

The Walled Garden Dilemma: Privacy vs. App Choice in Messaging Ecosystems

Carla Griggio

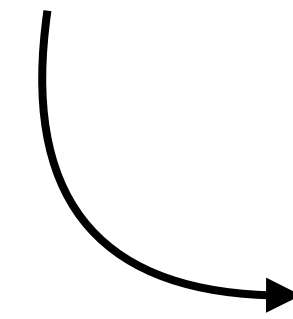
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**AALBORG
UNIVERSITY**

This talk is about people

My research areas



Human-Computer
Interaction
(HCI)

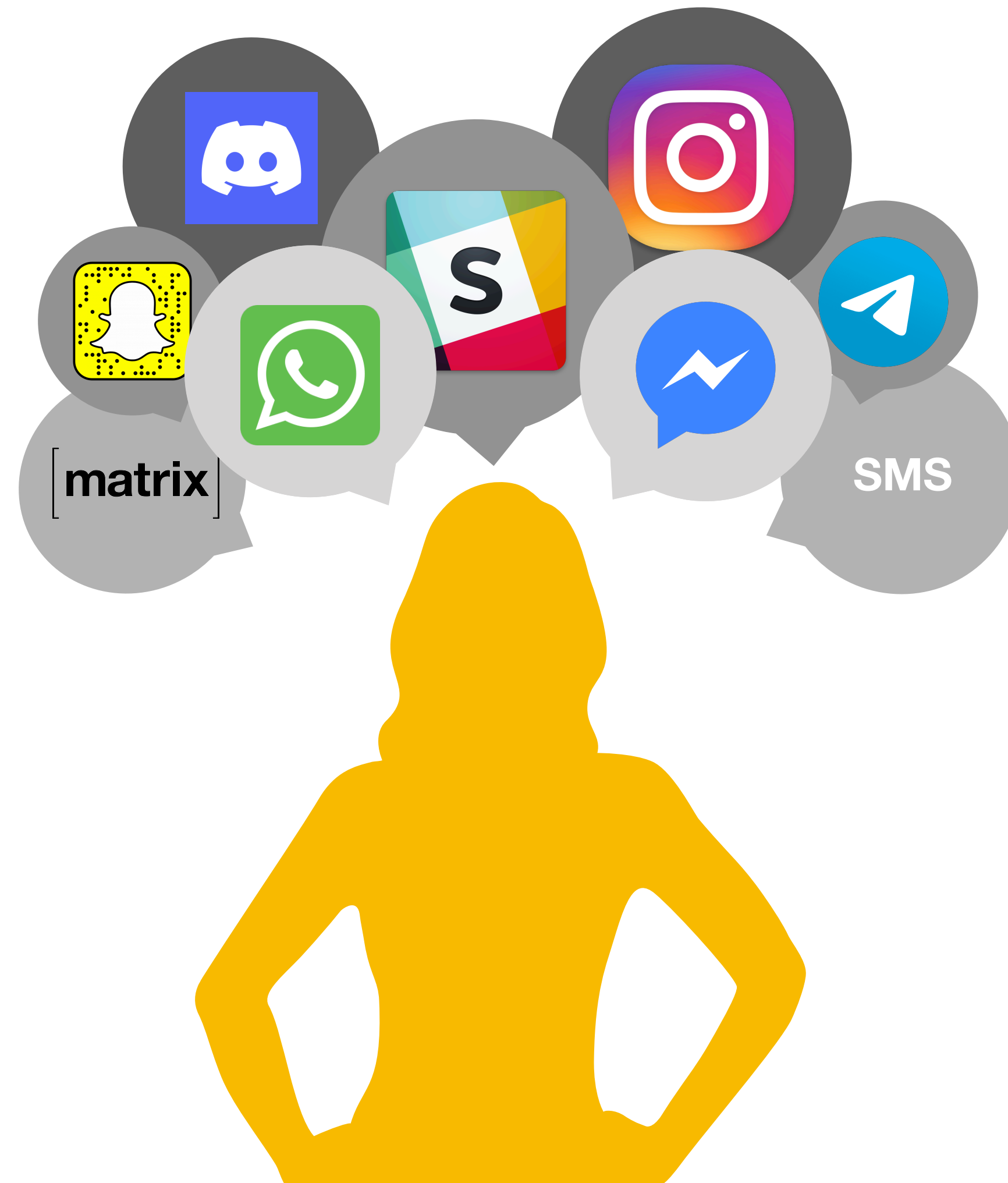
Computer-Mediated
Communication
(CMC)

Empirical studies
(e.g., interviews,
experiments)

Design and Engineering
of new communication
software

Theoretical concepts
to explain users' behaviour
and inform design

Ecosystems of Messaging Apps



Personal collections
of messaging platforms

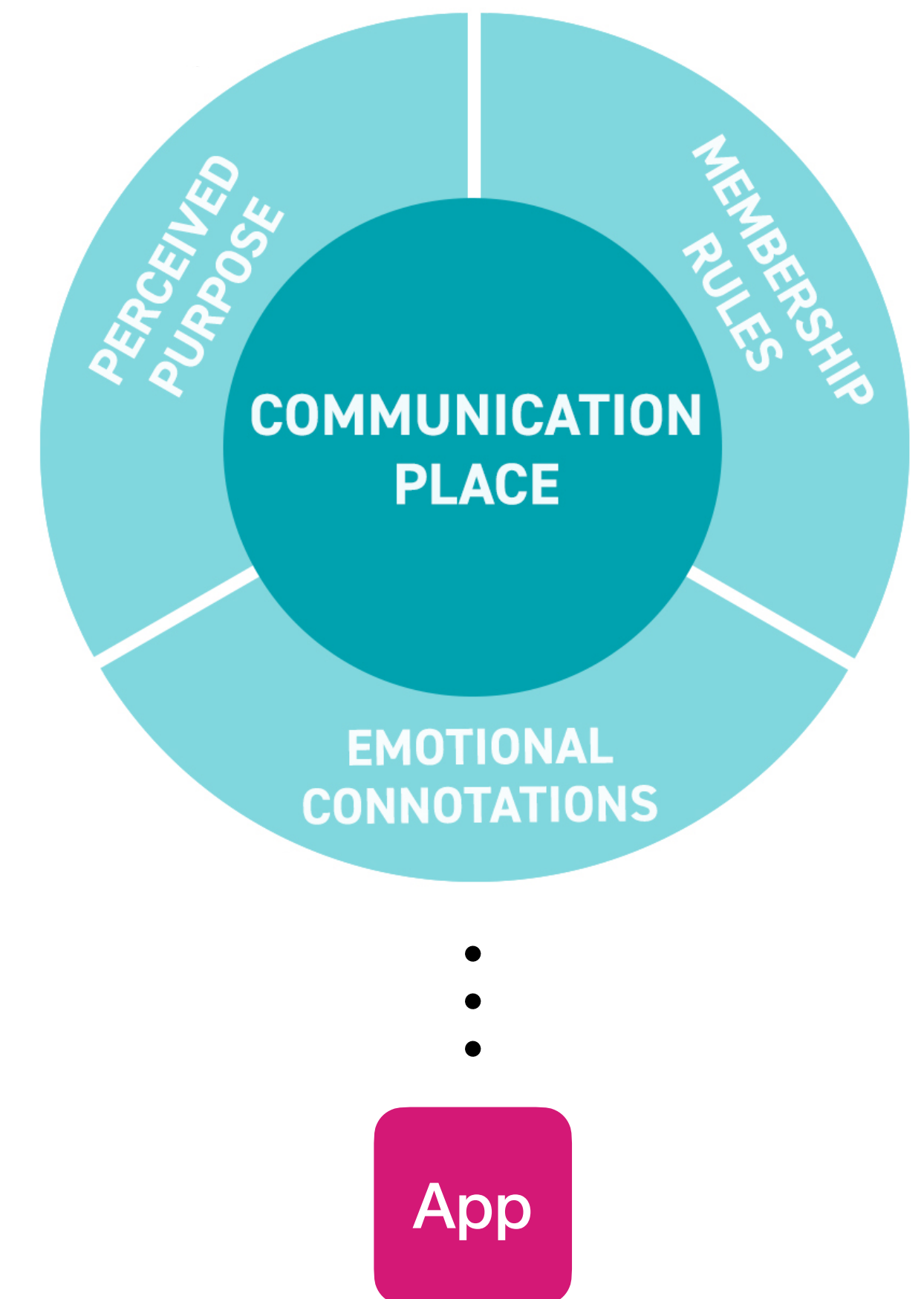
What motivates people to use multiple messaging apps?

Interview study

Communication place

A user's personal construct about an app which determines:

- what that app should be **used for** (**perceived purpose**)
- how that app **feels like** (**emotional connotations**)
- and **who** should be allowed to be a contact on that app and who should stay **outside** of it (**membership rules**)



Midas Nouwens, **Carla F. Griggio**, and Wendy E. Mackay.

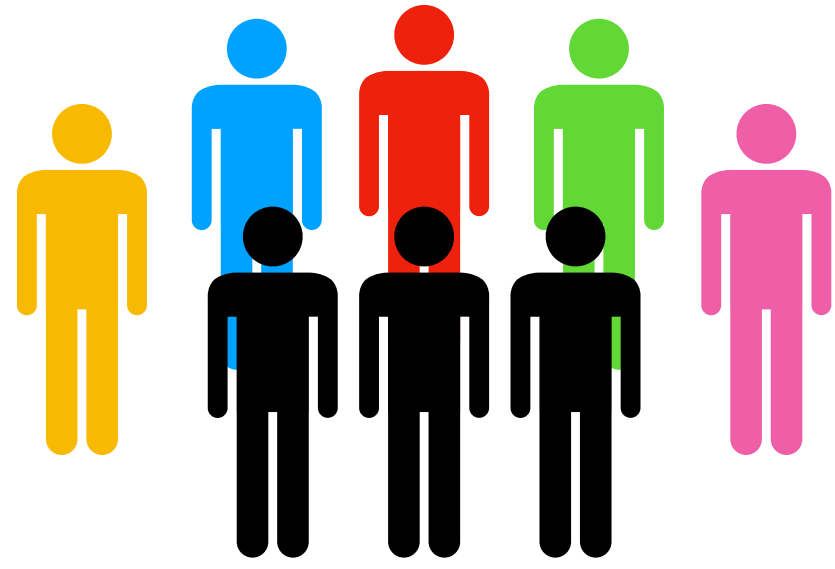
"WhatsApp is for family; Messenger is for friends": Communication Places in App Ecosystems

Published at ACM CHI '17

“ In my head, *WhatsApp* is slow and old. I only use it for groups, like the family *WhatsApp* group. So to talk to my friend there is weird.

Whereas *Messenger* is white and happy and empty. It feels way more airy and I use it for all my friends.

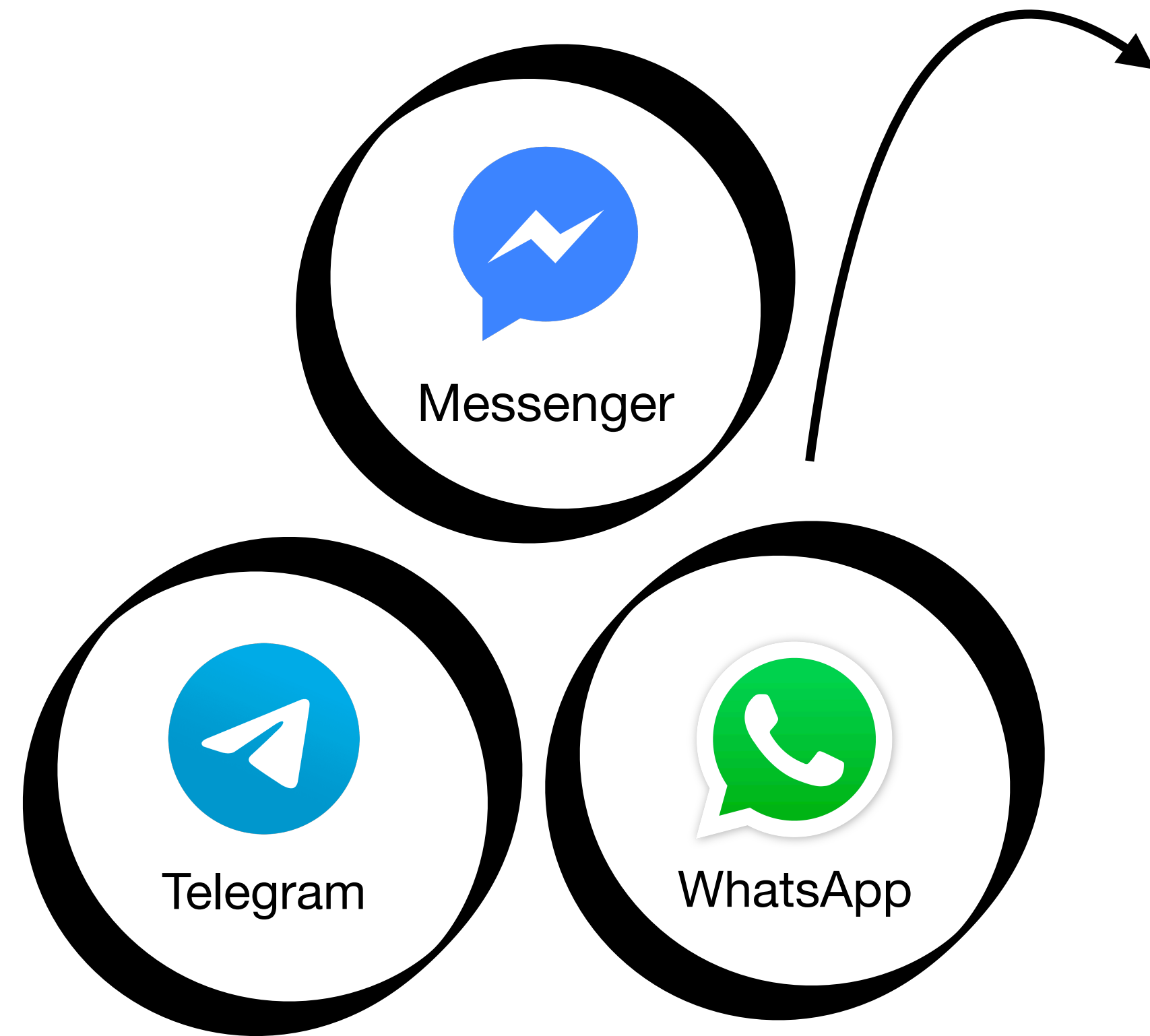
”



Participants sometimes **broke the rules of their communication places** when the functionality they needed was somewhere else.



What motivates people to use multiple messaging apps?

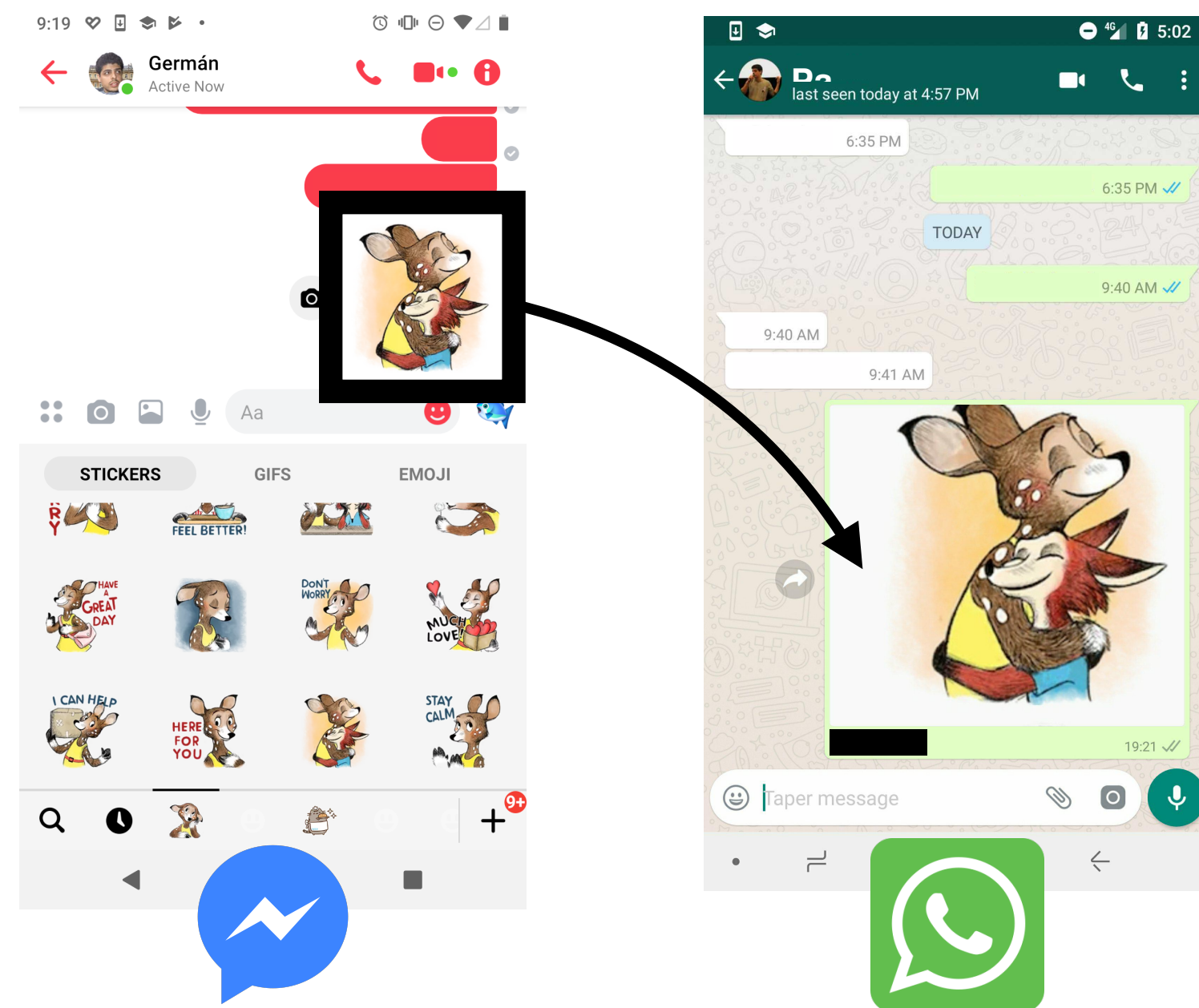


Walled Gardens: Users can only message other users of the same network

Users take advantage of walled gardens to build their own “communication places”

What kind of breakdowns occur when using multiple messaging apps?

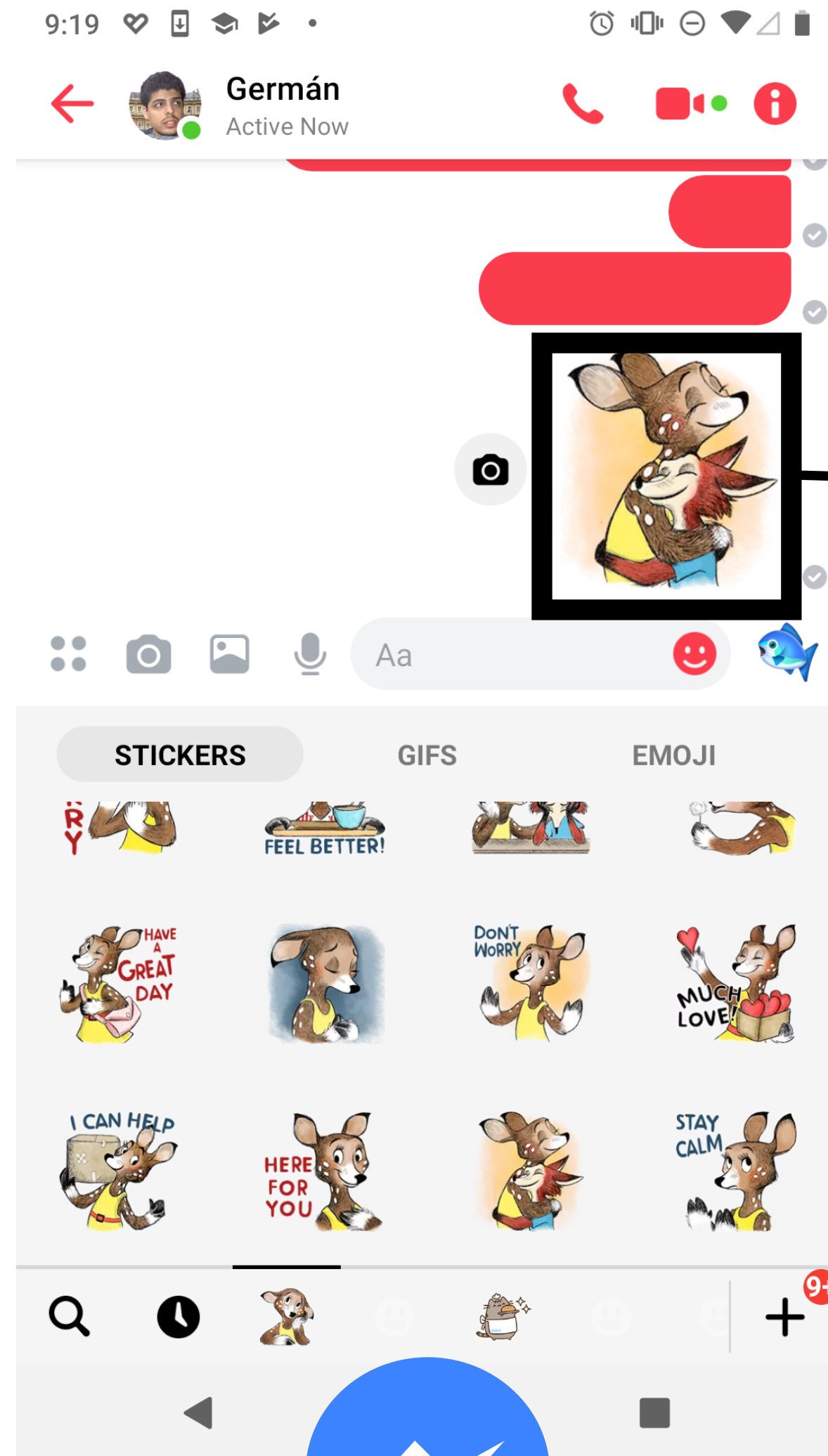
Interview study

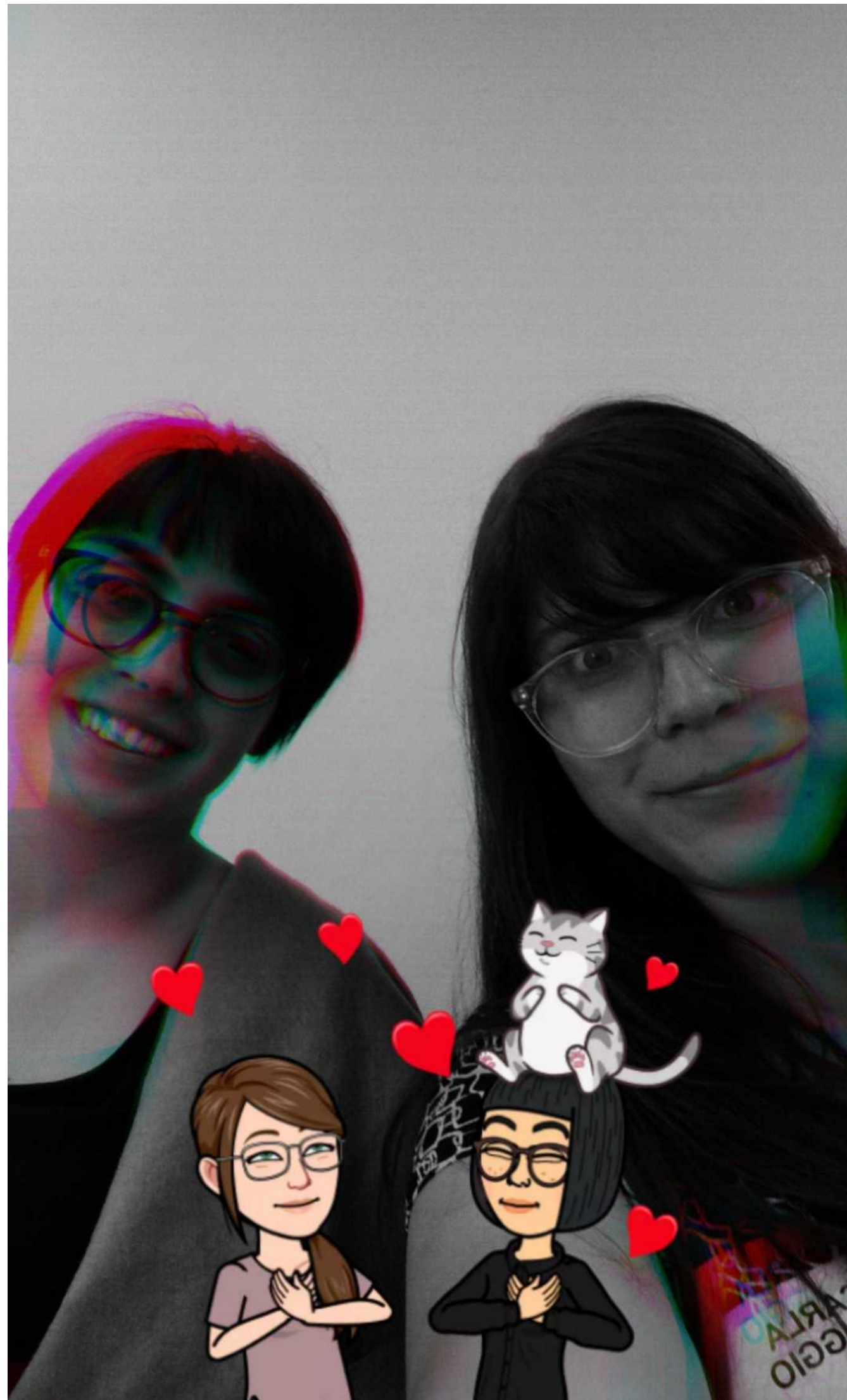


Expression Breakdowns

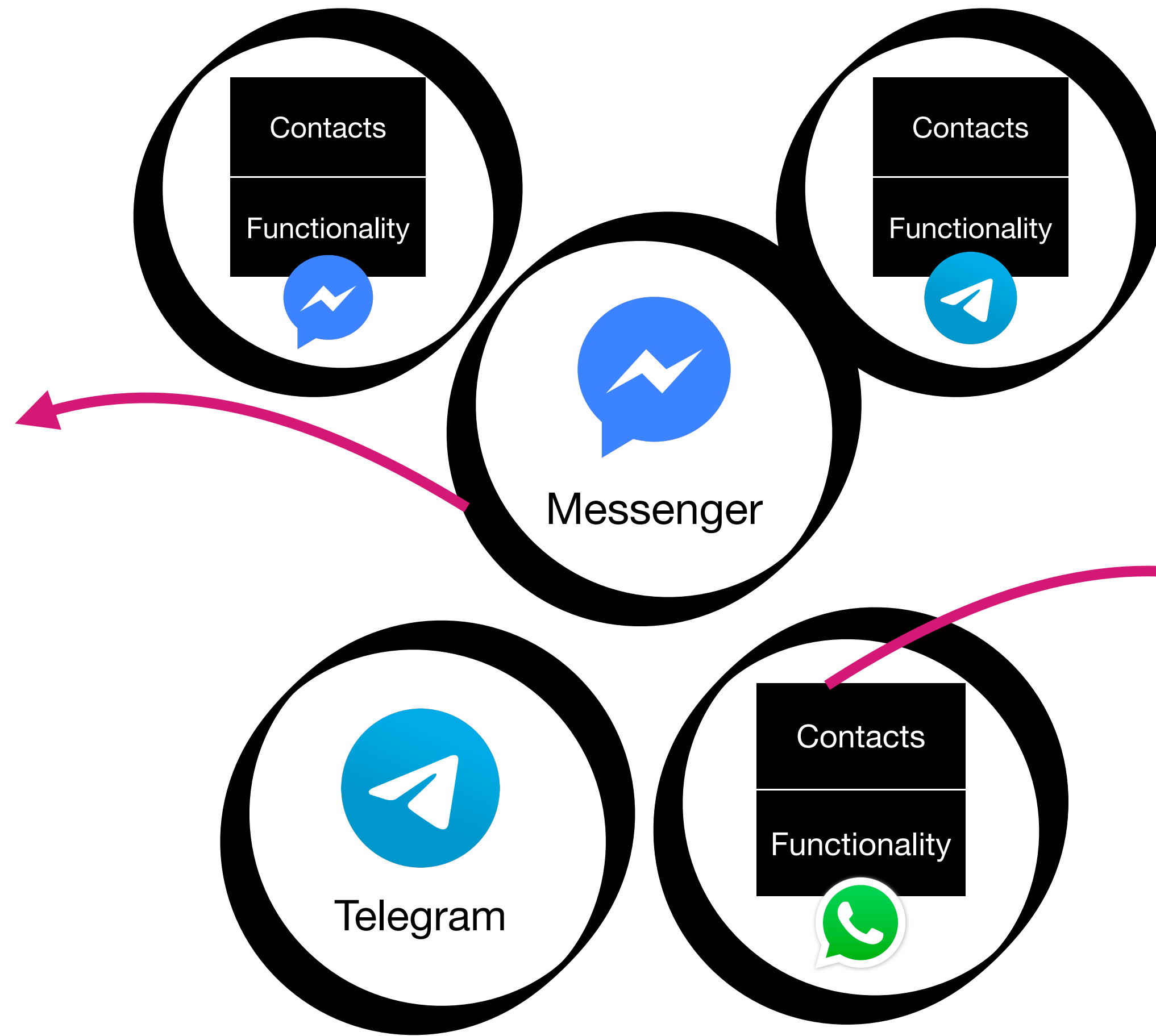
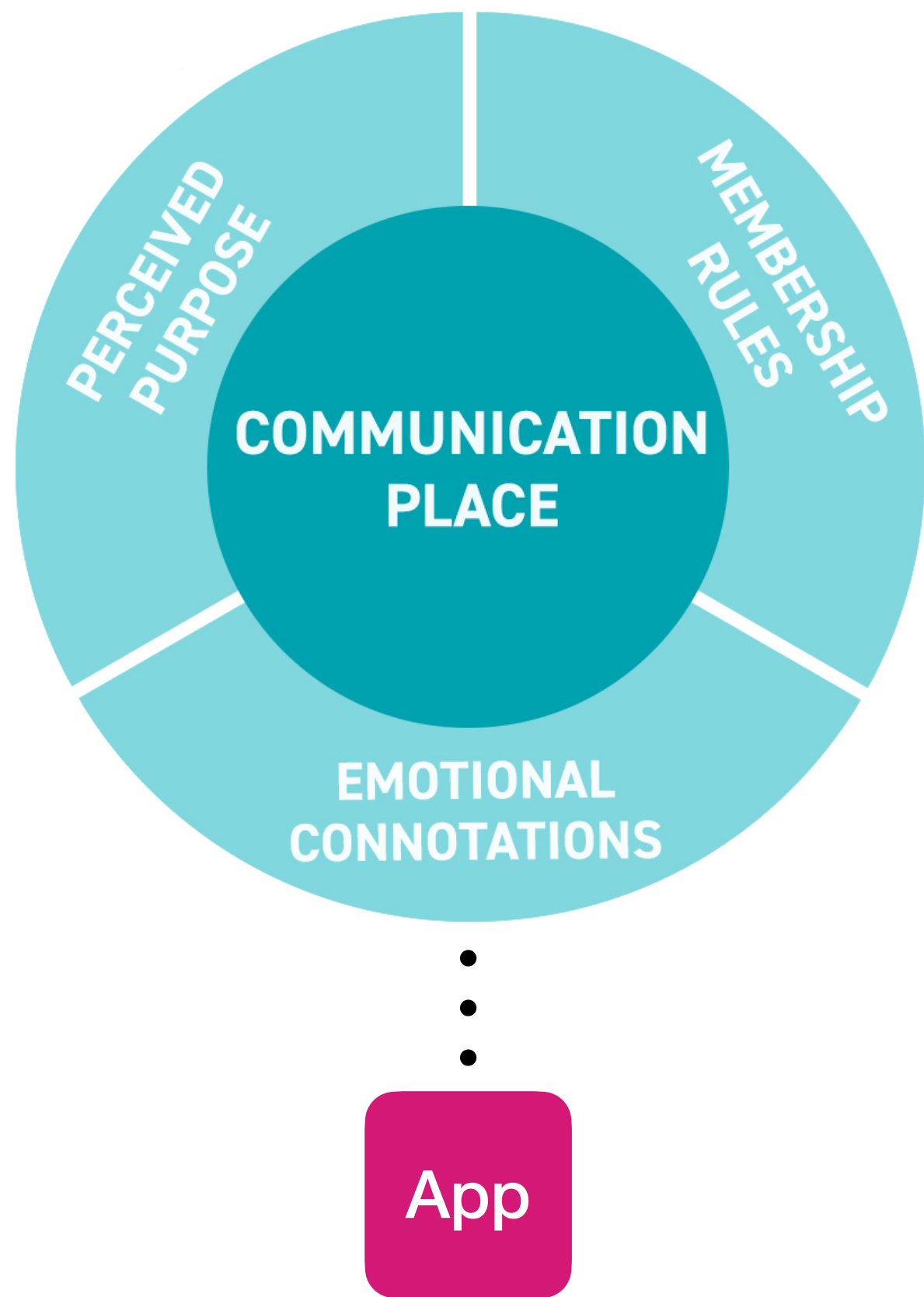
Interruptions to the conversation flow due to the user needing functionality from **another** app to express their message as they want to

Generating media outside of the current app





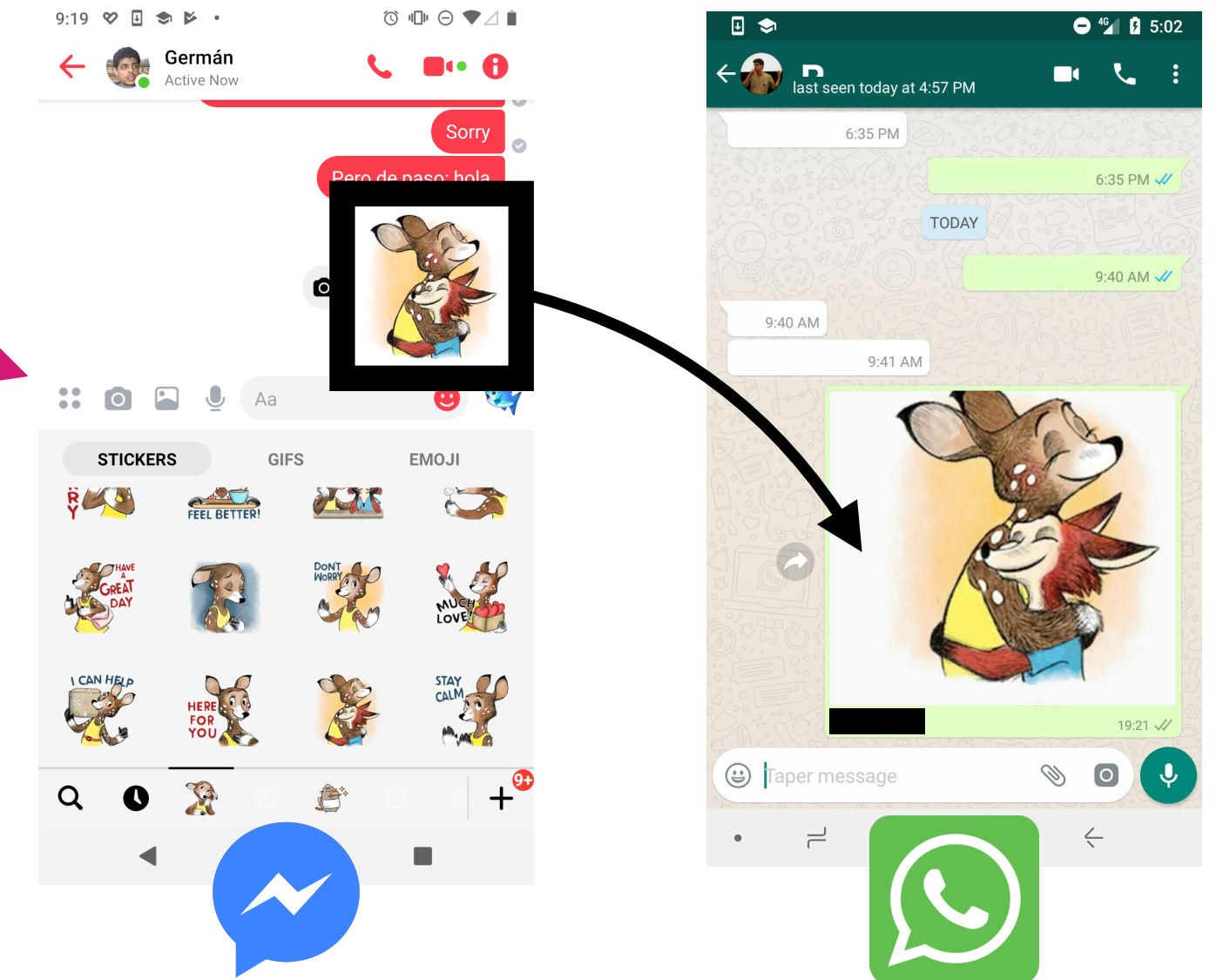
P12



Walled gardens

The walls between **contacts** of different apps enable the creation of communication places

Expression Breakdowns



The walls between **functionality** of different apps cause expression breakdowns

The Walled Garden Dilemma

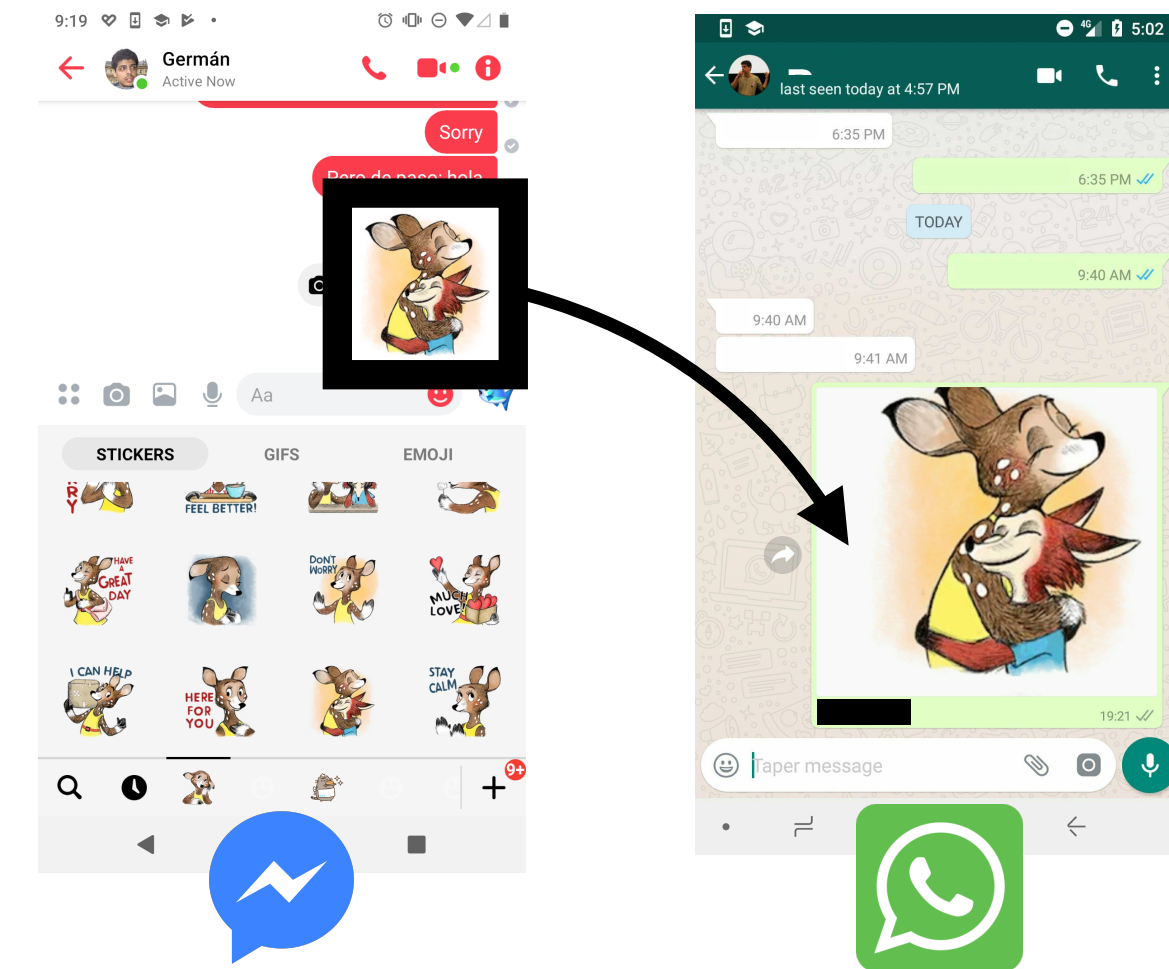
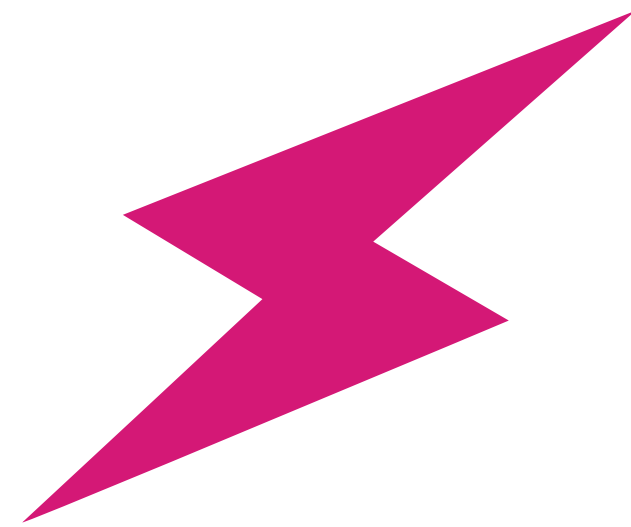
The walls between apps serve as a privacy-preserving tool
for drawing social boundaries between contacts
but also restrict how we can communicate with whom

The Walled Garden Dilemma

How can we design new communication tools that let users preserve their communication places while preventing expression breakdowns?



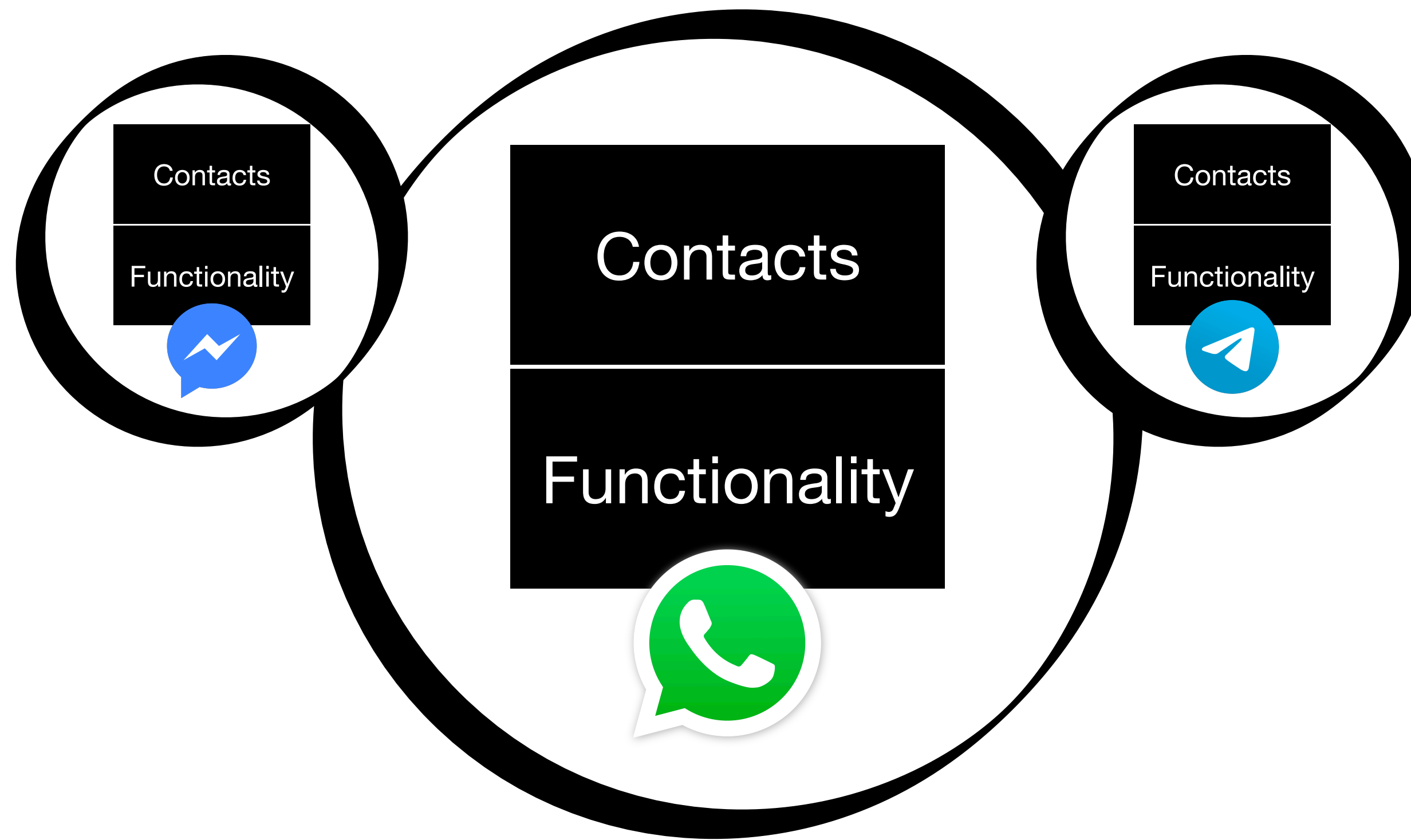
Communication places



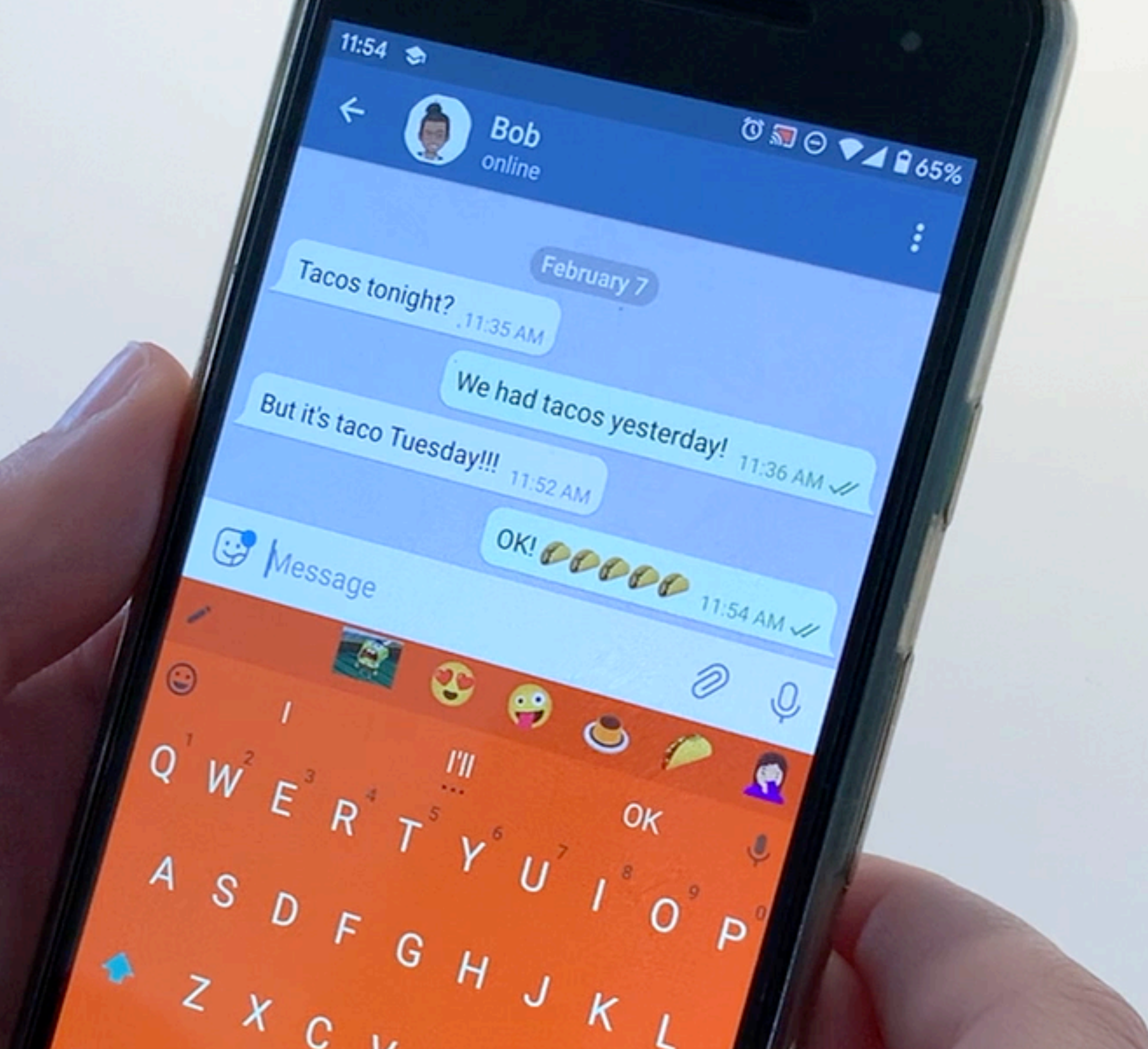
Expression Breakdowns

The Walled Garden Dilemma

How can we design new communication tools that let users preserve their communication places while preventing expression breakdowns?



Dearboard

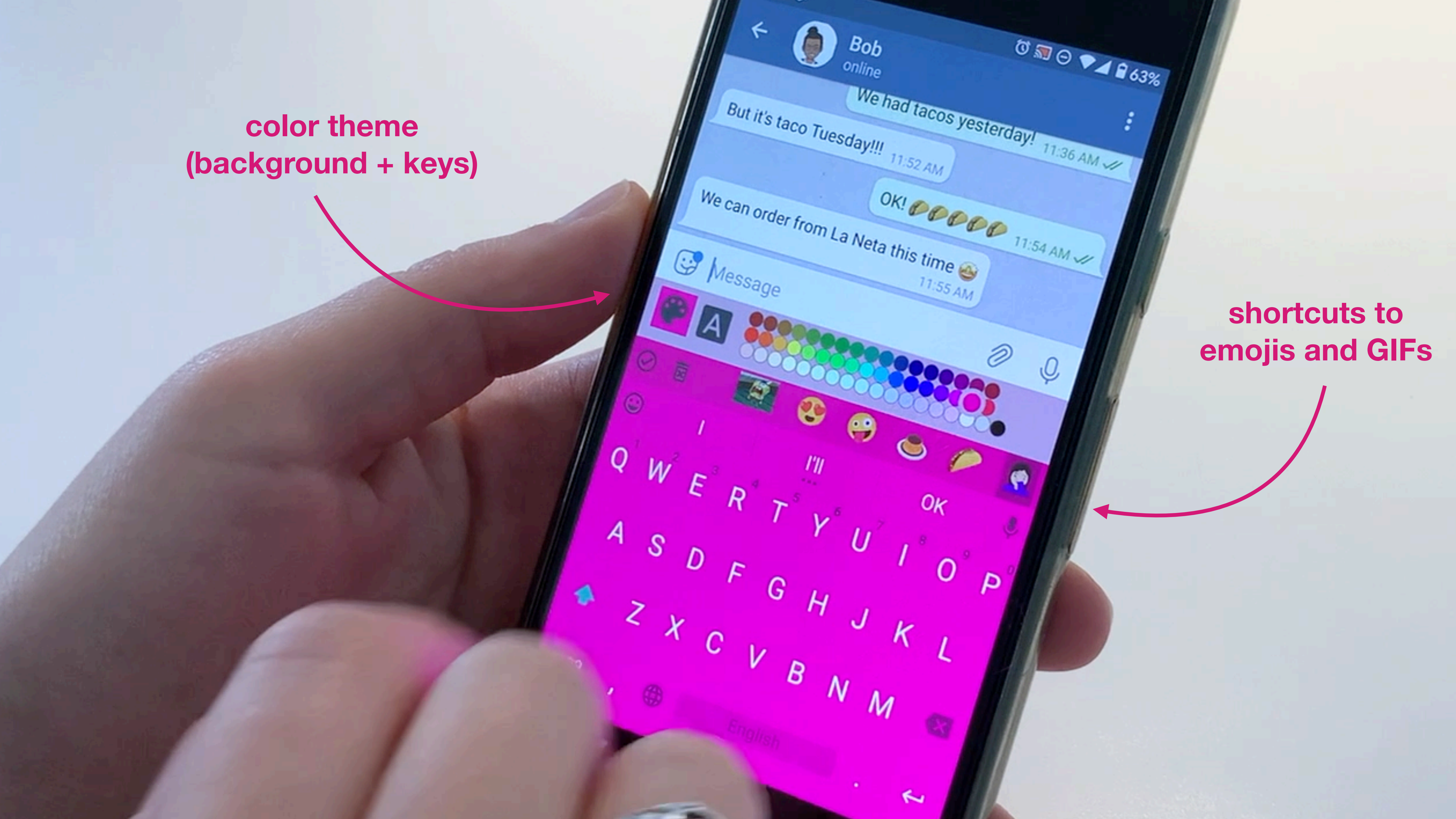


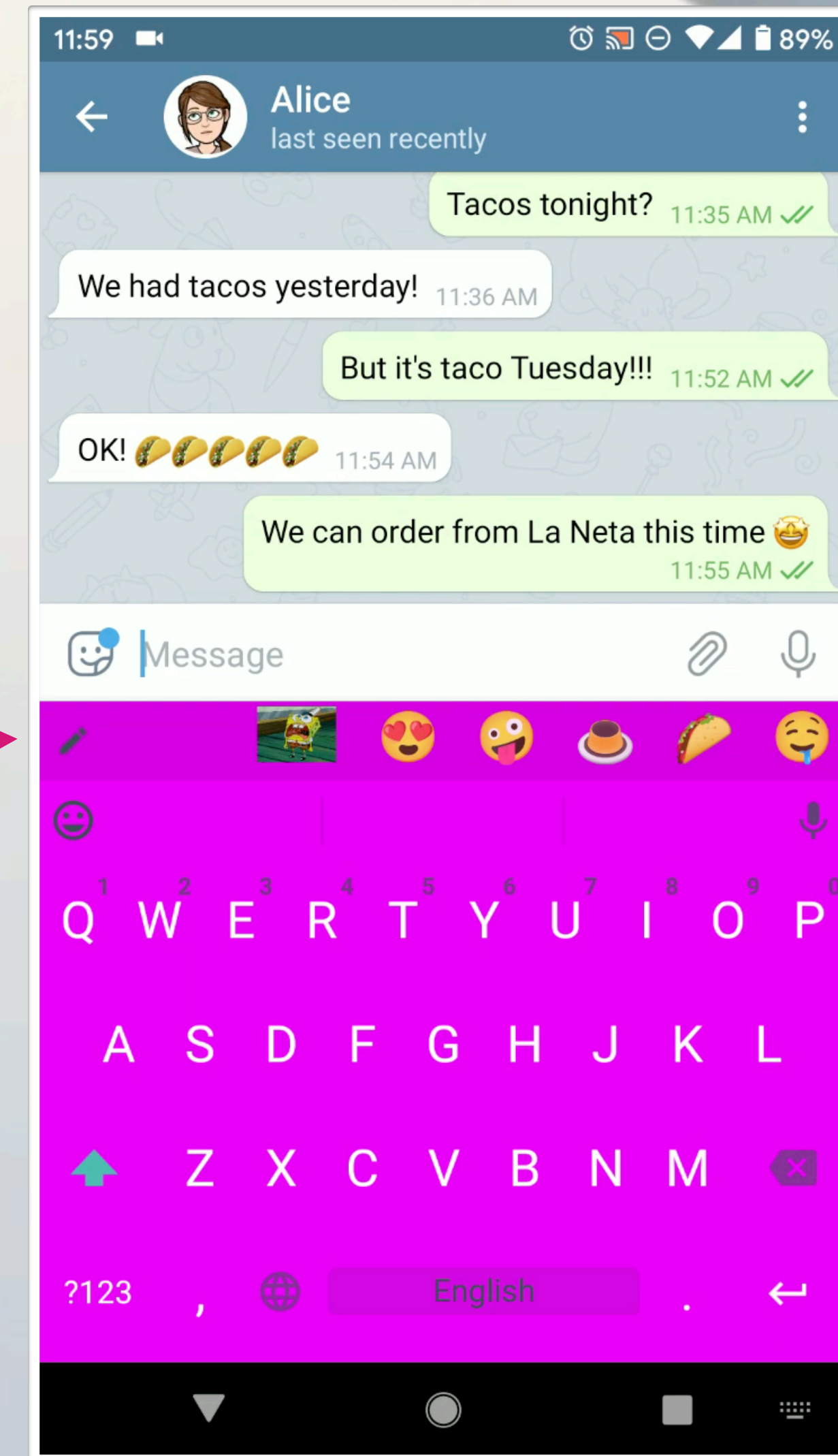
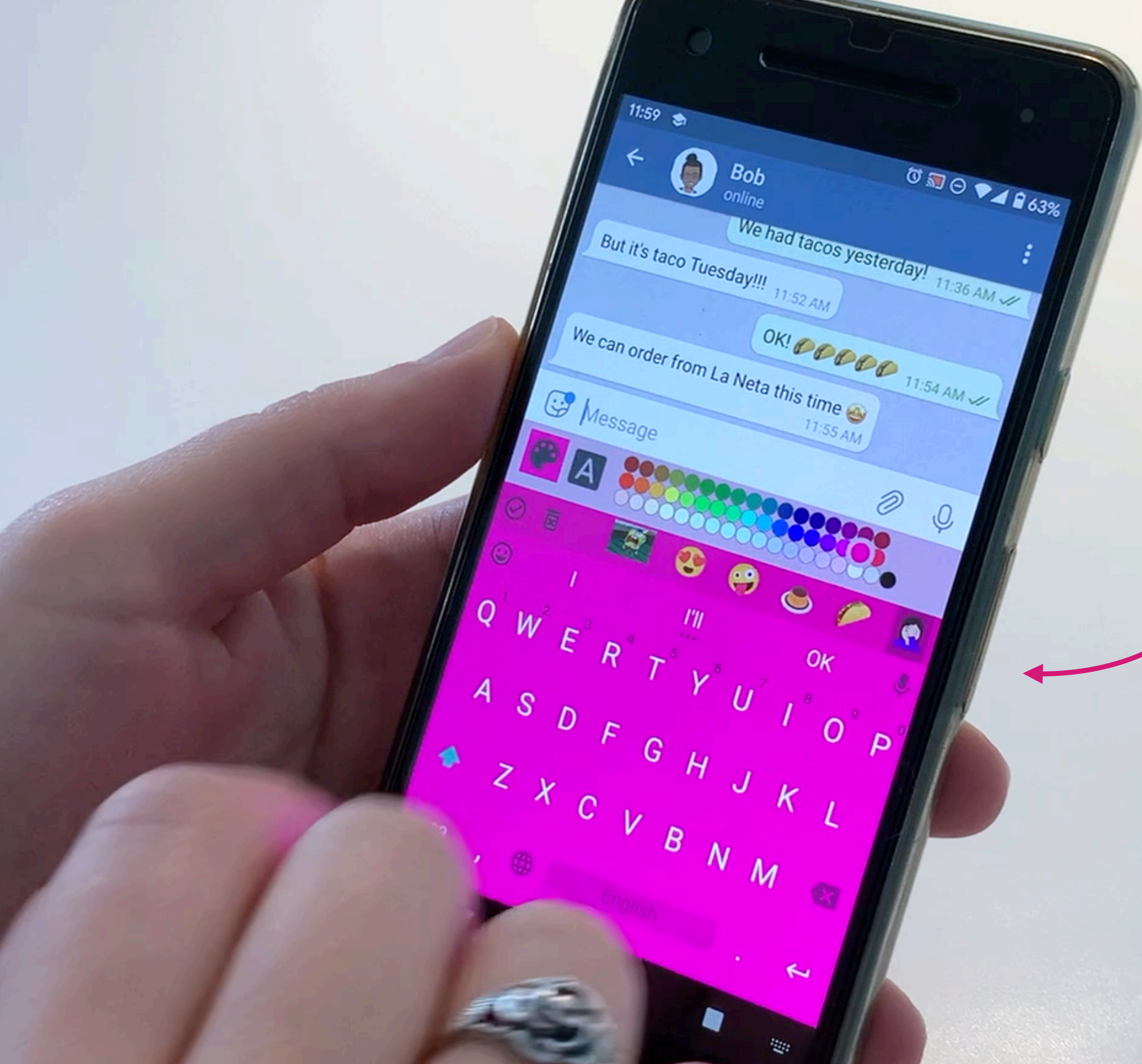
Carla F. Griggio, Arissa Sato, Wendy Mackay, and Koji Yatani
Mediating Intimacy with DearBoard: a Co-Customizable Keyboard for Everyday Messaging
Published at ACM CHI '21

**color theme
(background + keys)**

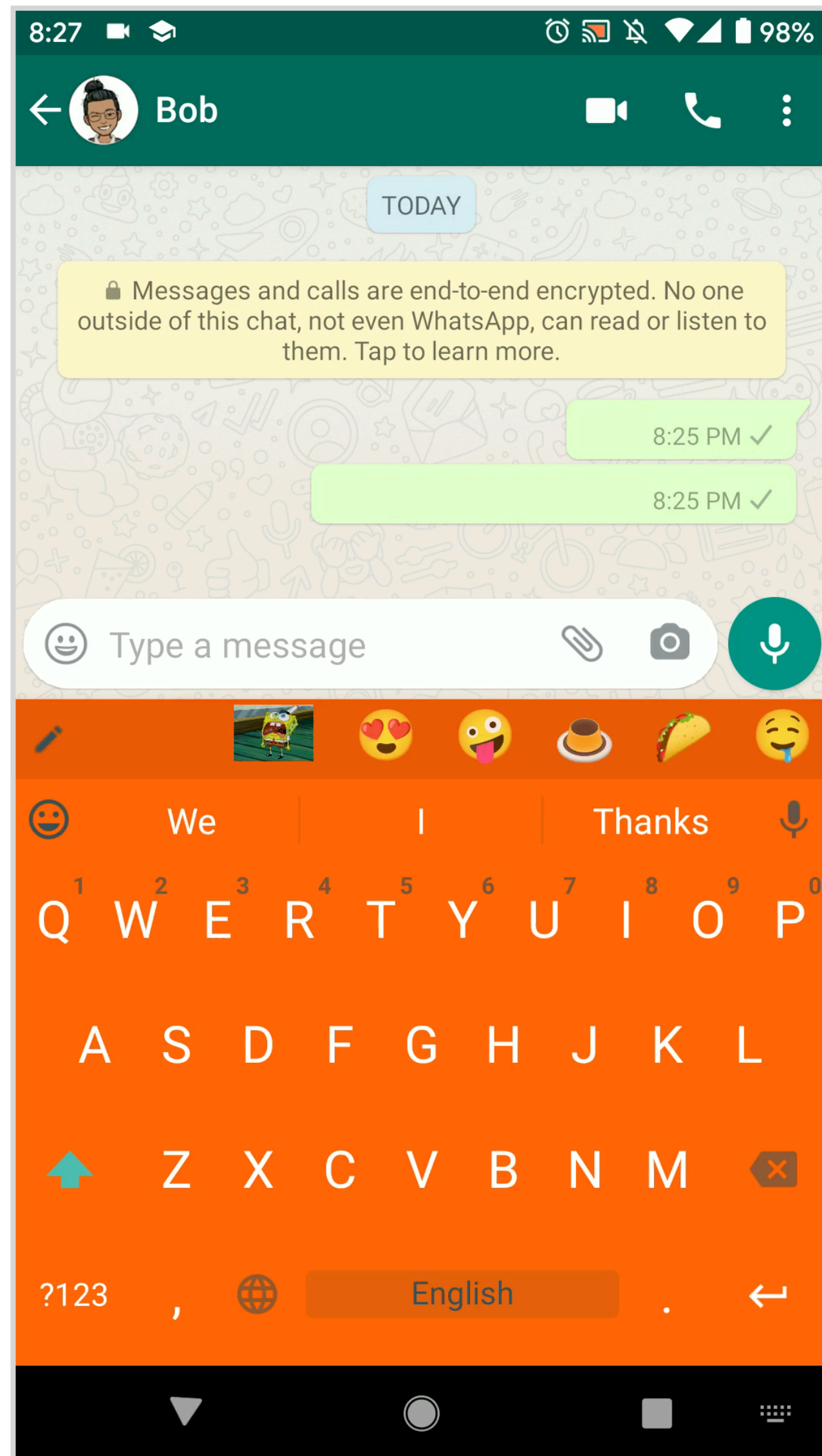


**shortcuts to
emojis and GIFs**

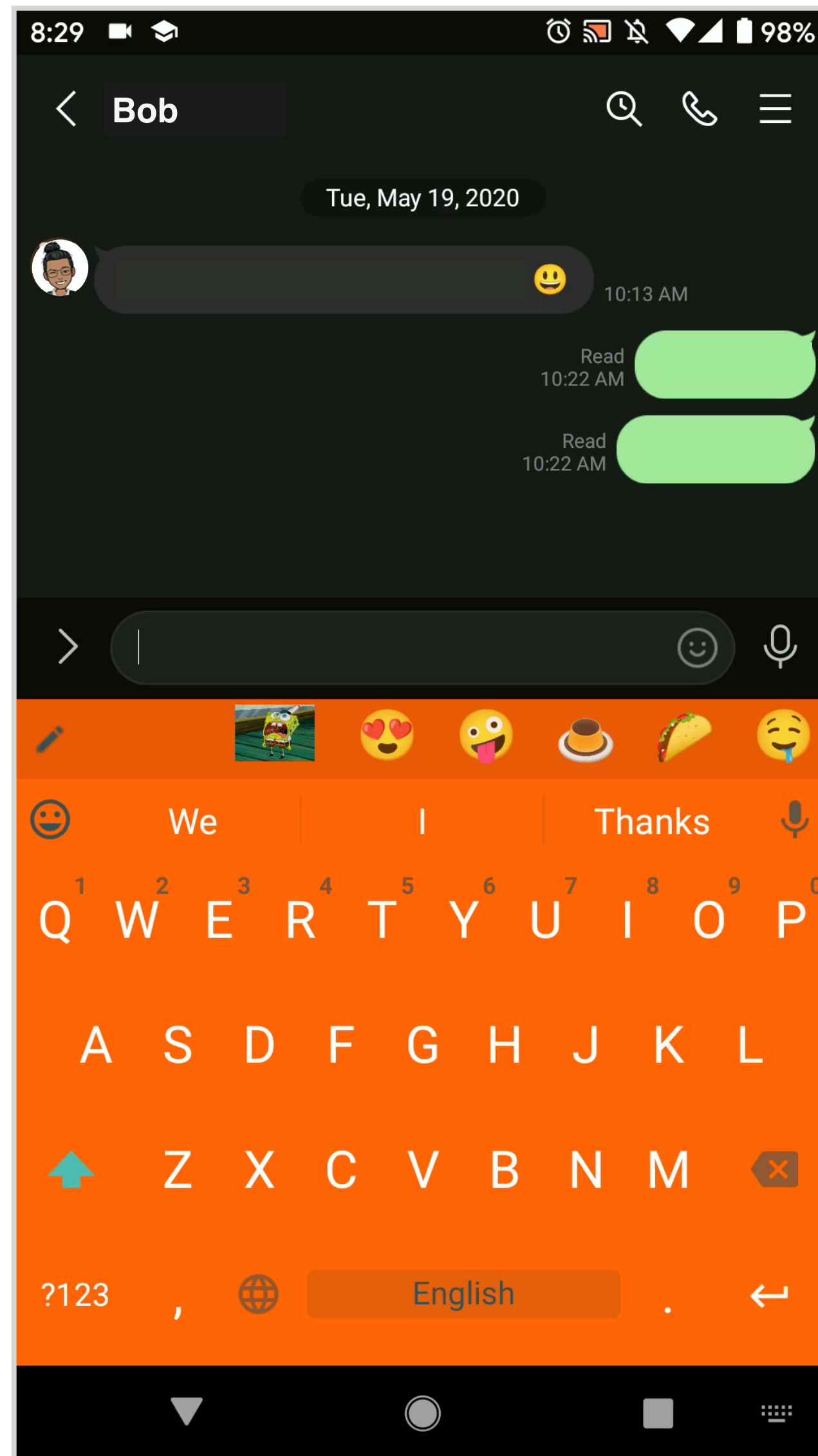




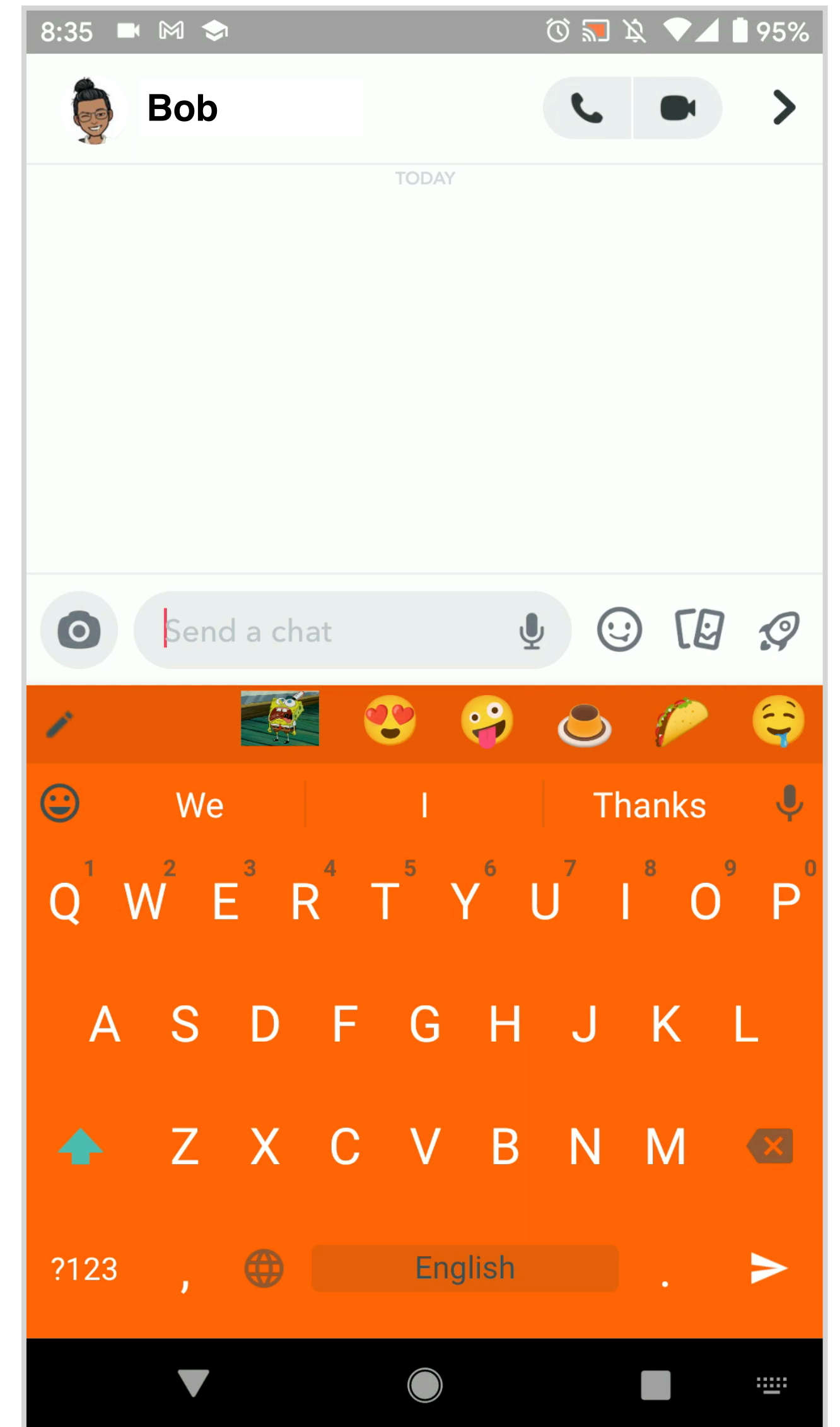
Alice and Bob see the same color theme and shortcuts



 Bob on WhatsApp



 Bob on LINE



 Bob on Snapchat

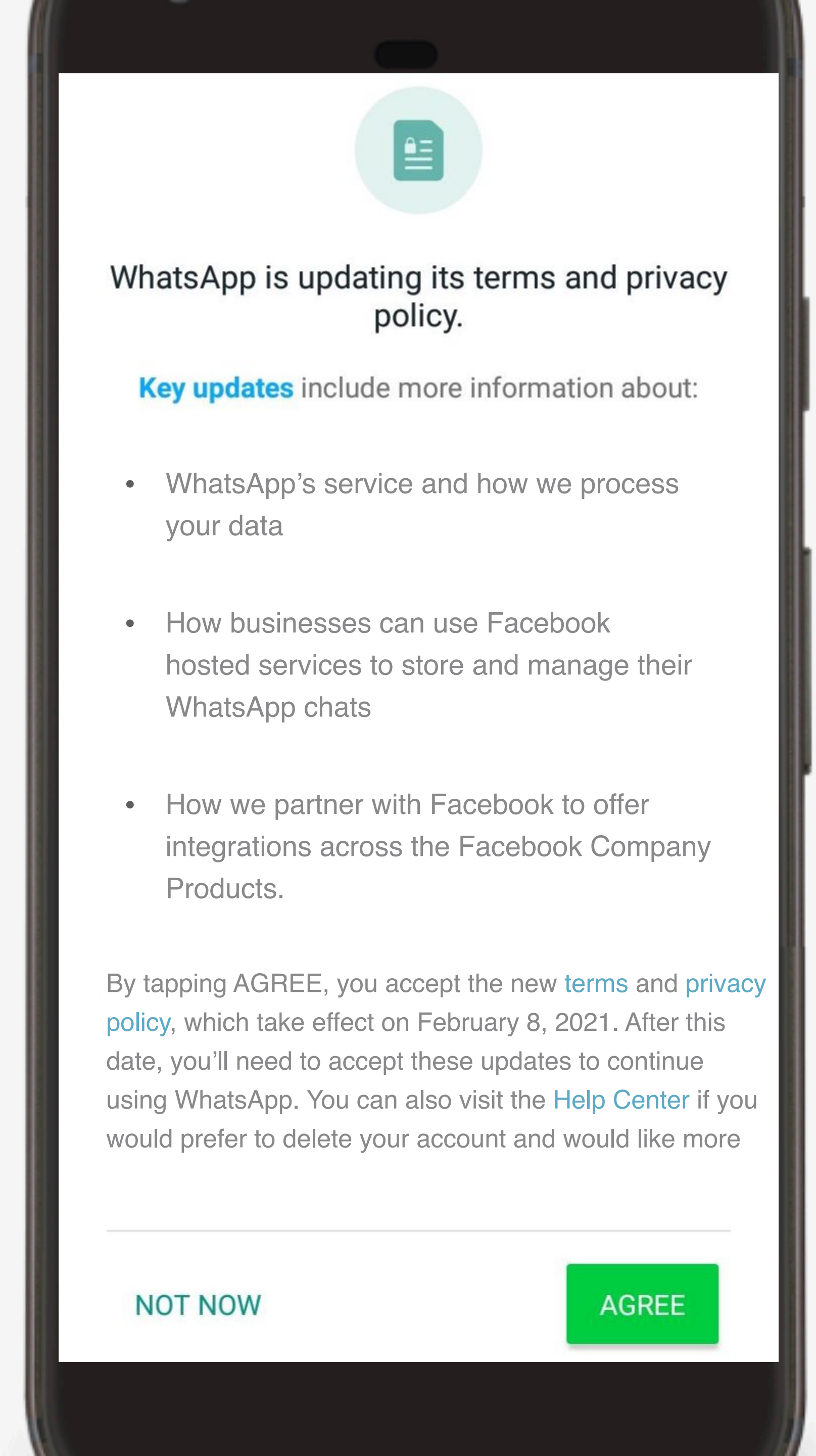
Back to Walled Gardens

Sure, walled gardens enable communication places, but also create huge network effects that lead to tech monopolies and less freedom of choice.

How are the concepts of communication places and expression breakdowns relevant to breaking network effects?

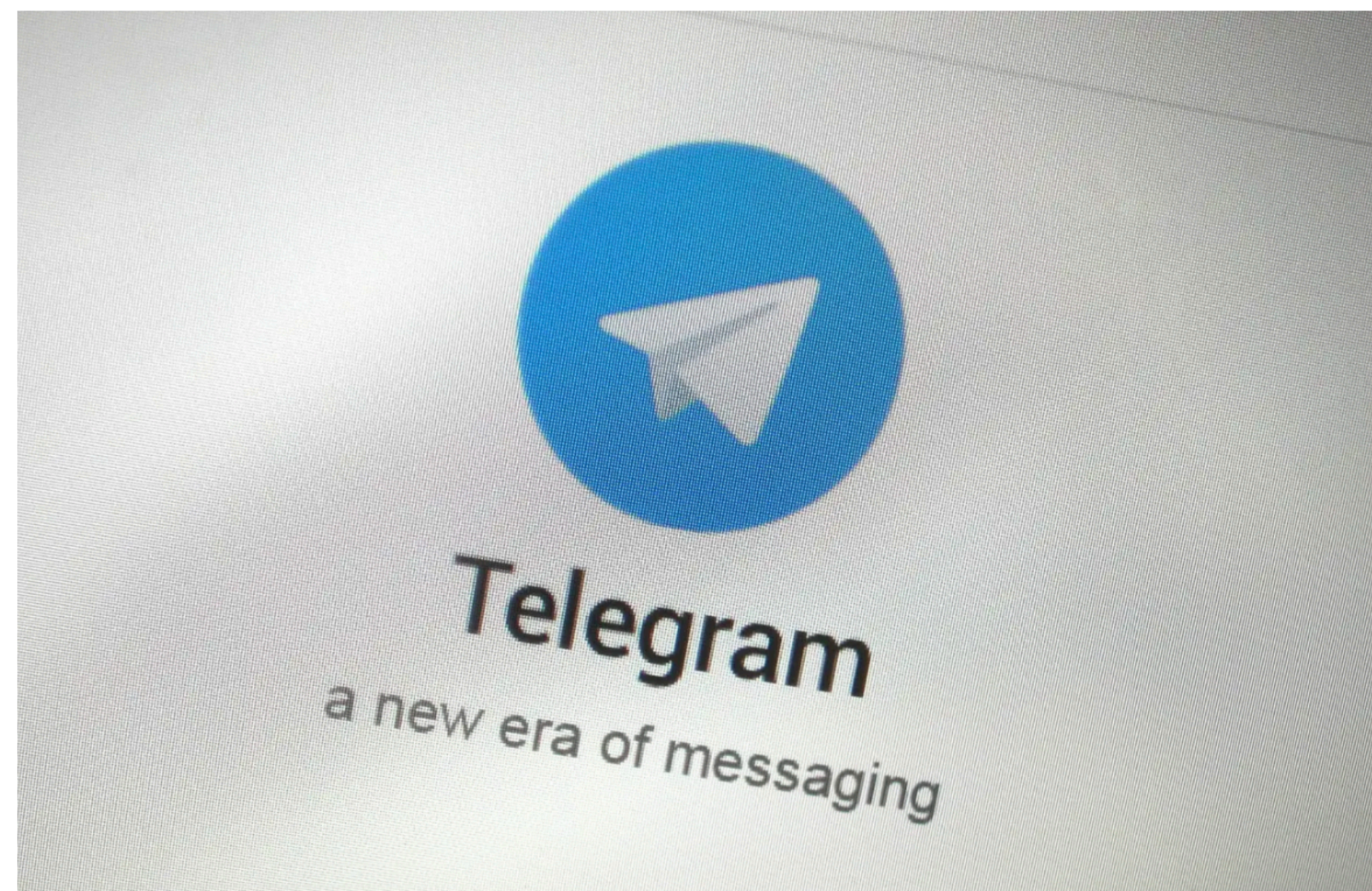


Remember when WhatsApp updated their privacy policy back in 2021?



Telegram hits 500 million active users following backlash over WhatsApp's changing privacy policy

Natasha Dailey Jan 12, 2021, 10:30 PM



FILE PHOTO: The Telegram messaging app logo is seen on a website in Singapore. Thomas White/Reuters Reuters

- Telegram hit the 500 million active user milestone in the days following backlash over WhatsApp's changing privacy policy.
- The messaging app announced it had 25 million downloads in the last 72 hours. Competitor Signal has also seen a boost in users in the last several days.
- WhatsApp has since clarified its new policy to say the privacy of messages with friends and family will not be affected, but it's still forcing users to share some account data with Facebook in order to continue using their accounts.



TECHNOLOGY NEWS JANUARY 11, 2021 / 2:00 PM / UPDATED A YEAR AGO

Signal sees meteoric rise in daily installs as people look for WhatsApp alternatives

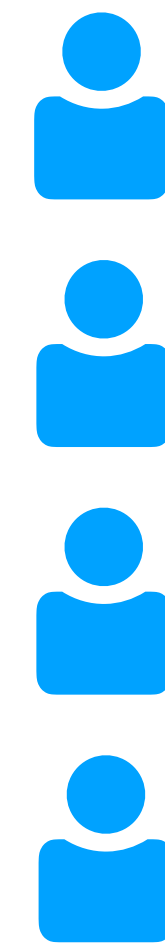
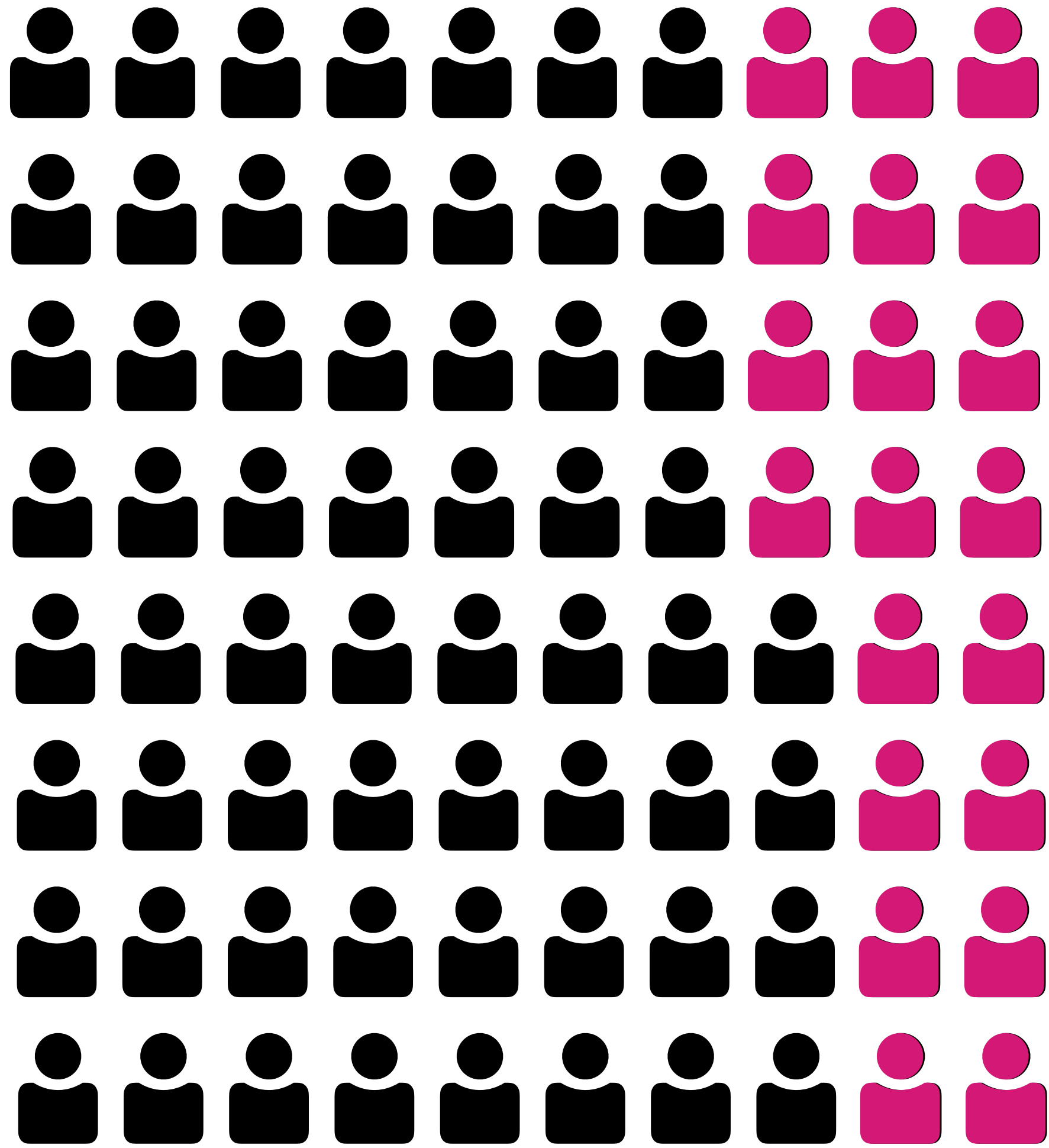
By Reuters Staff

2 MIN READ



(Reuters) - The number of new users installing messaging app Signal every day is on track to cross 1 million, putting it closer to levels seen by larger rival WhatsApp, following an update to the Facebook Inc-owned app's privacy policy.

About 810,000 users globally installed Signal on Sunday, nearly 18-fold compared with the download numbers on Jan. 6, the day WhatsApp



**We ran a survey with
1525 WhatsApp users
from UK, Spain,
Mexico and South
Africa**

**26% wanted to switch at
least partially to other apps**

**24% of those (6% overall)
managed to switch as much
as they wanted**

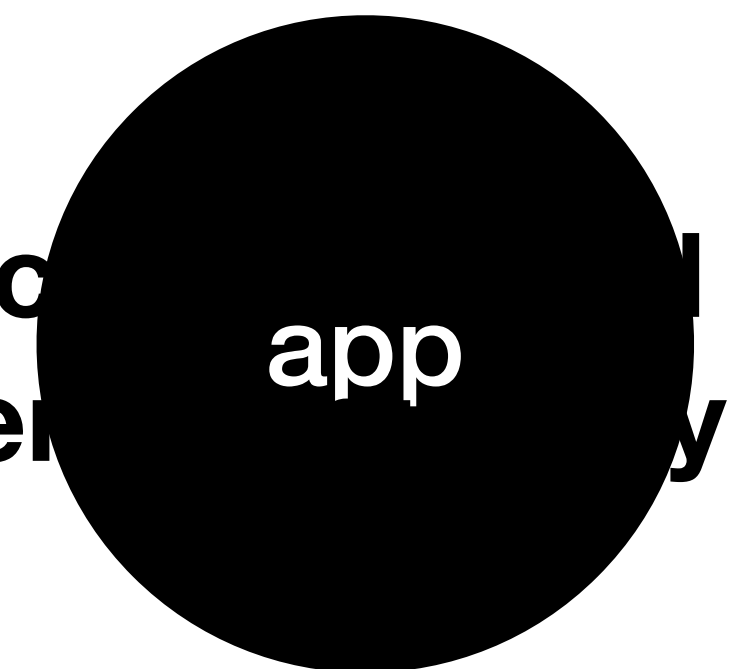
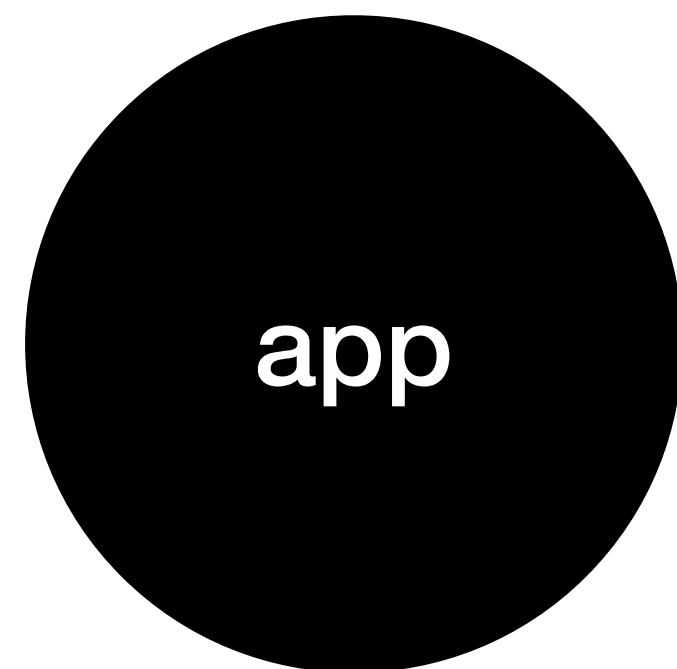
0,5%
(8 participants)
Uninstalled WhatsApp

Participants' Ecosystems of Messaging Apps

Median of 5 apps in total

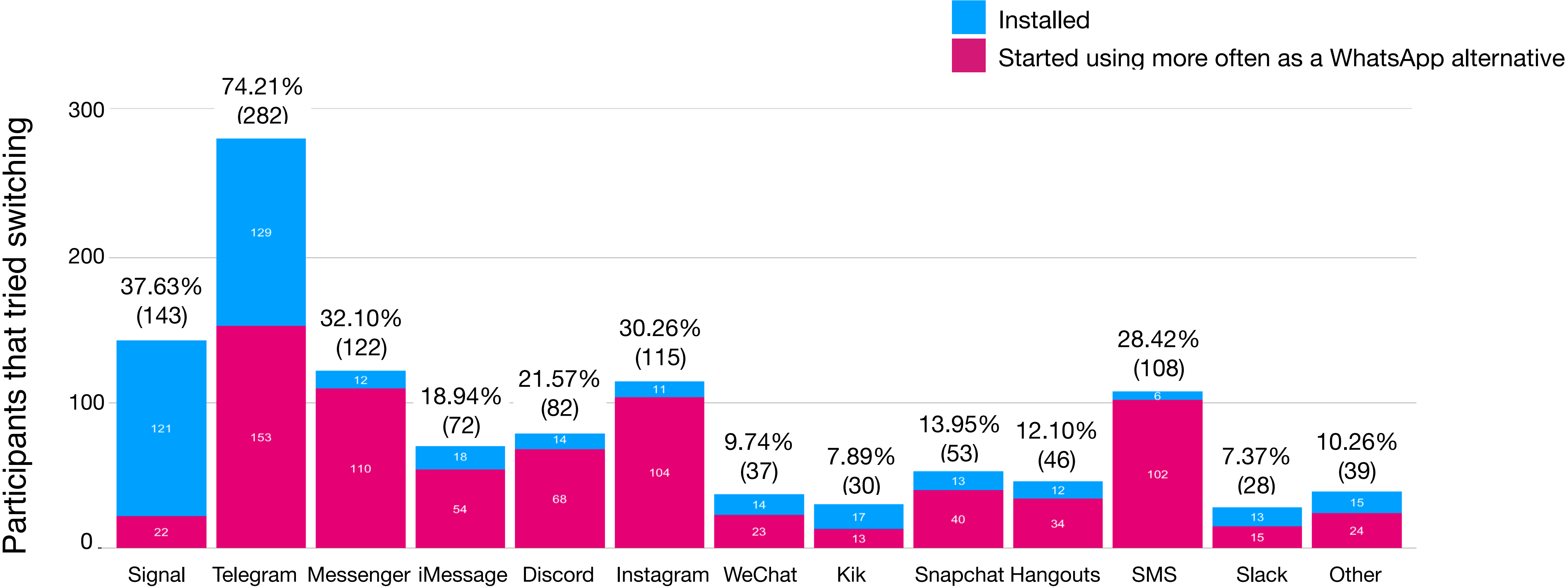
Median of 4 apps used regularly

Median of 1 "primary" app used very frequently



partic
op ver
y

Did users install new apps as an alternative to WhatsApp?



**The participants that managed to switch
switched to a median of 3 alternative apps**
by installing new ones or using existing ones more often

Barriers to moving to other apps

Network effects (75%)

"Having friends and family still stuck with WhatsApp is a challenge because I need to convince them to change"

"Some people don't want to move because "Nobody else uses it" "

"My job requires me to use WhatsApp as part of work groups"

"Having to leave groups (neighborhood watch, etc) that only exist on WhatsApp"

Social pressure to preserve
communication places

Difference in functionality between apps (42%)

"There are no other apps that do the same thing"

"Lack of app customisation"

"No stories in apps like telegram"

"I've used WhatsApp for years and it hasn't been easy to try and learn something new."

Switching apps can cause new
expression breakdowns

Barriers to moving to other apps

Privacy concerns (5%)

"The way that the app forces you to give permissions to grant read/write access to your phone's memory and personal files"

"Reading through the terms and conditions of the new apps"

Feeling a loss of control over where to communicate with whom (47%)

"Trying to move all your contacts to find out that most of your contacts are not moving to the same app you are using"

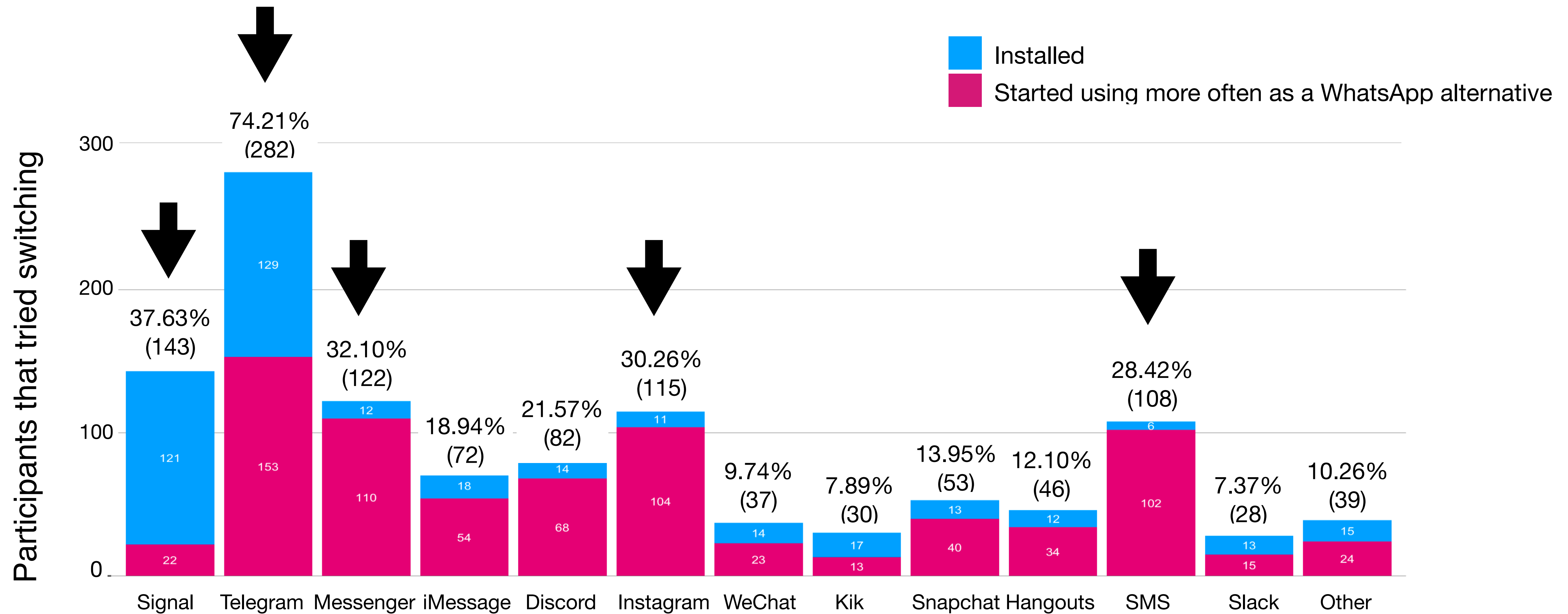
"Difficult to know that other contacts were using the new app"

"Trying to maintain conversations in different Apps can be confusing"

"Messaging a friend using sms and they respond via whatsapp"

Switching apps can disrupt existing communication places

Apps tried as alternatives to WhatsApp



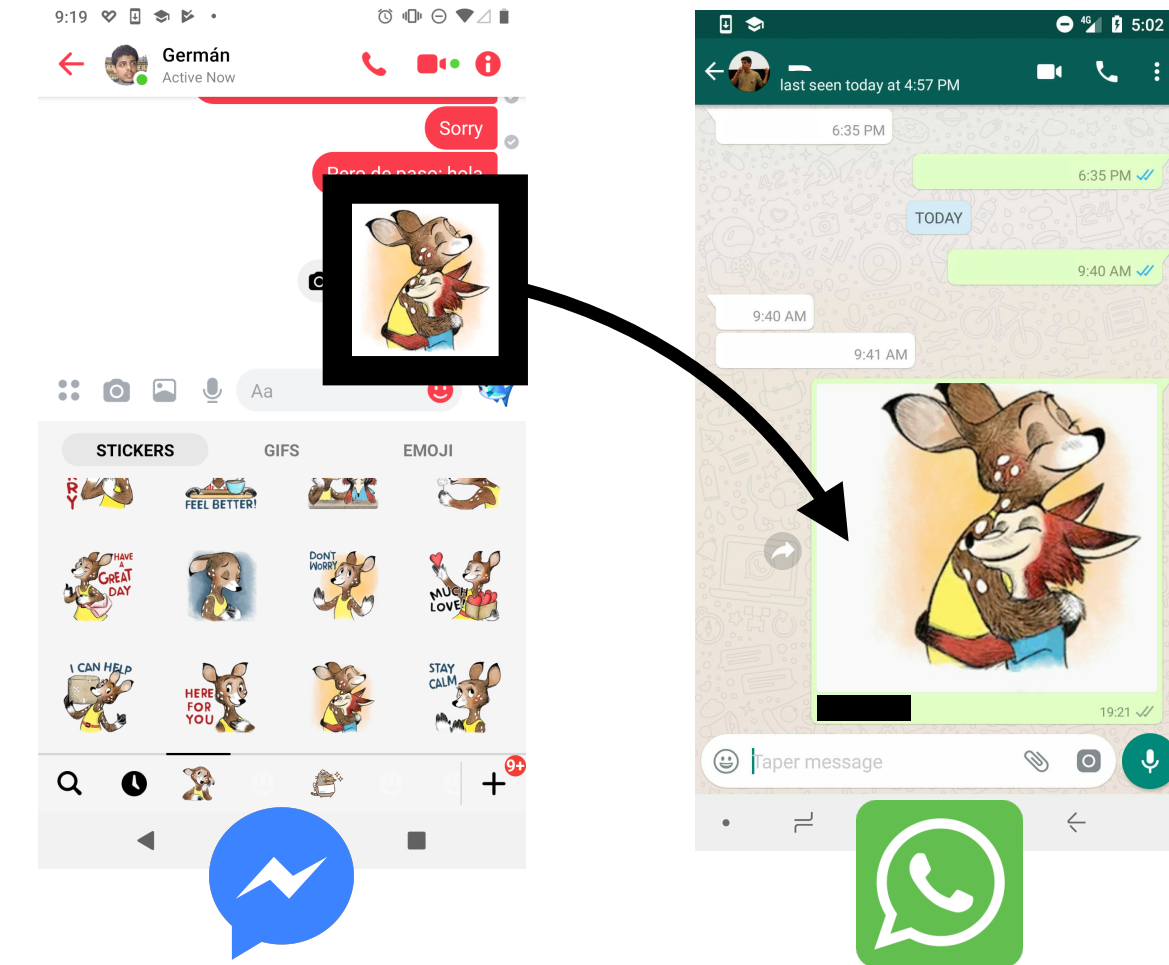
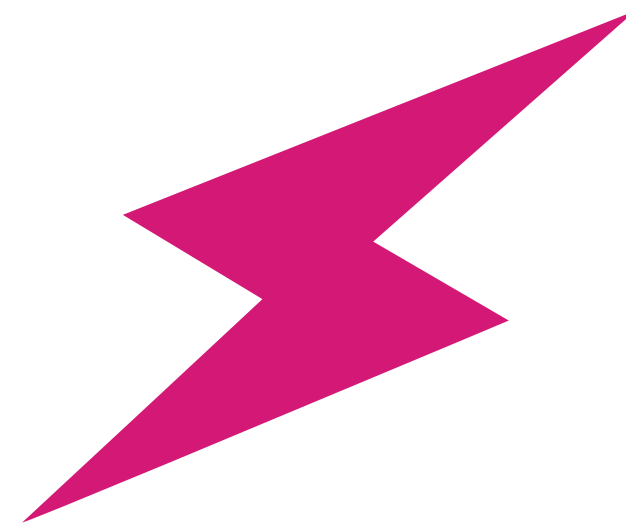
Dataset available!

The Walled Garden Dilemma

How can we design new communication tools that let users preserve their communication places while preventing expression breakdowns?



Communication places



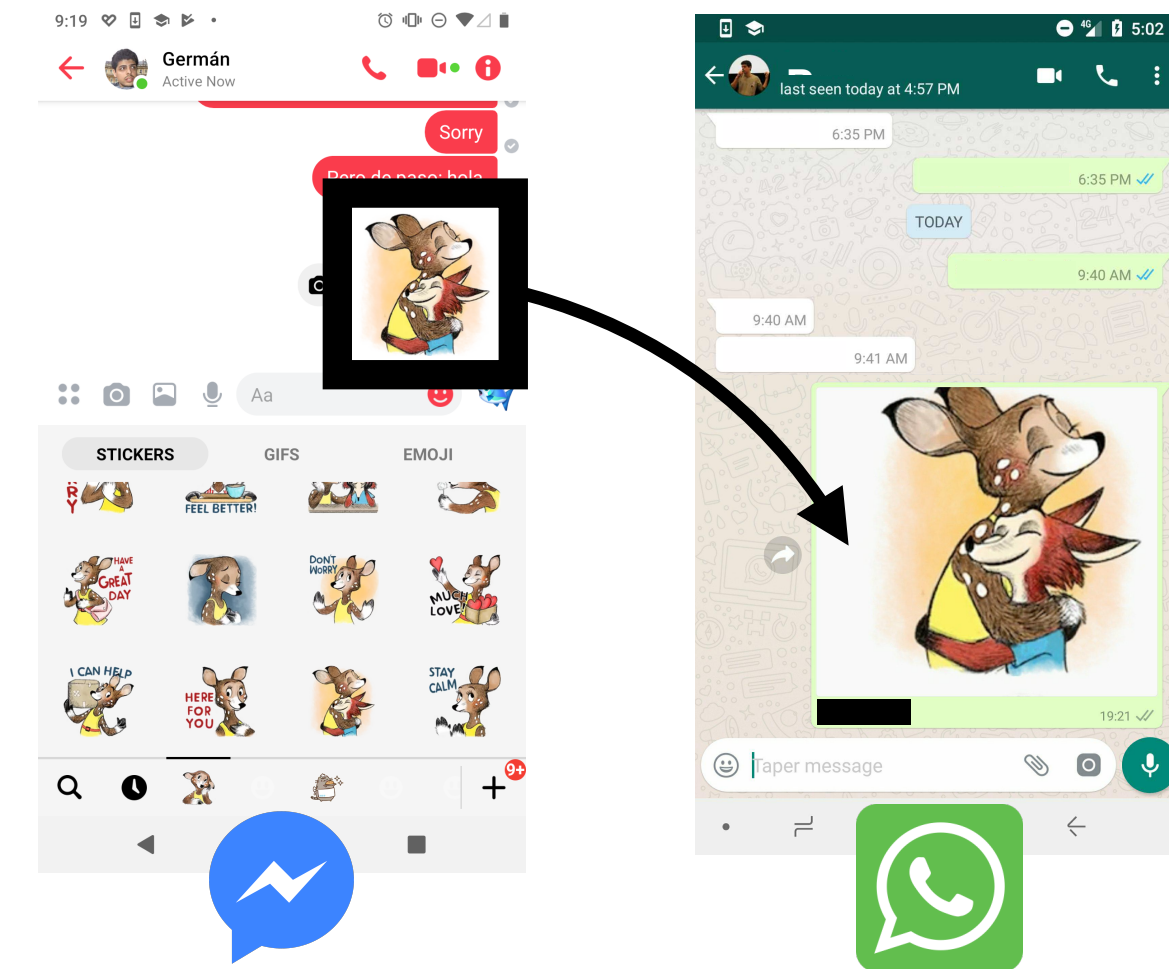
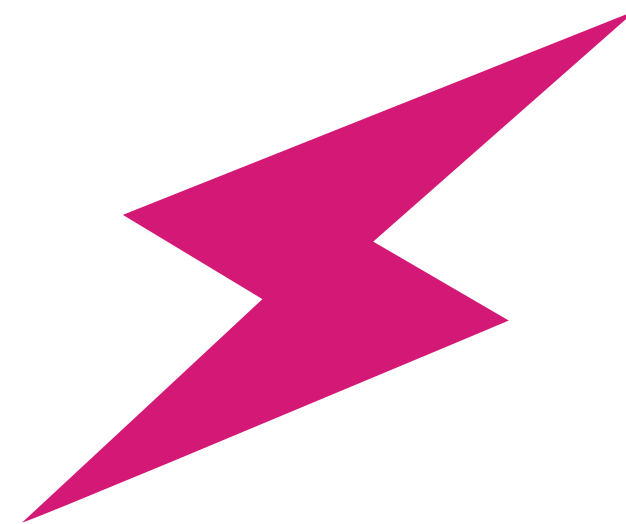
Expression Breakdowns

The Walled Garden Dilemma

How should we design for messaging interoperability so that users keep control over their social boundaries and avoid expression breakdowns?



Communication places

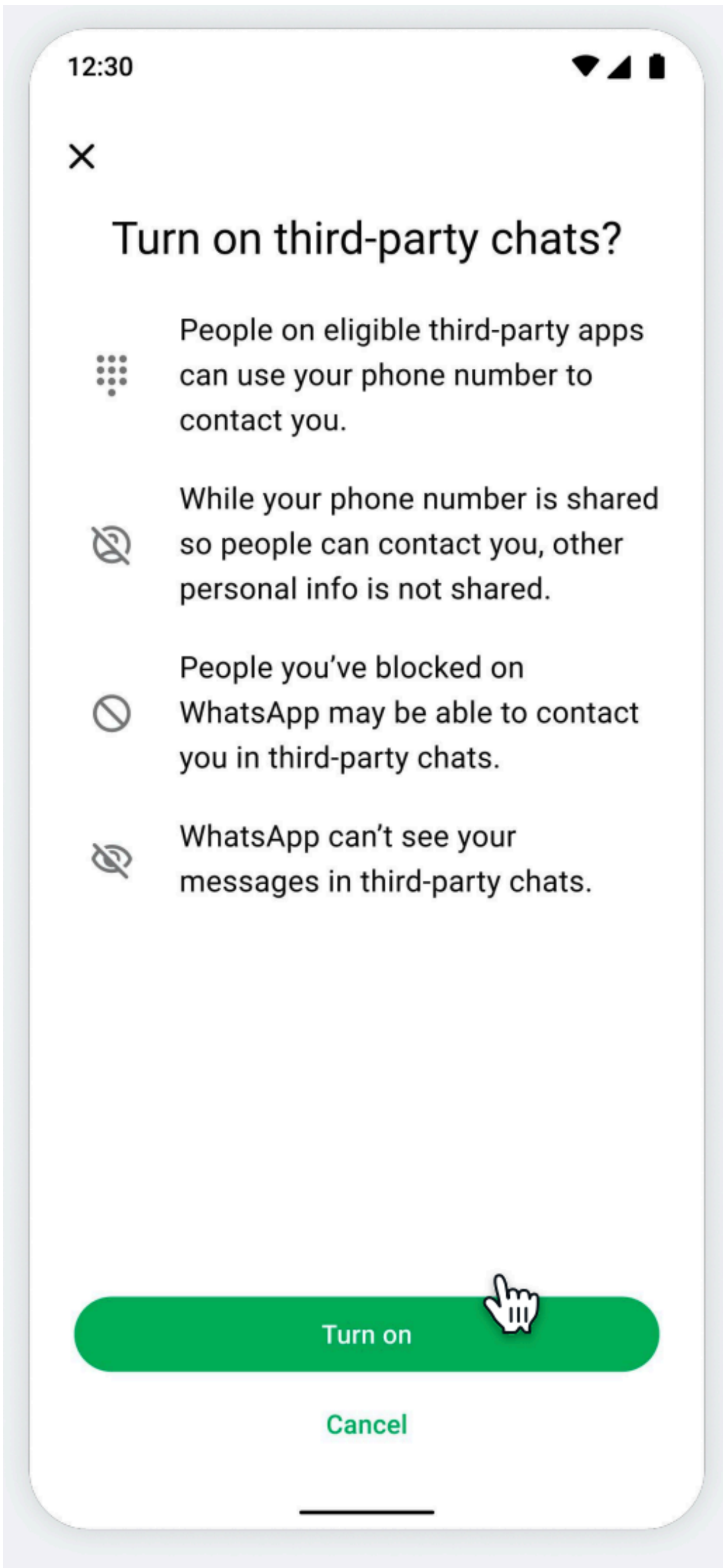


Expression Breakdowns

1) In an interoperable world, users should still have control over their social boundaries

**Interoperability could let users chat where they want with whom they want,
i.e., have ideal communication places**

**... but, it could also take away their control over who's allowed in or kept out
of a particular platform**



WhatsApp's design for third party chats.

Should third-party chats be enabled by default?

Having third-party chats ON by default could raise awareness of the availability of interoperable chats and increase adoption

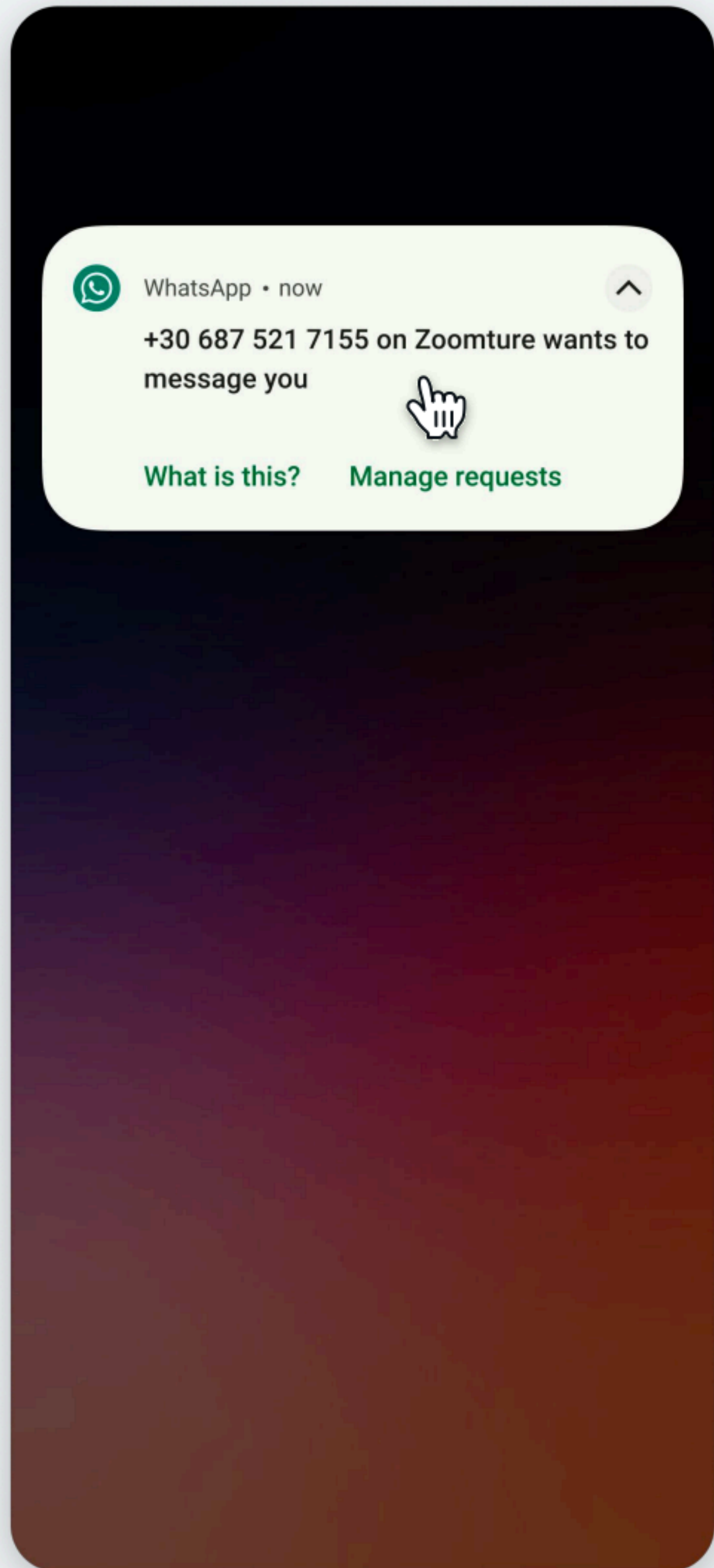
... but it could also disrupt users' communication place, causing a negative association between interoperability and a sense of lack of control over where to communicate with whom



WhatsApp's design for third party chats.

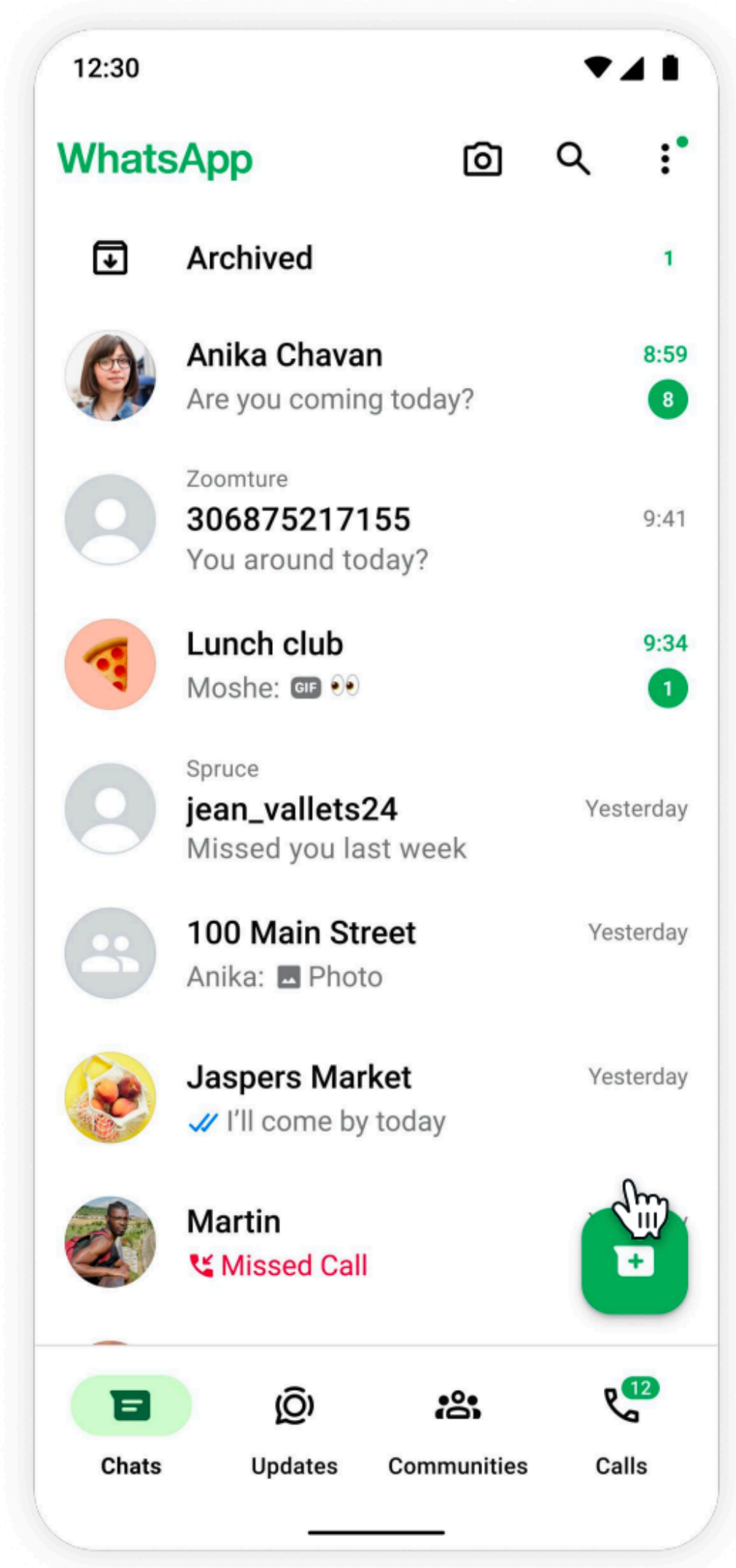
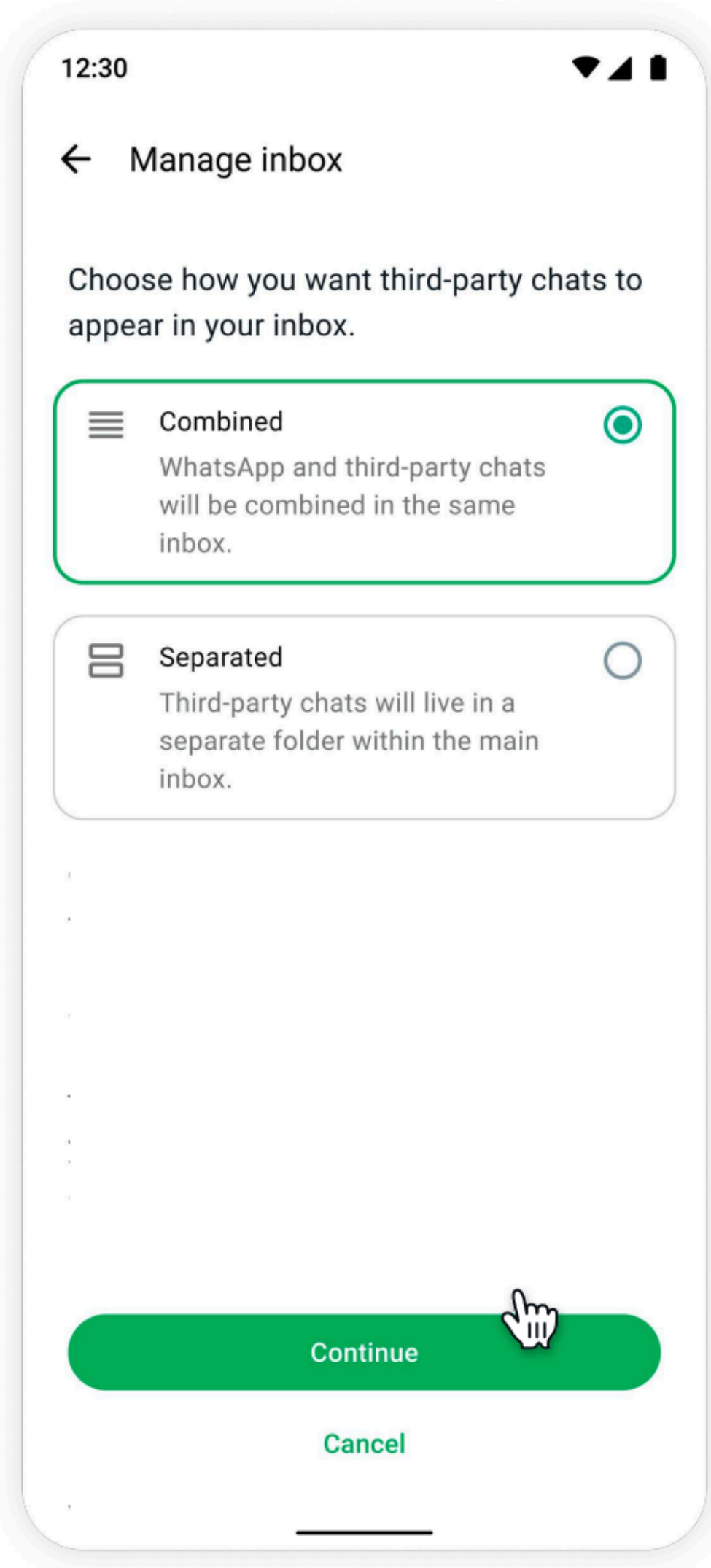
Should third-party chats be enabled by default?

Even if users first receive a “message request”, this puts them in the position of having to *be rude* and say no!





WhatsApp's design for third party chats.



Should third-party chats and local chats be combined or separated?

Depends!

Who are the people in the third party apps?
Can **some** be combined, and **some** separate?
Will **status indicators** apply the same to local chats and third party chats, or will they have different settings?

2) Interoperability protocol specs should minimize expression breakdowns



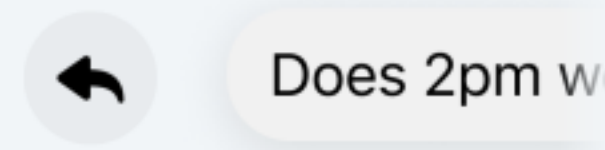
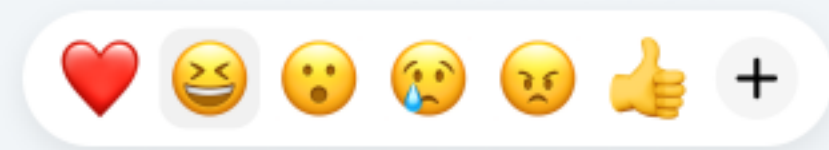
[Home](#) > [Strategy](#) > [Priorities 2019-2024](#) > [A Europe fit for the digital age](#) > [The Digital Markets Act: ensuring fair and open digital markets](#)

The Digital Markets Act: ensuring fair and open digital markets

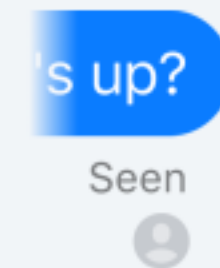
Interoperability requirements for messaging apps:
text messaging, sharing of images, voice messages, videos and
other attached files

Is this functionality enough to break network effects?

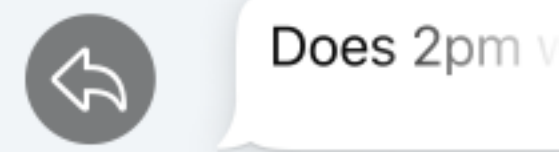
Messenger



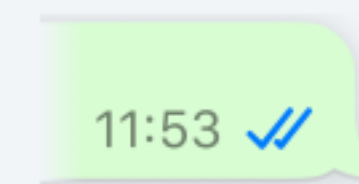
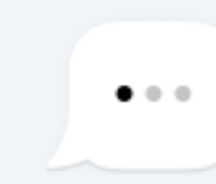
Does 2pm w



WhatsApp



Does 2pm w



Reactions

Replies

Typing indicators

Read receipts

3) Users want privacy and security—yes. But not at the cost of their established communication habits.

**New (interoperable) apps should of course be user friendly,
fast and secure**

... but, the main purpose of a communication app is to communicate, so lack of support of existing communication habits may pose great barriers to adoption

**Will the Digital Markets Act effectively
counter network effects?**

**Will the Digital Markets Act effectively
counter network effects?**

**Hopefully. But if users lose control over where to
communicate with whom, and if the interoperability protocols
are too restrictive in terms of expression,
we risk seeing little change.**

Thanks for listening :D
Questions? Ideas? :)

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