P2P and the city

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Peer-to-Peer

[Logos of napster, The Pirate Bay, BitTorrent, and Hadopi]
Peer-to-Peer

freifunk.net

freifunk verbindet! - freifunk connects! [subs ...

Social freedom.
Diaspora* is a fun and creative community that puts you in control.
Peer-to-Peer

BYO-wifi network

WIFI-CAPABLE DEVICE
iPhone, non-jailbroken

PORTABLE BATTERY
TeckNet iEP387

TRAVEL WIFI ROUTER
TP-Link TL-WR703N

USB THUMB DRIVE
8GB, formatted ext4

USB CABLE
USB2 Micro B / USB2 Type A
(comes bundled with the wifi router)

occupyhere.org
Peer-to-Peer
Peer-to-Peer

http://tidepools.co
Peer-to-Peer
Peer-to-Peer
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

- Public identity
- Information
- Social capital

... qualitative

Resource sharing

- quantitative

The objective matters
Why is it difficult?

Competition between the local and global!
Why is it difficult?

And the global is winning :-)
Why is it difficult?

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 :-)

big brother is watching
NetHood: Bridging the virtual with the physical

Apostol, Antoniadis, and Banerjee, “From Face-block to Facebook or the other way around?”, Sustatinable City and Creativity, Naples, 2008
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 (2013): Flânerie between Net and Place, Journal of Planning Education and Research
Lessons from Urban Planning

What makes a successful place? (W. Whyte)

http://www.pps.org/reference/grplacefeat/
Design principle 1: triangulation

http://soulpancake.com
Design principle 2: appropriation

Parc de Luxemburg, 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 …

Antoniadis, and Apostol. Local Information and the Right to the Hybrid City, Journal of Community Informatics (submitted)
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-lyria)

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!

Join us at “nethood_train_talk”
Social learning and interdisciplinarity
ICT as a “lingua franca”

The NetHood ICT Toolkit

Information sharing games

different games

different neighbourhoods

Real life experimentation

repetition

social learning

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)

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

Interdisciplinary explorations of self-organization in practice

- Theory
  - LSE
  - AUT
  - Models and Metaphors
  - Politics
- Practice
  - SARDEX
  - INURA
  - Parallel currencies
  - Solidarity
- Self-organization *in the Internet* and *through the Internet*
- Design
  - Virtual
  - ETH
  - Physical
“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”

“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'.”

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
SARDEX.NET

1. SELL
Increase your sales and find new customers. Learn how it works.

2. BUY
With credits Sardex you'll save cash. Learn more.

3. SAVE
Paying for goods and services is always worthwhile. Contact.

2nd International Conference on Complementary Currency Systems
19th-23rd of June 2013
The Hague
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