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Where Locality Meets Virtuality

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Technology has created new ways for people to make and maintain social connections. People can communicate at a distance and exchange messages asynchronously or quickly catch up on missed conversations. They can maintain weak or latent ties, to be activated when needed.

Whenever a new way of accomplishing some function emerges, observers tend to notice first a substitution effect of the new for the old. Then there is what economists call an income effect, an increase in how much the function is performed overall. Finally, new structures emerge that rely on cheap ubiquitous availability of that function. Malone and Crowston charted this progression in the realm of transportation (the horseless carriage; increased mobility; suburbs) and tried to anticipate it in the realm of coordination technologies (Malone and Crowston 1994). The same framework can help us understand and perhaps even foresee potential impacts of new, technologically-mediated ways of making and maintaining social connections.

The first wave of commentary about virtual connections focused on substitution of virtual for physical contact, of long-distance for local relationships. Debates raged about whether virtual ties effectively substituted for all the important functions of social interaction and whether communities and cities would suffer from neglect.

With a little more perspective, the income effect is becoming clear. As the cost of making social connections as declined relative to other activities, people are making more social connections overall. From surveys reflecting on time usage, it appears that people who spend more time online are watching TV a lot less, but spending only a little, if any, less time face to face with friends and family (Gershuny 2002). In a suburb of Toronto, Hampton and Wellman found that people with high speed Internet connections had both more long-distance and more local contact (Hampton and Wellman 2000).

If we look for leading indicators, we can now make plausible speculations about what some of the new connection-intensive structures might look like. These structures will mix the physical and virtual, using geographic proximity to organize virtual interaction and technology to mediate activity in physical space. Consider some examples of each.

First, geography has become a natural and widespread way of matching people to content and conversations. The UpMyStreet.com web site invites users to enter the postal code where they live or want to make connections. The site then not only displays local information (schools, cafes, etc.), but also shows the messages contributed by people who

live closest to that postal code. The system can scale well as more users participate: with few users, readers might see messages from people100km distant; with more users, they would make connections in their neighborhood.

An even more interesting hybrid of the physical and virtual exists in the community of adventurers that has emerged around the site geocaching.com. Someone places a physical cache with a few interesting curiosities in it (e.g., playing cards) in a hidden location, then posts the GPS coordinates of the cache on the web site. When another adventurer finds the cache, he or she takes something from it and leaves something else, so the cache's contents evolve over time, and leaves a comment on the web site, creating a connection over time among the people who have found the cache. There are also sometimes "travel bug" trinkets in the caches, with instructions asking finders to take them to some other location around the world. Eventually, after several stops and many months, a photo of the travel bug in its final destination will appear on the website, giving its original owner and everyone who helped a sense of participation in an extended, imaginary adventure with each other, even though the people involved will likely never meet in person. There are now caches hidden in 171 countries, according to the site. On a recent day, the site listed dozens within 10km of Cambridge, Massachusetts, and about a dozen within 20km of Cambridge, England.

Rather than using geography to index online activity, virtuality can seep into physical interactions. In neighborhoods, researchers have explored the effects of photo directories (Resnick and Shah 2002) and email lists (Keith Hampton's e-neighbors project). At meetings, researchers have experimented with electronic "meme" tags that people can wear that would alert the wearer whenever someone wearing a compatible tag passed nearby. One can imagine similar technology seeping into all sorts of every day scenarios. For example, airlines might offer to automatically seat people near compatible fellow travelers, grouping the tennis fans together or perhaps merely the people interested in conversation rather than sleep.

Perhaps a mix of physical and virtual can even help to overhaul transportation systems, enabling a hybrid between notions of public and private. Hitch hiking, the practice of getting and giving rides to complete strangers, has declined drastically in the United States in the past half century, in part due to safety fears and in part due to its inconvenience. But in a few metropolitan areas, it has emerged in a new form. Drivers pick up riders at suburban locations in order to fill up their cars, making them eligible to use less congested "High Occupancy Vehicle" lanes. Conventions have developed for where to wait in line depending on one's destination. Now imagine how this institution might evolve if participants used cell phones and web sites to coordinate ride matching. A reputation system might help people weed out bad matches ("previous riders reported that this driver drove too fast") and ease safety fears, since ride matches would be registered and thus an abductor could be traced. The meme tag idea might even make such ride matching more fun: drivers and passengers might be alerted when they had mutual acquaintances in common, or graduated from the same secondary school or university, without revealing this information to those without matching characteristics.

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There has been a decline in traditional ways of connecting and thus a decline in valuable social capital, at least in the United States (Putnam 2000). It is an open question whether virtual ties can adequately substitute as a generator of social capital. But a focus merely on substitution effects may obscure the more important trends and opportunities. The income effect suggests that there will be more social interaction overall. Most importantly, new forms of social relations are emerging that could not exist without combining locality and virtuality. It is there that we should look for the emergence of socio-technical capital (Resnick 2001) to substitute for declining participation in bowling leagues.

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