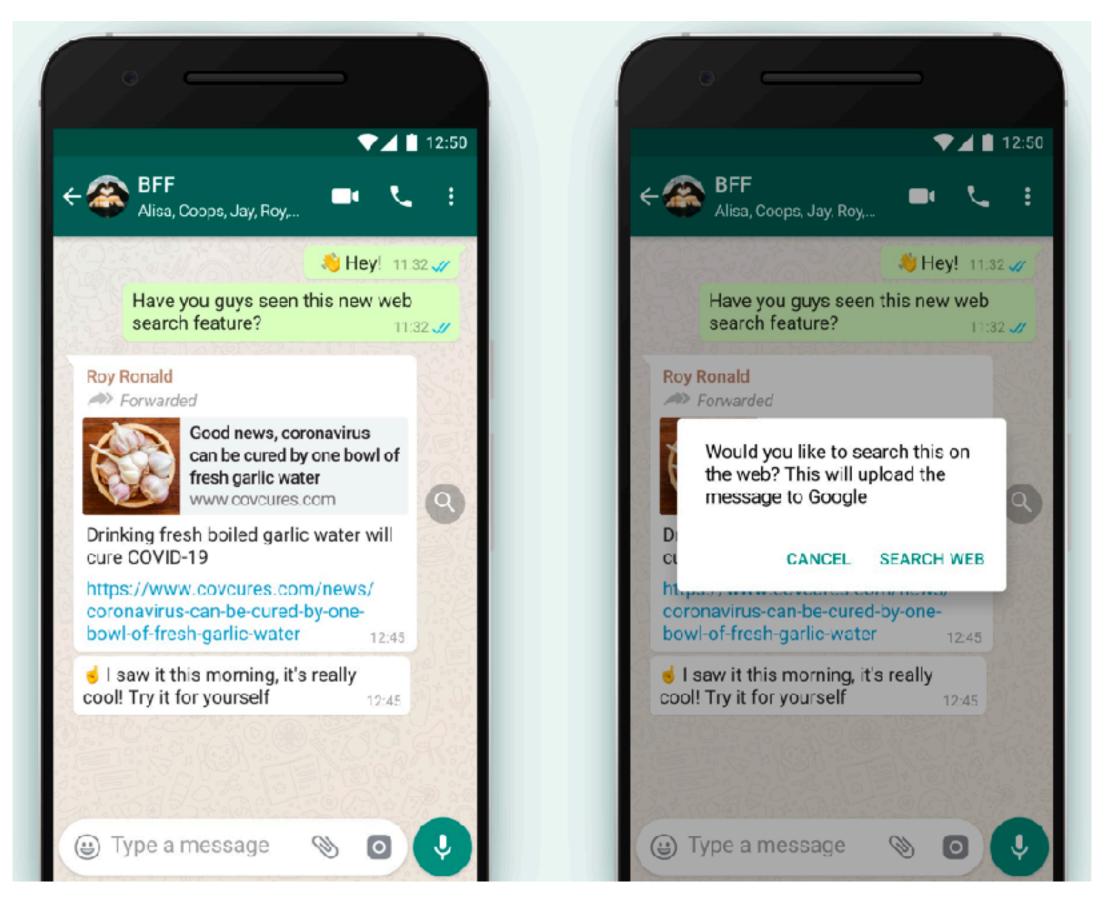


# Design Implications

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- Helping users deal with misinformation in ways that mitigate social power dynamics
- Empower the user to better fact-check or flag misinformation for themselves

### Design Implications—Mitigating Social Power Dynamics Selective Application of Fact Checker Icon



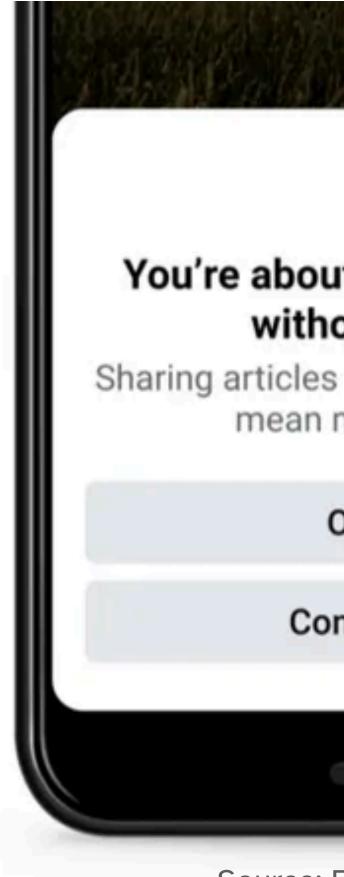
Source: WhatsApp blog



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## **Design Implications—Empowering the User** Add Friction When Sharing Unopened Links



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## 0 You're about to share this article without opening it. Sharing articles without reading them may mean missing key facts. **Open Article Continue Sharing**

Source: Facebook newsroom



- Misinformation in private WhatsApp groups can look very different than open social media platforms
- Social relationships and privacy commitments brings about challenges to misinformation management
- User empowerment and mitigating social power dynamics can be future design considerations

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