Reinterpreting Networks of People as Fluid for Political Purposes

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For a term that has one of its roots in computer science, "networks" has become an ubiquitous word in daily discourse, especially when modified by the word "social". Not only do we spend countless hours managing and forming our social networks through online means, we use the phrase to refer to physical-space activities. We see things in terms of connections and links, the chains that tie one person to another, the means by which we "network" in order to gain influence or jobs. Coupled with this is the visual representation of these social networks, the commonly-seen jumbled mess of dots and lines. This view, when applied to social networks, has the well-known legend: dots refer to people, known as nodes, and lines refer to connections between them, known as edges. The use of the language of nodes and edges allows mathematical formalism from graph theory to perform computations on these networks, creating numbers that are meant to suggest degrees of "connectedness" or "centrality".

If we delve a bit into this view of networks (as it is as much tied to the visual as to the mathematical representation) a number of questions immediately arise. What are the conditions by which the network is instantiated or individuated (using the term of Alexander Galloway and Eugene Thacker)? Who gets to decide when a particular network is individuated? What are the means of controlling access to the network, the protocol that individual nodes have to follow to become part of the network? When someone creates a visual representation of the network, who is represented, what types of connections are represented, and when is the representation supposed to refer? The general representational strategy of graph theory flattens difference within the network by re-inscribing fixed relations via the discourse of stable nodes and stable edges — otherwise known as stable people and stable relationships. Such a view would suggest answers to these questions that are simply instrumental.

We do not have to see the network as representing a stable reality, however. If we flip our view around, the network can be an active agent in creating a particular view of reality, an ontological device to suggest situated realities, rather than an inert visual and mathematical tool that waits to be filled with data. Networks become less a means of fixing what already exists but rather objects that take part in crafting certain ways of representing the world over others. Responses to the previous questions are then not merely parameters to be chosen within a particular software package, but rather a means of creating differing ontological politics that have broader ethical, social, and political meaning.

This does not necessarily mean that our change of perspective has inherently emancipatory possibilities. We are still faced with choices about who, what, how, when, and why to represent. We are still faced with the problem that once we decide to represent a network, we are forever fixing, within that particular representation, one view of the world, and one that will privilege certain actors, people, and connections versus others. Indeed, this is one of the main critiques of actor-network theory (ANT) within science and technology studies. ANT aims to flatten the ontological space between humans and non-humans by showing how both types of objects within the world must be marshaled together in order to create, for example, a particular scientific fact or technological artefact. This combining of forces, and the need for the people and objects in the network to agree upon entering the network, sets up an inner/outer dichotomy that privileges actors within the network (what Ulises Mejias has termed "nodocentrism"). For Susan Leigh Star, in her well-known critique of ANT, this means that the "standardized network often involves the private suffering of those who are not standard — who must use the standardized network, but who are also non-members of the community of practice." Her critique, written over fifteen years ago, has been echoed recently by Thomas Berker who asks how we can look at suffering within these networks as the "uneven distribution of enabling and disabling effects" as well as the "uneven distribution of the ability to switch between networks". Suffering within networks occurs not only

because of inability to move in and out of a network, but also because of an inability to create a network in the first place.

What impact might these critiques have operationally on the design and implementation of an application for use within a networked world? I would like to refer to a recent project that I developed as a response to these issues, with the caveat that other responses can be made and that my project undoubtedly does not address all of the concerns.

The project, Fluid Nexus, is a mobile phone application designed to enable activists and relief workers to send messages and data amongst themselves independent of a centralized mobile phone network. The idea is to provide a means of communication between people when the centralized network has been shut down, either by the government during a time of unrest, or by nature due to a massive disaster. During such times the use of the centralized network for voice or SMS is not possible. Yet, if we can use the fact that people still must move about the world, then we can use ideas from sneaker-nets to turn people into carriers of data. We can create fluid, temporary, ad-hoc networks (via Bluetooth) that pass messages one person at a time, spreading out as a contagion and eventually reaching members of the group. This allows surreptitious communication via daily activity.

Fluid Nexus relies on, yes, a fluid view of reality and of networks. It requires no representation of the network to function: it gets its strength from temporary links between people that disappear as soon as they are created. These ad-hoc connections do not necessarily have to correspond to real-life links between individuals; messages and data can transfer based on physical proximity instead of social relationship. People can therefore remain who they are without having to necessarily change their behavior to join the network. By displacing stabilizing of the network, Fluid Nexus works to redistribute power over network individuation and protocol to those often seen as other, providing a counter to centralized control of often-State-run infrastructure.

Fluid Nexus could of course be re-appropriated by the State for their own purposes, thereby reestablishing stabilized networks. However, we should not see the application as a kind of general solution, but rather a tactical move in a continual cat-and-mouse game. We have to regularly respond to moves of stabilization with counter-moves of fluidity and destabilization. The critiques of networks outlined earlier suggest a way of conceptualizing how discourse about networks directly transforms into questions of ontological politics that can consequently be mapped into operational questions of technology.

References omitted for brevity. Text, video, images, and source code for Fluid Nexus can be found at http://fluidnexus.net.