

P2P and the city

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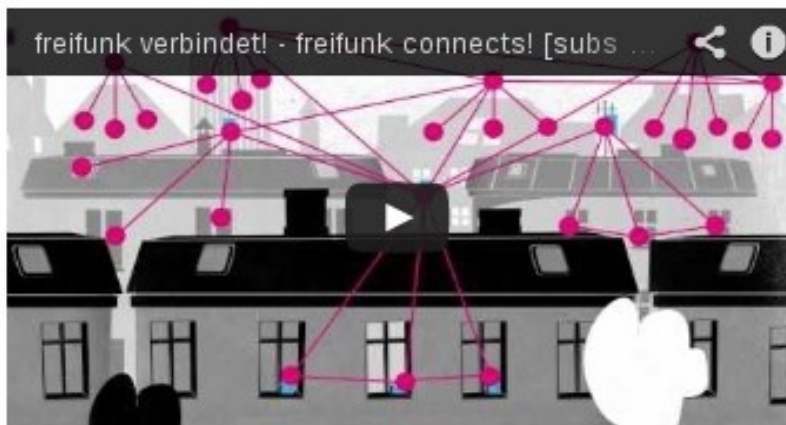
LSE fellows seminar, February 20th 2014

Peer-to-Peer



Peer-to-Peer

freifunk.net



THE
DIASPORA*
PROJECT

[HOME](#) [BLOG](#) [GET INVOLVED](#) [SUPPORTERS](#)

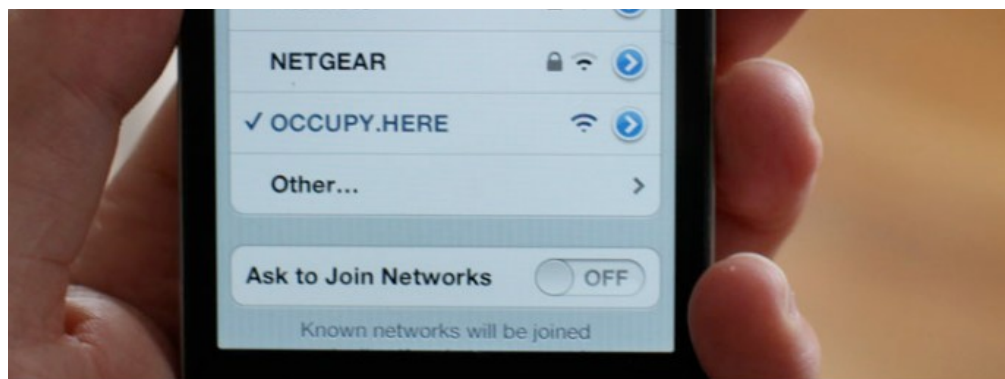
[SIGN UP](#)

[DONATE](#)

Social freedom.

Diaspora* is a fun and creative community that puts you in control.

Peer-to-Peer



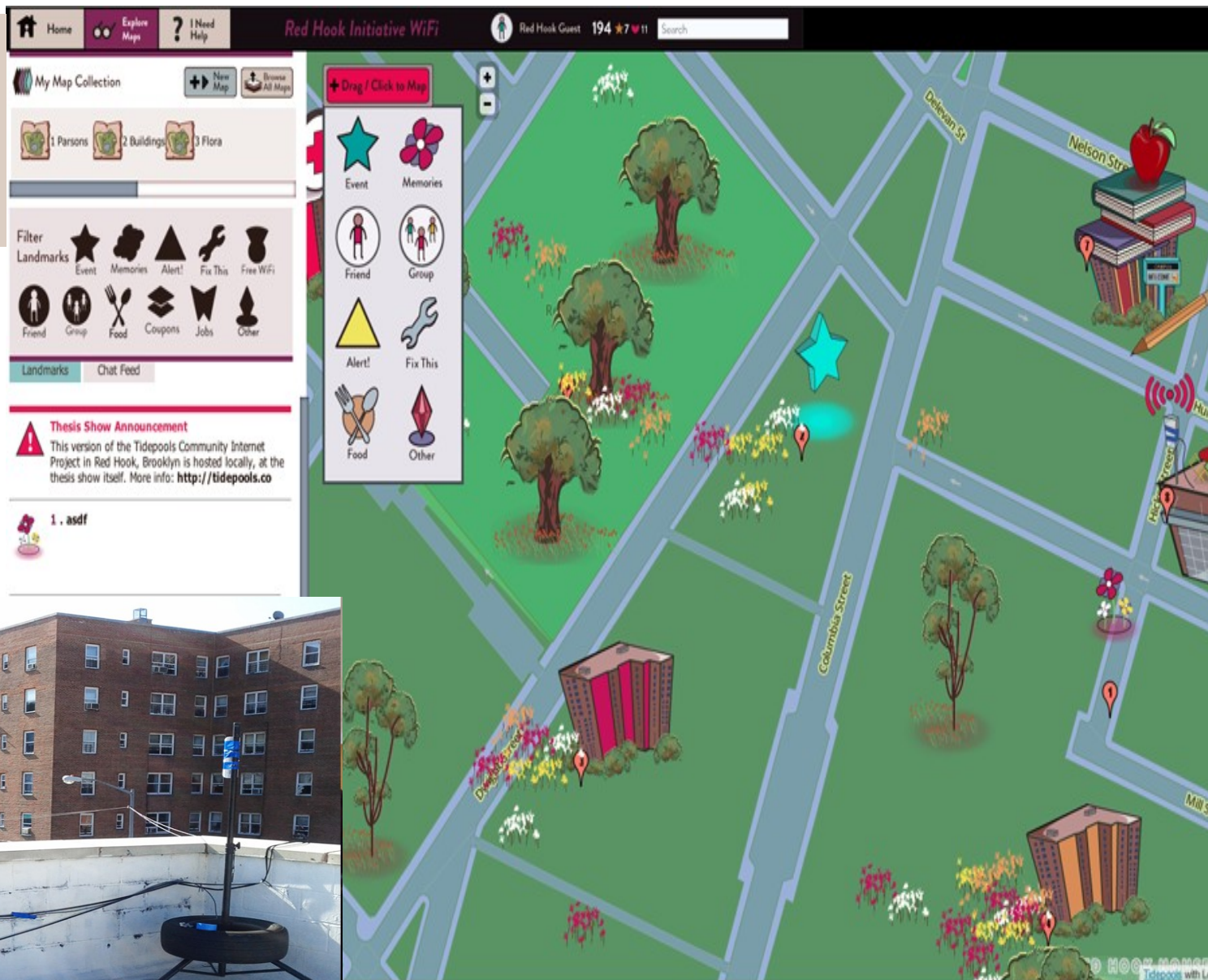
Peer-to-Peer



Peer-to-Peer



<http://tidepools.co>



Peer-to-Peer



Peer-to-Peer



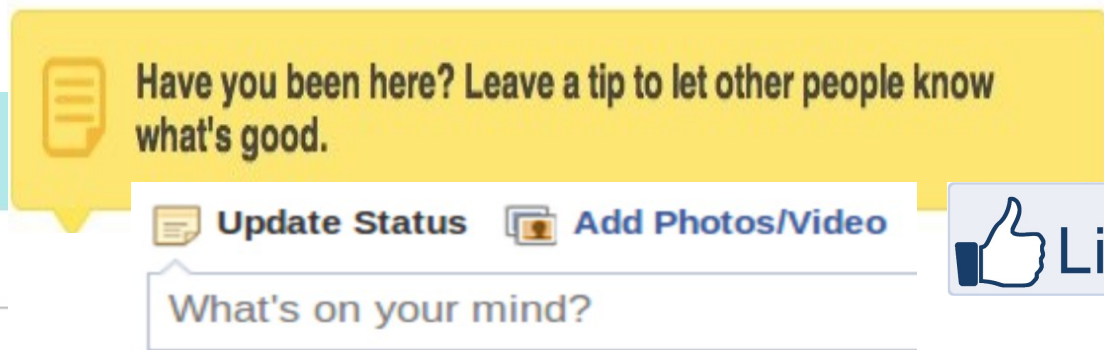
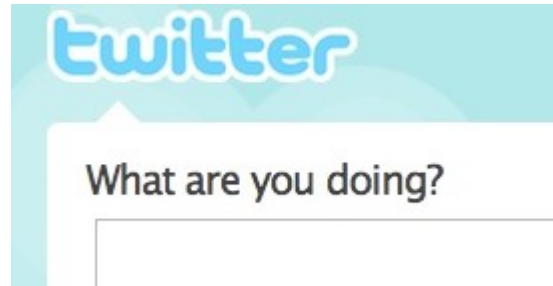
Cyclos

Online & mobile banking software



And the (hybrid) city

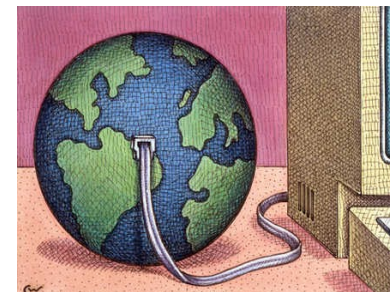
Virtual
space



Physical
space



Network



Challenges

- **Local vs. Global, Virtual vs. Physical**
 - Exposure to diversity, healthy living, incentives
- **The right to the hybrid city**
 - Access, identity, participation, ownership
- **Social learning**
 - Experimentation, interdisciplinarity, knowledge sharing

A highly interdisciplinary problem

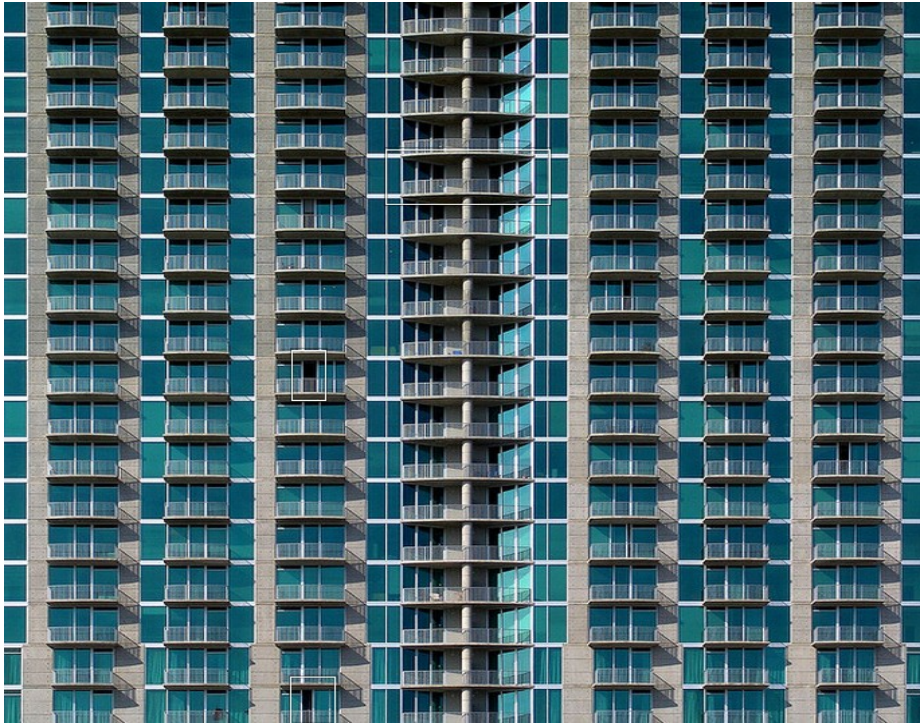
- Which is the desirable balance between conflicting objectives?
 - Politics, sociology
- Design tools
 - Virtual space: Human-Computer Interaction, CSCW, CMC
 - Physical space: Urban design, architecture, arts and design
 - Hybrid space: Urban informatics, ubiquitous computing
- Modeling and prediction
 - Behavioral/experimental economics, social psychology
 - Agent-based modeling, simulation tools
- Networking, collaborative development, data collection and analysis
 - Computer science, engineering

Many ideas are already around

But the competition is very high: Need to insist and concentrate efforts

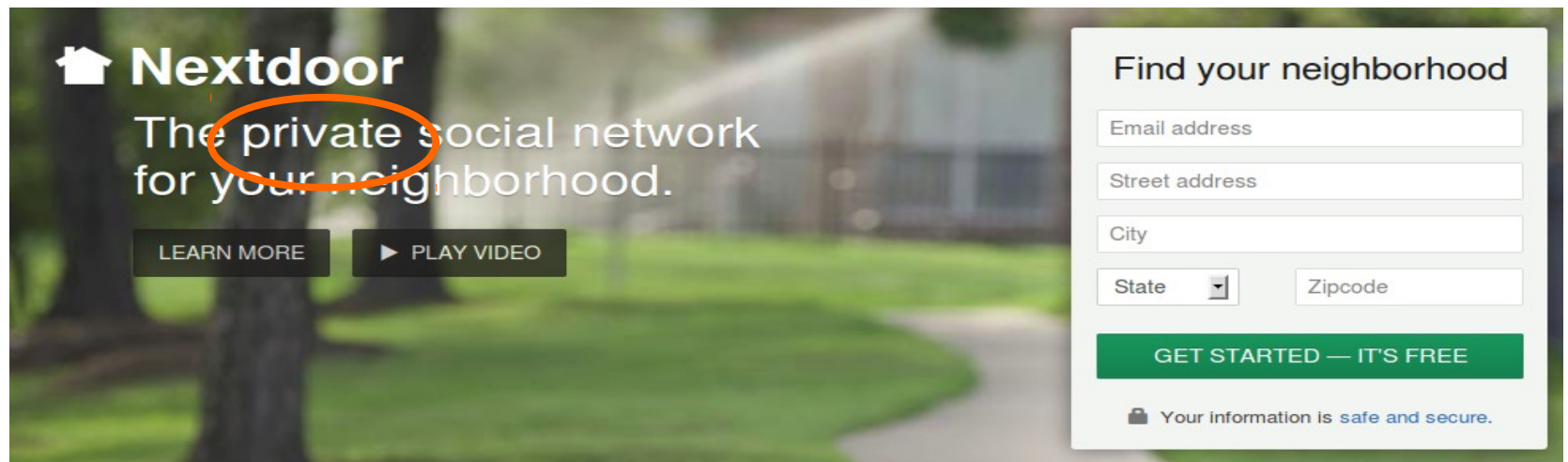
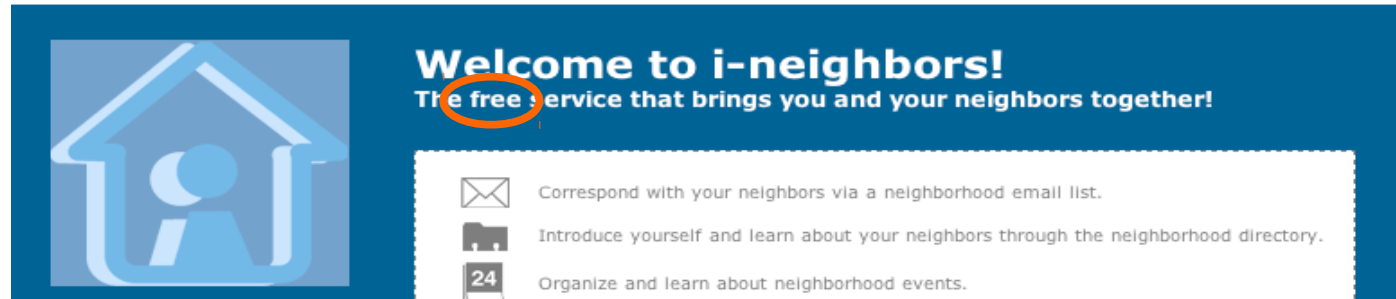
No optimal solutions: Need for **options, friction, diversity**

Why is it difficult?



The context matters

Why is it difficult?



The design details matter

Why is it difficult?

Conviviality



qualitative

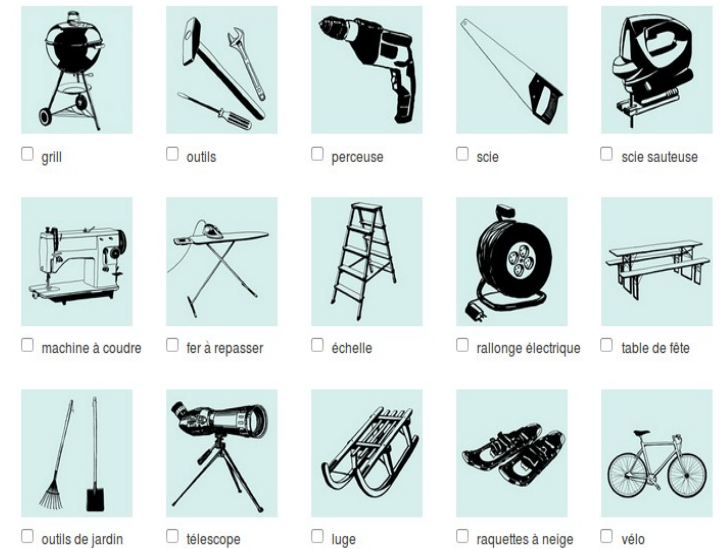
Resource sharing

Public identity

Information

Social capital

...



quantitative

The objective matters

Why is it difficult?



bekathwia@flickr

Competition between the local and global!

Why is it difficult?



And the global is winning :-)

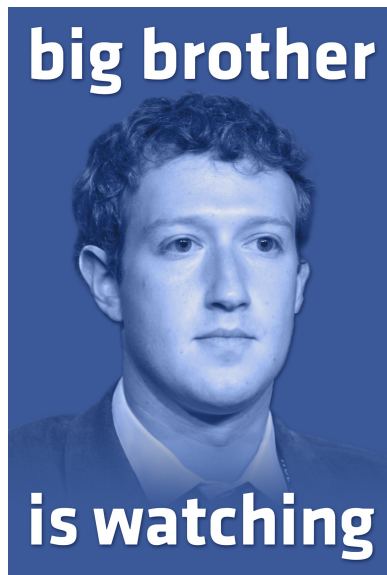
Why is it difficult?



Photo by Tridib Banerjee

Usability, efficiency, trust, costs, and critical mass matter!

Why is it a problem?



Privacy, surveillance, manipulation, uniformity, algorithmic serendipity, ...

vs.

Adaptability, diversity, independence, customization, happiness :-)

NetHood: Bridging the virtual with the physical

Facebook helps you connect and share with the people in your life.



NetHood helps you connect and share with the people in physical proximity



On-going work

- Social software design (details) as incentive for
 - Participation, trust building, resource sharing
- The urban planning perspective
 - Planners as cyberspace designers
 - Citizens as planners-flaneurs
 - The role of wireless technology
- Information sharing with strangers as a killer application
 - Do It Yourself networking + experimentation
 - Links between social and behavioural sciences
- Complementary currencies
- Interdisciplinarity

Design detail: Me and my likes

Virtual space

- Design choice: how one's “likes” are shown in his/her profile?
 - **Twitter:** part of one's own stream
 - **Flickr:** 1-click away from one's home page (used to be part of profile)
 - **Ipernity:** 2-clicks away
 - **Facebook:** fuzzy treatment (others in profile others “disappear”)

This small detail could influence liking **reciprocity behaviour**

Urban planning and the hybrid space

- Urban planners as cyberspace designers
 - Analogies with K. Lynch's taxonomy of images (1967)
 - **E-** landmarks, nodes, edges, paths, districts
 - From place to **e-place**
 - W. Whyte's principles adapted to the virtual space
- Design for **hybrid flânerie**
 - Encouraging observation and representation

Apostol, Antoniadis, and Banerjee (2012): Cyberspace design: a new challenge for planners, ICE Journal of Urban Design and Planning.

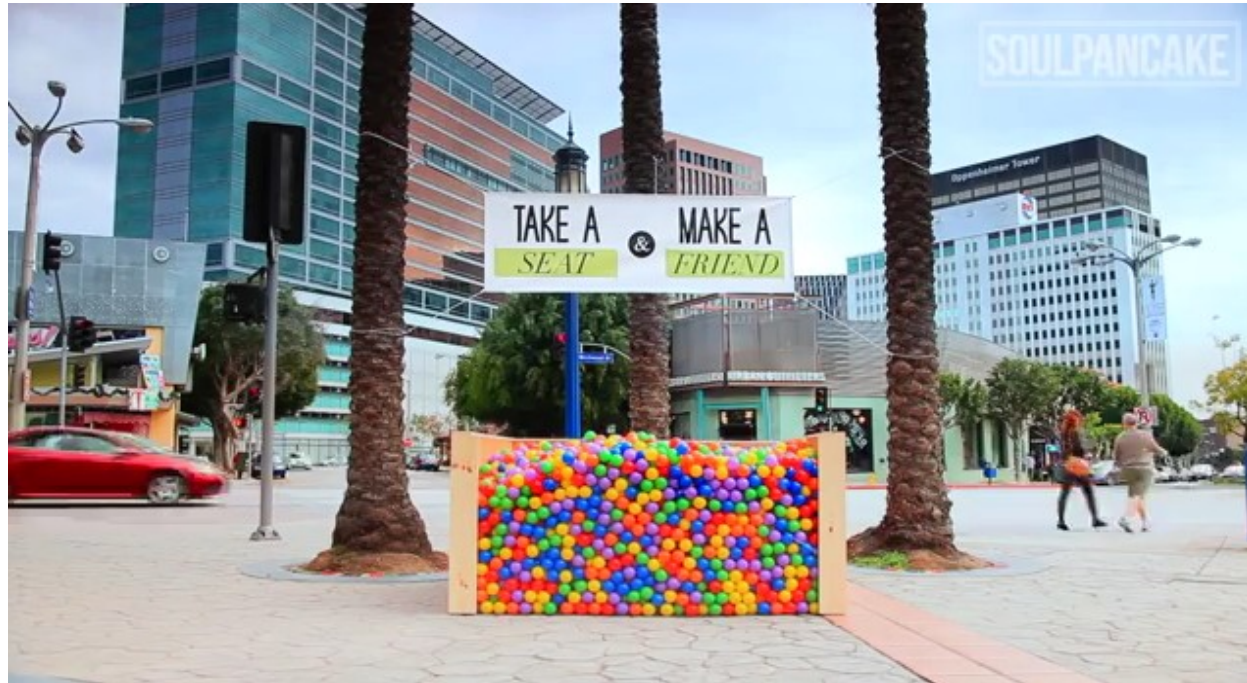
Apostol, Antoniadis, and Banerjee (2013): Flânerie between Net and Place, Journal of Planning Education and Research

Lessons from Urban Planning

What makes a successful place? (W. Whyte)



Design principle 1: triangulation



Design principle 2: appropriation



Parc de Luxembourg, Paris

For the art of observation ...



... and the infra-ordinary

Information sharing with strangers



...



Information sharing with strangers



Allowing **contact** but preserving **privacy** and **freedom of choice**

The “sidewalk” metaphor (Jacobs 1961, *The Death and Life of Great American Cities*)

Local information as a basis

- Collective intelligence
 - Deliberation
 - Decision-making
 - Sharing economy
-
- From crowd-sourcing to “group-sourcing”
 - The concept of representation ...

Case studies (1)

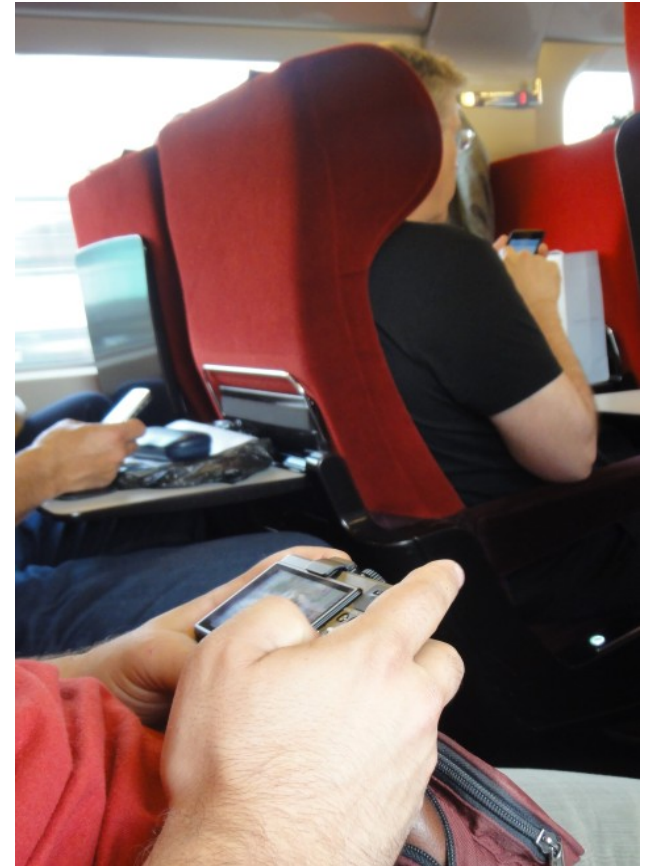
Information sharing during neighbourhood events (project CONTACT)



- Context:** high diversity, divides, barriers, short-term interaction
- Design:** input options, attention, anonymity, visualization, selected questions
- Outcome:** contact, awareness, informal participation

Case studies (2)

Information sharing in inter-city trains (project with TGV-Iyria)

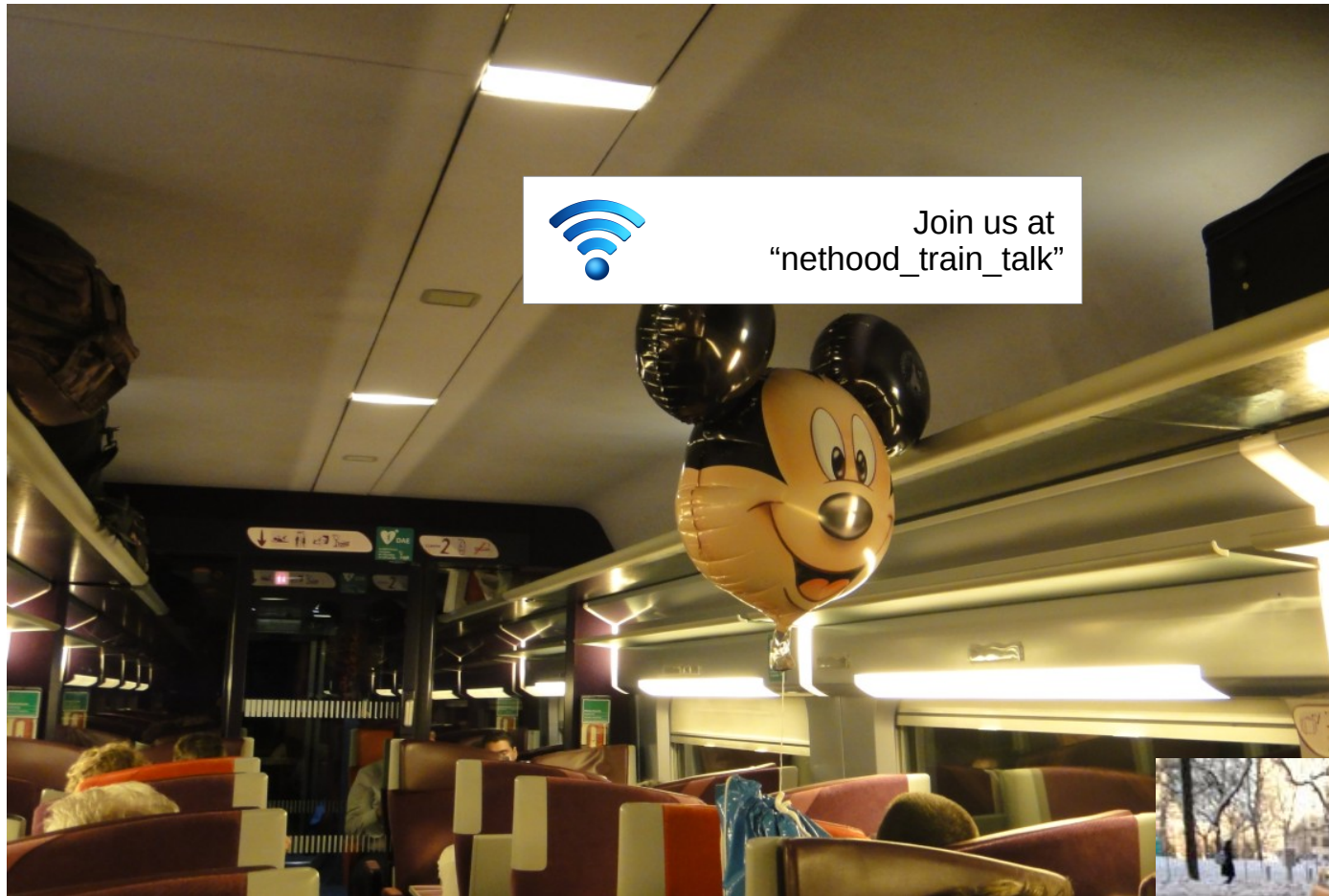


- Context:** high diversity, short-term interaction, available devices
- Design:** anonymity, incentives, optional
- Outcome:** content sharing, serendipity

The role of wireless technology

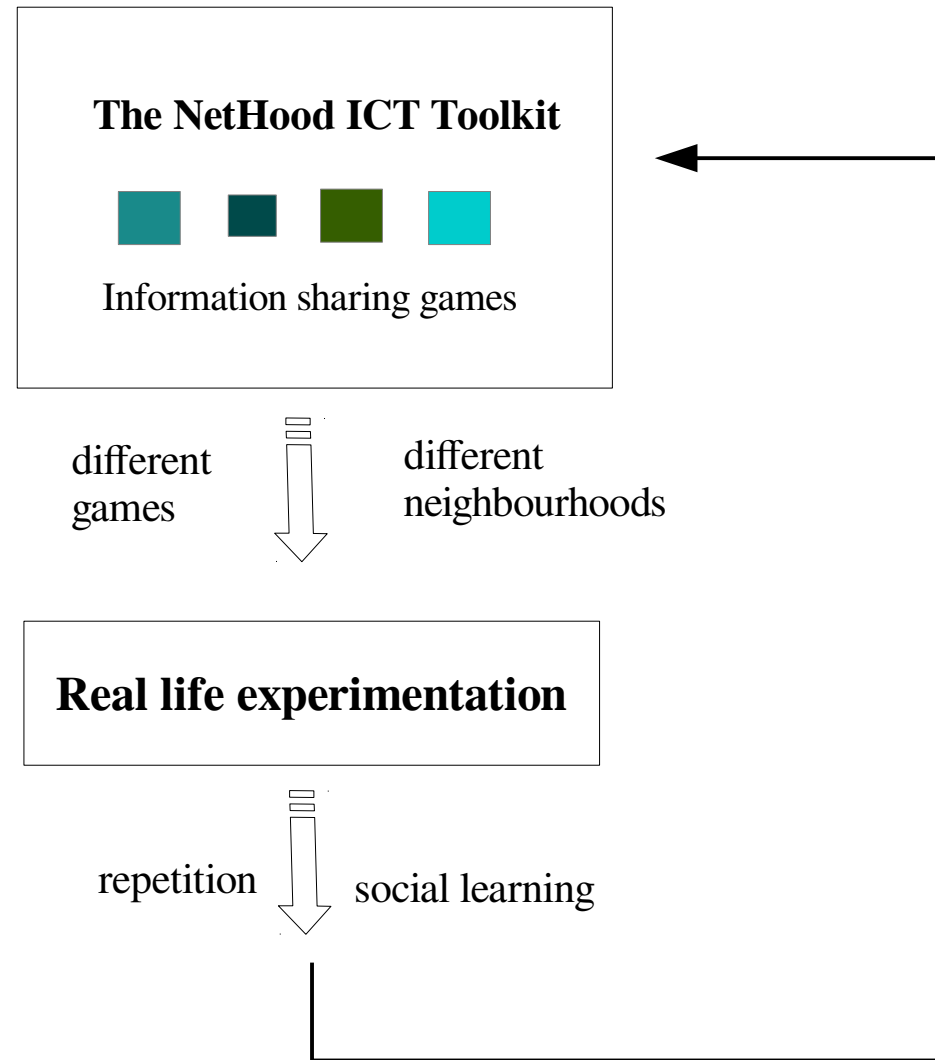
- De facto physical proximity
- Low cost
- Feelings of ownership and independence
- Anonymity (if desirable)
- Ubiquitous access (no credentials needed)
- Opportunities for hybrid space design

Don't forget: the details matter!



Social learning and interdisciplinarity

ICT as a “lingua franca”



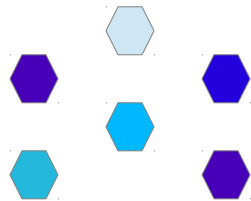
Allow local communities to self-organize and experiment from the bottom-up

Pattern languages and social learning

Modeling and tools

Context

Public spaces, neighbourhoods, high-rise buildings



Hybrid design patterns

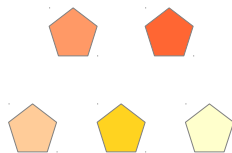
Network



Virtual space

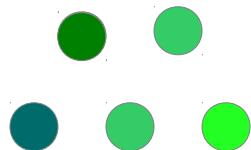


Physical space

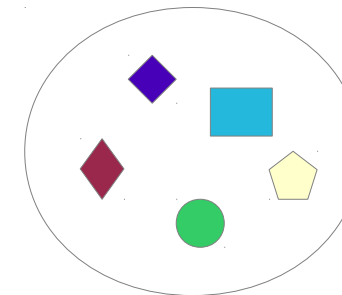
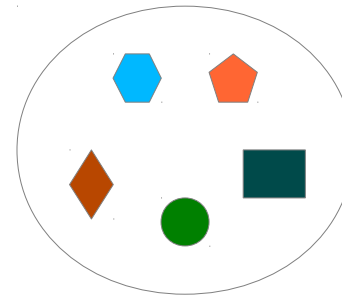
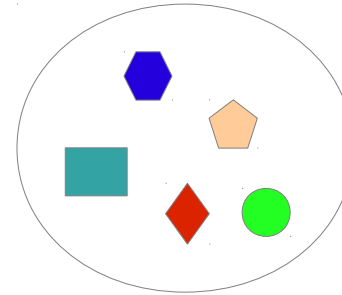


Framing and objectives

Conviviality, resource sharing, information, participation



Case studies



Data Collection

Analysis

Behavioural economics: information sharing as a public good

- **Contribution:** different levels of predefined private information
 - Demographics, interests, skills, etc.
- **Costs:** what stops people from sharing their info
 - Hardwired, context-based, design-sensitive constraints
- **Public good:** the total amount of information collected
 - Visualized through statistics or detailed records
 - It is the diversity (and not the quantity) that matters!
- **Access:** Pure vs. excludable, threshold-based, ...

Related work (Internet as a laboratory)

- Amazon's Mechanical Turk
 - More “subjects”, less control
- Facebook, Google, Twitter
 - Invaluable sources of information
 - ... but knowledge stays private!
 - ... and power too!



Related work (design for cooperation)



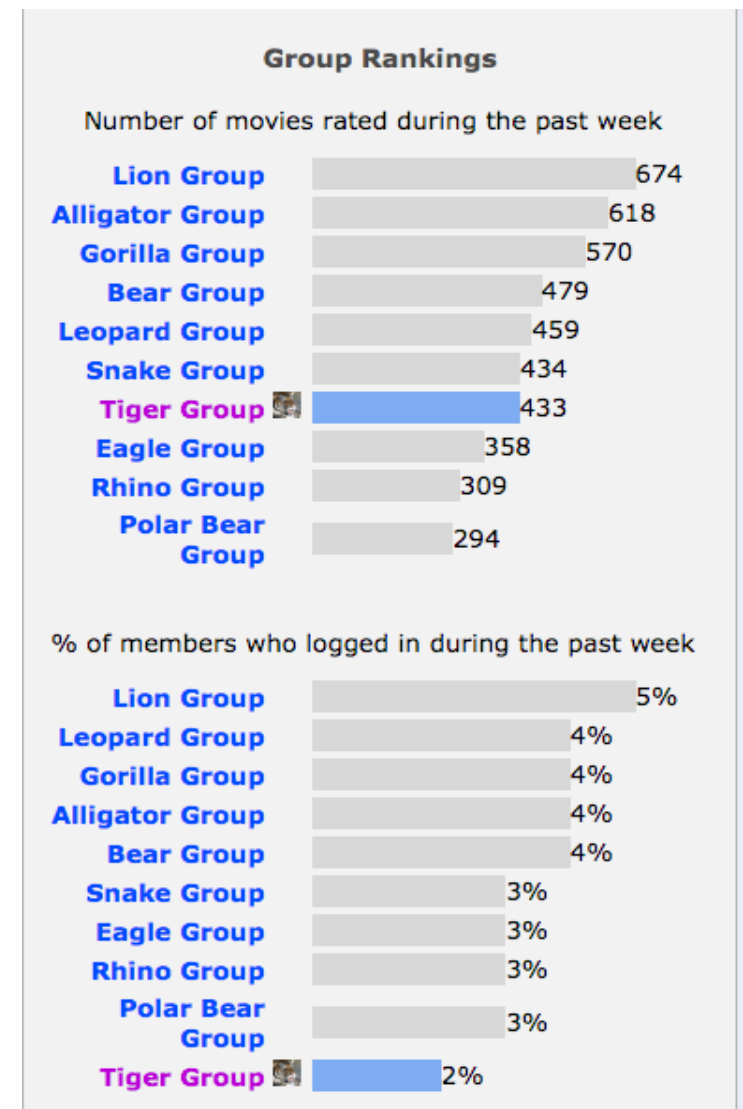
Welcome frindrix@gmail.com (Log Out)

You're in the  **Tiger Group**

You've rated **26** movies.

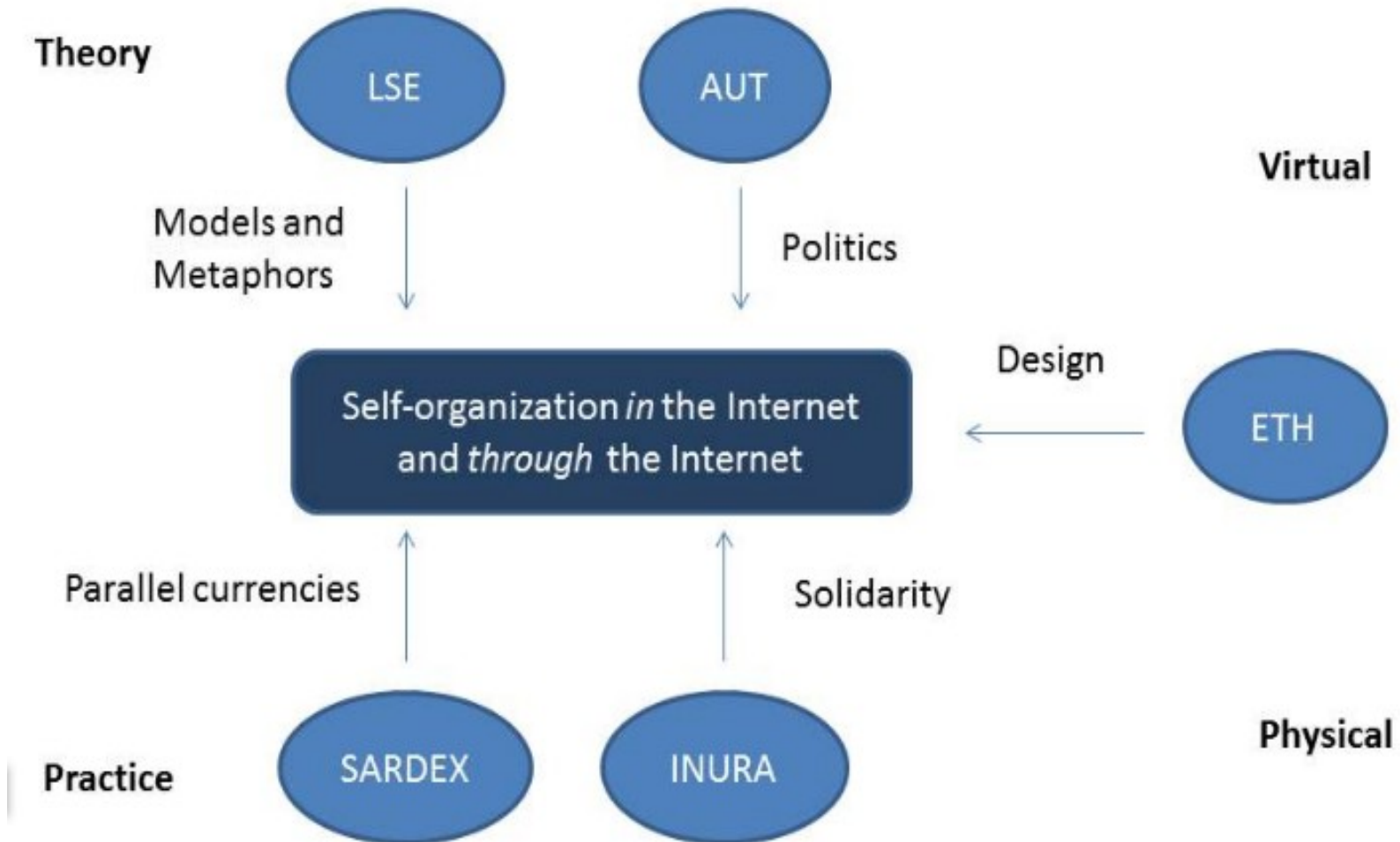
You're the 31st visitor in the past hour.

Related concepts from social psychology:
goal setting, self-efficacy, grouping



Project COMPARE

Interdisciplinary explorations of self-organization in practice





“A very interesting property of CCs ... is that without a suitable accountability and governance framework they simply do not work. Hence, from the point of view of social science they could be seen as useful 'laboratories for institutional learning' that enable some level of experimentation of new ideas in a relatively protected environment”

Paolo Dini, Community currencies and the quantification of social value in the digital economy, 2012



“Indeed it is the hybrid space of modern neighbourhoods that we propose as the common living laboratory where experimental economics, urban planning, and computer science can interact toward the establishment of a social learning approach for bringing knowledge to action, and vice versa, under the premises of an informed practice”

Panayotis Antoniadis and Ileana Apostol, The Neighbourhood Game, 1st EINS conference, 2013



“The 'commons' are used today in a more specific sense that captures mutations in the dominant mode of production and new relations of social self-governance in the management of new and older types of collective goods.”

“In this article, we set out from an outline of the particular histories of the commons in Greece and we go on to trace out their re-invention in the present, in response to the current economic crisis.”

“The thrust of our analysis is that if we can begin to see alternative activities and dimensions as diffused, viable, and persistent over time, 'we may be encouraged here and now to actively build on them to transform out local economies'.”

Alexandros Kioupkiolis and Thedoros Karyotis, The commons in theory and practice: Self-management in contemporary Greece,, 2012.



International Network of Urban Research and Action (INURA)

INURA is a network of people involved in action and research in localities and cities. The Network consists of activists and researchers from community and environmental groups, universities, and local administrations, who wish to share experiences and to participate in common research. Examples of the issues that Network members are involved in include: major urban renewal projects, the urban periphery, community-led environmental schemes, urban traffic and transport, inner city labour markets, do-it-yourself culture, and social housing provision. In each case, the research is closely tied to, and is a product of, local action and initiative.

INURA is a non-governmental and non-profit organization with a self-organizing, non-hierarchical, decentralized structure.

<http://www.inura.org>



A map of Sardinia, Italy, with 15 districts highlighted by green circles containing white numbers representing the number of companies. The numbers are: 115, 19, 51, 17, 25, 31, 28, 90, 29, 35, 105, 52, 152, 15, 394, and 52.

On-going work

- Designing for complementary currencies
 - Institutions
 - Rules
 - ICT-support
 - Hybrid space

Interdisciplinarity

- Dagstuhl seminar on DIY networking

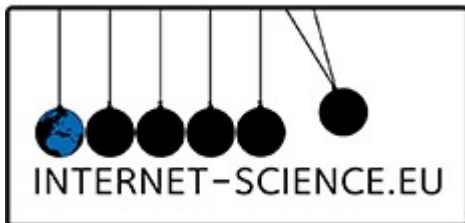


Interdisciplinarity

- What are the right questions to ask for people to introduce themselves?
- What is an appropriate lingua franca for collaboration?
- How we can avoid power games?
- Think of information sharing with strangers :-)

Thank you for your attention!

- We are searching for
 - Collaborators
 - For research, development, experimentation
 - Volunteers
 - For running their own local nethoods
 - Critics
 - For good questions :-)



<http://nethood.org>

