University of Michigan, Sept. 2022

Mobile Methods and Applications

Creativity and Configurations

Adriana de Souza e Silva, Professor of Communication, NC State University, USA
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What are Mobile Methods?

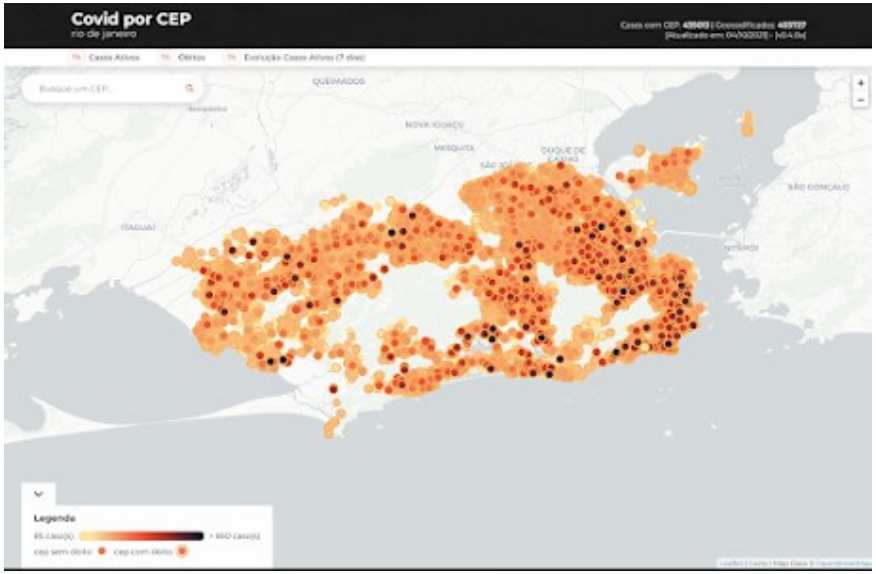
- Mobile ethnography (“go-alongs”).
- Observations of mobility systems.



(Boase & Humphreys, 2018; Boase, 2020; Büscher, Büsher & Urry, 2009; Merriman, 2014)

What are Mobile Methods?

- Spatial analysis (maps/GPS)

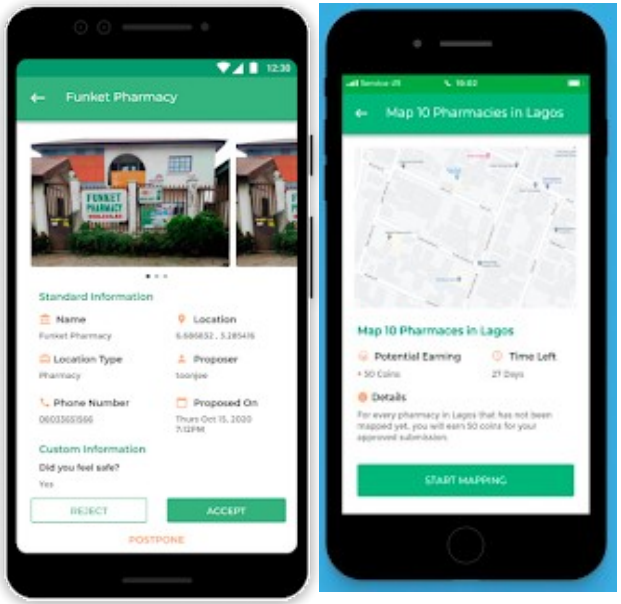


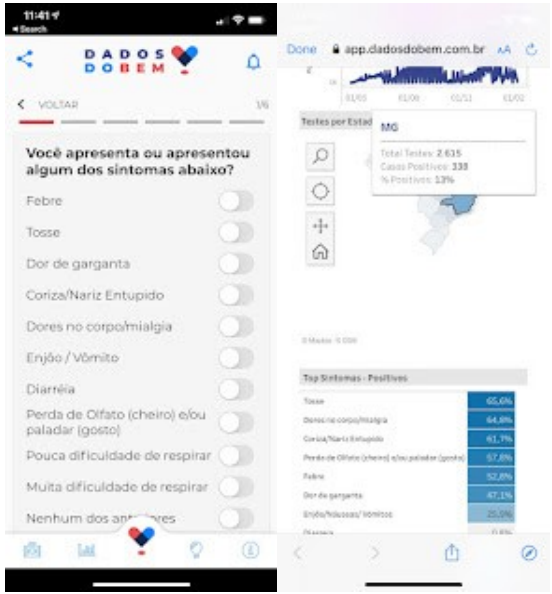


(Boase & Humphreys, 2018; Boase, 2020; Büscher, Büsher & Urry, 2009; Merriman, 2014)

What are Mobile Methods?

- Using mobile communication technologies to study social phenomena
  - Data collection using cell phones / apps (diaries, biometric data, etc.)





(Boase, 2020)

Goal

Develop innovative mobile methods through creative and unorthodox approaches (vs. “traditional” methods) to study new socio-technical configurations.

Problem driven methods and app development



1: Understanding the connection between viral spread and urban mobility via mobile game development (Adriana).

E-Rhythms

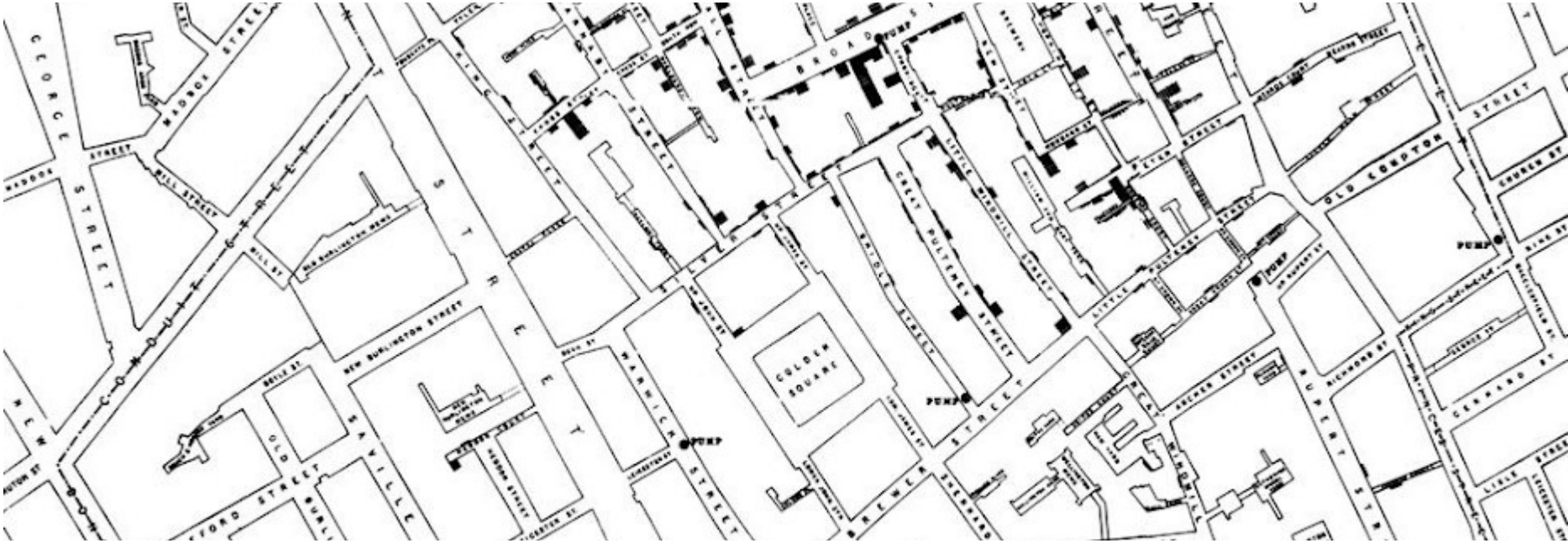
2: Understanding socio-technical configurations via multi-method data collection app (Jeff).



3: Understanding creative technological appropriation through a crowdsourced database (Adriana).

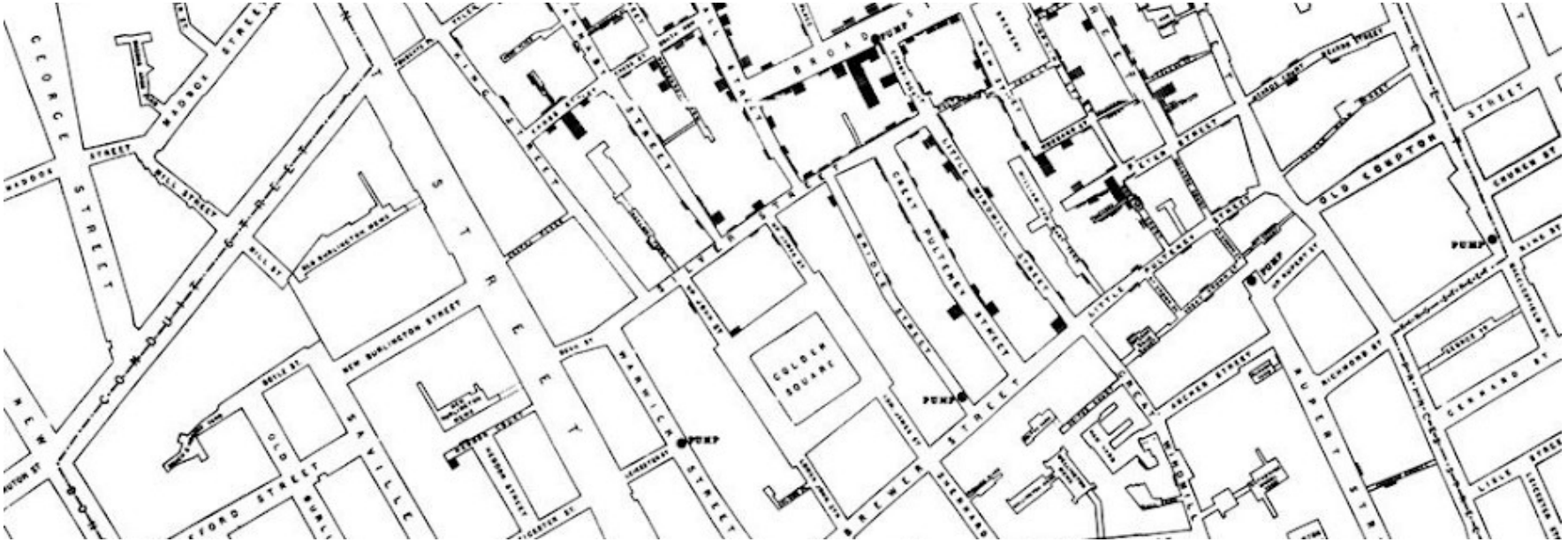
1. The social-distancing location-based game

How can location-based games help us understand the connection between viral spread and urban mobility?



1. The social-distancing location-based game

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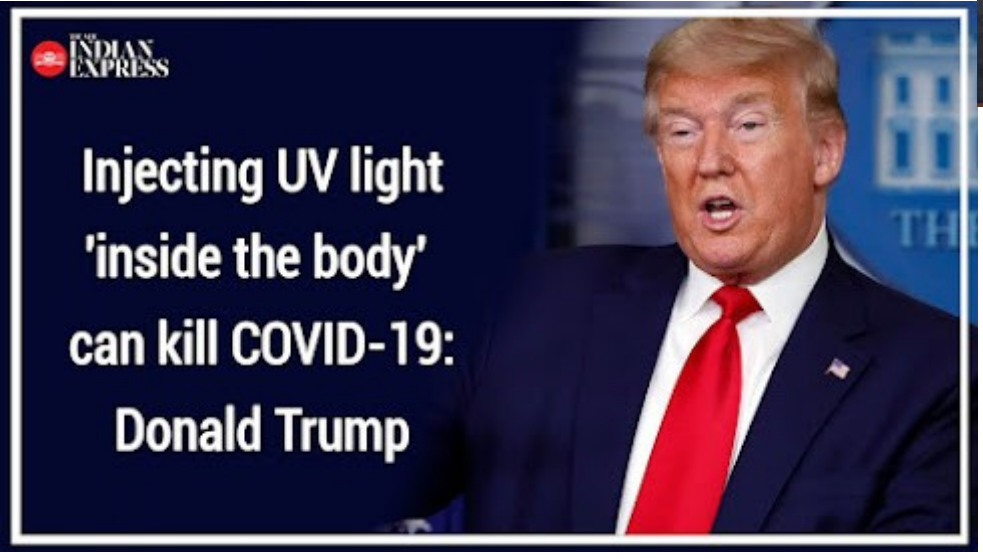


John Snow's 1854 London cholera map

Problem

Poor public health communication

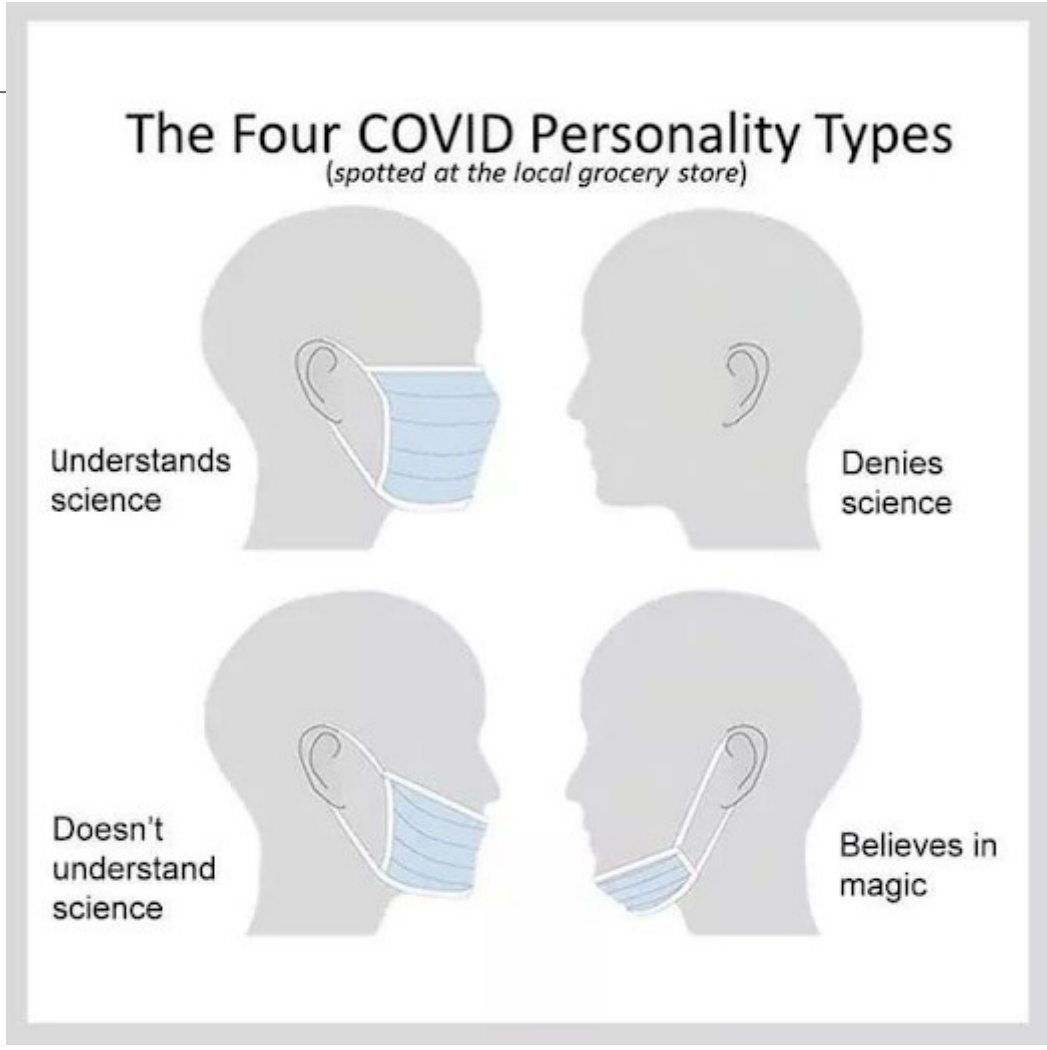




Problem

Poor public health communication





Problem

Poor public health communication









Problem

Human mobility = viral mobility



Solution

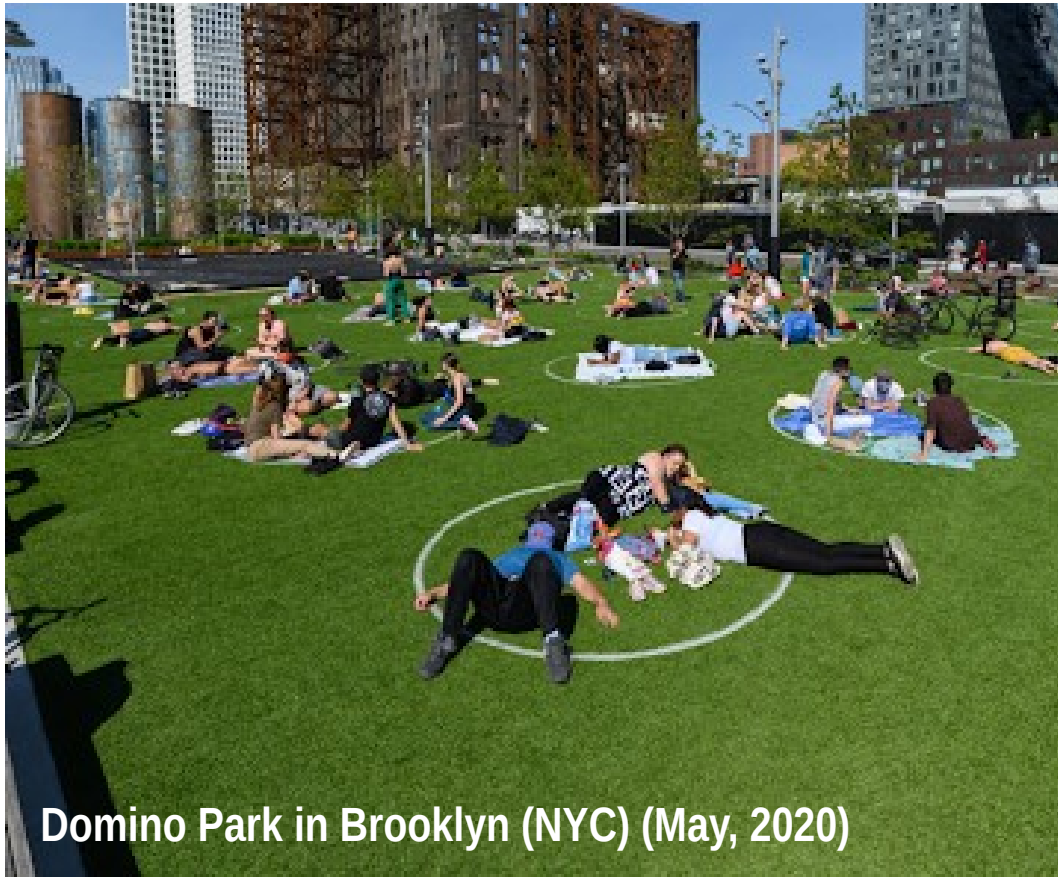
Help people understand viral mobility in public spaces in a playful way that is integrated with people's ordinary lives.





(de Souza e Silva & Hjorth, 2009; Licoppe 2006; Evans & Saker, 2019; etc.)

The “social distancing” game

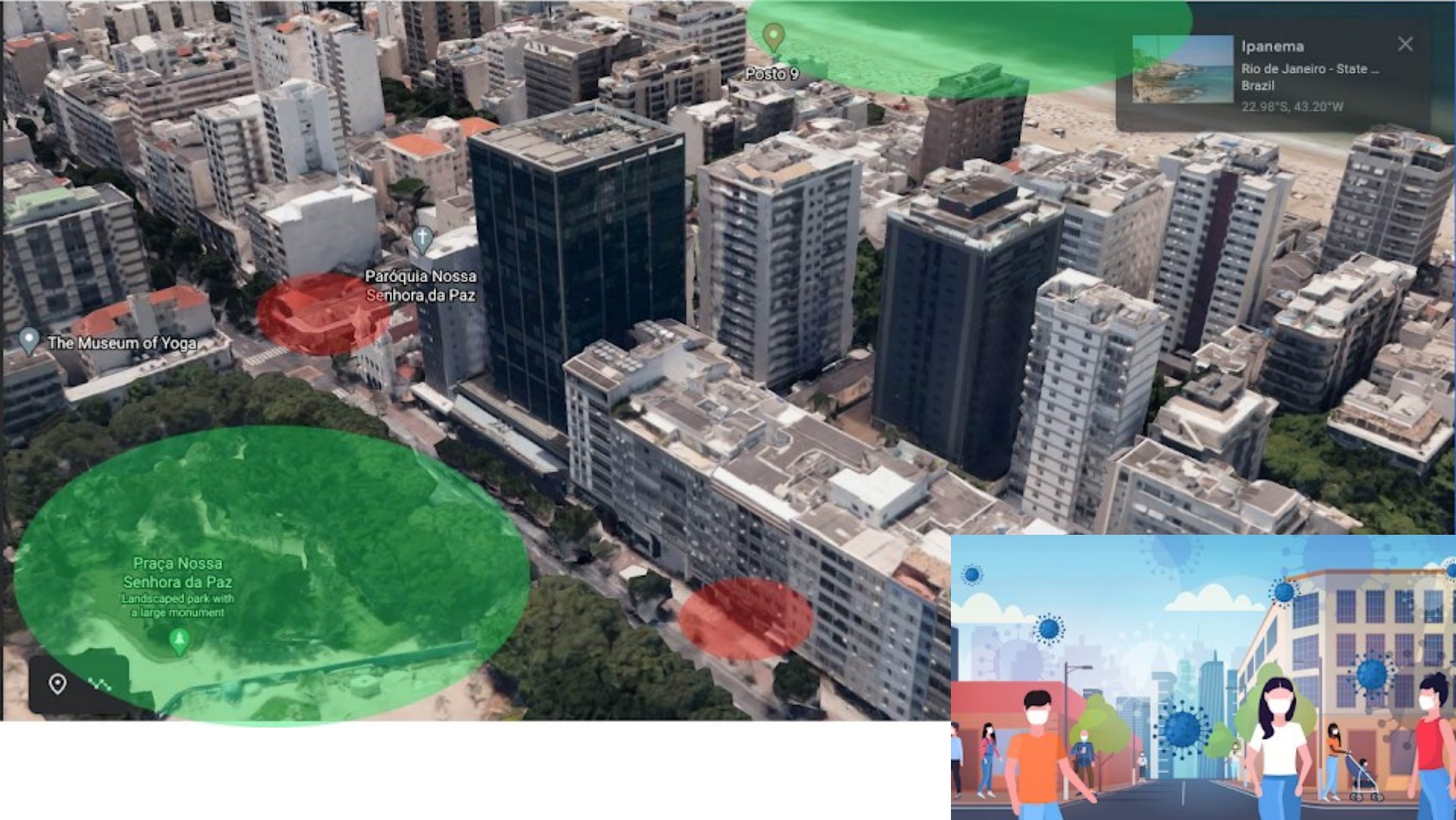


Domino Park in Brooklyn (NYC) (May, 2020)

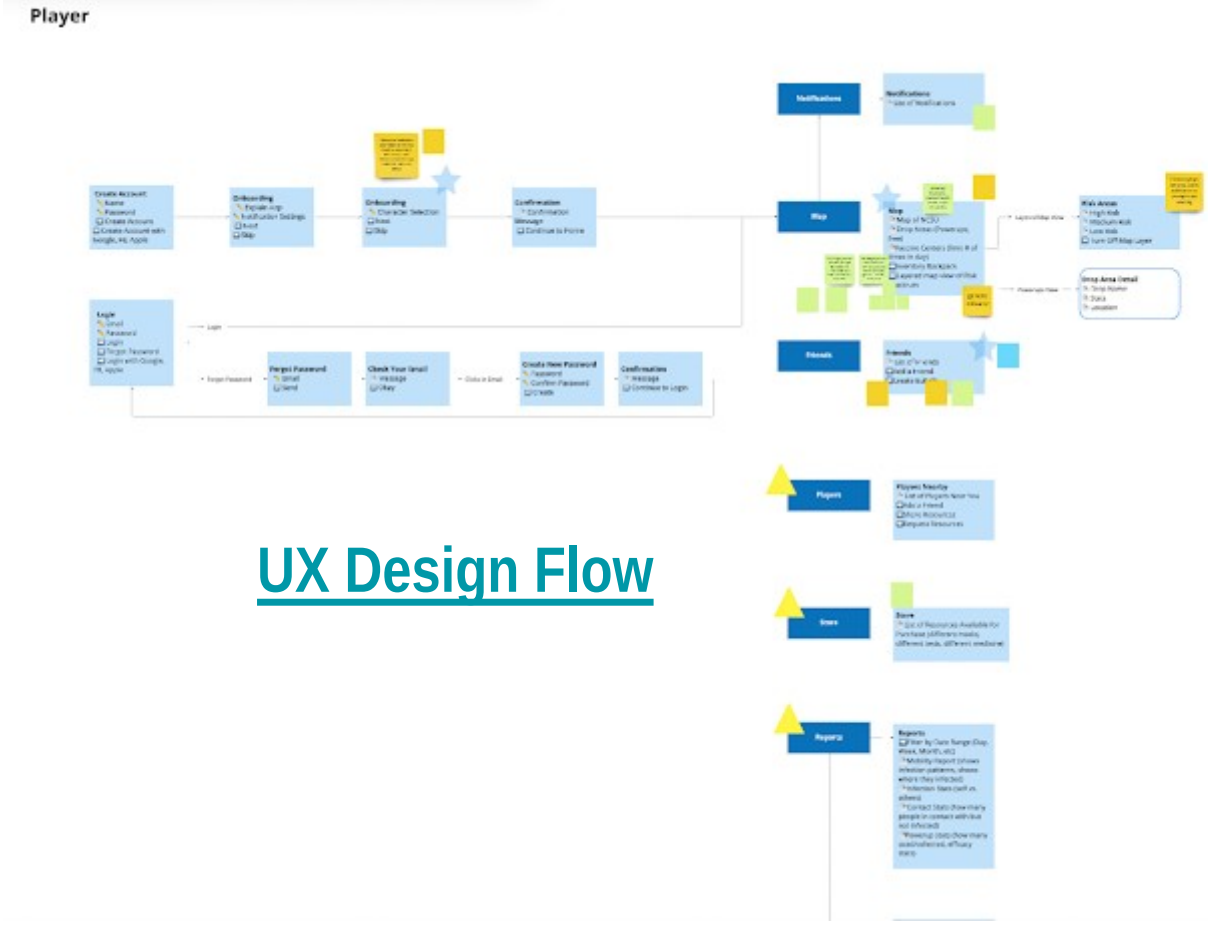
1. Maintain social distance.

1. Be less mobile.

1. Visit less crowded areas.


Posto 9
Ipanema
Rio de Janeiro - State ...
Brazil
22.98°S, 43.20°W
Paróquia Nossa
Senhora da Paz
The Museum of Yoga
Praça Nossa
Senhora da Paz
Landscaped park with
a large monument

Game development process



UX Design Flow

Game development process

- Mobile Prototype
- Desktop Prototype



Next Steps

- Find funding to develop / implement the rest of the game.
- Pilot-test in University campi / schools.
- Work with different levels of governments to implement new public health campaigns.
- Translate the game into different languages / platforms for use in other non-English speaking countries.

2. Socio-technical configurations

via multi-method data collection app



Theory

- Social configurations: rules, norms, and cultural schema can constrain and enable communication;

- Technical configurations: hardware and software rules/configurations can also constrain and enable communication;

- Individuals are theorized to reflexively choose which communication technologies to use within the context of social and technical configurations.

Focus

Why and how are different communication technologies used in the context of complex family and work configurations?

Problems

- Using technology is a type of behaviour.
- People are not good at remembering these types of behaviours.

(Boase & Ling 2013; Kobayashi & Boase 2012)

Problems

Reflexive thinking is not evident in behaviour.

>> How can we learn about this type of thinking?

Problems

Complex work and family configurations are thought to be increasingly common in post-industrial societies.

>> How can we make generalizations about how these configurations relate to the use of communication technology?

Solution

Smartphones:

- Primary device for many;
- Logs kept by default;
- Multimedia devices;
- Allow data collection apps.



Solution

Behaviour:

- Develop a smartphone app to ethically collect logged communication behaviour.



Solution

Reflexive Thinking:

- Integrate the smartphone app into traditional interview methods.
- Helps to triangulate behaviour with reflexive understandings of technology use



Solution

Generalization:

- Integrate the app into traditional survey methods.
- Helps to producing generalizations.



E-Rhythms Project



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University of Toronto



Tetsuro Kobayashi
City U Hong Kong



Rhonda McEwen
University of Toronto



James E. Katz
Boston University



Rich Ling
Telenor, Norway



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Jack Jamieson
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CIT, Japan

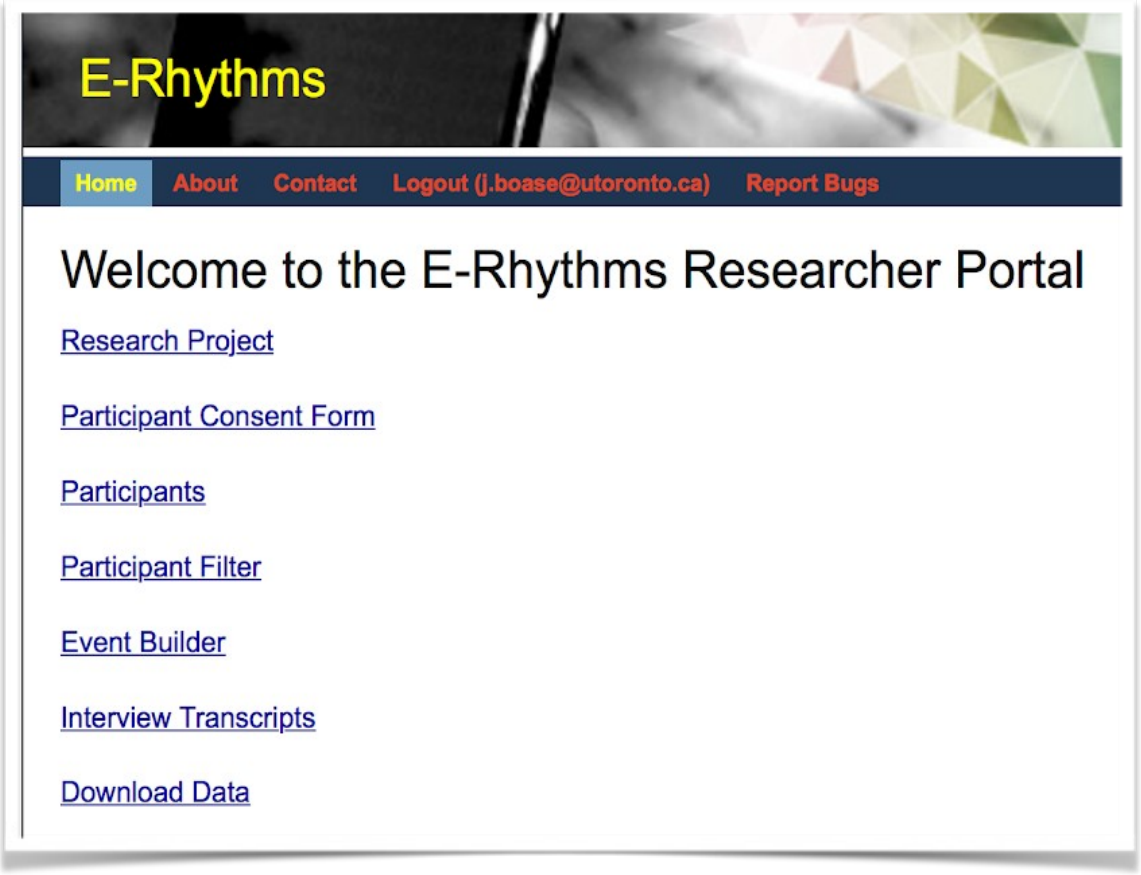


Yingduo Tang
University of Toronto

Social Sciences and Humanities Research Council of Canada
Conseil de recherches en sciences humaines du Canada
Canada

Researcher Portal

- Multiple researcher accounts.
- All data collection event controlled by researcher.



Android App

- Anyone can download.
- Users must enter ID.
- ID tied to specific project.
- All actions determined by project tied to ID.



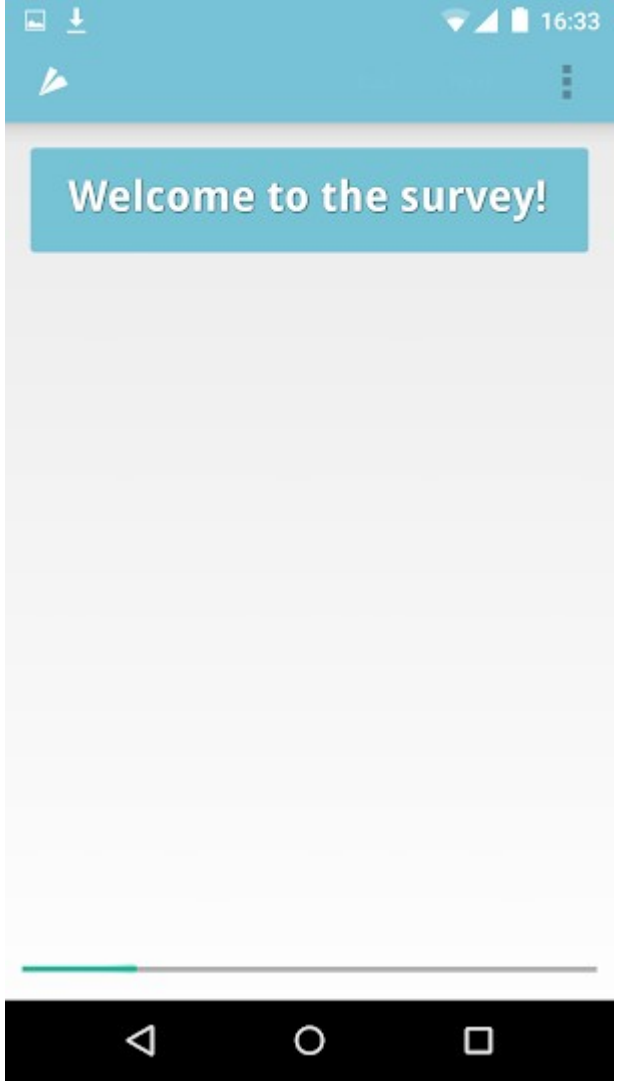
Ethical Collection of Calling and Texting Logs

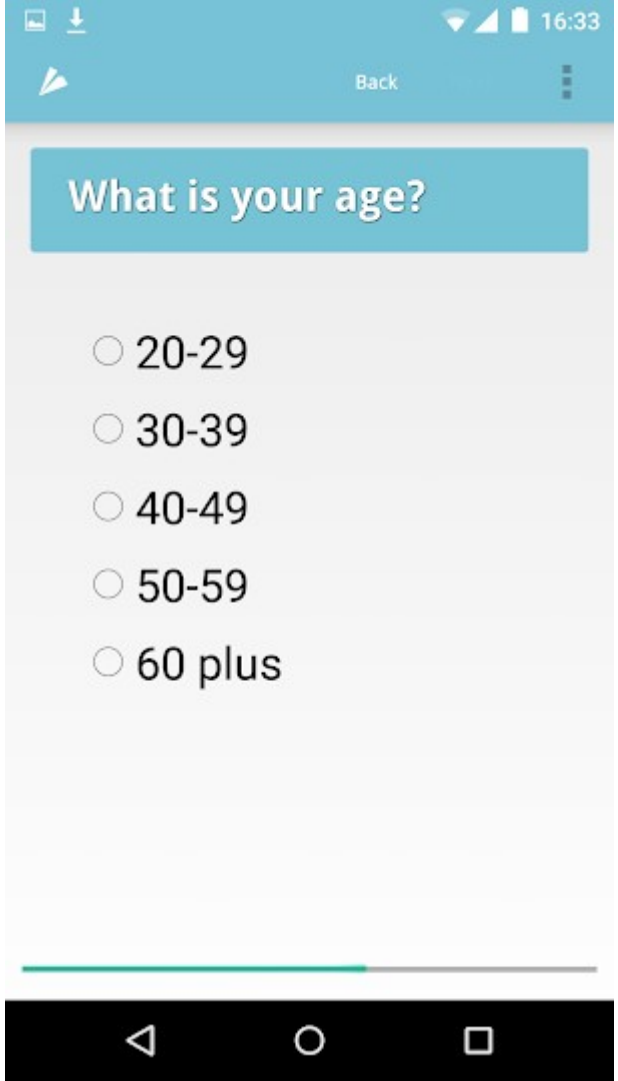
- Informed consent.
- Only collect what is useful.
  - Do not collect names
  - Do not collect message content
- Mask phone numbers.

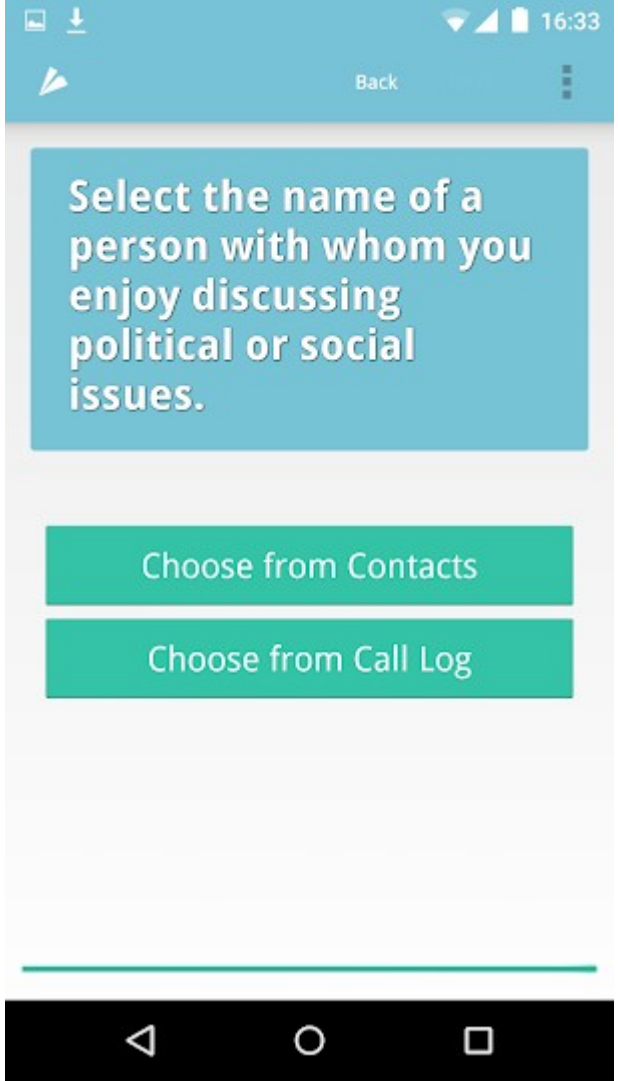
User ID	Hash ID - Respondent's Phone Number	Address Book Label	Hash ID - Alter's Phone Number	Duration in Seconds	Date & Time	Time Zone	Direction
224	d01ac7af977b8ab2bcb96aba1c518d5d	UNKNOWN	9ac751946948b6aacf4b77dd7c693efc	10	10-06-12 17:05	America/Detroit	OUTGOING
224	d01ac7af977b8ab2bcb96aba1c518d5d	MOBILE	65bc0d3cd474296f7fa44f276ff5dc94	1	10-06-12 18:30	America/Detroit	OUTGOING
224	d01ac7af977b8ab2bcb96aba1c518d5d	HOME	6649303d09e71176067b18cf12d66a39	39	10-06-12 18:50	America/Detroit	OUTGOING
224	d01ac7af977b8ab2bcb96aba1c518d5d	HOME	6649303d09e71176067b18cf12d66a39	25	10-06-12 18:51	America/Detroit	OUTGOING
224	d01ac7af977b8ab2bcb96aba1c518d5d	HOME	7b3137146ae1e7cf8057704ac4f2eab7	145	10-06-12 19:10	America/Detroit	OUTGOING
224	d01ac7af977b8ab2bcb96aba1c518d5d	MOBILE	65bc0d3cd474296f7fa44f276ff5dc94	152	10-06-13 14:59	America/Detroit	INCOMING
224	d01ac7af977b8ab2bcb96aba1c518d5d	MOBILE	65bc0d3cd474296f7fa44f276ff5dc94	132	10-06-13 18:55	America/Detroit	INCOMING
224	d01ac7af977b8ab2bcb96aba1c518d5d	UNKNOWN	3ccad0fe201ffe288bd88fdbc783940c	124	10-06-14 15:42	America/Detroit	OUTGOING
224	d01ac7af977b8ab2bcb96aba1c518d5d	HOME	6649303d09e71176067b18cf12d66a39	5	10-06-14 16:32	America/Detroit	INCOMING
224	d01ac7af977b8ab2bcb96aba1c518d5d	HOME	6649303d09e71176067b18cf12d66a39	6	10-06-14 16:32	America/Detroit	OUTGOING
224	d01ac7af977b8ab2bcb96aba1c518d5d	HOME	7b3137146ae1e7cf8057704ac4f2eab7	306	10-06-14 17:45	America/Detroit	OUTGOING
224	d01ac7af977b8ab2bcb96aba1c518d5d	HOME	6649303d09e71176067b18cf12d66a39	66	10-06-15 15:33	America/Detroit	INCOMING
224	d01ac7af977b8ab2bcb96aba1c518d5d	HOME	6649303d09e71176067b18cf12d66a39	27	10-06-15 16:04	America/Detroit	OUTGOING
224	d01ac7af977b8ab2bcb96aba1c518d5d	MOBILE	65bc0d3cd474296f7fa44f276ff5dc94	73	10-06-15 16:04	America/Detroit	OUTGOING
224	d01ac7af977b8ab2bcb96aba1c518d5d	HOME	6649303d09e71176067b18cf12d66a39	21	10-06-16 6:14	America/Detroit	OUTGOING
224	d01ac7af977b8ab2bcb96aba1c518d5d	MOBILE	65bc0d3cd474296f7fa44f276ff5dc94	35	10-06-19 20:49	America/Detroit	INCOMING
224	d01ac7af977b8ab2bcb96aba1c518d5d	HOME	e2be2f00036c840524c7fd187a43fe75	426	10-06-20 20:23	America/Detroit	OUTGOING
224	d01ac7af977b8ab2bcb96aba1c518d5d	HOME	e2be2f00036c840524c7fd187a43fe75	26	10-06-21 10:36	America/Detroit	OUTGOING
224	d01ac7af977b8ab2bcb96aba1c518d5d	WORK	0c5f33963315f8572c349d28e5befee5	297	10-06-21 10:38	America/Detroit	OUTGOING
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224	d01ac7af977b8ab2bcb96aba1c518d5d	UNKNOWN	23a40748351463af7ca9bcabebf97927	19	10-06-22 15:24	America/Detroit	OUTGOING
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224	d01ac7af977b8ab2bcb96aba1c518d5d	MOBILE	65bc0d3cd474296f7fa44f276ff5dc94	223	10-06-23 15:50	America/Detroit	INCOMING
224	d01ac7af977b8ab2bcb96aba1c518d5d	UNKNOWN	3304b180d99d819104d0f5a37f605f25	286	10-06-24 17:01	America/Detroit	INCOMING
224	d01ac7af977b8ab2bcb96aba1c518d5d	UNKNOWN	3304b180d99d819104d0f5a37f605f25	43	10-06-24 17:11	America/Detroit	INCOMING
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224	d01ac7af977b8ab2bcb96aba1c518d5d	MOBILE	65bc0d3cd474296f7fa44f276ff5dc94	72	10-06-27 12:21	America/Detroit	INCOMING
224	d01ac7af977b8ab2bcb96aba1c518d5d	MOBILE	65bc0d3cd474296f7fa44f276ff5dc94	114	10-06-27 19:41	America/Detroit	INCOMING
224	d01ac7af977b8ab2bcb96aba1c518d5d	MOBILE	65bc0d3cd474296f7fa44f276ff5dc94	24	10-06-28 6:05	America/Detroit	INCOMING
224	d01ac7af977b8ab2bcb96aba1c518d5d	UNKNOWN	88768eab6a88af763123c012a2df4d02	7	10-06-28 9:31	America/Detroit	INCOMING
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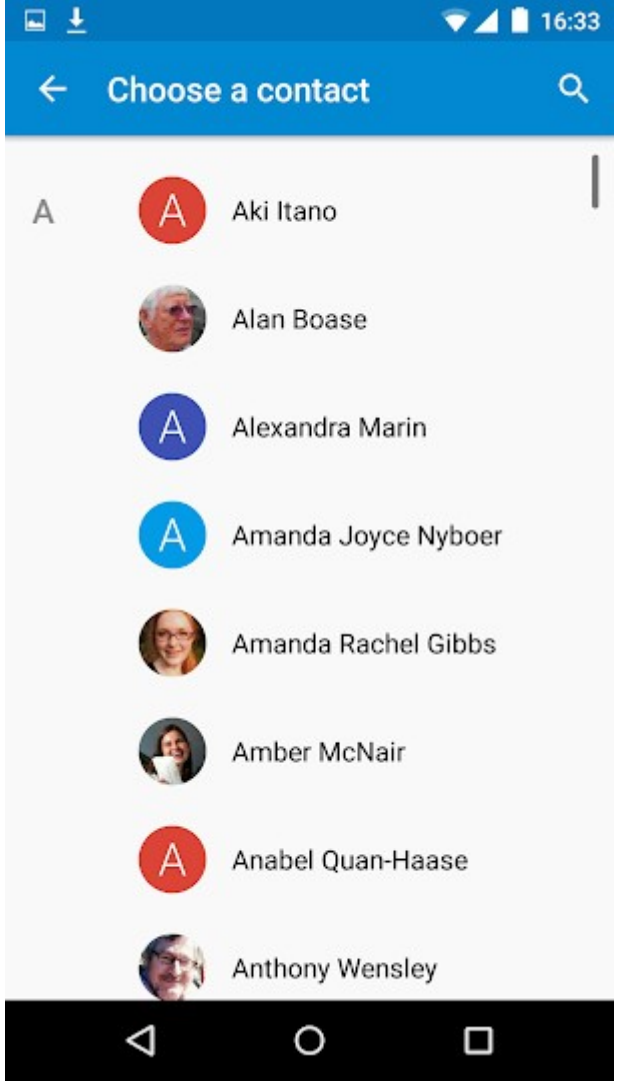
Integrating Logs with Survey and Interview Data


16:11
E-Rhythms
Loading data...


16:33
Welcome to the survey!


16:33
Back
What is your age?
20-29
30-39
40-49
50-59
60 plus


16:33
Back
Select the name of a person with whom you enjoy discussing political or social issues.
Choose from Contacts
Choose from Call Log


16:33
Choose a contact
A
Aki Itano
Alan Boase
Alexandra Marin
Amanda Joyce Nyboer
Amanda Rachel Gibbs
Amber McNair
Anabel Quan-Haase
Anthony Wensley

Summary and Conclusion

- My problem requires a method that helps to produce generalizations about behaviour and thoughts.

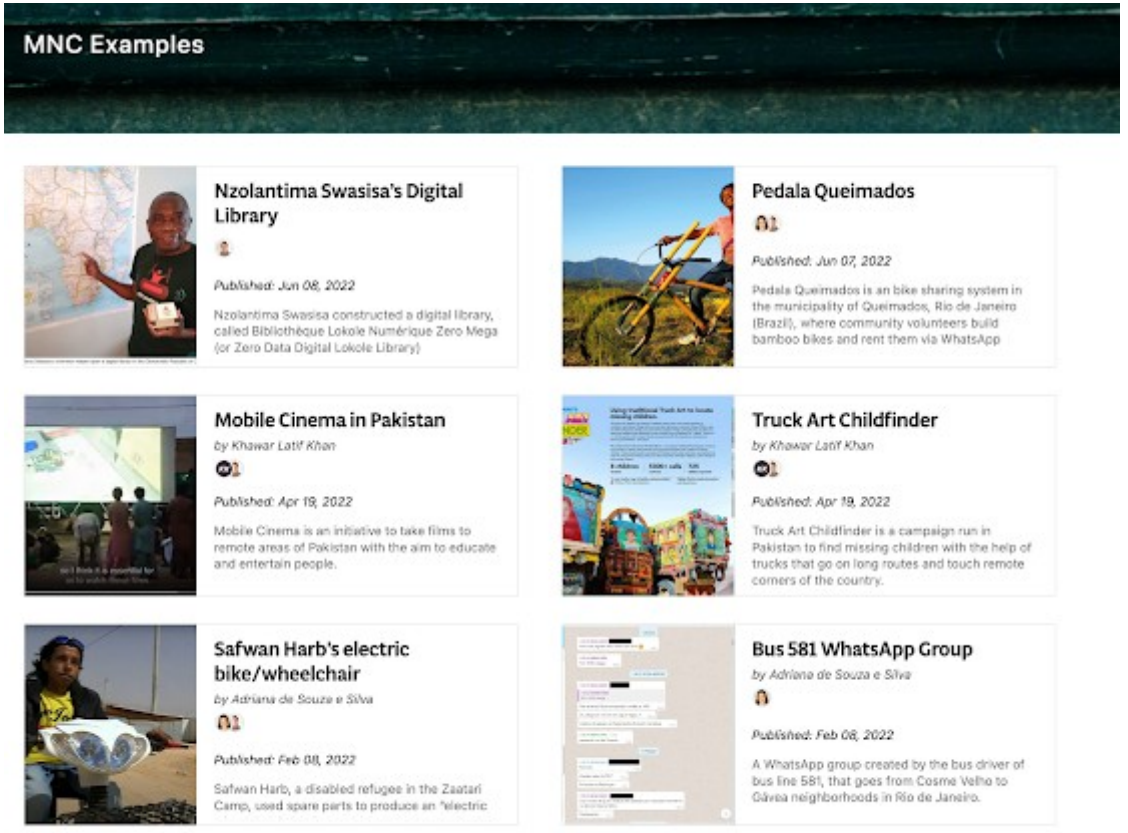
- No one method does all of this.

- The E-Rhythms app is an example of how an app that can be woven into traditional quantitative and qualitative methods.

3. Mobile Networked Creativity

Problem:

Understanding creative technological appropriations via crowdsourcing.



Context

Communication Theory ISSN 1050–3293

ORIGINAL ARTICLE

Mobile Networked Creativity: Developing a Theoretical Framework for Understanding Creativity as Survival

Adriana de Souza e Silva [1] & Mai Nou Xiong-Gum[2]

[1]North Carolina State University, Department of Communication, Raleigh, NC 27695-8104, USA
[2]Furman University, Communication Studies Department, Greenville, SC 29613, USA

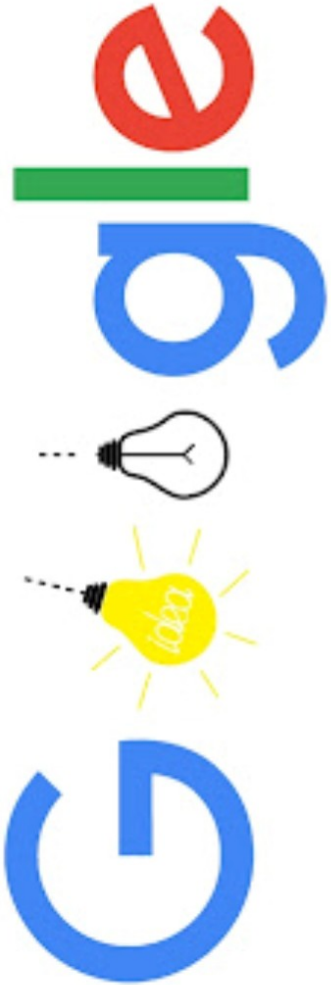
Mobile networked creativity is an emergent practice that arises from the ongoing relationships among people and people with technologies—or networked resources. In this article, we propose a concept of creativity as emerging from networked connections, (im)mobility, and situations of hardship. We, thus, make a connection between mobility and space as networked elements of creativity as opposed to individual agent models. We focus on how unplanned or emergent uses of digital technologies reveal how creative practices emerge, particularly in the context of mobile technology use where people are physically mobile and yet connected via the Internet. We define the concept of creativity as a constant process of becoming, a "recursive organization" that can be seen in groups such as migrants, or people living in disenfranchised communities that survive in makeshift locations such refugee camps or slums. Contrary to the affluent and capitalistic-embedded traditional ideas of creativity, mobile networked creativity is a practice that is found mostly in situations of economic hardship, power imbalances, and (im)mobilities.

Creativity =

Artistic practice, Individual cognitive process, Innovation







Solution

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



https://mobilenetworkedcreativity.pubpub.org/

Next Steps

- Collect as many examples as possible, from different parts of the world.
- Add more languages to the website to make it more inclusive.
- Develop a mobile-friendly version.
- Display the examples in curated exhibitions.

Exercises / Discussion

1. Choose a group (groups of 4)
2. Choose a topic
3. Discuss with your group (30 min.)
4. Present your groups' ideas (5 min.)

Exercises / Discussion

Imagine your group is a game development company with the task of finishing up the “social-distancing game”. In your group:

1. Make a competitive analysis of the game, comparing it with existing apps and present the similarities and differences (pros and cons) or this app and existing apps.
2. Propose screen designs to fill in the game gaps. How would you design the missing screens based on the UX flow? Based on the competitive analysis on #1, would you add any missing screen / functionality?
3. Propose new ways of adding more data collections methods to the app design. What other types of data could be collected to help answer new research questions? Design those screens.

Request

Please help me add more entries to the MNC repository,

and help me spread the word!

