

TOWARDS A CRITIQUE OF DIGITAL NETWORKS FOR LEARNING

by Ulises A. Mejias

(Editor's note: the bulk of this essay is a talk given at the Georgetown University Library, Scholarly Communication Symposium on "Social Media in the Classroom: Implications for Teaching and Learning" February 19, 2010. Portions of an earlier - and highly interesting blog post on "The Tyranny of Nodes" {<http://blog.ulisesmejias.com/2006/10/09/the-tyranny-of-nodes-towards-a-critique-of-social-network-theories/>} were used to frame the argument in the absence of the papers to which Mejias was responding. That blog posting was also the basis of the invitation to speak at Georgetown.)

Most critiques of the rise of the network as a model for organizing social realities focus on what it has replaced: tightly-woven, location-specific communities (a community itself can be defined as a particular kind of network, but for the moment let's stick to these conventional terms). Wellman (2002) traces how social formations have developed from densely-knit traditional communities to sparsely-knit but still location-specific "Glocalized" networks (think cities connected to other cities), to networks unbound to any specific physical space, or what he calls Networked Individualism, where "people remain connected, but as individuals rather than being rooted in the home bases of work unit and household." (p. 5). An important characteristic of Networked Individualism is the overcoming of physical space. Today's networks connect individuals regardless of the distance between them. More than its elimination, Networked Individualism promotes the reconfiguration of distance: it is not only our relationship to the far that is changed, but also our relationship to the near. Critics sensed a threat to the near in this reconfiguration, and saw in Networked Individualism the destruction of communal location-specific forms of sociality (i.e., the irrelevancy of the near). However, this has not proven to be necessarily the case, as Network Individualism can play a part in (re)connecting people to the local. The network then also becomes a model for "reapproaching nearness" (Mejias, 2005), with the added benefit that nearness now encompasses new forms of global awareness.

In the context of education, we find similar tensions: while on the one hand digital networks (and specific sets of tools like social media) are said to expand the horizons of what we can learn and how we can learn it, there are also concerns about the kinds of knowledge they might devalue. Accordingly, I want to offer three points and critiques for further examination: The first is that there is a danger that digital networks and

social media could produce learners who can't think outside the network. Second, the fact that using social media tools controlled by corporations might be convenient and cheap, but it might not always be in the best interest of the learner or the learning process. And finally, I'm going to end with what I think the role of the university should be.

Learning and Thinking Outside the Network?

There is a danger that social media could produce learners who can't think outside of the network. I teach a class called Social Networks on the Web, and there is a moment early in the semester where my students acquire what I call "network goggles." They start reading all of the literature on networks, and they start seeing networks everywhere: in the sciences, in the natural world, in their lives. They get very excited. I've been thinking about what that means, what acquiring this information does to us. Basically, I think the network has become a very powerful episteme. In other words, it's not just a learning method, a way of going about learning about the world; it's also a way of making *sense* of the world. I think what has happened is that networks are not just metaphors we use to describe groups of things, they have also become templates, and they have become models. But we use them not just for making sense of the world, or interpreting the world; we use them to actively organize and shape our social reality. My work is about exploring the limits of networks as templates: what they make possible or what they make impossible; through what dynamics they include and through what dynamics they exclude.

A couple of concepts make it easier to describe these dynamics. The first one I call nodocentrism. In network theory, the distance between two nodes is understood to be finite. If you have two nodes in a network, there's a way to link to them, to connect them. But the distance between a node and something that is outside the network is for all practical purposes infinite. If something is not on the network, if something is not a node, it cannot be rendered or displayed in the network. If roads and highways connect any two nodes, they also allow for the commuter to quickly bypass the space between the nodes. Those locations may be nodes in other networks, but from the perspective of the two nodes being connected, they do not matter. In other words, a network is a way of organizing reality that recognizes only other nodes—which is why I call this property nodocentrism.

In response to that, I offer the concept of paranodality. When we think about a network diagram, what do we usually see? We see a lot of nodes connected by links, and then there's a lot of empty, white space, between the nodes. I'm arguing that this space is not empty, it is not dead. This space is actually populated by multitudes that do not conform to the organizing logic of the network. From the perspective of the network, the paranodal is perhaps ineffable; it is that which cannot be Googled. But we are interested here in precisely those things that fall outside of the organizing logic of the network. The network is an epistemology, a way of interpreting the world, a model for organizing reality. But the paranodal represents the only site

from where it is possible to unmap or unthink the network, to disidentify from it and think alternative forms of identity and reality.

If we were to apply these concepts to the learning process, we could ask which kinds of things are included and which kinds of things are excluded when learning happens as an activity within the network. We could start to think about the networked social media tools we use as facilitating a form of epistemic enslavement. If a specific form of knowledge cannot be rendered with these tools, then it cannot be part of the network, and it might as well not exist. The question then is: *who* gets to decide what to include and what to exclude from these networks? This brings me to my second question and critique.

*Convenient and Cheap, but in the Best Interest of
the Learner or the Learning Process?*

My thesis is that networks are machines for increasing participation, but these machines simultaneously increase inequality. If we look at the science of networks, there is a law called preferential attachment. Basically it means the following: if you have a new node joining the network, and that node has a choice between linking to other nodes that have very few links, or linking to other nodes that have lots and lots of links, what do you think they're going to do? They're going to link to the nodes that have more links. This is basically what allows scale-free networks to scale, what allows networks to grow very rapidly and very efficiently. The result is that the rich become richer in network terms. Those nodes that already have a lot of links keep accumulating more and more links so they become wealthier.

Think about it this way: if you have an educational video and you want to share it on the Web, where are you going to go? Most people would say YouTube. Or if you want your students to try micro-blogging, where are you going to direct them? Most people would send them to Twitter. This is why the monopsony is the dominant market structure of Web 2.0. Let me explain what I mean by monopsony. We've all heard of monopolies. In a monopoly you have a single seller. A monopsony is a kind of the reverse: you have a single buyer and many sellers. I think this captures very well what we have in this era of user-generated content because we are *all* producers of media. We all generate digital content. But increasingly, there are fewer and fewer options for where we go to upload that content—the monopsonies. Hence I say that the monopsony is the dominant market structure of Web 2.0.

I want to argue that using these monopsonies, these tools, can be cheap and can be convenient, but the problem is that the relationship between learners and social media companies is not symmetric. When we promote the use of these privatized social media tools in education, we have to be very careful about addressing disparities like surveillance: the fact that many of these companies monitor and track our very movements when we

use their products, sometimes without our knowledge. We have to think about intellectual property issues: the fact that when you upload a picture to Facebook, you might be surrendering certain property rights, etc. We have to think about the pervasive presence of advertising, and perhaps the kind of advertising that promotes unsustainable habits of consumption. All of these disparities are involved with social media. We are all familiar with the narrative of the Internet ending the era of one-to-many communications of traditional media. Supposedly, the Internet has ushered in an era of many-to-many, peer-to-peer communication. We no longer have to depend on the monopolies. However, what I'm arguing is that one-to-many is not giving way to many-to-many without first going through many-to-one, the monopsony. This is the scenario that we have: the many sellers uploading their content to one buyer.

The Role of the University

I return to my point about paranodality and the idea that it is only the *outsides* of the network where we can unthink or disidentify from the network, from the mainstream. If universities are part of the mainstream, they could still help us remain critical about the application of digital networks in the learning process. For instance, when it comes to the impact of monopsonies, I argue that universities should develop alternative social media tools and release them as public goods. We could promote their use through projects both within and outside the university. The university should be a laboratory for these kinds of tools, and it should strive to provide these alternatives to the public openly, instead of partnering with corporations in the creation of more inequality. This, of course, is not the direction things are currently going. But faculty and staff, I believe, can play an important role in promoting the development of these open source tools, and the promotion of online public spaces that are basically free of some of the influence of monopsonies.

Transcription provided by Tracy Nectoux

References

- Mejias, U. 2005, Re-approaching nearness: Online communication and its place in praxis. *First Monday*, vol. 10, no. 3. Retrieved April 28, 2005 from http://firstmonday.org/issues/issue10_3/mejias/index.html
- Wellman, B. (2002). Little boxes, glocalization, and networked individualism. In M. Tanabe, P. van den Besselaar & T. Ishida (Eds.), *Digital cities II: Computational and sociological approaches* (pp. 10-25). Berlin: Springer. Accessed on October 3, 2006 from <http://www.chass.utoronto.ca/~wellman/publications/littleboxes/littlebox.PDF>