

Barry Wellman

Ties & Bonds



BBS

John Skvoretz is now the Dean of Arts & Sciences at Univ of S. Florida, Tampa. Longtime INSNA-niks will remember Tampa as the home of the first 2 Sunbelt conferences, 1981-1982 (at George Steinbrenner's Bayshore Inn), and USF stalwarts Susan Greenbaum and Al Wolfe as the 2nd INSNA coordinator and *Connections* editor after me.... **Susan Bastani** elected Dean of Social Sciences at one of Iran's leading universities, Alzahra University Venak in Tehran. Note the word *elected* the next time you hear a US government rant: Unlike the secretive committees of many North American universities, Susan won an open election against 4 other candidates. She's also the Middle East's first network analyst (except for Israel) and heading the Iranian component of the World Internet Project...

Katy Börner promoted to tenured Assoc Prof, Info Sci, Indiana U..... **Marina Hennig** awarded "Venia Legendi" (5/05) by Humboldt Uni, Berlin where she receives the title of privatdosenent (equivalent to US "assistant professor"). She now can be referred to as "PD Dr. habil. rer. soc. Marina Hennig." The title of her dissertation: "Individuals and social relations: A network theoretical contribution to the overcoming of the community-society dichotomy"....

Andrew Seary awarded PhD from Simon Fraser Univ (Vancouver, Canada): "MultiNet: An Interactive Program for Analysing and Visualizing Complex Networks." My spies tell me that all committee members (+ the external examiner) gave it high praise....

MIT emptying out? **Keith Hampton** moving Summer 05 from Urban Studies to Annenberg School of Communication, U Pennsylvania.... **Pablo Boczkowski** moving Summer 05 from Sloan B-School to Assoc Prof of Communication at Northwestern U. Pablo also won the 2005 Outstanding Book Award of the International Communication Assoc for *Digitizing the News: Innovation in Online Newspapers* (MIT Press, 2004). The ICA award citation says that the book crosses over research traditions and methods.... It combines archival research and comparative ethnographic studies of specific digital news enterprises. [It is] innovative in approach, meticulous in analysis, and thoughtful in drawing conclusions."

Former INSNA head **Martin Everett** (Provost, Westminster U) has been made an Academician of the Academy of Learned Societies for the Social Sciences. He's now one of the select 350.... Former INSNA head **Steve Borgatti** has won the Outstanding Computing/Teaching Applications Award of the American Soc'gl Assoc's Communication & Info Technologies section.... **Ron Rice** elected president of the International Communication Assoc. He'll also be program chair for the ICA's 2006 meeting in Dresden.... **Harrison White** (Soc, Columbia) received the Distinguished Book Award (of the Amer Soc Assoc's Economic Sociology section) for *Markets from Networks: Socioeconomic Models of Production* (Princeton U Pr, 2002).... **Harriet Friedmann** (Soc, Toronto) spent 3 months on an Agrarian Studies Program fellowship at Yale, followed by 3 months as a Fellow of All Souls College, Oxford.... **David Smith, Judith Stepan-Norris** and

Valerie Jenness (all Soc, Cal-Irvine) selected as editors of *Contemporary Sociology* book review journal.

The first issue of the quarterly, *Social Influence*, will appear, Spring 2006. It is now accepting submissions on such topics as social influence tactics, compliance, advertising and mass media, political process, contagion, rumors, interpersonal influence, influence in democracies, power, as well as other topics related to social influence. The journal accepts long empirical articles, shorter empirical articles, theoretical pieces, literature reviews, historical and biographical pieces, articles on the application of the science of social influence, and commentary. More info at <http://www.socialpsychologyarena.com/> or email Anthony Pratkanis, Editor, at peitho@cats.ucsc.edu.

Frank Harary Graphed

Frank Harary died Jan 4 in Las Cruces, New Mexico, USA, from a post-operative infection at the age of 83. He was a Distinguished Professor at the computer sci dept of New Mexico State U. Frank was the leader in applying graph theory to social network analysis, as he'd be the first to tell you, with a twinkle in his eye. Frank founded the *Journal of Graph Theory* and the *Journal of Combinatorial Theory*. Born in Brooklyn, 1972, he received his Bachelors and Masters from Brooklyn College and PhD from Berkeley. He moved from U Michigan to New Mexico in 1987 and was active in many Sunbelt conferences until recently.

Frank's *NY Times* obit says he "wrote or contributed to 700 academic papers." His 1969 *Graph Theory* "has been credited with giving the field a broader relevance. Theory, which dates from the 18th century or earlier, is concerned with the edges and vertices found in graphs. It is frequently used to model physical or abstract problems in chemistry computer networks, transportation lines and even sociology." (my ital). Former student Stephen Hedetniemi (Clemson) said "The elegance of the writing had been crucial to the speciality's acceptance. Harary made a beau-

tiful presentation of the theory that hasn't been equaled since." His dept chair, Desh Raanjan, says Frank delivered > 1K conference and invited lectures in more than 87 countries in 4 languages. He had at least hon docs from universities in Scotland, England, Sweden, Greece and the U.S.

Harary's other books include *Graphical Enumeration* (with Edgar Palmer) and *New Directions in the Theory of Graphs*, and *Structural Models: An Introduction to the Theory of Directed Graphs* (with RZ Norman and Doc Cartwright). You can get a bibliography at "www1.cs.columbia.edu/~sanders/graphtheory/people/Harary.F.htm".

When news of Frank's death circulated on Socnet this past January, former INSNA head Steve Borgatti wrote, "I used to be skeptical when he would begin a sentence with 'When I created graph theory...,' but I have to admit now that his contribution to making graph theory a field was in fact huge. He was an extremely colorful character who [was] quite charming all the time. I remember almost all of my interactions with him (e.g., in the hospitality suite of Sunbelt conferences) quite vividly."

Stan Wasserman notes that Frank would "bring his own wine (bottled at his own 'Harary Winery' label) to conferences.... He almost single-handedly is responsible for the popularization of graph theory in network analysis" — especially Harary, Norman & Cartwright.

Frank guest taught at Univ of Cal - Irvine. Narda Alcantara remembers becoming "quite fond of him. He was great teaching his stuff and he would lecture his students even using paper napkins in a noisy restaurant."

Scott White (Doug's son) remembers hearing a talk in Mexico. "Being quite the performance artist, he would intermingle colorful and sometimes bawdy jokes with derivations of non-trivial graph theoretic results."

I, too, have fond memories of Frank Harary and regret that our oft-postponed project will never come to be: We were to link my old East York data (1968 variety as in "The Community Ques-

tion") — the distribution of all the actual egocentric graphs with 5 nodes and 6 ties — with his modeling. I still hope that one day a paper will come from that, with Frank as a spiritual co-author. Or perhaps a posthumous one, as he had an Erdős number of 1 and I only have a 3 (but so do Claude Shannon and John Nash). Frank's had 268 co-authorships compared to Erdős' legendary 509. Should we start a Harary number count in network analysis? One rumor has Frank starting an autobiography, but I haven't been able to get any hard information.

Ev Rogers Remembered

Everett Rogers, the great communication scientist, died this Fall. A memorial service was held for him on December 4, 2004, at the U of New Mexico main campus. He had moved there after many years at Michigan State and Stanford. New Mexico colleague Brad Hall reports that at the memorial service, people not only talked about Ev's "great academic accomplishments, but about his inclusiveness, supportiveness and generosity. These were discussed in regard to young colleagues and graduate students as well as to the communities he researched and served."

Frank and Ev gone in a month -- both in New Mexico. Strange coincidence. Both lovely people, with strong Sunbelt and INSNA presences.

Here is a lovely reminiscence from one of Ev's earliest students, Nan Lin.

What I Learned from Ev Rogers – Networking, By Nan Lin, December 2004

It was 1964 and I was in the second year of my doctoral studies at Michigan State when someone told me that "an exciting and young professor" had joined the faculty. So, I signed up to take Ev's Diffusion of Innovations course. During the course, we read through his Diffusion of Innovations monograph (I believe it was the first or second edition) and many other monographs and articles, and much discussion took place in and out of the classroom. The course itself was not extraordinarily hard and some parts were even boring. However, Ev was enthusiastic at all

times and quickly involved students in his research projects. Along with a fellow graduate student, I soon found myself involved in a study simulating the diffusion process in a rural area in a hypothetical developing country. With Ev urging us on, we worked furiously to write programs in Fortran, keypunch the Hollerith (IBM) cards, submit our decks of cards through the windows at the computing center, anxiously wait for the print-outs, read the error statements, and punch some more cards. After we got the program to work, we then repeatedly changed parameters, examined the outcomes, punched some more cards, and submit the programs again. The harder we worked and the deeper we got into the simulation, the more we became appreciative of Ev's work and enthusiasm.

In less than six months (remember we were using Fortran, Hollerith cards, and relying on the mercy of the humongous and temperamental IBM computer, housed in a conference-room-sized quarters), we succeeded with a working program and obtained some interpretable results. Ev suggested that we write it up and send it to a conference, which we did. The next thing we knew was that Ev was driving us in his car from East Lansing to the conference in Pittsburgh. The three of us were joined by a couple of other graduate students in geography who also had a paper accepted. None of us students had any traveling money and Ev was happy to take all of us and did the driving. Once we checked into the hotel and got into two rooms, one of us had to sleep on a roll-away. So, we drew straws and Ev lost, so he slept on the roll-away for two nights, never losing his smile and always chatting with us about our papers, other papers in the conference and what we needed to do when we went back. Throughout the conference, he introduced us to others (he seemed to know most people at the conference). The participants came from many disciplines, ranging from communication, sociology, political science, and psychology to economics, geography and mathematics. Suddenly, I found myself transformed from being a graduate student into a researcher chatting (as naturally as I could pretend) with colleagues!

By that time, I thought I had learned a lot about networks and communications in courses and was rather proud of all the good grades I had received. But during the first year of my exposure to Ev, I learned how to actually practice network research and how to actually do networking. Probably most importantly I learned how a good mentor should treat his/her students (equally) and share the credits with them (eventually we ordered the authorship on a publication by collectively deciding the relative contribution each of us made and Ev was the third author).

In the next two years, I got into more of Ev's research projects (and learned to punch cards faster). By the time I finished my dissertation, I had gone through several iterations of these networking practices. They have since ingrained in me as I have followed the same principles in practicing research and networking for the next four decades. No one can match Ev's enthusiasm, genuine interest in his students, willingness to work with them and giving them full credits. But I am really grateful that I had the opportunity to learn from the great master-mentor himself during my formative years.

Taiwan International Social Capital Conference

Capitalizing on the growth of interest in social capital, a bunch of social networkers descended on Tunghai University, 2 hours south of Taiwan's capital. (And how many meanings of "capital" can *you* use in a sentence?) Organized by Ray-May Hsung (a most capital and capable person), the conference featured presentations by Nan Lin (whom I learned was Fujian born and Taiwan raised), Ron Breiger, Karen Cook, Bonnie Erickson, Henk Flap, Joe Galaskiewicz, myself and Taiwan colleagues.

The themes varied around the overall social capital framework, with discussions about heterophily vs homophily; micro-macro; the impact of ICTs, power-dependence networks; measurement; methods; openness-closure; structural holes; access vs mobilization; instrumental and

expressive returns on social capital; contingent effects. Among Ron Breiger's concluding comments were that diversity does not necessarily negate homogeneity, and that diversity does not necessarily negate core values.

Foreign guests also learned that our Taiwanese colleagues make great discussants. The choreography was interesting.

1. Express great honor in being asked to comment on the work of such distinguished scholars in their midst.
2. Apologize in fine English for their poor English and their lack of intellectual worthiness.
3. Announce that despite the great wisdom of the scholars, they would modestly suggest some ways to make already-superb papers even better.

The payoff, of course, is:

4. 10 minutes of extraordinarily perceptive and constructive commenting.
5. Thank the speakers and hope that they had contributed a little bit. "I hold Professor X in the highest esteem. I hope he may find my little contribution useful to improve his masterful work even more.

Collateral learning was also interesting. We learned that the way that Taiwanese drivers keep awake is to chew on betel nuts — stimulants coming from a certain species of palm tree. In normally conservative Taiwan, these are sold by bikini-clad young women in glass booths lit by neon signs

25th Sunbelt Conference in Rainy LA

I'm writing this section in LAX, after successfully convincing the US authorities that my Rockports really are shoes. Bev & I are on our way back from the most successful Sunbelt conference ever by most criteria, in Redondo Beach, suburban LA, Feb 2005.

1. It was the best attended, with upwards of 400 people taking over the Crowne Plaza in Redondo Beach (just south of the airport).
2. We had more papers. There were usually 7

sessions running concurrently, and Thursday has become a full session day instead of an arrival-for-the-banquet day.

3. There were more good papers. At almost every time slot, there was something I wanted to hear. This was achieved partially by the growing success of the field, and by a more selective refereeing process.

4. There were more workshops. Moreover, the workshops were filled, be they "Networks for Newbies" or advanced technical workshops.

5. INSNA itself hit new highs with upwards of 600 members.

6. Not only did we have a plenary keynote speaker — Ron Breiger (Soc, U Arizona) using Spinoza to give relationships true analytic priority — but the Lin Freeman award speaker: Jim Moody (Soc, Ohio State), brought balance theory up to date. (In case you forgot, the Freeman award is for folks under 40 or late-blooming recent PhDs.)

7. The conference was also beautifully run, by Carter Butts & Katie Faust doing the program, Becca Davis & Tom Valente (and their students) running the conference itself, and INSNA Prexy Bill Richards doing computerized registration.

To give you a comparative sense, when INSNA started, we had about 175 members. The first Sunbelt in 1981 probably had about 150 participants. Many of us were upset because we had to run *two* parallel sessions, limiting the extent to which we could hear about each other's work. For many years, INSNA was stable at 300 to 400 members, and the Sunbelt ran 4 to 5 parallel sessions, from Friday morning to Sunday noon.

I spoke briefly after the first night's banquet, doing my INSNA founder schtick. I showed bits from early copies of *Connections* (hand-typed and proofread, and hand-delivered by me and Bev to the postoffice) and pictures of the second Sunbelt. We struggled to ID the then-youthful faces.

It was great to see much representation from outside of North America. In addition to foreign graduate students, studying in North America, I met Italians, Dutch, Slovenians (the Vladi-

Anuska duo), Aussies, Taiwanese, Koreans, British, Irish, Mexicans, and Japanese. I didn't meet anyone from mainland China, elsewhere in Latin America (other than my student Juan Carrasco and a Peruvian working at Univ of Southern California) or Africa. Alas, the usually sizable and active French representation seemed to consist of only one person. For better or worse — and I think better — there wasn't a clear difference between North American and unAmerican papers. My guess is that a combination of SocNet, UCINET (et al.), and frequent ocean-crossing has led to coalescence.

One thing that has stayed constant: a continuing stream of formal math model papers. But these have grown more sophisticated in the math and programs used. This year, the buzz is that p^* has been developed into EGRM. Not only is UCINET user friendly (and with Steve Borgatti doing saintly advising work on www.ucinet.com) but it is being joined by Pajek, Net Miner, Multinet, and others.

It's not just that we've grown, but that the type of presentations (formal and over coffee) have changed. I've been giving the Networks for Newbies workshop for many years, a vantage point for spotting emerging interests. Originally, much of the action was in social support and community. Then, organizational analysis turned hot, fueled especially by Ron Burt's *Structural Holes*. Bob Putnam's *Bowling Alone* and Nan Lin's 2 *Social Capital* books fostered a move in rhetoric and analysis from social support to social capital.

This year's crop suggests 3 hot areas, fueled by funding, concern and interest:

The epidemiology of disease: in particular, how AIDS/HIV spreads. Both US and Canadian interest was represented. However, I didn't hear anything about SARS, despite its rapid, network-based spread. I would think the models for the rapid spread of SARS would be much different than those for one-person-at-a-time HIV. I also heard about the potential for the spread of bio-terrorist diseases. (A nice popular article on this appeared in the *MarchScientific American*: Chris Barrett, Stephen Eubank and James Smith, "If

Smallpox Strikes Portland" -- although I can't help but think that they are already infected by the Trail Blazers.)

Computer networks as social networks. For the first time, an appreciable number of people from the computer companies -- software and services -- showed up. Some of us -- like me, Caroline Haythornthwaite and Marc Smith (Microsoft Research) have been preaching to the HCI choir for years, but it has been a slow sell. However, in the past few years the spread of so-called "social software" such as *Friendster*, has gotten a lot of press (see my rant about *LinkedIn* below and now HCI people have starting thinking beyond human-computer interaction to human-computer-human interaction. I saw people from IBM, Parc, and Microsoft, plus a bunch of academics interested in this stuff. (Some CN/SN bits are discussed at the end of my article.)

Defense "intelligence". "Intelligence" of course is often a network phenomena, with connectivity of people, organizations, finances, and materiel. One sometime Sunbelt participant, Olivier Schmidt, has just detailed this in *The Intelligence Files*, published by Clarity Press.

The Sunbelt is open to anybody, and this year we had a larger than ever contingent of folks from the US Defense Intelligence Agency, the US National Security Agency (the folks who listen to phone calls and read emails), an Aussie outfit called the DSTO (Defense Science & Technology Agency), and a Brit. I know of at least 10 spooks who were there. There may have been more, because in previous years, I have met folks from the FBI and the Joint Warfare Analysis Centre. In addition, at least 3 long term INSNA members are actively involved in "terrorism research": two academics and 1 management consultant. They are interested in flows: of funds, drugs, and the well-publicized "weapons of mass destruction". All of these participants seemed like nice people, and at least one was willing to grant that the most sizeable source of WMD was the US government.

To the best of my knowledge, no participants from the other side(s) were there.

Another absence that struck me: no one in the defense "community" (to use their term) seemed interested in the 1950s-1960s hot button question of why people rebel against governments. (Old-timers should remember the CIA's Project Camelot in the Kennedy era; newbies should Google and read Irving Louis Horowitz's book of the time.). This time round, terrorism is dealt with purely as a technical matter of preventing the flow of weapons and funds, rather than an ideological and recruitment issue. Another absence: no one seemed interested in the huge geopolitical cum socioeconomic shift happening with the development of China as an economic power. Yet, the shift of industrial strength and R&D to China is standing world-systems (and its theory) on its head.

Yet Mike Schwartz's (Soc, Stony Brook) recent report documents 2 models of Iraqi opposition. Mike provides evidence that US military leaders believe that there has been a coalescence of a wealthy and savvy Saddamist leadership group with the al-Zaraqi network:

Pressure from recent American offensives drove the 2 groupings into an increasingly comfortable alliances... The contacts and networks that Saddam's key cronies began developing months before the invasion now paid off. An understanding with the Islamic fanatics, and the well-funded Baathists appear to have made Syria a protect base of operations. [Quotes from the summary of the Schwartz report in *Intelligence*, number 456, 14March05, part 2. The original essay is, "Going to War with the Army You Have" at: <http://www.tomdispatch.com/indexprint.mhtml?pid=2241>].

Mike argues that this coalescence model fits well with the US military's own fixation on command-and-control structures: their own — and through reflective projection (*my term*) — their opposition. It is what the cold-war based US military is set up to deal with, cognitively, procedurally and militarily. By contrast, Mike provides a second model, arguing that the Iraqi

opposition is a bunch of scarcely-coupled, autonomous cells, often composed of close kin. [BW: Of all things, this second model reminds me of the hyper US-patriotic movie, *Red Dawn* (John Milius, dir; 1984) in which a bunch of teens harried the Russian-Nicaraguan-Cuban occupying army — heroically, morale-boosting, but to little strategic effect.] Reading Mike's article, I was reminded of his dissertation-based research into a 19th-century American movement.

Network Gelt Flows

Post-Doc and RA-ships at U Illinois: The Science of Networks in Communities (SONIC) at Speech Communic, U Illinois (Urbana) & the local Nat'l Center for Supercomputing Applications has 2 postdocs and 5 graduate RA-ships available to work on an NSF-funded, multinational, multiyear effort. Central goal: develop "cyberservices" to map, nurture and leverage large-scale social networks within distributed communities using "next generation cyberinfrastructure". US & int'l applicants welcomed with expertise in development and testing SNA theories, modeling networks, visualizing networks, data-mining algorithms to detect networks. Info from Nosh Contractor, nosh@uiuc.edu.

Indiana's Field of Network Dreams: The US NSF has also funded at Indiana U & Notre Dame U the "NetWorkBench: A Large-Scale Network Analysis, Modeling and Visualization Toolkit for Biomedical, Social Science & Physics Research" for \$1.2M over 3 years. Principals are Albert-Lazlo Barabasi, Katy Börner, Santiago Schnell, Craig Stewart, Alessandro Vespignani & Stan Wasserman. In addition, Börner and Robert Goldstone have received a McDonnell Fdn grant for "Modeling the Structure and Evolution of Scholarly Knowledge" and Börner, Hsinchun Chen (U Arizona) and Lee Giles have a NSF grant to study "Pattern Analysis for Transformational Research."

California Netting: Judith Stephan Norris (Soc, Cal-Irvine) and Rick Grannis (Soc, UCLA) has received a grant to investigate kinship patterns of the American elite. Among other Qs, it asks to

what extent the America Revolution marked the end to the power and privilege of families descended from aristocratic families.

Computer Networks are Social Networks

Pseudo Networks from Pseudo Social Network Software: In October 200, I received this information from someone whom I shall keep anonymous:

"I've started using *LinkedIn* to keep up with my professional contacts and help them with introductions. *Since we have worked together and know each other well* (my ital), I would be happy to recommend you and put you in touch with anyone in my network that you may need to contact. I've found quite a few people we both know there as well. I would very like to invite you to join and access my network."

As the name didn't click with me and I do get overloadedly forgetful, I wrote asking how we knew each other. This CEO of a smallish company replied:

"I apologize. I had seen one of your papers online, was impressed and sent the invitation. I used the standard *LinkedIn* invitation."

So here is someone who has never met me — in person or online — writing to tell me that we have worked together and that he knows me well. He also offers to expose his entire *LinkedIn* network to me, without knowing anything about my often-prickly persona.

Moreover, *LinkedIn* — like some other so-called social network software — assumes each person maintains one big network, whereas we know that people often maneuver among multiple networks — which we might want to keep discrete and discreet.

As I interface between network analysis, computer science and community studies, I consistently find:

1. Many "social networking" programs don't have a clue about social networks. (Pause now, for vigorous response from *Visible Path* folks, who apparently do have a clue.)

2. People in the organizational and computer science world are getting justifiably scornful about such programs — which is good — but are, unfortunately, extending their scorn to social network analysis — which is bad.

Cognitive Networks: Kathleen Carley, among others, has been mapping and analyzing cognitive networks for years. Now "concept mapping" is on the educational software bandwagon. The Florida Institute for Human & Machine Cognition is providing "Cmaps" to schools in Panama, where Gaspar Tarte is an enthusiast as the country's "secretary of governmental innovation." Tarte says "We would like to use tools and a methodology that help children construct knowledge" with Cmaps — a series of concepts (usually nouns) linked by phrases or verbs. Apparently, the kids use the software to construct their own cognitive maps. [Source: Bill Kaczor, "Panama Gets Software to Assess Students," Associated Press, 9July05].

Even some economists are getting the idea that knowledge is networked. See Brian Losby, "Making Connections," *Econ Journal Watch* 2 (April 2005) 56-65.

Been Wiki'ed? Collaborative Software Taking Off A wiki is a website to which many (sometimes all internet participants) can contribute. Sounds like the ultimate amorphous network. We use a restricted wiki in our Connected Lives project to keep up with who is doing what. The most famous wiki is the Wikipedia, an encyclopedia to which all may post and on which all can edit whatever anyone else has written. A good friend got an entry — apparently posted by an undergrad. But it was so inaccurate, that the good editorial fairy came by one night and straightened out some facts. Of course, the wicked witch of the wiki west can then come and edit that one. And so it goes. I find the Wikipedia useful when I want information quickly, but obviously users need to take the validity of entries with many grains of salt.

As John Markoff points, open collaborative software are vulnerable to antisocial behavior. (*This is a variant of Wellman's Law — "Bad Chat Drives Out Good"*). For example, the *LA Times*

was using wikis to create reader-driven editorials until obscene postings drove away serious Los Angelenos. Yahoo My Web folks are reportedly handling such problems with a system in which people invite their friends and colleagues to join them — allegedly creating "overlapping search communities based on mutual trust". CN/SN search-engine maven Eszter Hargatti (Communic, Northwestern U) refers to this as "social bookmarking". Here's her description from her *Crooked Timbers* blog, 29June05:

"Using *del.icio.us* [social bookmarking software] has allowed me to find some great sites that would have been unlikely to show up in my browser otherwise. You go to a Web site, you decide to bookmark it (but doing so on *del.icio.us* is like bookmarking it publicly) and then you can add tags to it to classify it according to your liking. The exciting feature of *del.icio.us* (and other such services) is that they show you how many other people have also tagged that same page. Clearly you share some interest with those people. You can then click to see their entire list of bookmarks or just the ones they have tagged similarly to the shared link. Chances are good that you'll find some additional pointers of interest.

"Yahoo!'s twist on all this is that you don't have to make all the bookmarks public. You can make them completely private (you're the only one with access), available to your community (people you've linked to your Yahoo! account) or completely public... I do think — just like with Yahoo! 360 — that Yahoo! should allow you to distinguish between different communities (e.g. 'make available to friends', 'make available to colleagues')." In her "EList"-serve, Eszter also points out that social bookmarking also gives you portability: you can access your bookmarks from any website ([12July05].

BW: I am more skeptical than my friend Eszter that social bookmarking will be widely used. Why should I want others to know what I am searching for, pix of Paris Hilton or not? And how would it benefit me if they knew? Or, if I knew what they are searching for. There also needs to be much thought into who we give

access to, as only the *Friendster* folks believe that we each belong to only one big network.

One good thing. Although the surveillance aspects are potentially ugly — Yahoo is saving the tags (keywords) that people can optionally create to characterize web pages — it does have the cognitive/linguistic fun-ness of creating "folkstomy" — classification systems created by folks rather than by experts. Sounds like the US Supreme Court's approach to porn: "We know porn when we see it." [For more info, and a more positive attitude towards this stuff, see John Markoff, "By and For the Masses," *NY Times*, June 20, 2005: pp. C1, C5].

The Networked iPod: No, I am not talk about file-sharing. Despite being Apple-owned and branded, the original idea came from Tony Fadell, independent contractor hired by Apple in 2001 to develop such a product. In Silicon Valley: the platform design came from Portal Player and the OS to run the interface came from Pixo. The hard disk was developed in collaboration with Toshiba, the flash memory came from Sharp and the flat battery from Sony. There's also a digital > analog converter from Wolfson Microelectronics and a firewire interface controller from Texas Instruments. All of the components are assembled and packaged by Taiwanese company, Inventec. [Source: Satish Nambisan, "How to Prepare Tomorrow's Technologists for Global Networks of Innovation." *Communications of the ACM*, May 2005, p.29]

File-Swapping Networks: I am puzzled by why iPods have captured the cool factor among teens and twenties, when they are the essence of top-down centralized downloading. By contrast, file-swapping networks are more anarchistic — and cheaper. Yet the current nature of file-swapping networks are like very unsafe sex — you don't know who you are networking with to get your copy of "Sympathy for the Devil" — and you are quite likely to get spam and spyware along with it. I've been told — but haven't verified — that when you use Skype, the currently largest peer-to-peer phone service (and largely free), you automatically allow your spare computing power and internet connections to be borrowed by

Skype. It's made by the same folks who were doing adware on file-swapping *Kazaa* a few years ago. (*Business Week Online*, June 20, 2005). Yet my wife doesn't even let me look in her pocketbook. Why should we let strangers look at our hard disk and possibly leave unwanted droppings there? There is some effort to have computers "gossip" with one another about which files can be trusted when swapped, but I am skeptical. [More info at John Borland, "Cleaning Spam from Swapping Networks", *C/Net News.com*. http://news.com.com/Cleaning+spam_from+swapping+networks/2100-10323-5623848.html, and in Susannah Fox, "Spyware: The Threat of Unwanted Software Programs is Changing the Way People Use the Net." Pew Internet and American Life Project, 6July05. www.pewinternet.org]

Computer Geeks Network: James Gosling and other panelists at a recent Sun deep thinkers conference discussed how computation, and the network, are a fabric that is driving all kinds of interesting things at the edge, not just in the electronic sense but also in a physical sense. "We humans have become part of an ether of computation," said tech wizard Danny Hillis. "If you are in a conversation and you don't know something, you go do Google to search....it's augmenting in a clumsy way. We will get more intimate — when you want a question answered, just think of it and some process will go out on Net and answer will appear to you." Hillis claimed, "I can't think properly unless I am connect," to which Paul Saffo quipped, "that's due to middle age." [Dan Farber, "Views from the Smartest People in Sun's Orbit, *ZDNet*, 30June05]

Musicians Swapping Networks: Musicians often move from band to band. Many play in several bands at once. *BandtoBand.com* lists how every band they list is connected to every other band through shared or serial membership. Emphasizes recent rock bands. Toscanini's move from La Scala to NYC does not show up.

Family Awareness / Family Surveillance: Microsoft's Cambridge UK lab is designing a tool that uses GPS tech to pinpoint the location of family members. Its called the "Family Awareness Clock" after the one used by Harry Potter's

buddy Ron Weasley to learn when his sibs and parents are ind anger or lost. How soon before such sousveillance becomes surveillance by the powers that be? [Source: "News Track," *Communications of the ACM*, May 2005, p.10]

Network Yourself: By contrast, you use a *personal area network* (PAN) to communicate with yourself: It's a low power network that uses the human body to distribute data signals to devices on or very near the skin. It's shorter range (currently reaching 8 inches from the skin) and possibly securer than Bluetooth, LANs, and certainly WiFi.