Nation of Neighbors: Design and Network Evolution for Internet Community Safety Systems

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Nation of Neighbors website: Art Hanson

NoN Report: Promotes Community Safety

Break-In/Burglary
Theft-Other Than from Home
Vandalism/Graffiti/Destruction
Suspicious Activity
Threat
Assault
Accident-Motor Vehicle
Drug Activity
Fire
Public Nuisance
Reckless Endangerment
Animal Problem
ATV Complaint
Litter/Garbage Dumping
Quality of Life Issue
Other

NoN Forums: How to motivate?

Forum

Welcome to the *new* Nation of Neighbors forum. We have users from all across the country, all with a passion for building strong communities through communication. While our tools are location specific, it would be a shame to miss the opportunity to share ideas and learn from each other.

The forum is still under active development. Please help us by trying it out and providing feedback. The forum uses the same underlying system as our community groups, so any improvement here will apply to your group pages as well.

Thanks for your help!

Building Interest [2]

Anyone who has tried to start or maintain a Neighborhood Watch knows how difficult it is to build sufficient interest to make it work. Let's share ideas on promotion, recruiting and maintaining interest!

Latest Discussions in Building Interest	Replies	Last Activity
New NoN members I would like to begin by welcoming all the new members of NoN, especially those in Georgia from the recent media releases in the Metro Atl. area.&nb...	1	Comment 3 months, and 10 days ago
Marketing! We are currently organizing Neighborhood Watch in our town of 35,000, which is a suburb of SLC. We started out with a meeting at city hall to build interest. Once we had 6 devoted …	3	Comment 10 months, and 4 days ago

Forum Testing [1]

Testing the discussion forums

Latest Discussions in Forum Testing	Replies	Last Activity
Help us develop our new forum Thanks very much for helping us test our new forum! Here's how the forum works:	3	Comment 10 months, and 28 days ago

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Research Directions

- **Motivating registration**
  - **Egoism, Altruism, Communalism, Principlism**
  - **Four versions of invitation letter**
- **Understanding activity**
  - **Survey of members**
  - **Content analysis, taxonomy of postings**
- **Studying network evolution**
  - **ManyNets, NodeXL, TempoVis**

User Motivation Experiment

- **Two goals:**
  - **Modify invitation email to maximize acceptance**
  - **Understand users' motivations for joining the site**
- **Previous studies emphasize:**
  - **Personalized introductions**
  - **Attraction of social interaction**
  - **Strong identification with organization →**
    pro-social behavior, commitment & satisfaction

User Motivation Experiment

- **Four motivations for community involvement[*]:**
  - **Egoism:** benefit one-self
  - **Altruism:** benefit one or more other individuals
  - **Collectivism:** to benefit a group
  - **Princliplism:** to uphold moral principles

  Batson, et al., 2002

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User Motivation Experiment: 4 Emails

I'm a member of Nation of Neighbors, a website that

- **helps me to be aware of** crime and suspicious activity in our neighborhood.

- **allows me to share information about** crime and suspicious activity in our neighborhood.

- **allows our neighborhood to work together to report and discuss** crime and suspicious activity.

- **allows its users to contribute to justice and safety in our neighborhood by reporting** crime and suspicious activity.

It makes me feel good **to know I am joining a group of devoted citizens who are building a better community**.

Research Directions

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Community—Some History

- Ferdinand Tönnies—*Gemeinschaft und Gesellschaft* (1887).
  - Societies organized around family, village, and town.
  - Societies organized around the metropolis and nation-state.
  - Societies are always to some degree both Gemeinschaft and Gesellschaft.
- Sparse social science literature on 'community' pre-1910.
  - First clear sociological definition in delineated rural communities in terms of the trade and service areas surrounding a central village (1915).
  - Competing definitions followed based on:
    - geographical area;
    - groups of people living in a particular place;
    - and others which looked to community as an area of common life.
- Since the late nineteenth century, 'the use of the term *community* has been associated with the hope and the wish of reviving once more the closer, warmer, more harmonious type of bonds between people vaguely attributed to past ages' (Elias 1974).
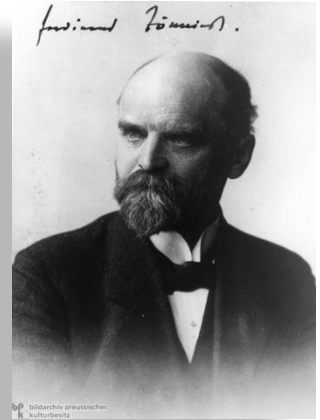
Community—Values & Attributes

- ## Communities as Values

  - Communities bring together a number of elements:

    - solidarity, commitment, mutuality and trust.

  - William Morris on 'fellowship':

    - "Fellowship is heaven, and lack of fellowship is hell; fellowship is life, and lack of fellowship is death; and the deeds that ye do upon the earth, it is for fellowship's sake ye do them."

      (A Dream of John Ball, Ch. 4; The Commonweal 1886/7)

# Community—Values & Attributes

- Community as Attributes
  - *Place*—people share common geography.
  - *Interest*—people connected by a common characteristic
    - e.g. religious beliefs, sexual orientation, occupation or ethnic origin.
    - The sociology of identity: non-place forms of community. People talk about the 'gay community', the 'Catholic community' or "communities of practice".
  - *Communion*—attachment to a place, group or idea ('spirit of community').
  - Different ways of approaching community can overlap.
    - Place and interest communities may intersect—Washington is a "company" town. Many of the people who live there work in the same industry.

Community—Social Networks

- What does 'community' mean to people?
  - Bott—a social network is considered, 'not as the local area in which they live, but rather as the network of actual social relationships they maintain, regardless of whether these are confined to the local area or run beyond its boundaries'. (1957)
  - Intimate social networks (family and friends–"strong ties").
  - Beyond the core—work, church, neighborhood, civic life, etc. ("weak ties").
- 'Networks' are attractive because they can be mapped and measured. The qualities of social networks help describe and explain people's experiences.
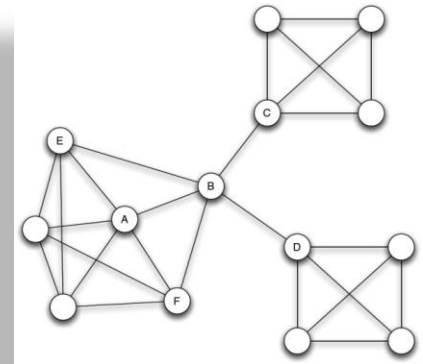
Community—Virtual Communities

- "Community" has expanded beyond concrete social relationships to groups of people thought to be similar.
- Internet growth focuses attention on this change.
  - TMSP enables interaction and knowing each other without meeting physically.
  - Different forms of TMSP may provide a sense of community.
- Are Internet based relationships "community"?
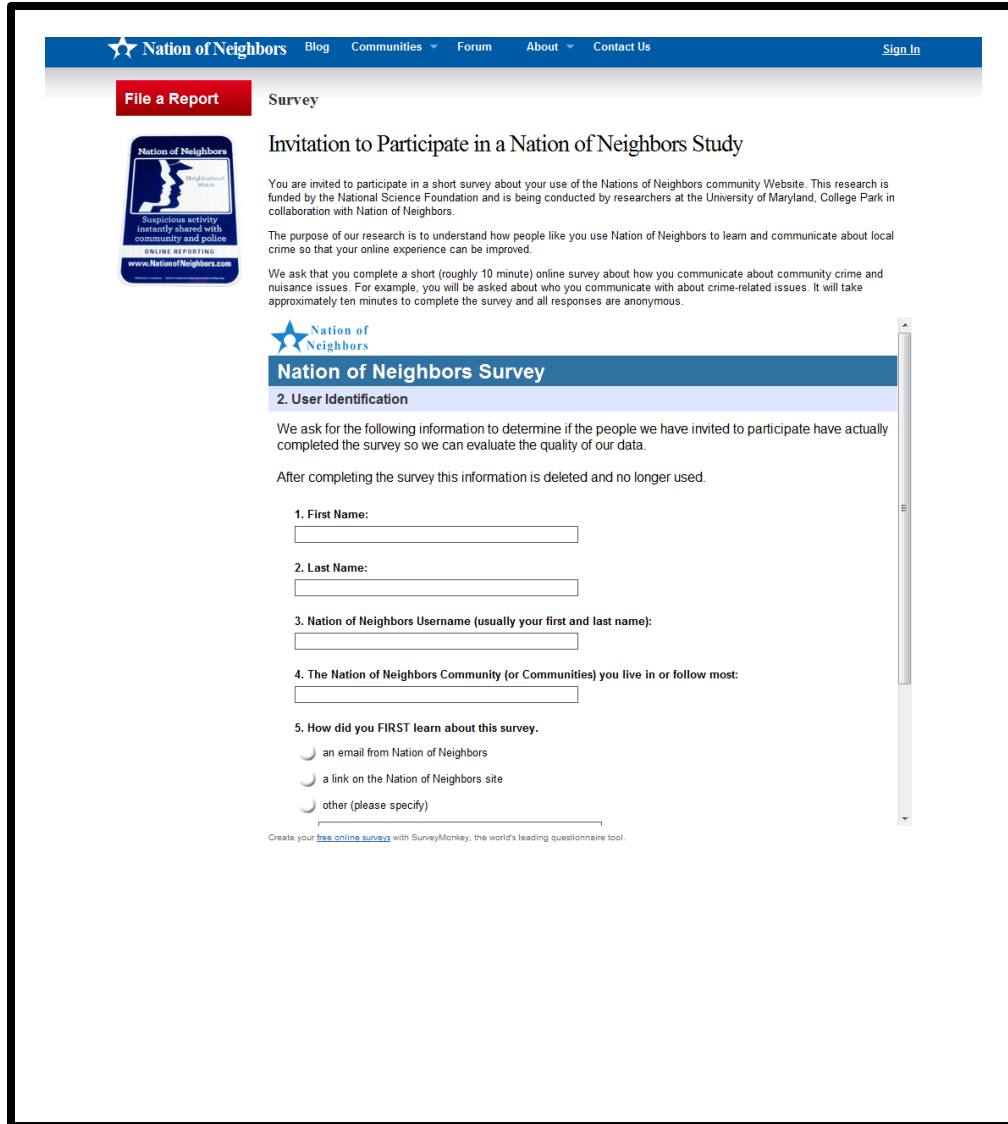
Community—Virtual Communities

- Computer Science—4 conditions for online communities:
  - Interactivity
  - More than two communicators
  - Common-public-place where members meet and interact
  - Sustained membership over time.
- Sociology—People experience community:
  - If they belong to the community (*membership*),
  - If they can make a difference to the community (*influence*),
  - If they provide support and are supported by other members (*integration and fulfillment of needs*), and
  - If they share history, common places, time together, and similar experiences (*shared emotional connection*).

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Community—Nation of Neighbors

- In what ways is NoN a community?

  - Computer science?

  - Sociologically?

  - Members?

- Can NoN evolve to better embrace the qualities associated with geographical and interest communities for it's members? Is that important?

User Survey (n = 152)

Research Directions

1. Determine factors that predict successful community development.

2. Find common characteristics of key players in successful community networks.

User Survey (n = 152)

Sections

1. Recruitment
2. Neighborhoods
3. Demographics
4. Perceptions of Crime
5. Competing Sources of Info
6. Motivations for Use
7. User Response to NoN
8. Ego Net Data
9. Technical Proficiency
10. Social Isolation

User Survey (n = 152)

NoN User Perception of Neighborhood Crime Rate
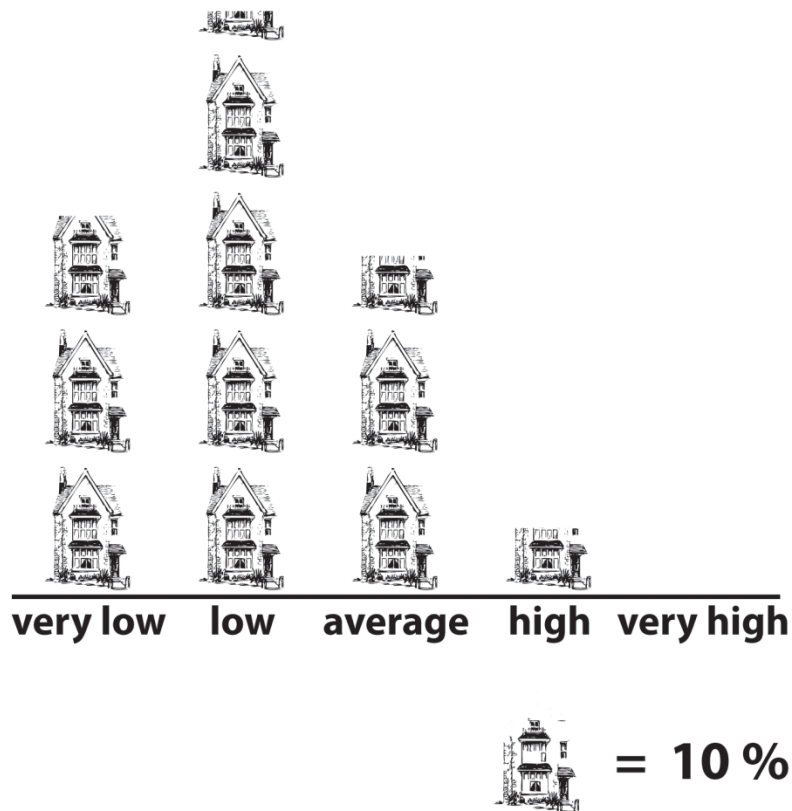
very low   low   average   high   very high

= 10 %

Sections

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User Survey (n = 152)

Perception of Safety
10-point scale, 10 = completely safe, means reported

walking at night	7.6
home during night	8.6
walking during day	8.9
home during day	9.1

Sections

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User Survey (n = 152)

Motivations for Use of NoN
5-point scale, 1 = strongly agree, mean reported
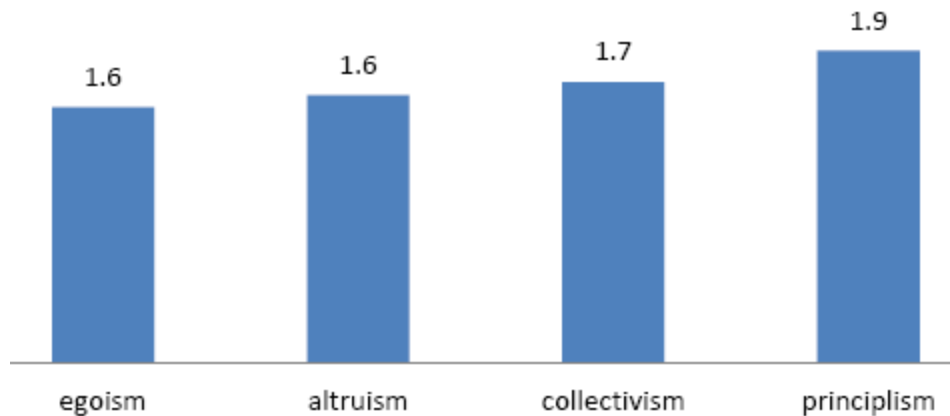
egoism: 1.6
altruism: 1.6
collectivism: 1.7
principlism: 1.9

Sections

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User Survey (n = 152)

Relationship to Person 1
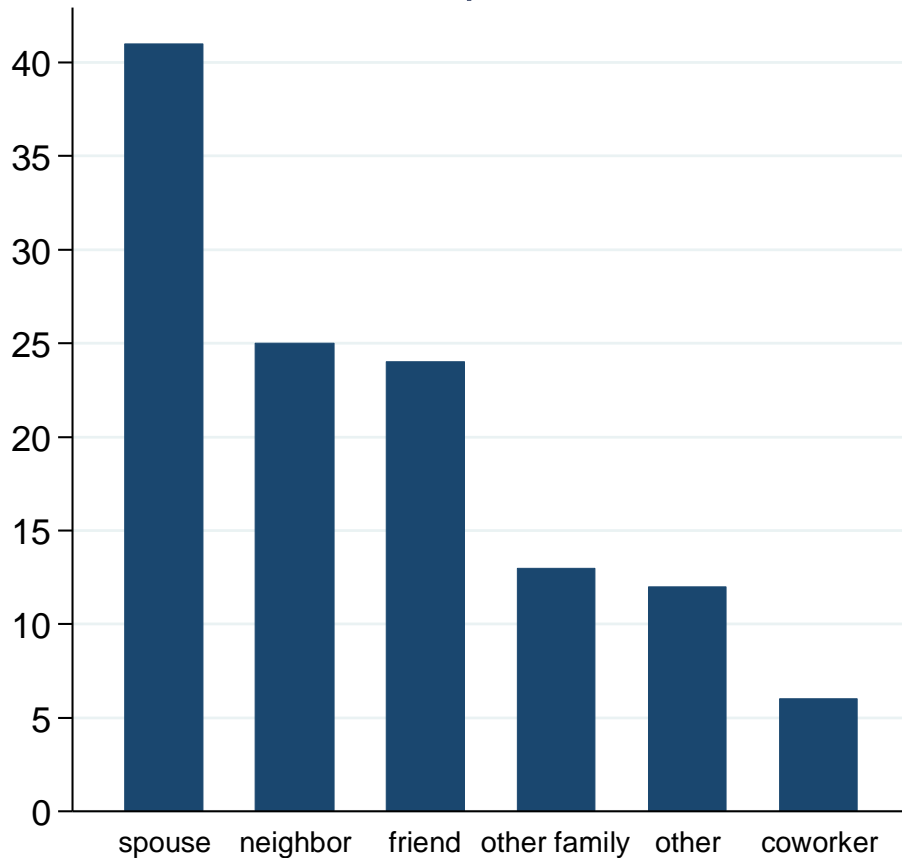
Source: NoN Survey, 2011
Multiple response does not sum to 100%

1. Recruitment
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User Survey (n = 152)

NoN Members in Crime Discussion Ego Networks
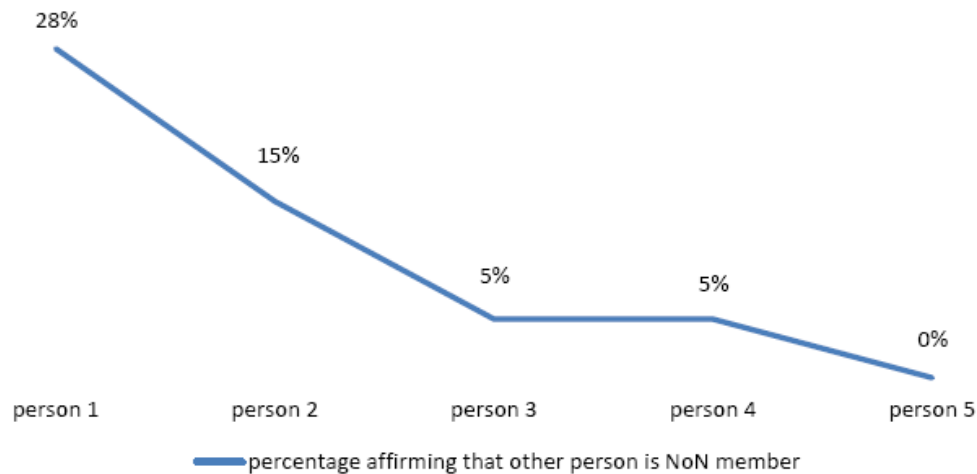
- 28% — person 1
- 15% — person 2
- 5% — person 3
- 5% — person 4
- 0% — person 5

— percentage affirming that other person is NoN member

Sections

1. Recruitment
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Research Directions

- **Motivating registration**
  - **Egoism, Altruism, Communalism, Principlism**
  - **Four versions of invitation letter**

- **Understanding activity**
  - **Survey of members**
  - **Content analysis, taxonomy of postings**

- **Studying network evolution**
  - **ManyNets, NodeXL, TempoVis**

Visualizing network evolution

- The Goal
  - Visually represent time-based changes of networks
- The Idea
  - Show differences among multiple time points
- Three Tools to Show Time Differences
  - ManyNets: tabular format + SocialAction
  - NodeXL: node-link diagram in Excel
  - TempoVis: node-link diagram & time slider

ManyNets

www.cs.umd.edu/hcil/manynets

NodeXL
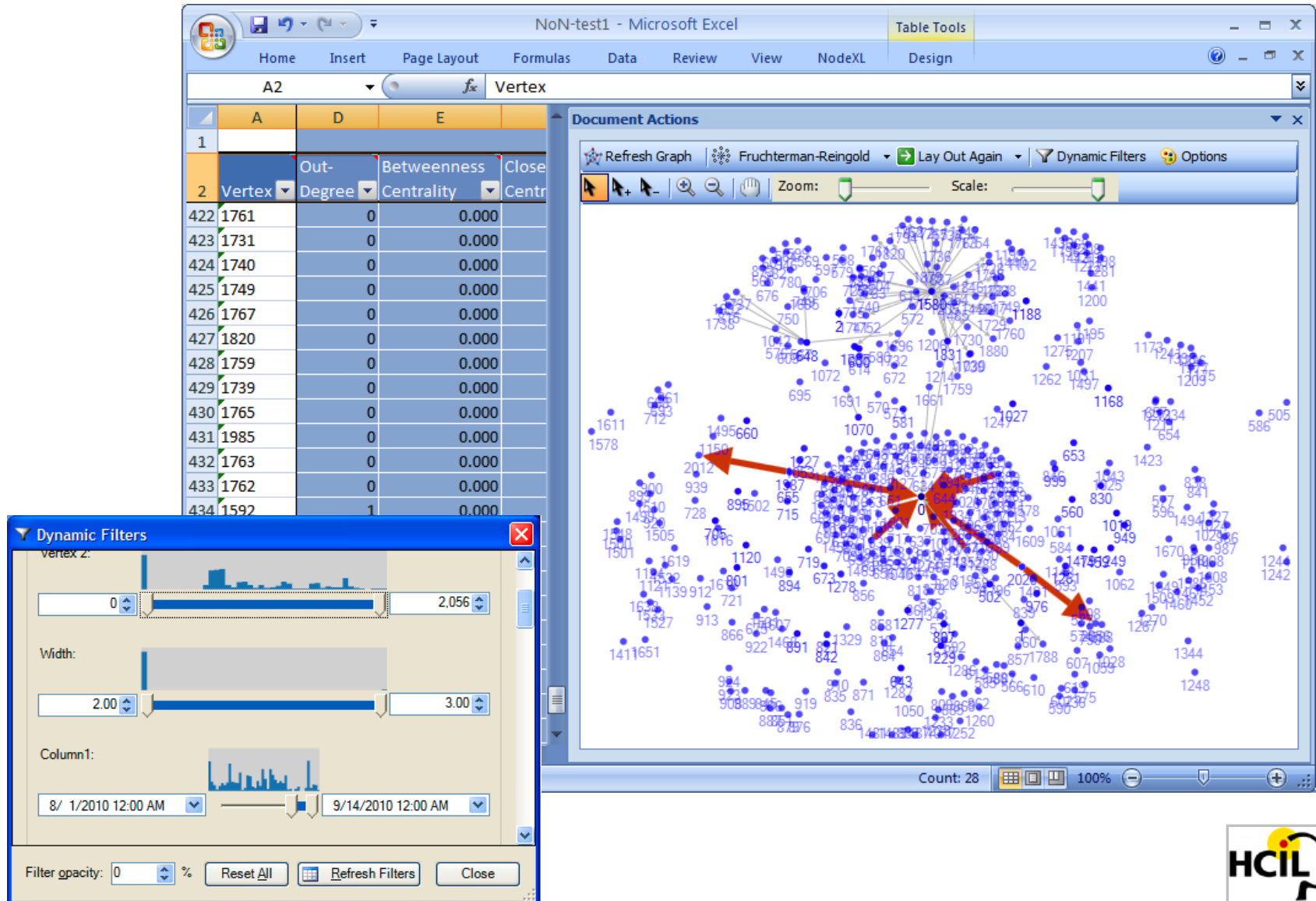
TempoVis: High interaction prototype

- Shows addition & aging of node/links
- Navigation with "Time Slider"
- Marquee-selection of sub-groups
- On-the-fly examination of network features using the visualizations
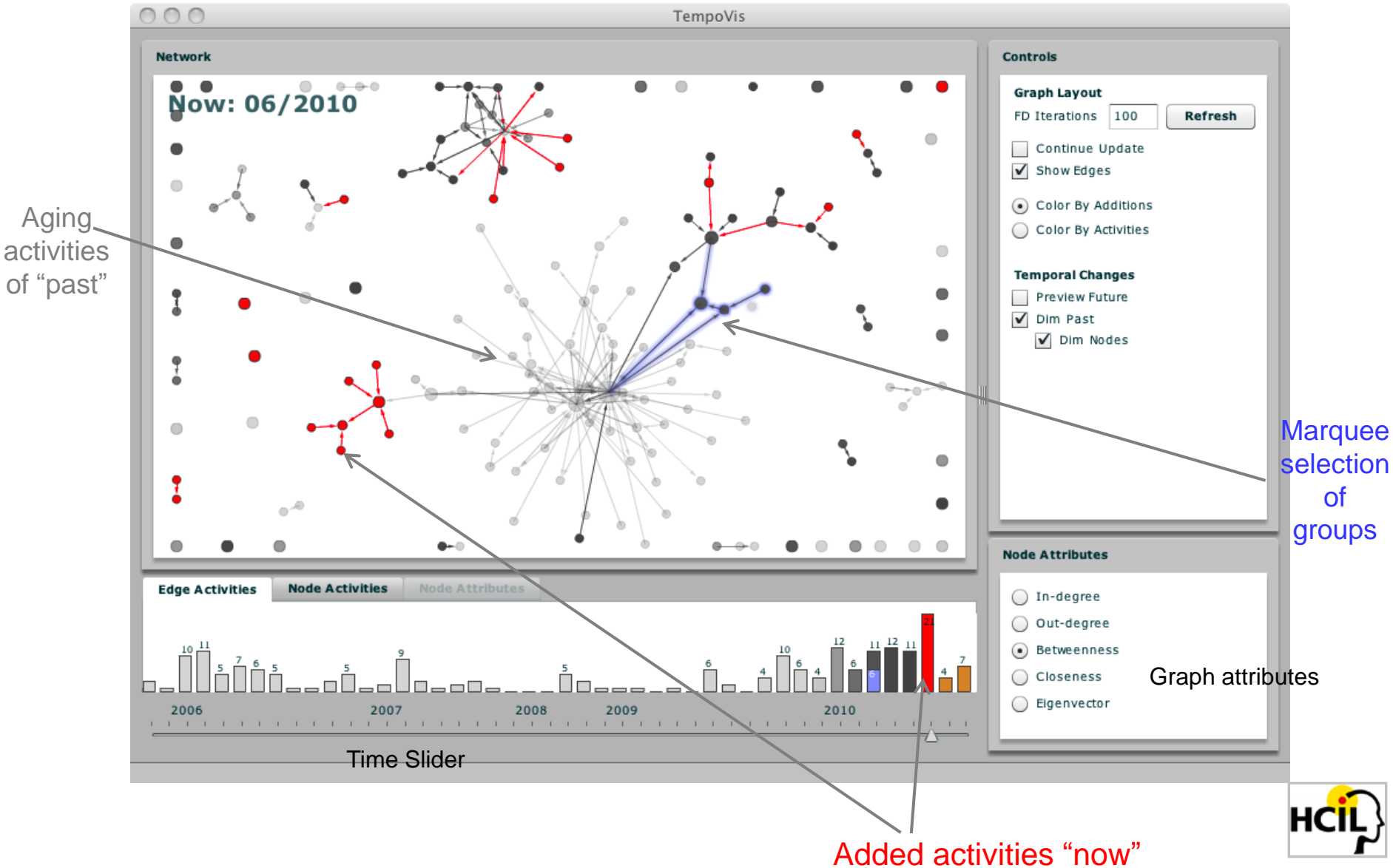
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TempoVis: Color Code for Changes

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TempoVis: Color Code for Changes
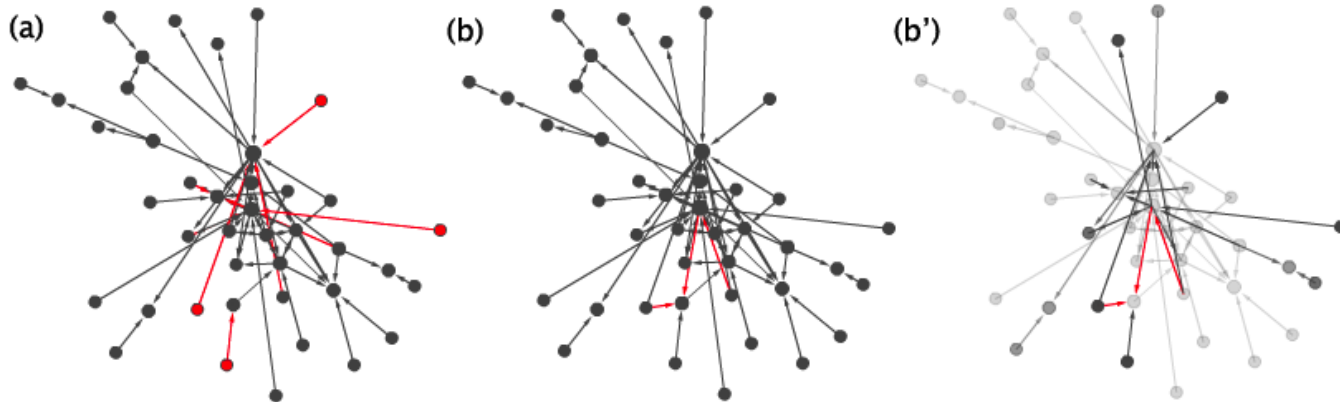
- (a,b) visualization of added node/edges of the "current" time point
- (b') visualization of past activities using dimmer colors

Community—Some History

- Ferdinand Tönnies, *Gemeinschaft und Gesellschaft* (1887), the first systematic sociological account showing an evolution from ancient to modern society.
  - *Gemeinschaft*—early societies are organized around family, village, and town. The economy is largely agricultural and political life is local.
  - *Gesellschaft* –societies are organized at larger levels of metropolis and nation-state. The economy is based on trade and modern industry.
- The evolution from Gemeinschaft to Gesellschaft is not linear.
  - Organic and romantic theories of social evolution (Lewis Morgan and Henry Sumner Maine) and materialist and rationalist interpretations (Marx and Hobbes) needed to be integrated into a more encompassing model.
  - Tönnies believed societies are always to some degree both Gemeinschaft and Gesellschaft.
- Before 1910 there was little social science literature on 'community'. The first clear sociological definition came in 1915 as Galpin delineated rural communities in terms of the trade and service areas surrounding a central village (Harper and Dunham 1959: 19).
- Competing definitions followed. Some focused on geographical area; some on a group of people living in a particular place; and others which looked to community as an area of common life.
- Since the late nineteenth century, 'the use of the term *community* has been associated with the hope and the wish of reviving once more the closer, warmer, more harmonious type of bonds between people vaguely attributed to past ages' (Elias 1974).
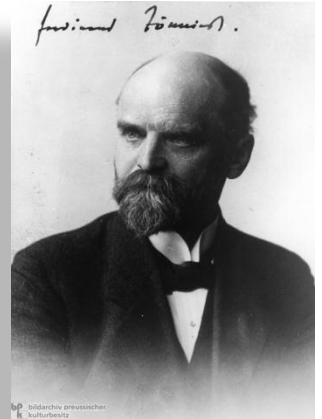
Community—Values & Attributes

- Communities as Values (Frazer 2000)
    - Communities bring together a number of elements:
        - solidarity, commitment, mutuality and trust.
    - It comes close to the third of the ideals inscribed on the banners of the French Revolution—fraternity (the first two are liberty and equality).
    - William Morris described 'fellowship':
        - Fellowship is heaven, and lack of fellowship is hell; fellowship is life, and lack of fellowship is death; and the deeds that ye do upon the earth, it is for fellowship's sake ye do them. (A Dream of John Ball, Ch. 4; The Commonweal 1886/7)

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Community—Values & Attributes

- Community as Attributes (Frazer 2000)
  - *Place*. Territorial or place community where people share common geography. A rich literature—'community studies' and locality studies (focus on spatial divisions of labor).
  - *Interest*. Interest communities connect people by a common characteristic (not place).
    - People are connected by religious belief, sexual orientation, occupation or ethnic origin.
    - The sociology of identity and selfhood built out the conceptual space so non-place forms of community can be understood. People can talk about the 'gay community', the 'Catholic community' or the 'Chinese community'.
  - *Communion*.
    - Weak sense: attachment to a place, group or idea (a 'spirit of community').
    - Strong sense: 'communion' involves a profound meeting or encounter.
  - These different ways of approaching community can overlap.
    - Place and interest communities may well coincide—Washington is a company town. Many of the people who live there work in the same industry.

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Community—Social Networks

- What does 'community' mean to people? The nature of the relationships between people and the social networks they are a part of.
- Typically, the deepest sense of belonging is to:
  - Intimate social networks, especially family and friends ("strong ties").
  - Beyond that core are work, church, neighborhood, civic life, and other "weak ties" (Putnam 2000: 274).
    - Besides a sense of self and individuality, these informal relationships 'also enable us to navigate our way around the demands and contingencies of everyday living' (Allan 1996: 2).
    - Bott (1957: 99) argued that the immediate social environment of urban families was best considered, 'not as the local area in which they live, but rather as the network of actual social relationships they maintain, regardless of whether these are confined to the local area or run beyond its boundaries'.
  - 'networks' are attractive because they can be mapped and measured. The 'connectedness' (or density) (and other qualities) of social networks help describe and explain people's experiences.

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Community—An Example

- Wenger studied the support received by older people in North Wales (1984; 1989; 1995) examining the changing composition of networks and identified five support networks for older people, the:
  - local family-dependent support network. Mainly close kin, who often shared a household or lived locally.
  - locally integrated support network. Typically local family, friends and neighbors.
  - local self-contained support network. Usually small-scale, containing mainly neighbors with relatively little kin involvement.
  - wider community-focused support network. Involving a high level of community activities, this form also typically entailed a high number of friends and kin.
  - private restricted support network. Characterized by an absence of close kin, aside from a spouse in some cases, this 'type' also meant few friends or neighbors.

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Community—Virtual Communities

- The notion of "community" has moved from concrete social relationships to groups of people thought to be similar.

- Internet growth focuses attention on this change.
  - TMSP enables people to interact without meeting physically and to know each other through things like email and Facebook,.

- Some believe that these different forms of social media form the basis of interlinked personal communities—and provide a sense of community.

- Are Internet based relationships "community"?

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Community—Virtual Communities

- Computer Science: Prerequisites for an online community is four conditions (Jones 1997):
    - Interactivity
    - More than two communicators
    - Common-public-place where members can meet and interact
    - Sustained membership over time.
- Sociology: People experience community if they feel that they (McMillan and Chavis 1986):
    - belong to the community (*membership*),
    - they can make a difference to the community (*influence*),
    - they provide support and are supported by other members (*integration and fulfillment of needs*), and
    - they share history, common places, time together, and similar experiences (*shared emotional connection*).

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Community—Nation of Neighbors

- This is how we come to and view Nation of Neighbors.

- In what ways is NoN a community?
    - Computer science?
    - Sociologically?
    - Members?

- Can NoN evolve to better embrace the qualities associated with geographical and interest communities for it's members?

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Community—Citations

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User Survey (n = 152)

Survey Sections

1. Recruitment
2. Neighborhoods
3. Demographics
4. Perceptions of Crime
5. Competing Sources of Information
6. Motivations for Use
7. User Response to NoN
8. Ego Net Data
9. Technical Proficiency
10. Social Isolation

Survey – Defining & Predicting Success

- **NoN as Neighborhood Watch**

  - **Crime Prevention/Reduction**

  - **Crises Response & Capacity Building**

- **NoN as a Social Network**

  - **Consistent Interaction**

  - **Mutual Information-Sharing**

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