

The lost histories of alternative Internets

Some years ago, in 2014, a simple but far from trivial pin found its way to the lab I direct, the [Media Archaeology Lab](#). The pin reads, "Ask Me About INTERNet."



Shortly before its arrival, I had read Howard Rheingold's 1993 *The Virtual Community* and found myself startled by his strange use of "internet," the noun floating free of its article. In the following months, as I pursued my research on the history of pre-internet networks, I increasingly noticed the absence of "the" before "internet" in a host of other venues. Slogging my way through manuals on internet protocols, especially for TCP/IP (short for Transmission Control Protocol / Internet Protocol and officially adopted in 1983 as *the* standard language for networks to communicate with each other), I could see the ways in which, despite all the shoulder-shrugging about the origins of "the internet," that singular, monolithic network governing our waking lives, this network of networks had in fact emerged from decades of inchoate heterogeneity that could have gone in any number of directions.

Just tracking the evolution of the term turns out to be illustrative of this heterogeneity. Before being called "the internet" it was referred to simply as "internet," itself preceded by "internetwork," which reminds us that the Internet is not "a" network but a proliferation of networks communicating with each other, with "internetworking" as a verb emphasizing the work it takes to get these networks talking to each other, and "internetworking" as an adjective describing the process of transferring packets of information to and from any kind of telecommunications network.

What, then, were all these different networks that existed before the creation of TCP/IP and later "the internet"? What was possible on these networks that might not be possible on the internet of today, which is *de facto* a network of surveillance and commercialization and whose underlying workings are mysterious to most users? What sorts of communication spaces and communities did these networks make possible or impossible?

Sociologist Karin Knorr Cetina reminds us that "a network is simply an arrangement of nodes tied together by relationships," which serve as conduits for communication and resources. Her definition rightly suggests that the manner in which nodes are tied together could encompass any kind of technology or technique—including semaphore (a system of sending messages by holding arms or flags or poles in certain positions), morse code, or, say, short wave radio. The medium matters: it shapes the resulting communication,¹ much as texting instead of calling a family member produces a distinctly different kind of connection

and even a different kind of relationship if one is exclusively used instead of the other. Thus, while the excavation of alternative models of networks is important for the sake of a full historical record, it is also important for giving us tools to imagine how network-mediated relationships might be different. It allows us to ask “what if” questions.

First, though, we need to ask two foundational questions of alternative, historically-forgotten, networks: *how* did they work and *for whom* did they work? And, more difficult to pin down, why have histories of the internet excluded them? Why do officially sanctioned histories instead almost invariably start with the ARPANet of the late 1960s, moving to the creation of the personal computer in the late 1970s, then to the creation and eventual widespread adoption of the aforementioned TCP/IP in the 1980s, and finally straight to the invention of the World Wide Web in the early 90s? What has been gained and lost from overlooking or even erasing histories about the wild heterogeneity of networks that existed since at least the 19th century?

All of these questions are of course rooted in the disenchantments of our moment. Many of us are looking for ways out of the internet’s current incarnation, so often dubbed a hellscape. Several new books--Charlton D. McIlwain's *Black Software*, Cait McKinney's *Information Activism*, and Jenna Supp-Montgomery's *When the Message Was the Mission*--address these questions by creating counter histories to Great Men narratives about its development. Spanning roughly 150 years, from the mid-19th century through the early 21st century, they urge us to question the power structures that account for the elision of counter histories. What if, they ask, networks had had the concerns of black people in mind?² What would a network look like if it embodied “feminist data politics” and “user control and transparency”?³ What if, in our recuperation of defunct or obsolete networks, we focused on their disconnections, disruptions, and failures?

Black Software was written, sometimes in actual fact, in the midst of Black Lives Matter protests, which had notably been coordinated almost entirely online--often in painstaking detail. Wanting to understand where “today's digitally revolutionized racial justice movement [came] from,” McIlwain found himself back in the mid-1970s with a group of “black folks who...used, built, and developed computing technology, digital networks, and online communities that furthered the interests of black people throughout the African diaspora.” These individuals were unquestionably pioneers in the history of computing, and yet there are no webpages dedicated to them on Wikipedia or on institutionally-sanctioned websites for computer history. Unsurprisingly, scholarly fields are no more immune to white supremacy than any other institutional structure in America.

McIlwain's solution is not merely to tinker with the history of networks and the internet (for example, by adding black pioneers and technologists to the already established canon of inventors) but to take on the herculean labor of creating a counter history from the ground up. He digs through periodicals; corporate records, conference proceedings, and annual reports; government documents; archives at Howard University, the National Criminal Justice Reference Center, and IBM; and conducts 15 personal interviews with pioneers like Kamal Al-Mansour (creator of [AfroLink Software](#)) and Derrick Brown (activist and co-creator of the [Universal Black Pages](#) from the mid-1990s). The result is a history that shows us precisely how black men and women built alternative networks. In this regard, the story of Ken Onwere, co-creator of [Afronet](#), is particularly compelling. An American-born Nigerian then residing in San Diego, Onwere founded the company in 1993. Afronet was a FidoNet system--essentially “a hub to exchange messages, emails, electronic bulletin boards about topics of interest” to “likeminded Africans and African Americans in the US and Canada” (92). Powered by an army of dedicated volunteers, it was free and open, acting as an inclusive umbrella for any number of Computer Bulletin Board Systems (BBSes) or online platforms from the west to east coast. It’s important to keep in mind that these were not Edenic times, however, even if

the internet had yet to be completely commercialized. Cyberlibertarian and internet activist John Perry Barlow infamously described it a few years later as "a world that all may enter without privilege or prejudice accorded by race, economic power, military force, or station of birth." Of course, as we now know, Perry was engaging in myth-making, as clearly demonstrated by the old BBS posts McIlwain dug up that were unapologetically misogynist and anti-black. He repeatedly reminds us:

BBS. Usenet. The Internet. Yes, they were creating a whole new world. But it wasn't a question about if and when racism would rear its ugly head in this new world. Racism, fueled by anti-blackness, was already there when it began. And if you were black, and online, your very emotional survival depended on your finding a respite in a new world that was, like the old one, built on, and permeated by white supremacy. But Afronet became that virtual table where all the black kids could come to sit together. Afronet was where we could find our people. (96-97)

While countless so-called innovators were, at the same time, scrambling to find ways to monetize the net and promote a hyper-individualist vision of being utterly free and unburdened by bodies and IRL identities, black software engineers like Onwere were instead determined to connect black people. "To me the business model of the next century is about inclusion,"(124) declared another member of the Black vanguard, NetNoir co-founder David Ellington. McIlwain lands us with this thought experiment: what would our current internet look like if it put communities and inclusivity first rather than the profitability of IPs?

Of course the answer to the foregoing is open-ended and, right now in early 2021, an exercise in wishful thinking. But we cannot even begin to reimagine an alternative present leading to the future without first tracking these histories. In Cait McKinney's *Information Activism: A Queer History of Lesbian Media Technologies*, an alternative network trajectory begins in the nondigital realm--with lesbian feminist print newsletters in the early 1970s and that decade's telephone hotlines-- before then expanding its purview to include digital methods for organizing, cataloging, and archiving these materials. McKinney insists we not only need to know *about* these counter, queer histories, but we need an appropriate infrastructure for accessing them. In terms of what it means for an infrastructure to be "appropriate" for its users, McKinney explains:

Lesbian feminists built or altered sociotechnical systems to carry out their work, and these systems materialize their imbrication in queer, antiracist, and feminist life-worlds. Information activism leverages the entanglement of politics with technologies to build infrastructures for lesbian feminism. (3)

Explicitly activist, these alternative networks and their infrastructures are not, she contends, just neat artifacts from the past. They are systems for information exchange that have the potential to prop up entire "life-worlds." As I suggest above, channeling Michel Foucault, all of them are life-worlds that have largely disappeared from view because of institutional investments in set notions of gender, sexual orientation, race, religion, and more that in turn end up propping up certain histories while erasing others.

Like McIlwain, McKinney pored over an astonishingly wide range of grey literature including "newsletters, meeting minutes, telephone call logs, internal memos, letters...online archival interfaces, photographs, catalog records, log books, subject thesauruses, instruction manuals, handbooks, bibliographies, and actual index cards." (8) She compellingly argues that "[t]he invisibility of women's work in histories of media and technology is perhaps most acute when this work takes the form of service, care, or emotional labor, categories that include activist projects understood as labors of love." (12) Her book forces another thought experiment: what would a history of the internet look like that highlights the emotional labor involved in supporting all the complex decision-making processes spanning years and

numerous countries and organizations about, say, whether to use TCP/IP or the competing protocol at the time, called the OSI (Open Systems Interconnection Model), for the creation of an internet?

I was most taken with an early section in her book about a print-based network called “Matrices: A Lesbian Feminist Research Newsletter.” Specifically by and for lesbian-feminists, this newsletter was a complex, multi-faceted object nested in a web of institutional, technological, personal, and political forces. Collaboratively created by four women spread across the U.S., and produced using the University of Nebraska’s English Department photocopier (along with telephones and the postal system), it was distributed free of charge for its first three years. It was often used for resource-sharing and community-building by lesbian feminists inside and outside of academia and across the U.S. and Canada. McKinney uses this example to walk us through numerous provocations (e.g. did lesbians invent the internet?) and to highlight the importance of the “rhythm and pace” of print networks (even if they are “slow, messy, labor-intensive, and sometimes cumbersome”). She then asserts something that is so obvious it isn’t: networks need not involve computers to be an effective and powerful means for decentralized, distributed information-sharing. Citing Riot Grrl VHS tape distribution networks as another example, she points out that “a more expansive media history of feminist social movements understands the idea of networks as paradoxically bound to, but also independent of, particular technologies.” (60) Her book has us imagine what networks--and, again, life-worlds--might be enacted today and tomorrow if we took these newsletters and telephone hotlines as models and built networks that are intentionally slow, small, personal, decentralized and distributed.

Finally, Jenna Supp-Montgomerie’s *When the Medium Was the Mission* excavates the entire assemblage surrounding the first transatlantic undersea cable, typically thought of as marking the birth of network culture in 1858. Rather than build on the conventional definition of a network--which favors the technological structure connecting nodes--Supp-Montgomerie begins with the premise that networks have always been “first and foremost imaginaries” or enactments of “particular forms of social and material life.” (6) This framing makes clear that whatever we currently believe about the inherent affordances of networks is in fact what our network environment allows us to believe. The fact is that early networks came to be through a complex conjunction of religion, politics, and infrastructure. Our typical discourses about the history of the internet, however, elide that complexity; they take the easy route, favoring narratives that fixate on the same set of actors (white males) and their well-documented performance of technical feats to get different networks communicating with each other. But what if histories of the internet instead tracked the ideological, philosophical, and political underpinnings of its technical functioning?

Consider the 1858 transatlantic cable, which may have only functioned for 23 days but has had an outsize influence on our cultural imaginary—not only in shaping our beliefs about how networks work but in generating the story we tell about the cable as the most important technological feat of the last 150+ years. “Connection” may now be embedded in the very definition of a network, but disconnection, Supp-Montgomerie’s book asserts, is just as inherent to networks. The first telegraph lines in the 19th century did not in fact work, and as she puts it in the Preface, “fracture was part of the network.” She continues:

...networks continue to be imagined as *connective* media, so much so that we have trouble thinking of networks in terms of the disconnection they actually rely on. Consider for a moment the way participation in digital networks depends on firewalls, passwords, out-of-office messages, and the delicate art of unfollowing. Historically speaking, networks would not exist without all the disconnection that went into their establishment. (xii)

If the narrative about our contemporary internet were indeed to focus on disconnection rather than connection, would this enable a more honest discussion of, say, the security flaws in our current internet infrastructure? Would we stop assuming that our current internet is the best possible version of an internet?

Why did belief in the messianic connective power of networks proliferate despite all the evidence to the contrary? Supp-Montgomerie's answer: the 19th century's version of public Protestantism. While disconnection and failure are at the heart of any so-called functioning network, these qualities, she argues, have been effaced for two reasons: one, the U.S. variant of 19th century Protestantism celebrated the telegraph as "the realization of an essential human connectivity blessed by God" (20) and two, the supposed connective quality of networks was seen by missionaries as a "vital new resource in an effort to convert the world." With alarming echoes of the discourse around failed late 20th century tech projects such as One Laptop Per Child, which promised to lift children in the developing world out of poverty by the mere presence of a \$100 laptop, 19th century missionaries "used media as mission, equating the spread of certain technologies with the spread of Christianity." (37) "Heathen minds," it was believed, "were...closed to Christianity but strikingly passive to the power of technology and awe-inspiring performances of it." (48)

If missionaries adamantly believed in the power of the telegraph to subdue, convert, and modernize, their targets had a far more cynical and accurate perception: telegraph infrastructure was a "symbol of imperial control." *When the Medium Was the Mission* contains stories of attempted network sabotage but mostly Supp-Mongomerie focuses on the thoroughgoing, deeply violent subjugation of non-White people in the name of "progress." Her book buttresses McIlwain's assertion that racism and slavery were embedded in the birth of networks themselves. More specifically, in 1858, the same year as the birth of the first transatlantic telegraph cable, a little known ship called the *Telegraph* crossed the Atlantic and took 654 enslaved Africans from West Central Africa to Cuba. Only 500 survived. The point of this story, which opens her second chapter, is to gesture to what should by now be obvious: "despite their disarticulation in US public discourses, the establishment of network infrastructure and practices of slavery occurred in the same time, space, and publics." (99) Moreover, they were not just contemporaneous--network infrastructure and slavery functioned according to the same logics and underwrote each other.

In short, our contemporary internet--the offspring of telegraph cables birthed from colonialist mind-sets --is anything but neutral. An alternative internet or even just an alternative network is possible if we start anew from altogether different premises that prioritize care, inclusivity, and transparency.

¹ Karin Knorr Cetina, "Scopic media and global coordination: the mediatization of face-to-face encounters" 42.

² Charlton D. McIlwain, *Black Software: The Internet and Racial Justice, from the AfroNet to Black Lives Matter*. 7.

³ Cait McKinney, *Information Activism: A Queer History of Lesbian Media Technologies*. 2.