

**BUMS, BRIDGES, AND PRIMATES:  
SOME ELEMENTS FOR A SOCIOLOGY OF ONLINE INTERACTIONS**  
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In today's presentation I will focus on the kind of social structures that users of computer-mediated global online communication networks (notably, the Web and social media) contribute to put in place. The point I will try to make is that science understanding of Web-based sociabilities has progressed enormously in the last decade, and that this should inform public policies touching on the Web, its regulation and governance.

**WHERE HAVE ALL THE COMPUTER BUMS GONE?**

Early glimpses into the social implications of ICT at a micro-level (that is: for the users themselves) date back to the mid-1970s and focus on the negative effect of these technologies. At the very origins of computer culture, we witness the emergence of the stereotype of the socially awkward computer hacker, isolated by the calculating machine which alienates him and keeps him apart from his peers. This characterization dates back to a time before the Web. In his *Computer Power and Human Reason : From Judgement to Calculation* (1976) Joseph Weizenbaum delivers us the portrayal of this subculture of compulsive computer programmer – or, as he liked to dub them, "computer bums".

These are "possessed students" who "work until they nearly drop, twenty, thirty hours at a time. Their food, if they arrange it, is brought to them: coffee, Cokes, sandwiches. If possible, they sleep on cots near the computer. [...] Their rumpled clothes, their unwashed and unshaven faces, and their uncombed hair all testify that they are oblivious to their bodies and to the world in which they move. They exist, at least when so engaged, only through and for the computers."

Since this first occurrence, and for a long time, common sense has almost unmistakably associated computer use and social isolation. Cultural analysts, novelists, commentators have been developing on this trope. Iconic cyberpunk author William Gibson, famously described Case, the main character of *Neuromancer* (1984), as a cyberspace-addict incapable of functioning in an offline social situation.

Beyond these popular descriptions – or rather as a cumulative effect of their proliferation – at the beginning of the 1990s sociologists and social scientists started asking themselves if there was any ground for this stereotype. Already some developed countries had enough people online to make ICT socially significant – at least in terms of a critical mass of data to be studied. Web culture was still a subculture then, but – as it often happens – it was going mainstream. This is when they started analyzing the actual behavior of people interacting through computer networks to see how computer-mediated communications could trigger social isolating – and they ended up discovering that it actually didn't.

Social psychologist Robert Kraut and his team conducted a pioneering in-depth study of the social effects of the Internet on 50-odd families from the Pittsburgh area in the first year since the introduction of the Web in their households. The results were summarized in a landmark article whose title was everything but ambiguous. "Internet paradox: A social technology that reduces social involvement and psychological well-being?" was published in the *American Psychologist* in 1998 and it presented what can be described as a "hydraulic vision" of the relationship between

online and offline sociability. According to the authors, the more time users devoted to Web-based interactions, the more they lost contact with their families and close friends. Face-to-face and computer-mediated interactions were like two communicating vessels. If the level of online connection increased, the level of offline connections automatically plummeted.

This was a pretty straightforward explanation of the phenomenon of computer-induced social isolation. Unfortunately social scientists soon came to realize that, despite the explanation might be good, the phenomenon itself hadn't actually been observed. Quite often the social withdrawal and the perceived reduction of well-being was nothing but a temporary effect. Respondents in these early studies were learning new technical skills, a task that turned out to be cognitively and emotionally taxing for them, resulting in social withdrawal – sort of a cognitive strategy aiming at freeing up some time in order to learn. Where some saw a break in the social fabric, some others saw a learning curve. Kraut himself published a full disavowal of his own theory in an follow up study, "The internet paradox revisited" (2002) published in the journal *Social Issues*.

### **LITTLE BOXES, LONG BRIDGES**

The "communicating vessels" metaphor these studies were relying upon also presupposed an incompatibility between strong ties (families, friends, colleagues, neighbors) and weak ties (vague acquaintances, partners, buddies, strangers). If one wanted to put it in a somewhat sketchy way, one might say it was because users were spending their nights chatting with strangers over the Web, that they were neglecting their friends and loved ones. So the actual consequence of the Web on a social level wouldn't be social isolation, but rather a dramatic reconfiguration of the balance between strong and weak ties.

These notions are central to social network analysis (SNA), an approach that became more and more successful since the beginning of the year 2000. SNA is that branch of sociology which studies and measures networks of interactions between humans. It describes human groups as made up of individual "nodes" connected by ties. Those ties can be stronger or weaker according to reciprocity, stability or frequency of the personal relationship underlying inter-individual connections. SNA have been used since the 1950. Sociologists didn't need to wait for online social media to envisage families, school, organization or just about any human collective as networks of interconnected individuals. Online social media are just a new variety of social network, a variety that, according to the tenants of this new trend in social sciences, does not replace pre-existing ones, but rather goes along and complement them. Studies conducted in the 2000s point to a strong positive correlation between Web use, phone, mail, and face-to-face meetings. Online and offline communications are not mutually exclusive. They rather tend to range over a media continuum where users can choose and modulate their modes of interaction.

Of course, this does not mean that ICT are neutral when it comes to shaping our social networks. We are, according to some, living the transition from a society made up of "little boxes" to a "glocal" (global-local) society. In an essay published in *Digital cities II* (2002), Toronto-based sociologist Barry Wellman explains these little closed boxes were the small communities of strongly tied-individuals we traditionally lived in before the Web. What changed with computer-mediated communication becoming pervasive can neither be characterized as social atomization – the "boxes" are shattered and individuals live in a hell of social isolation – nor as an all-encompassing small-world effect – where everybody is continually connected to everybody else. Some middle scenario has to be privileged, where the small boxes are still in place, but they are linked up via passageways and bridges. Thus this phenomenon of known to SNA practitioners as "bridging".

This is for instance what happens with Facebook – to name the most popular social networking service. When signing in, new users are instructed to “connect with the people in [their] life.” And, on an aggregate level, users tend to comply. They first use the service to get in touch with people they know – to recreate their “little boxes” online. But after this initial phase, users become more socially adventurous, as they go look for new acquaintances. This is where they get in contact with random strangers – usually by taking advantage of the high transitivity of online social utilities. Transitivity implies that if A is friend with B, and B with C – eventually C and A will get in touch. Higher transitivity online translates into “longer bridges”: users can reach out for further social components and connect with their members. This is where we start seeing the outline of the society that is taking shape since the advent of online communication: neither a fuzzy nebula of isolated monads, nor meganetwork of weakly tied individuals – but a linkage of dense strongly-tied subcomponents (boxes) interweaved by long weakly-tied bridges. As online communication enables bridging on a higher level, it creates a “glocal” network, that can be described as an assemblage of small, loosely independent components – our little boxes.

### **MONKEY POLITICS**

By way of conclusion, I would like to evoke a question to which social scientists have not provided a satisfactory answer yet. While ICT users are online friending and bonding and bridging, are they actually enlarging their personal social networks? This question has a bearing on social capital, social connectivity, social cohesion – all notions that are political in nature. Are people displaying impressive friends scores in social media actually surrounded by a richer, more supportive social environment than their less-connected counterparts? Or are they just adding names to a useless list – names of people they won’t even keep in touch, people they cannot actually take into account because after all, there’s just a limited, finite amount of person one can keep track of?

Those who have been looking into the question of the actual size of personal networks of internet users, have often focused on the cognitive limits of the number of individuals one can create ties with, both online and offline. Famously, in his *Journal of Human Evolution* 1992 article anthropologist Robin Dunbar proposed a rough estimate of 148. The ‘Dunbar’s number’ was the result of a large-scale study comparing the size of the neocortex in primates and humans. As the size of the neocortex can limit the number of individuals primates (both human and non-human) can keep track of, social group size vary according to brain volume.

One can question this measure as well as the very approach adopted by the anthropologist, yet it is interesting to observe how – since we have been focussing on that peculiar brand of primates that use the Internet – Dunbar’s number has suddenly soared. In 1998 the figure pretty much doubled when social network analyst Peter Killworth contemplated a mean personal network size of 290. And in 2010 that number doubled again, as Princeton sociologist Matthew Salganik settled for an estimate of 610 personal ties. Although this studies did not exclusively focus on Web-based social media, we might make the educated guess that – as superficial acquaintances as well as strong personal relationships now build up on both online and online interactions – maybe social networking utilities are a technological extension of our ancestral tendency to keep track of our fellow humans. We can recognize and keep in mind our most recent friends, some of our co-workers, very few of the people we meet everyday. But we also bump into people online, follow them on Twitter or eye them on Facebook. Sometimes these people are at the very center of our social network, close to our core of relations and associates. Sometimes

they are at the periphery of our social life. Maybe social networking services are just a way of keeping center and periphery together in a more efficient way. Maybe, the jury's still out on that. We still don't know: these are just hypotheses that shape our work as sociologists.

What is clear is that now that our research field has significantly expanded its initial knowledge base – and that the myth of the socially isolate computer bum has been replaced by an empirically documented figure of a connected individual – we have to direct our attention to the conditions allowing our contemporaries to fine tune (sometimes effortlessly, sometimes laboriously) an increasing number of persons they consider as relevant to their social existence.

While doing this, we mustn't forget that today's Internet users are also subject to an increasing number of political threats. As social scientists and as "political animals", we have the duty to denounce these dangers. If, as I have maintained, computer-mediated communication relies upon a prudent mix of social density (our "little boxes") and social openness (our "long bridges"), state powers and corporate giants cannot be allowed to throw either one of these mechanisms out of gear. Yet this is exactly what is happening as we speak. From China to France to the US, governmental campaigns to censor the Net jeopardize its openness. Liberticide laws, like the French LÖPSSI 2 (Loi d'Orientation et de Programmation pour la Sécurité Intérieure), international campaigns against free speech like the one recently orchestrated against Wikileaks, bandwidth or content restriction plurilateral agreements (like the ACTA Anti-Counterfeiting Trade Agreement), constrain net neutrality and empower Internet gatekeepers. If in the next few years the fragmentation of the Internet in small national, commercial, and infrastructure subnetworks will continue at the present pace – the creation of "long bridges" might become impossible. On the other hand, our little boxes are in danger of disappearing too. Companies like Google and Facebook act as *de facto* moral entrepreneurs, influencing media, lobbying politicians and bullying users into renouncing privacy and personal data ownership. The double standards of such transparency-happy organizations – always willing to harvest their users information while remaining utterly secretive to their own – result in periodic privacy disasters, exposure of personal details as well as potential trust bond breaking and life trajectories disruption for their users.

Our role in the next few years is not only to help understand a technological and social phenomenon, but also to help shape a political agenda that propels the best and limits the worst of what the Internet can bring to us.

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