RMIT University | June 2024

# Creativity as Survival

## Mobile Networked Practices in Hybrid Spaces



**Adriana de Souza e Silva**
Professor of Communication | NC State University → Northeastern University (USA)

# Research Background

## Networked Urban Mobilities + Mobile Communication



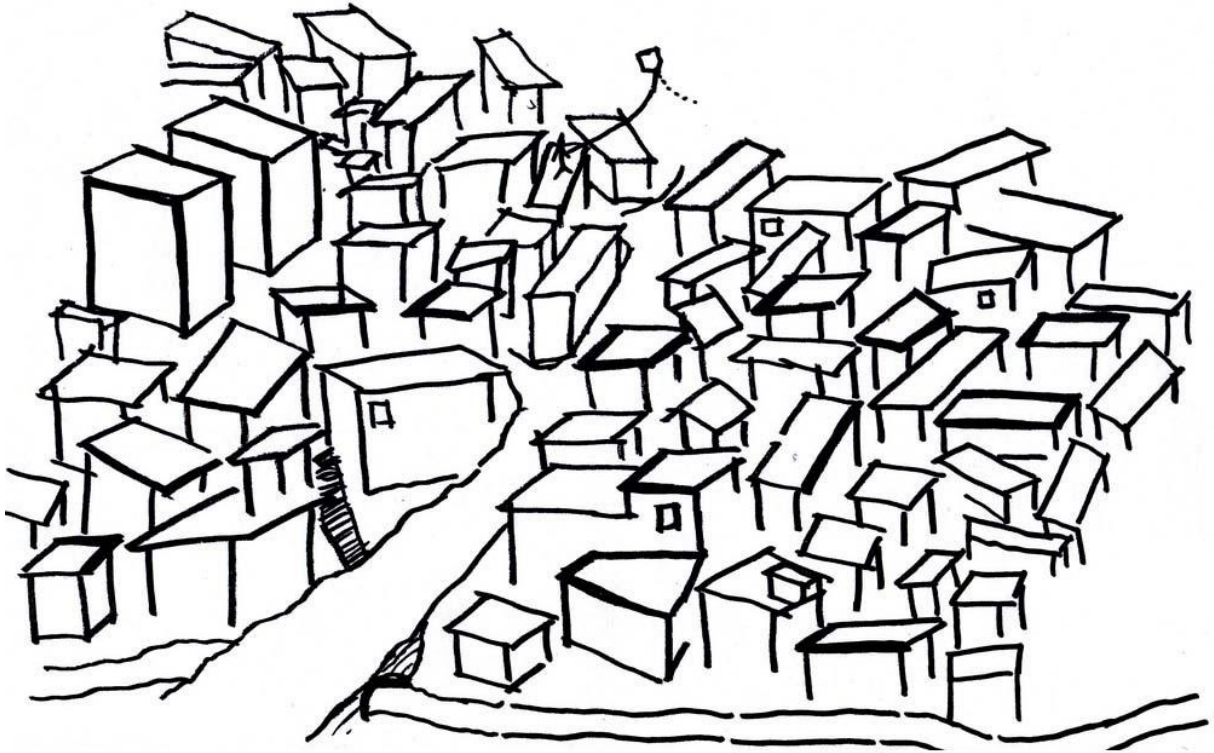
# Research Background

## Networked Urban Mobilities + Mobile Communication

Specific *foci*:

- mobile technology access,
- mobility justice,
- power asymmetries, and
- socio-economic inequalities

within marginalized communities, particularly in the Global South.



# Research Background

How do mobile technologies (e.g. such as smartphones) and the infrastructures connected to them shape people's interactions with public (hybrid) spaces and support new forms of sociability and creativity?

# Methods

How do location-based mobile media allow people to more deeply connect to the cities in which they live and to others nearby?

# Who am I?

**Degrees**
Ph.D in Communication and Culture (UFRJ, Brazil)
Masters in Communication and Image Technology (UFRJ, Brazil)
B.A. in Social Communication (Journalism) (UFRJ, Brazil)

**Professional Experience**
Design, Media Arts, Education

**Sub-Fields**
Mobile Communication, Mobilities, Internet/Digital Media Studies

**Collaborations**
Computer Science, Design, Sociology, Urban Studies, Geography

# Who am I?

## Design: Interface of contemporaneity




VIP Exame Magazine (1997)




Master's Thesis (1999)

# Who am I?

**Dissertation**

From spaces **MUDs** as (virtual)

to (hybrid) spaces as



Habbo Hotel




Pokémon Go Fest

# Who am I?

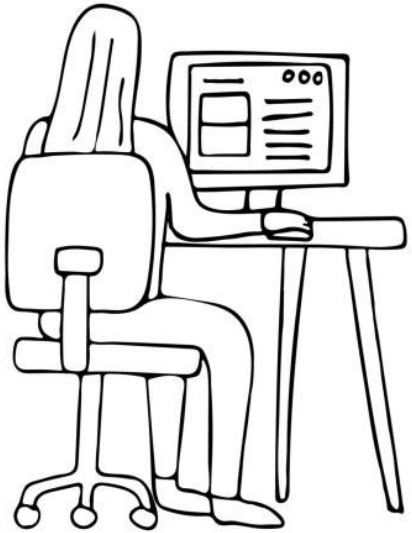
Cyberspace → Physical + Digital (Hybrid) Space





# Hybrid Spaces

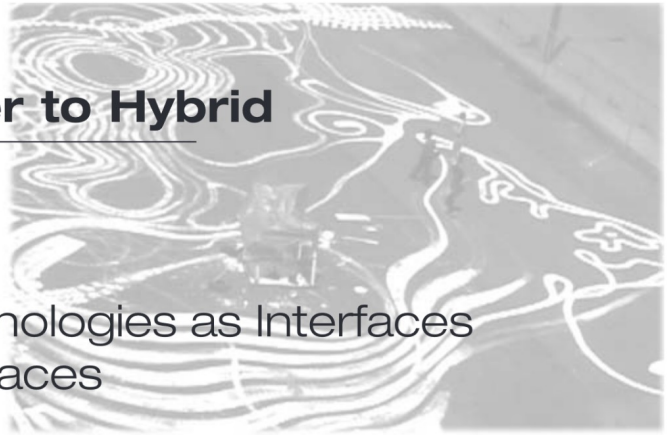
## Internet Studies, Mobile Communication





(de Souza e Silva, 2006)

# Hybrid Spaces



## From Cyber to Hybrid

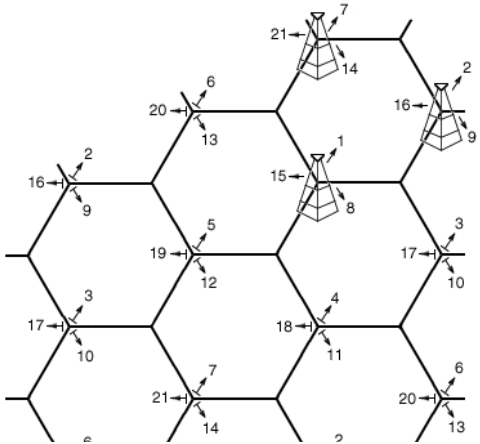
Mobile Technologies as Interfaces of Hybrid Spaces

**Adriana de Souza e Silva**[1]
North Carolina State University

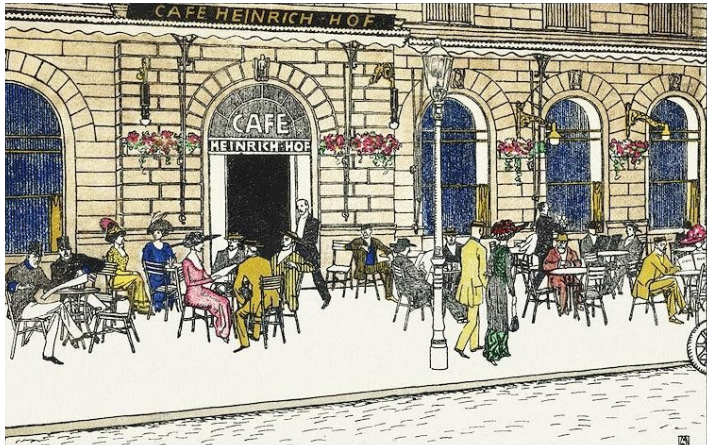
**From cyber** to **hybrid**: Mobile technologies as interfaces of **hybrid** spaces
A De Souza e Silva - Space and culture, 2006 - journals.sagepub.com
… This article defines **hybrid** … **from** static to mobile interfaces brings social networks into physical spaces. Finally, it explores how urban spaces are reconfigured when they become **hybrid** …
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# Hybrid Spaces

## Physical + Digital



networked




social



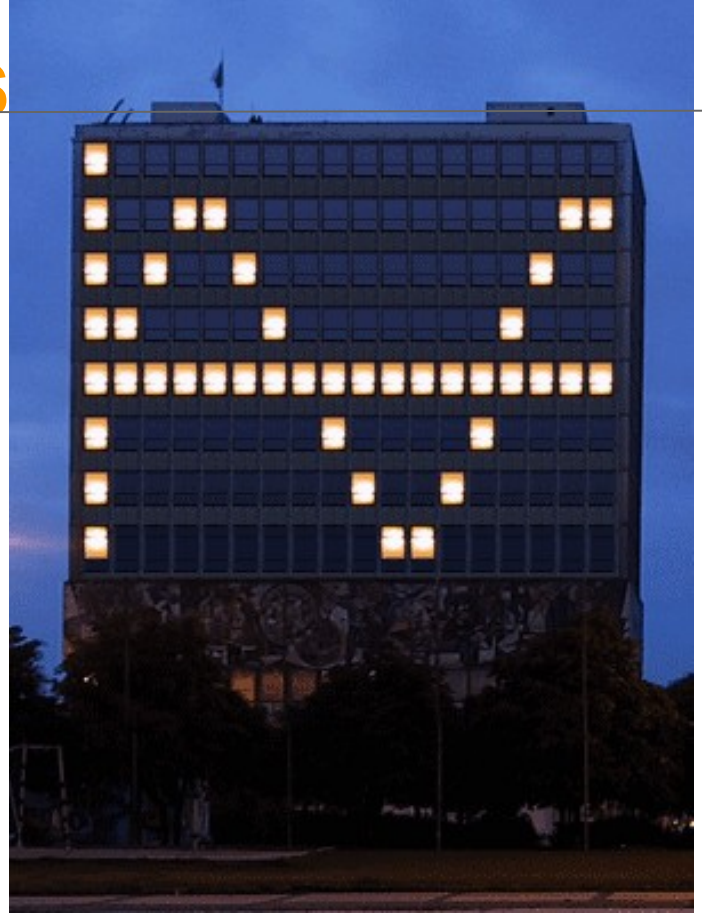
mobile

(de Souza e Silva, 2006)

# Hybrid Spaces




Mogi
(Newt Games, 2003 Japan)



Blinkenlights
(Chaos Computer Club, 2001 Germany)



Can You See Me Now?
(Blast Theory, 2001 London)




Fig. 1. *Botfighters* - SMS version (2001-2004). © It's Alive!

Botfighters
(It's Alive!, 2001 Sweden)

# Things changed…



# ...but hybrid spaces still matter.

## Revisiting the technological, geographical and social boundaries

de Souza e Silva & Campbell, 2023

- Understanding our contemporary sociotechnical landscape through a hybrid space framework may be transformative to how scholars study our society, technologies, and mobilities.

# ...but hybrid spaces still matter.

## Revisiting the technological, geographical and social boundaries

de Souza e Silva & Campbell, 2023

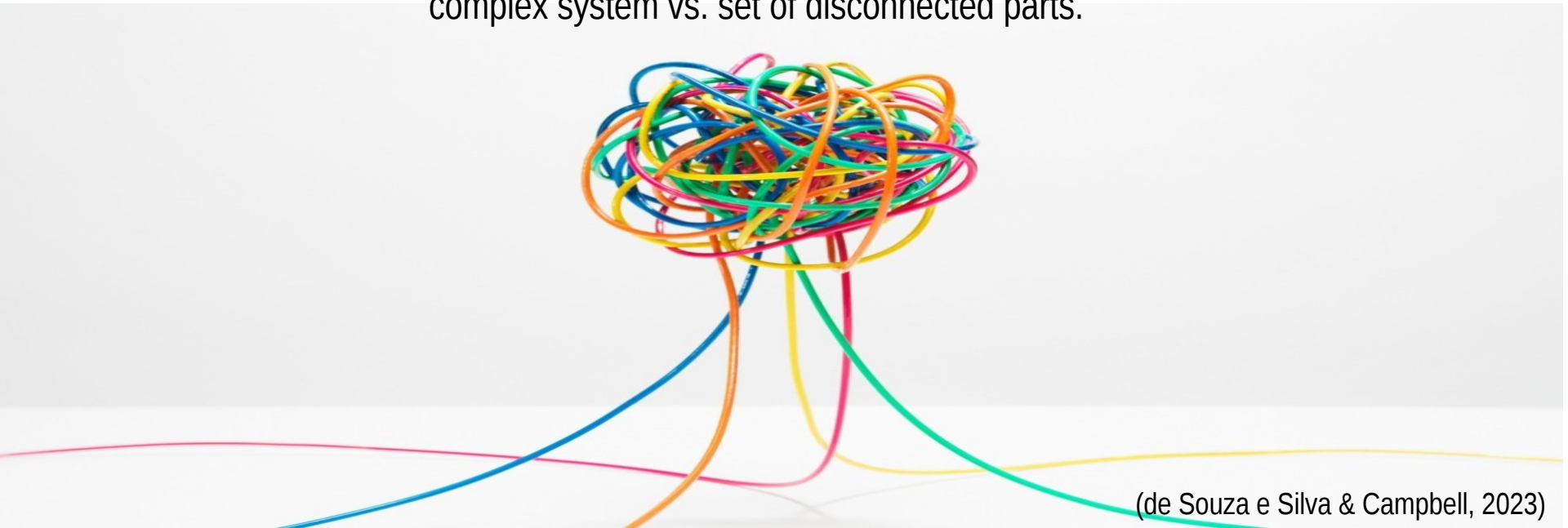
- Understanding our contemporary sociotechnical landscape through a hybrid space lens may be transformative to how scholars study our society, technologies, and mobilities.

- Hybrid space as more than a concept: a theoretical framework to inform research across a variety of humanities and social science areas (+ engineering, design, education).

# ...but hybrid spaces still matter.

## Revisiting the technological, geographical and social boundaries

**Technology** use, inhabited **spaces**, **communication/sociability** with others = complex system vs. set of disconnected parts.



(de Souza e Silva & Campbell, 2023)

# Expanding Hybrid Spaces

## 1. The Technologies of Hybrid Spaces



Mobile phones → Embedded Infrastructures

Hybrid spaces are not created by technologies themselves, but rather through the connectivity they support.








(de Souza e Silva & Campbell, 2023)

# Expanding Hybrid Spaces

## 2. The Geographies of Hybrid Spaces

Urban Global North → Global South, Rural, Bounded







(de Souza e Silva & Campbell, 2023)

# Expanding Hybrid Spaces

## 3. The Sociability of Hybrid Spaces

Personal Social Networks

↓

Institutional Structure










(Ling, 2012)

# The Politics Hybrid Spaces

## Power Asymmetries

(1) people's different levels of personal access to mobile technologies,
(2) people's level of awareness about whether they are in fact in a hybrid spaces,
(3) people's agency to deploy and access the networked infrastructures that configure hybrid spaces and extract data from us.








(Andrejevic, 2008; Sloterdjk, 2005; Cresswell, 2010)

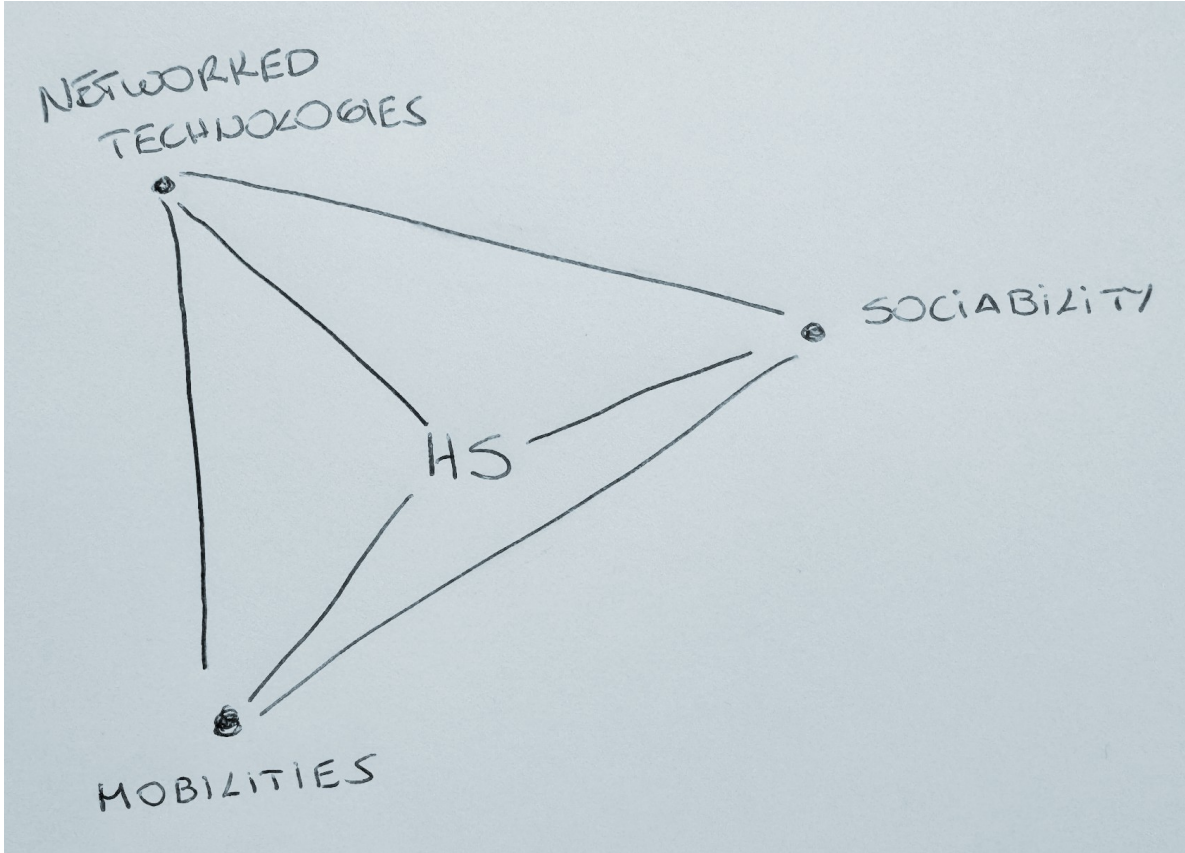
# The Politics Hybrid Spaces

## Power Asymmetries

Digital enclosures (Andrejevic, 2013)

↓

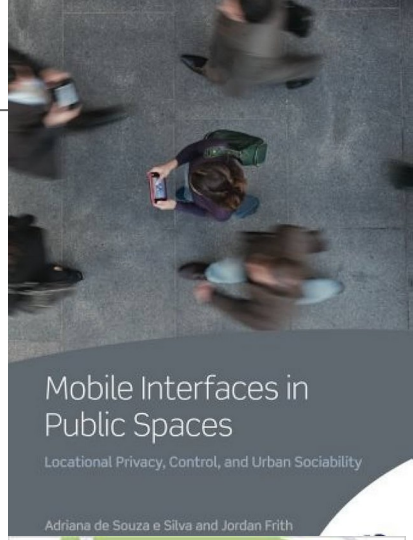
Hybrid Space enclosure

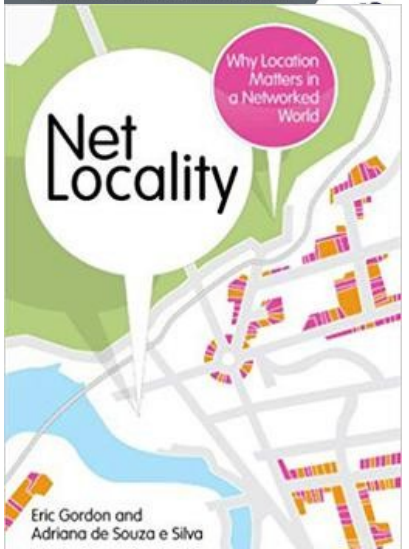


# Implications: RQ

1/5

How do mobile locative technologies (e.g., smartphone apps) connected to urban digital infrastructures (e.g., sensors, intelligent transport systems, surveillance infrastructures, and artificial intelligent systems) shape urban mobility, sociability, and people's interactions with public spaces by both collecting data from us, and also allowing people to access data about their environment?



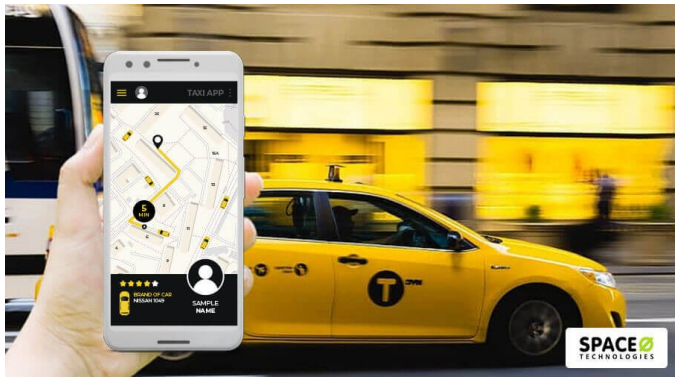



# Implications: RQ

2/5

How do mobility systems, such as micromobility (e.g., electric bikes and scooters), ride-sharing vehicles (e.g., taxis and Uber), and public transportation (e.g., buses and subway) are reconfigured by location-based media, AI systems and data collection mechanisms?



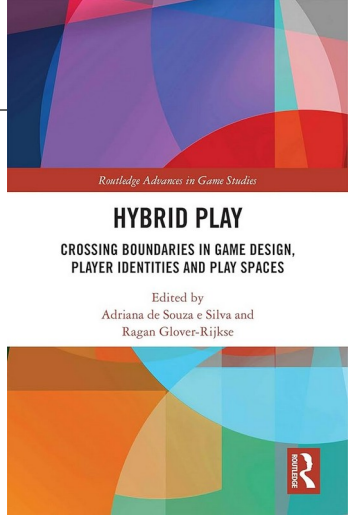






(de Souza e Silva, Damasceno, Bueno & Grandinetti, 2020; de Souza e Silva, Damasceno, & Bueno, 2019 )

# Implications: RQ




3/5

How do playful activities, like mobile games and mobile media art, are integrated into and shape urban mobility?




(de Souza e Silva, Glover-Rijkse, Njathi, & de Cunto Bueno, 2021; de Souza e Silva, Glover-Rijkse, Njathi, & de Cunto Bueno, 2023)

# Research Questions



4/5

How do micromobility, ride-sharing systems, and mobile technology use in Global South mega-cities are embedded into systemic uneven mobilities and mobility injustice as a legacy of the long histories of socio-economic inequalities, power asymmetries, and racism that these post-colonial countries experience?

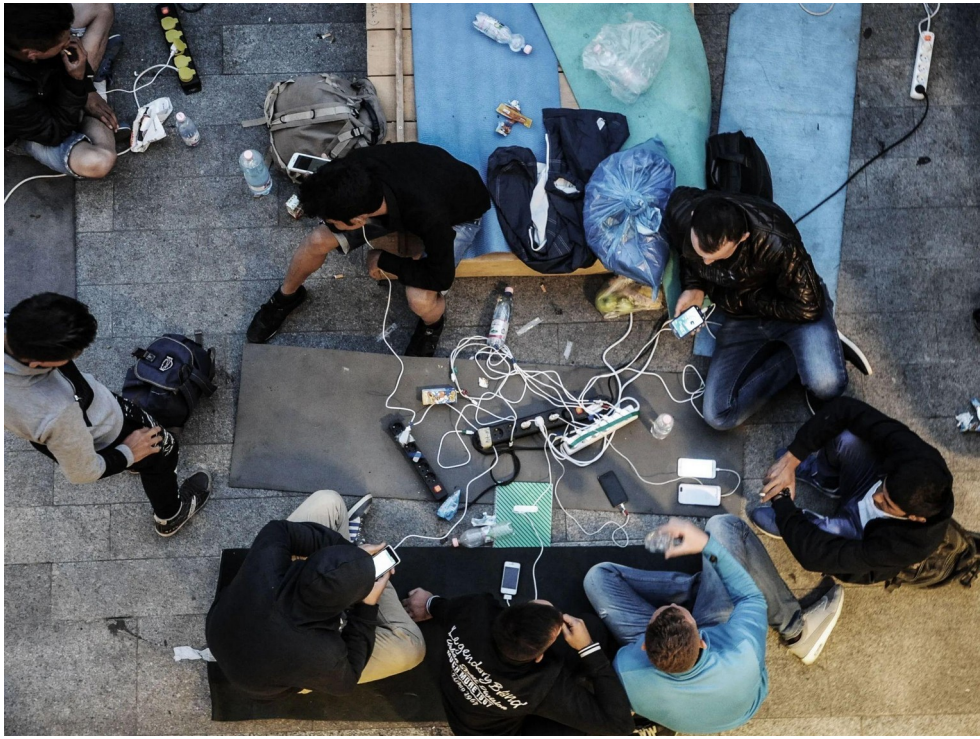


(de Souza e Silva, forthcoming; de Souza e Silva & Glover-Rijkse, 2022; de Souza e Silva, Sutko, Salis, & de Souza e Silva, 2011)

# Research Questions

5/5

How do people who live in precarious situations, such as forced migrants and slum dwellers, engage with mobile and networked technologies in creative ways?



(de Souza e Silva & Xiong-Gum, 2021)

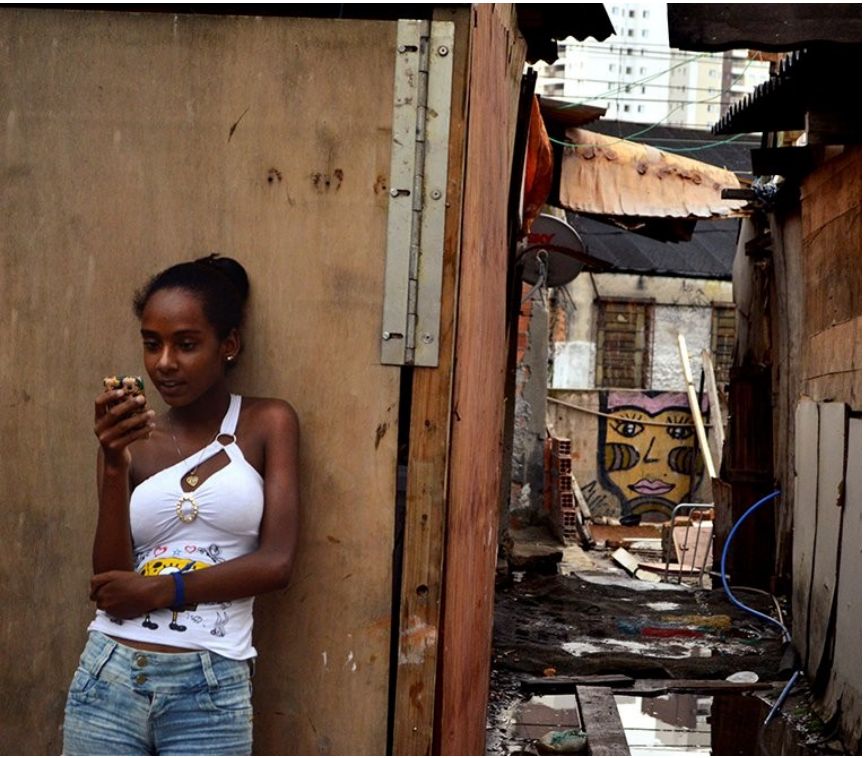
# Mobile Networked Creativity

A practice that arises from the networked and recursive relationships that involve mobile technologies and displaced / emplaced communities, in situations of hardship.



(de Souza e Silva & Xiong-Gum, 2021)

# Antecedents





Adriana: Favelas in Rio de Janeiro (Brazil)

# Antecedents





Mai: Refugees and forced migrants experience of borders in hybrid spaces

# What is Creativity?



# What is Creativity?

Rooted in Western philosophy / thought

1. Artistic practice
2. Individual process
3. Innovation

# Creativity as Artistic Practice

First used to define Shakespeare's work (1875)
…. Later on used to describe all forms of artistic creations.

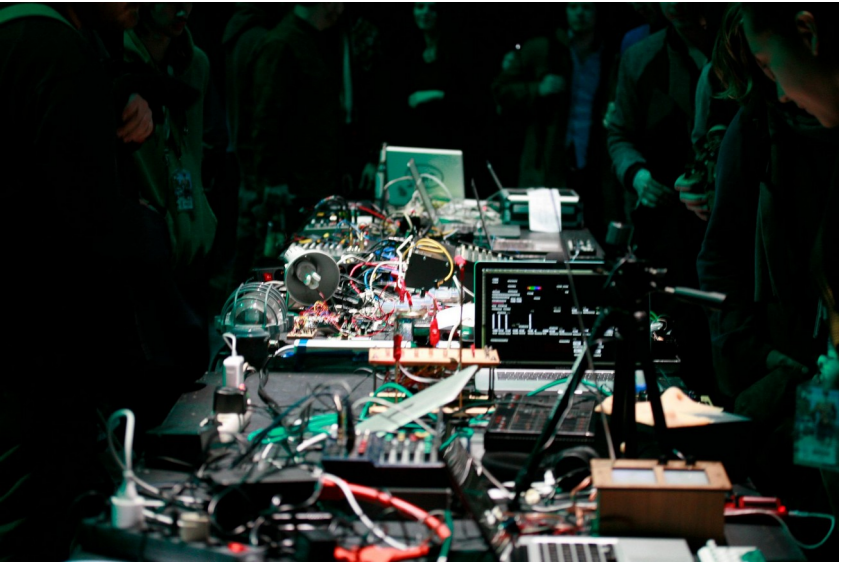


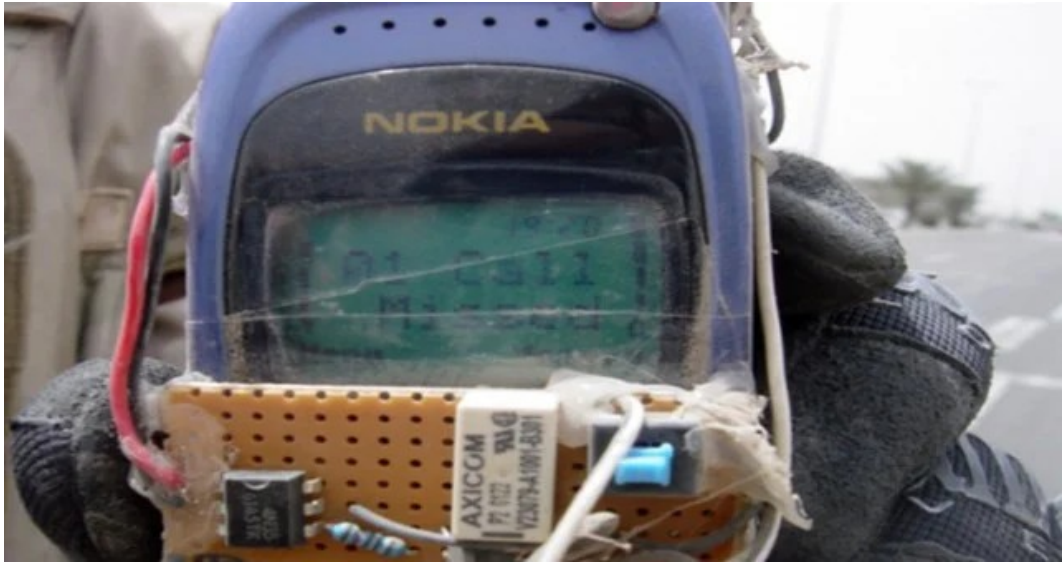


(Creativity Studies literature: Weiner, 2000; Gahan, Minahan, & Glow, 2007)

# Creativity as Artistic Practice

- What about non-artistic practices?
- What about power dynamics?
- Is creativity always “good”?






(Glăveanu et al., 2019; Runco, 2007; Sternberg, 2018)

# Creativity as Individual Process

Genetically inherited.
Connected with the idea Greek idea of the genius.








(Amabile, 1996; Shalley, Zhou, & Oldham, 2004; Runco & Richards, 1997; Weiner, 2004)

# Creativity as Individual Process

It is easier to measure aesthetic creativity in an individual (IQ, memory, attention tests) than to understand when a group of slum dwellers or refugees are “creative.”




(Amabile, 1996; Shalley, Zhou, & Oldham, 2004; Runco & Richards, 1997; Abbate, 2000; Hafner & Lyon, 1998; Johnson, 2010)

# Creativity as Innovation

Individuals without innate talents can be coaxed into being creative.

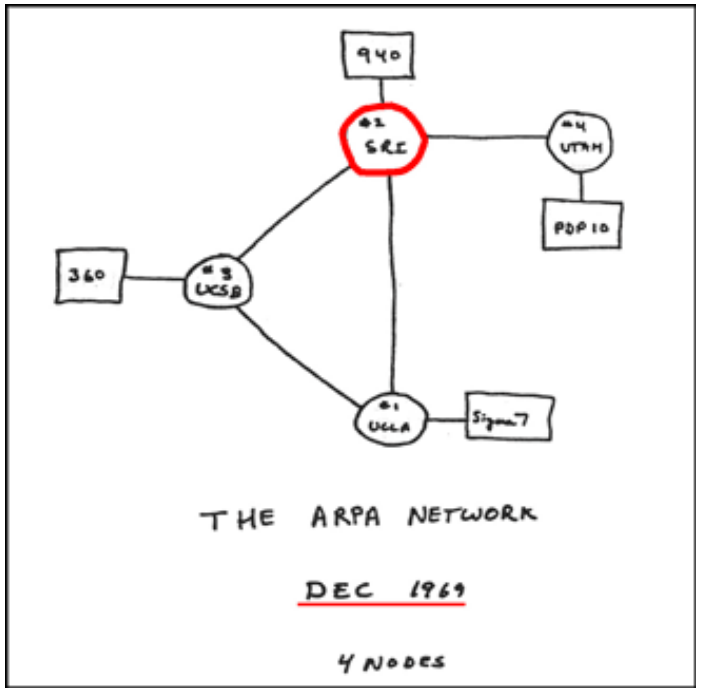


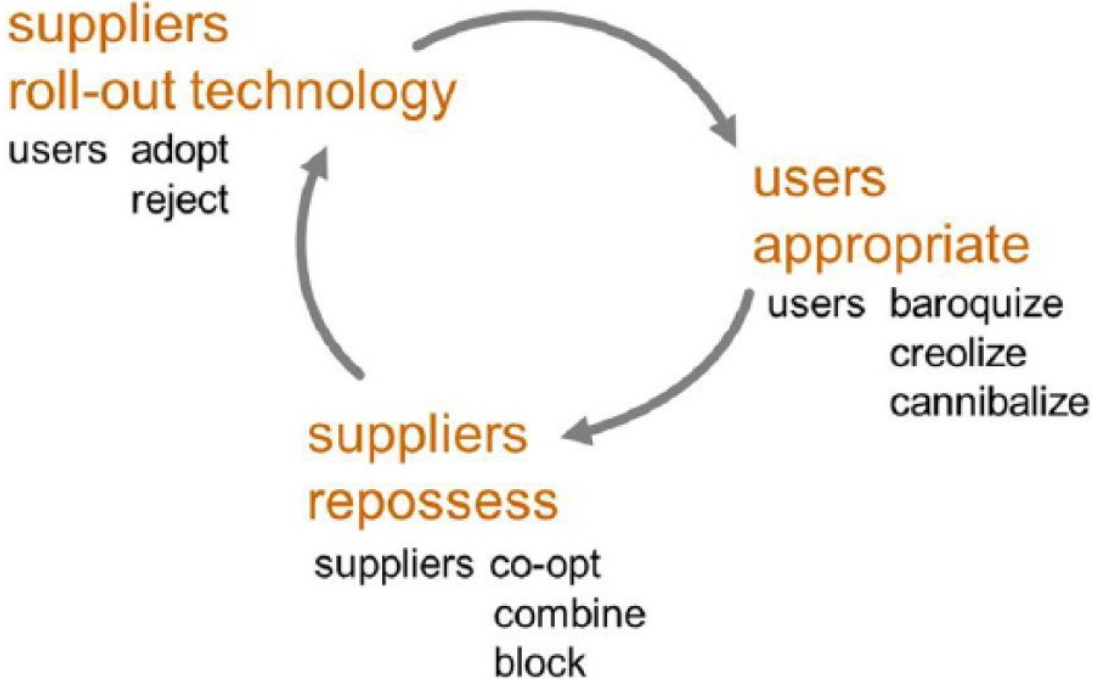

Development of ideas about products, practices, services or procedures that are novel and potentially useful to the organization.

(Steiber & Alänge, 2013; Anderson, Potočnik, & Zhou, 2014; Amabile, 1996; Mumford & Gustafson, 1988; Shalley et al., 2004)

# Diffusion, Adoption, and Appropriation

## Communication, STS, Design




(Isaacson, 2014; Aricat & Ling, 2018; Bar et al., 2016; de Souza e Silva et al., 2011)

# Diffusion, Adoption, and Appropriation

## Communication, STS, Design

Individuals → Groups

- Techno-vernacular creativity
- co-creation
- maker culture



(Cizek & Uricchio, 2022; Gaskins, 2021; Ratto, 2002)

# Diffusion, Adoption, and Appropriation

## Anthropology, Sociology

Bricolage, gambiarra/jeitinho, jugaad








(Levi-Strauss, 1962; daMatta, 1979; Boufleur, 2013; Rai, 2019 )

# Mobile Networked Creativity

## Spatial | Networked | Mobile

- Emergent / ongoing
- Serendipitous
- Relational
- Process (not a final product)
- Power and politics
- Marginalized communities





# Mobile Networked Creativity

## Networked / Complex

### Mobile

dynamic / technologies

### Networked

social networks / digital networks

### Spatial

contextual

People connected **through** technologies in space → people connected **with** technologies and spaces

CREATIVITY

# Mobile Networked Creativity

Occurring between people and technology, Mobile Networked Creativity (MNC) highlights how unplanned uses of mobile technologies reveal creative practices, especially where people have limited access to technologies.






MNC Video English

Published on Jun 07, 2022 SHOW DETAILS

# Pedala Queimados

Pedala Queimados is an bike sharing system in the municipality of Queimados, Rio de Janeiro (Brazil), where community volunteers build bamboo bikes and rent them via WhatsApp

*by Kelsey Dufresne*

Published on Jun 07, 2022

last released 1 year ago



## Description

Inspired by Ricardo Martins's self-made bamboo bike and journey of biking across all of South America, *Pedala Queimados* (or "Cycle Queimados") was an initative founded by Carlos Leandro de Oliveira to serve the Queimados (Baixada Fluminense) community in Brazil.

*Pedala Queimados*'s mission is:

> *To stimulate the use of cycling as a means of transportation, democratize land use, integrate movements fighting for active and sustainable transit, and debate and propose public policies to improve the quality of urban mobility.*



Image from *RioOnWatch*.



Published on Dec 09, 2022



# Habal-Habal in the Philippines

The habal-habal is one of the most popular ways to get around in Mindanao, Philippines

*by Adriana de Souza e Silva*

last released
11 months ago

## Description

In Southern parts of the Philippines, one of the most popular modes of transportation is the *habal-habal*, a motorcycle—usually a Honda TMX 155—that has been modified to carry the weight of extra passengers and cargo. According to the Vintagent, the typical modifications on a habal-habal consist of...

> "a wider bigger rear tire, a fabricated seat extension that hangs a meter out past the end of the bike, and a pair of foot rails for the passengers, that can also be used for tying on cargo."

The habal-habal is an excellent source of transportation in more rural regions like Mindanao where the streets may be too narrow to access with a four wheeled vehicle. Habal-habal drivers are able to carry up to eight people with additional luggage as well.



Image from *the Vintagent*

Published on Feb 08, 2022 SHOW DETAILS

# Bus 581 WhatsApp Group

A WhatsApp group created by the bus driver of bus line 581, that goes from Cosme Velho to Gávea neighborhoods in Rio de Janeiro.

*by Adriana de Souza e Silva*

Published on Feb 08, 2022

last released 2 years ago

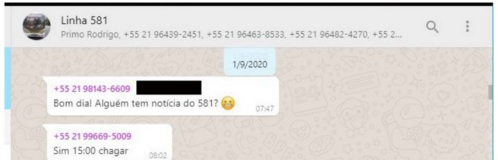
CITE SOCIAL DOWNLOAD CONTENTS

## Description

A WhatsApp group created by the bus driver of bus line 581, that goes from Cosme Velho to Gávea neighborhoods in Rio de Janeiro. Over the course of a few months in 2018/2019, a fleet of several buses was reduced to one line. Consequently, passengers have waited over an hour at the stops. At some point, in order to help passengers, the only remaining bus driver decided to create a WhatsApp group to broadcast to potential passengers the real time bus locations, departure, and arrival times. The group was not officially related to São Silvestre, the bus company, and did not use any kind of location-based service. Rather, location was transmitted by text, enabling mediated mobility. The group grew by word of mouth; passengers talked to other passengers at the stops and to the bus driver.

## Importance

The people in the WhatsApp Bus 581 community did not invent a new technology. But they were, in some respect, emplaced by the new WhatsApp group. Out of the difficulty in urban mobility and lack of public resources, they came up with a creative way to network, repurposing an existing mobile platform (WhatsApp) to replace an inexistent one (Moovit). Through re-organization, they adapted to the lack of proper public transport in their neighborhoods as well as to the issues of time.



# Future Directions

## Engagement & Practice

# Engagement & Practice

## 1.1. Public Outreach: Policy and R&D

Help **technology developers** and **policy makers** to move away from a colonial perspective that frames technology adoption and diffusion as a top-down process focused on bringing economic development to disenfranchised minority groups (ICT4D/M4D).





# Engagement & Practice

## 1.1. Public Outreach: Policy and R&D

Help **technology developers** and **policy makers** to move away from a colonial perspective that frames technology adoption and diffusion as a top-down process focused on bringing economic development to disenfranchised minority groups (ICT4D/M4D).

Help **scholars** better understand the sociotechnical practices that construct our lived spaces, and therefore help **governments** and urban planners to better develop these spaces taking into consideration bottom-up creative local practices.





# Engagement & Practice

## 1.2. Public Outreach: Popular press publishing

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COVID Health Mind & Brain Environment Technology Space & Physics Video Podcasts Opinion

VACCINES | OPINION

### What the U.S. Can Learn from Brazil's Successful COVID Vaccination Campaign

Despite similar leadership at the start of the pandemic, Brazilians are more trusting of government and view vaccination as a necessity and a right

By Adriana de Souza e Silva, Claudio Araujo on May 18, 2022



Public health workers vaccinate people at a COVID-19 vaccination clinic at Museu da Republica (Museum of the Republic) on May 24, 2021 in Rio de Janeiro, Brazil. Credit: Mario Tama/Getty Images

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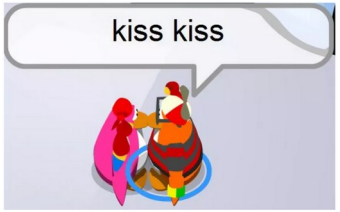
The State of Things

### Embodied: How Online Gaming Creates Real-Life Love

By Grant Holub-Moorman, Anita Rao

Published February 13, 2020 at 11:20 AM EST

▶ LISTEN · 48:19




Mikkey Girl / Disney

2.5 billion people around the world play video games. From Words With Friends to League of Legends, games are revolutionizing how we relate to one another. In many ways, gaming has become its own culture. But it might not be exactly what you'd expect. Most gamers play on their cellphones and nearly half are women. Most people playing video games are doing it with other people. And in response to hate-speech online and IRL, marginalized gamers are creating sanctuaries. On this edition of our Embodied series, host Anita Rao explores what gamers can teach us about socializing.

NC STATE UNIVERSITY News

Research and Innovation

### Creativity as Survival: Crowdsourcing Unexpected Ways We Use Technology

June 7, 2022 | Matt Shipman | 4-min. read



Safwan Harb made an electric wheelchair-bike from spare parts in the Zaatari refugee camp in Jordan.

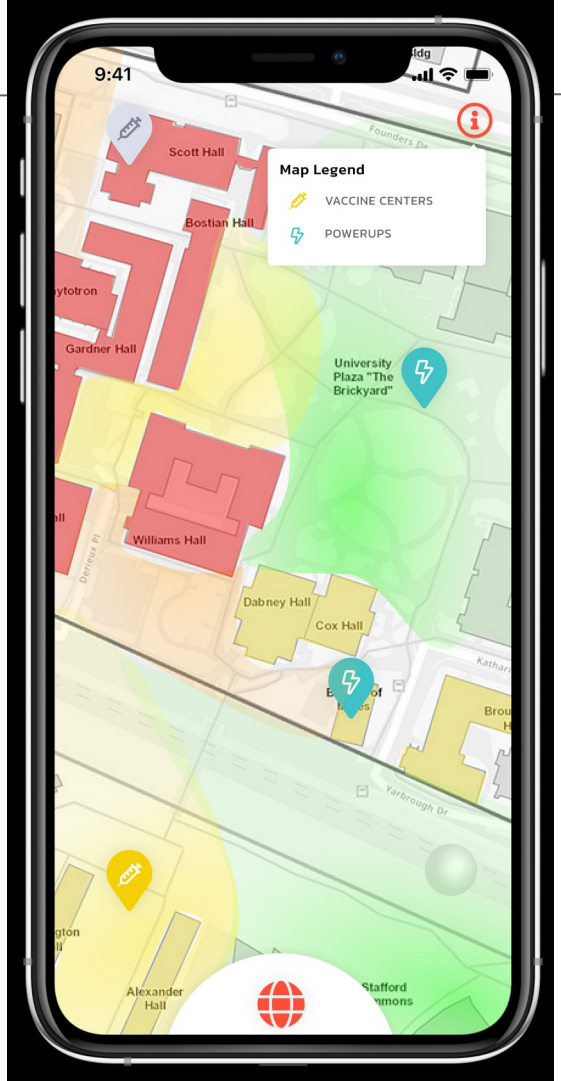
***Editor's note:*** *This is a guest post from Adriana de Souza e Silva, a professor of communication at NC State.*

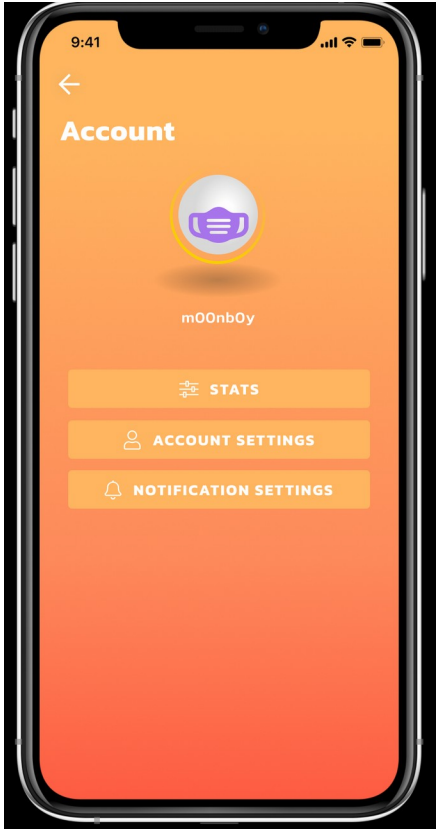
# Engagement & Practice

## 3. Public Health Communication



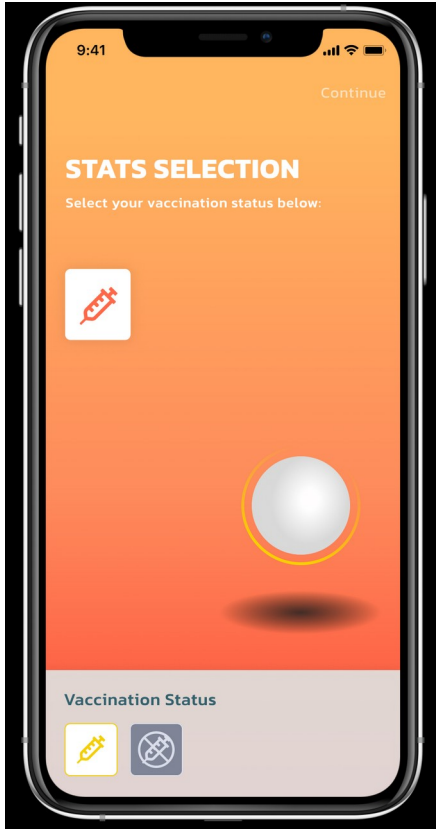
Pandemic Location-based Game

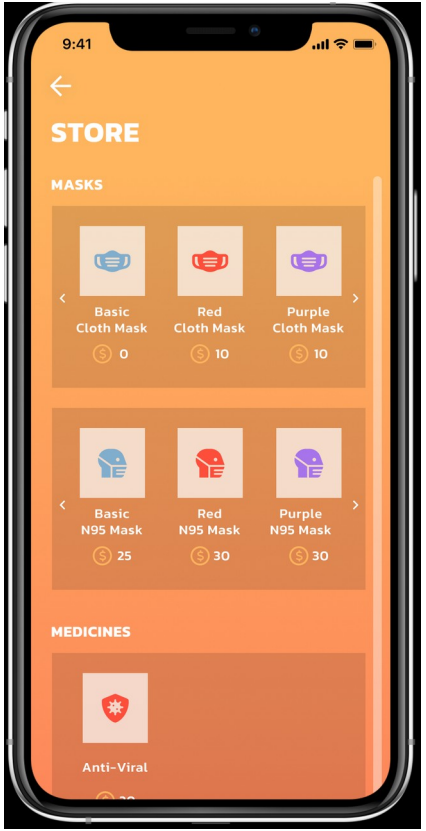


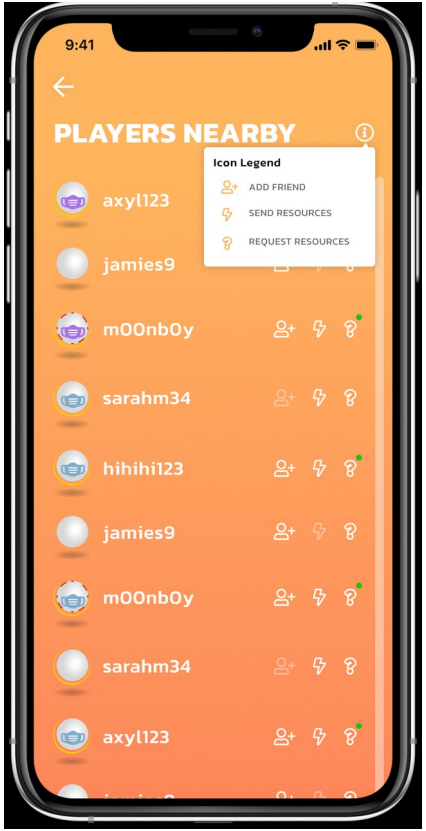



# Engagement & Practice

## 3. Public Health Communication



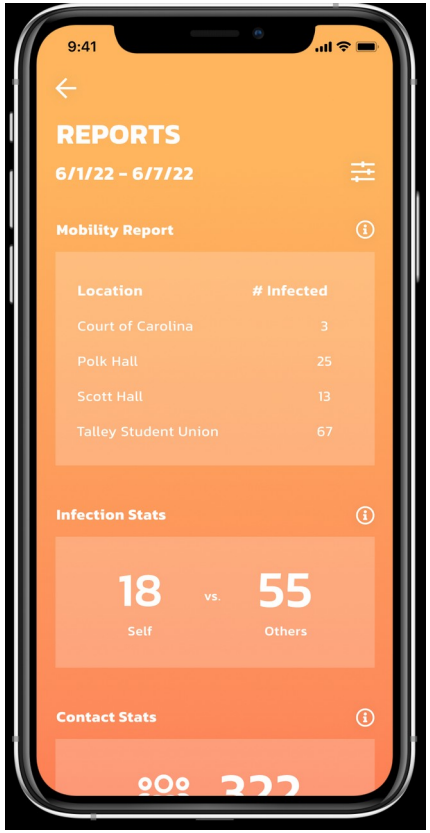



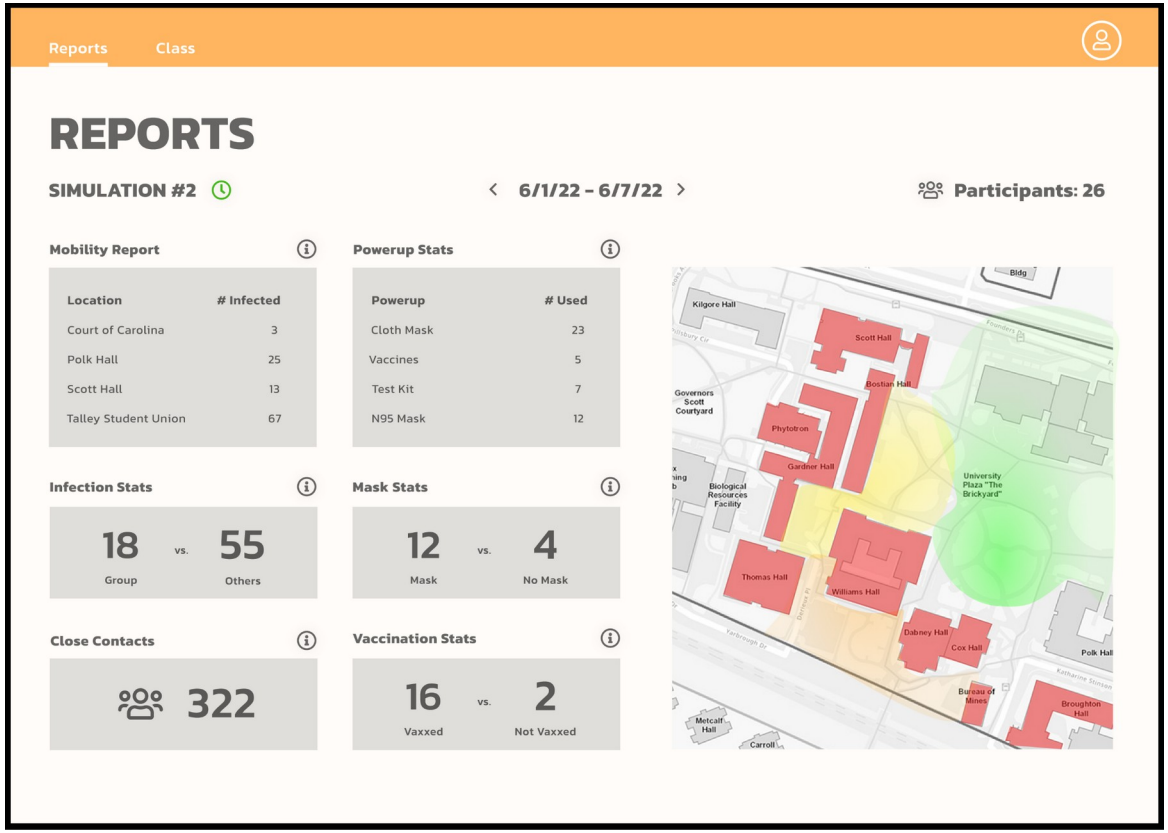






# Engagement & Practice

## 3. Public Health Communication



# Engagement & Practice

## 4. Gaming Research Tool




### The Retro Mobile Gaming Database

The Retro Mobile Gaming Database (RMGD) contains a collection of mobile games from 1975 to 2008. This database allows users to search games by multiple search criteria including title, year developed, type of game, and more. This robust search system will help researchers not only to find games but also to create new correlations among historical types of mobile games.

The RMGD uses specific terms for different game genres. These terms are explained in-depth in the Glossary.

We welcome your contributions. If you would like to suggest a game, you need to create an account. Before suggesting a game, please familiarize yourself with our Database Entry Style Guide and follow the guidelines. Your submission will be reviewed by the MGRL staff before going online. If you would like to add information to an already existing entry, please email the MGRL director, Dr. de Souza e Silva (aasilva [at] ncsu.edu). Have fun!

Note: If you have any comments, would like to see additional features, or want to report a bug, please fill this Form out

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Any hardware... | Any genre... | Any connectivity...

# Engagement & Practice

## 5. Mobile Games Collection

### Physical Collection

The Networked Mobilities Lab is accepting donations! If you have any old consoles you would like to donate, contact Dr. Silva at aasilva@ncsu.edu.

If you are interested in seeing our physical collection, visit Winston Hall on the second floor. Our collection is in the f display cabinet.

### Consoles

+ **GAMEBOY COLOR**

- **N-GAGE (QD)**



**Maker:** Nokia

**Year:** 2004

**Description:** Small handheld gaming and smartphone device, featuring a color screen. Uses Nokia Series 60 Symbian OS. Has an SD card slot for games and memory cards.

+ **GAMEBOY ADVANCE SP**

+ **SEGA GAME GEAR**

+ **NINTENDO DSI**

+ **NINTENDO DSI XL**

+ Mobile exhibition



# Engagement & Practice

## Networked Mobilities Lab

- Oral history of Mobile Communication
- NML Podcast
- NML Lecture Series



# Thank you!

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