Networks in the Global Village

In this paper, the author discusses the belief that many people hold that community ties that in yesteryear were quite strong have with time and the onset of industrialization and the era of technology dwindled down to thin, wiry strands that pale in comparison to their once thick chords. The author claims that this belief, while fairly pervasive among the people of ‘modern’ societies, is hogwash, saying that industrialization, advances in technology, and other societal changes have simply altered what an individual needs from a community and how the community functions as a whole. In undeveloped societies, Wellman claims, government and commerce are not as strong as they are in more developed societies; consequently, members of a community in an undeveloped society are often forced to help and to rely on one another in order to survive. In quite the opposite manner, members of a community in a more developed society can, because of economic and governmental strength, rely on both commerce and government as a means of acquiring what they need in order to survive. This lack of reliance on community for getting one’s life-sustaining material does not mean, however, that the communities of a more developed society are any weaker than the communities of an undeveloped one; they simply serve a different purpose. Whereas the communities of undeveloped societies provide a means of survival in those societies, the communities of more developed societies exist as support groups that help the often emotionally stressed individuals that, together, form these societies to cope with the worries of a high-tech world.

I find myself largely agreeing with what the author had to say. When, during conversation, someone comments on how he wishes society would revert back to how it was two centuries years ago because he would like to live ‘simpler’, I often remind him of the comparatively high infant mortality rate and the comparatively low life expectancy of two centuries past. While things were, perhaps, not so complex as they are now, they were by no means any easier (figuring out how to keep one’s children fed through the winter months may be ‘simper’ than learning how to create a computer’s CPU, but it clearly is not easier). Along those same lines, I find it silly to wish-away industry and technology with the belief that, without the things that have come from industrialization and technological advances, communities and the ties that held them together were much stronger. I assert (as does Wellman – only in a much more persuasive, and long-winded, fashion) that communities were not stronger but that they were simply different. Just as doing something ‘complex’ is not necessarily more difficult than doing something ‘simple’, so too is assisting one’s neighbor in some physical task no more a ‘stronger’ bit of community service than consoling one’s friend after a rather harsh break-up.

Additionally, I assert that communities of less developed societies sometimes seem to be ‘tighter’ communities because of their relatively small size. In such communities, where everyone in the community will gather to help one of their own build a new house, it is likely that everyone will know everyone else. In more developed societies, these ‘knowing’ ties often extend over great distances and vast areas and, because of this, may seem to be more thinly knit. This, however, is not the case since
the creation of ‘simplifying’ technology has allowed people who live many miles apart to communicate and stay in touch as if they lived on the same block.

**The Strength of Weak Ties**

In this article, the author discusses (as one may guess from the title) the ‘strength’ of weak ties in a community. While many authors and researchers of the past tend to ignore these seemingly insignificant social connections, Granovetter claims that these connections are extremely important, and perhaps essential, to the growth and continued prosperity of a community. According to Granovetter, a strong tie between two individuals of a community will never act as a bridge (where a bridge is a single connection that connects two different groups of people). Because of this, passing information along a strong tie will keep that bit of information contained within one of one’s own primary cliques. As those in one of one’s own primary cliques would tend to pass along any information they receive to another of their own strong ties (which would likely be another member of the original clique), information would most likely not go beyond the bounds of the initial clique. Because strong ties are never bridges, explains Granovetter, all bridges in a community must be weak ties (this does not mean, however, that all weak ties are bridges). If one passes information along one of his weak ties, then, it is likely (or at least more likely) that that bit of information will reach a broader audience. Clearly, then (at least according to Granovetter), it is the weak ties of a community, and indeed not the strong ones, that are responsible for ‘spreading the word’; without weak ties, it would be nearly impossible to spread information in mass.

Granovetter’s statements seem to be sound. This can be seen by taking, for example, the journalist. A journalist (or newsman/newswoman, etc.) could, if one considers all of that journalist’s readers to be ‘weak ties’, be considered to have an extremely large number of weak ties. Also, because newspapers are one of the (if not the) primary source from which most people derive most of their information.

In the world of today, however, where anyone can post a message that will reach thousands of people on digg, Slashdot, or some other, similar website, one wonders whether or not the model presented in this paper is even valid. With a large number of people having easy access to the world wide web, it has become extremely easy for anyone who has the desire to become a quasi-journalist. Because of this, it is possible for one to have as many weak ties as one would like. No longer are ties something that must be maintained and managed, and indeed are not things that must be created by meeting new people in person. Weak ties can now be made through the internet, and one need not personally know all of these weak ties. Thus, I do not believe that, since any person can have as many weak ties (which one can create almost instantaneously), maintained weak ties no longer have the importance that 10 years ago they did. Instead, information can now be easily spread through the short-term weak ties allowable by internet communities.

**Visualizing Social Networks**

The author seems to have written this paper simply to relay the importance of visualizations in scientific fields and how they have allowed for advances in science to progress more quickly than otherwise they
would have. Additionally, the author discusses the history of visualizations and how they have evolved over the years.

Beginning in the 1930s (so far as the author could tell), Moreno began to hand-draw graphs to more easily visualize social networks. His graphs were revolutionary in that they used color to denote differences in actors and connections (such as red for positive and black for negative) and also used direction to relay which way the connection was made (e.g. if A knows B, a line is drawn from A pointing to B). Furthermore, Moreno’s graphs used shape to differentiate actors (such as triangles for boys and circles for girls) and also used the position of the different nodes of the graph to relay information (e.g. displaying the actors representing football players in the position that that player plays). Shortly after Moreno, Lundberg and Steele incorporated the attribute of size into their graphs as a means of emphasizing the important and also modified by use of position to relay importance by placing important actors at the center of a graph. Taking this concept of centrally locating things of great importance, Northway organized her graphs in a bullseye-like manner.

Visualizations began changing in the 1950s with the idea of using factor analysis to position the nodes of a graph (rather than placing them arbitrarily or in some per-determined manner). By doing this, position was made to relay more than importance – it also relayed information concerning closeness and connectivity of different actors.

When computers became readily available in the 1960s, it became more practical to use more complicated algorithms to determine an actor’s location within a graph. It was also during this time that multidimensional (which apparently means more than 2) displays were first used (or at least were first used successfully).

In the 1970s, 1980s, and 1990s, computers began to be used more heavily. At first it was just the computer’s ability to print out graphs (they no longer needed to be hand drawn) that was used. Later, the monitor itself was used to display the visualization. Using the monitor in this manner allowed for another dimension to be added to the graphs: time. By observing how actors moved and connections changed within a graph over a certain period of time, researchers were able to see trends and draw conclusions that before they could not. Additionally, different algorithms (such as a spring system instead of factor analysis) began to see increased use during this time.

In the late 1990s (and the 2000s, but those seem to have taken place after the writing of this article), the World Wide Web and web browsers have allowed visualizations to become widely viewed. Additionally, online applications that allow for interactivity allow individuals to manipulate the graphs themselves, which in turn encourages exploration and stimulates the imagination. In addition, the internet and its ability to transfer mass amounts of information has provided a rich source of material for modern-day visualizations.

I found much of what was said in this paper to be fascinating. Many of the early techniques used in the 1930s and 1950s (e.g. looking for the emergence of cliques by forming sub-groups of a population) I have used when creating visualizations for this class. I also, however, find the seeming lack of major progress to be somewhat disconcerting. Some of the visualization made in the 1990s (e.g. Mitchell’s
Image of the Social Support Network of a Homeless Woman) look strikingly similar to some of those made in the 1930s (Moreno’s Positive Choices in a School Fraternity). While this perhaps simply means that Moreno’s model was so astoundingly good that it need not be drastically altered, I still find it odd (and even a bit troubling) that, after 75 years, things have not changed all that much.