Crisis Infrastructures: AIDS Activism Meets Internet Regulation

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Citation

Abstract

This chapter analyses how AIDS activist Kiyoshi Kuromiya and his internet activist organization Critical Path leveraged its community-based internet infrastructure model to challenge online content regulations about sex in the United States in testimony against the 1996 Communications Decency ACT (CDA). The CDA and AIDS internet activism were intertwined, sociotechnical phenomena, caught up in the rapidly unfolding, neoliberal information environments of the 1990s. Through this case, growing moral panics over sexual expression online were articulated to HIV and related perceptions of risk. I argue that during the 1990s, cultural understandings of HIV were inseparable from attempts to define the place of sexuality online and regulate "appropriate" internet use. The internet as we know it today has been imagined and re-calibrated through AIDS. The "AIDS crisis," as it was understood during this period by US judicial and legislative systems and the wider public, continues to reverberate in the ways online infrastructures both provide and limit access to information about sex.

Keywords

In one of the most significant judicial cases in the history of US online content regulation, an AIDS activist explained the internet to a federal judge. Justice Stewart Dalzell asked Kiyoshi Kuromiya, director of Philadelphia's Critical Path AIDS Project, to help him understand: "I'm very curious to know, how exactly does the technology work? How do you build up this access to, as you say here, thousands of databases that go through your Web page?" The activist's patient response, as documented by the court reporter, begins with a simple sentence fragment: *"Okay."* The text is punctuated as a full stop, perhaps followed by a deep breath. The transcript suggests Kuromiya was gathering himself to explain a terribly complex and important idea to someone very different from himself.

Kuromiya, founder of the Critical Path AIDS Project, was testifying at Philadelphia's Federal District Court in the American Civil Liberties Union's (ACLU) challenge to the 1996 Communications Decency Act (CDA). This was the US government's first attempt at online content regulation. Within the terms of the act, *any* online information about sex—whether hard-core porn or explicit instructions on condom use—was potentially "indecent" and "patently offensive." The act required sites hosting or linking to these materials to verify that users were not minors, or face substantial penalties.

Kuromiya walked the judge through some internet basics (message boards, hyperlinks, webpages, and internet service provision), then repeated his objection to the CDA: the act would inhibit the work AIDS activists were doing online to circulate accurate, accessible information about HIV transmission and treatment—information that was not reliably available elsewhere. Online infrastructures linked by countless network connections could not impose technological safeguard against "indecent" and "patently offensive" content about sexuality without also limiting open communication about HIV.

The web was, by its very nature, indiscriminate in its network structures, and this was a good thing. As Kuromiya explained it, users seeking online information about HIV could connect to a wide range of sources through hypertext links. The ACLU drew on this assertion to argue that the web's linked data infrastructures exceeded existing definitions of individual liability that were grounded in discreet, one-to-many broadcast models for understanding media. Users who followed HTML links from one site to another often did so without knowing in advance that they were "leaving" one site for another. Analyzing Critical Path's website and Kuromiya's affidavit, Judge Dalzell asked the activist: "You seem to have entered into a number of arrangements, thousands of them, with institutions including research institutions. . . . Have you all changed anything in the way you communicate information to users [since the law was passed]?" Kuromiya replied, "No. We're constantly updating our site, but no, we haven't changed anything. . . . I'm not sure how to interpret that law. I do not know what indecent means. I don't know what patently offensive means in terms of providing lifesaving and life promoting information to persons with AIDS or persons at high risk for contracting AIDS, including teenagers."[1] The judge found the internet too promiscuous; for the AIDS activist, that was precisely the new medium's point.

Kuromiya's explanation to the court was simple and hard to dismiss: in order to teach young people about condom use, testing options, oral sex, and other low-risk sex practices, websites about HIV transmission needed to write about, and even depict, explicit sex acts. The internet was immediate, relatively cheap for marginalized content producers to access compared to broadcast or print, accessible to amateurs, and fundamentally collaborative; it was technology ideally suited to making and rapidly circulating information about HIV when access through traditional channels was precarious, uneven, and slow. Kuromiya's expert opinion was based on

a decade of activism dedicated to building and sustaining what he called "Community-Based

Infrastructure for AIDS Information Dissemination on the Internet."[2] This model offered

nonprofit internet service provision and web hosting for AIDS service and activist organizations

and individual users affected by HIV/AIDS. Critical Path also ran a website and Bulletin Board

System (BBS), a twenty-four-hour telephone hotline, and a print newsletter aimed at rapid and

accessible information distribution.[3]

       This chapter mobilizes archival research in Critical Path's papers alongside court records

related to the CDA, analyzing how Critical Path leveraged its community-based internet

infrastructure model to challenge online content regulations about sex. The first section outlines

how Critical Path used early computer network technologies to realize community-based

responses to HIV. The second section situates this model in relation to Kuromiya's position as a

formerly interned Japanese American, a gay man, and a prison abolitionist. I analyze how

Kuromiya used Critical Path's infrastructure model in his instrumental testimony. AIDS provided

a ready example for explaining to the court, and the public, that the formal and regulatory

development of consumer internet infrastructure could fundamentally determine online

communication's social utility.

       The ACLU used Kuromiya and Critical Path to argue that online information about sex

needed to be free and open, without any technologically enforced minimum age verification.

This approach reflected outreach strategies activists and AIDS Service Organizations (ASOs) had

developed over the previous fifteen years to reach young people. Targeting youth with

information about sex was controversial because it acknowledged their sexual subjectivity,

unthinkable within what Cindy Patton has named the "national pedagogy" of the AIDS crisis,

which relied on stigma, the valorization of innocence, and binary thinking about "good" and

"bad" sexuality.[4] Imagined as potential internet users, teenagers were simultaneously too young to *look at porn online* and yet old enough to *have actual sex offline* (and require information about doing so).

The CDA and AIDS internet activism were intertwined, sociotechnical phenomena, caught up in the rapidly unfolding, neoliberal information environments of the 1990s. Through this case, growing moral panics over sexual expression online were articulated to HIV and related perceptions of risk. I argue that during the 1990s, cultural understandings of HIV were inseparable from attempts to define the place of sexuality online and regulate "appropriate" internet use. The internet as we know it today has been imagined and re-calibrated through AIDS. The "AIDS crisis," as it was understood during this period by US judicial and legislative systems and the wider public, continues to reverberate in the ways online infrastructures both provide and limit access to information about sex.

Community-Based AIDS Information Infrastructure

Critical Path's work building what they called information infrastructure is an opening to thinking about how precarious users perform sociotechnical work that matters to histories of networked computing. Critical Path's "Community-Based Infrastructure for AIDS Information Dissemination on the Internet" offered alternatives to costly, telecom-controlled internet access, while the basic terms of information provision were being regulated and contested. Critical Path's model brought AIDS activists' resiliency and resourcefulness with media technologies to bear on computer network models. As a conceptual framework, this model explained why new information infrastructures mattered for people living with HIV. Practically speaking, it offered

several unique approaches to service provision that allowed users with HIV to participate in new computer networks.

The model combined grassroots internet service provider (ISP) architecture with the development of accessible, shared communication tools and training for would-be users. The organization saw internet access as a basic communication need for people living with HIV during a period in which the web was considered either the domain of businesspeople and large institutions or an expensive and technologically sophisticated hobby. Critical Path began online work in the late 1980s, hosting an HIV-related Bulletin Board System. The organization also redistributed online information from BBS in a widely circulated print newsletter and via a twenty-four-hour telephone hotline.[5] This "analog" outreach focused especially on prisoners with HIV. Critical Path's multimedia activism extended online information to those less likely to become internet users because of poverty, disability, or carceral status. By the mid-1990s Critical Path's activism was bringing new users into online networks so that they could contribute to the larger "HIV/AIDS internet."[6] Critical Path offered instructions on how to dial up, participate in a listserv or BBS, host a website, or get and use an email address. In the CDA case, Kuromiya used Critical Path's model to put forward a working understanding of the internet as a networked infrastructure and, more precisely, as a shared technology for survival and making-do. This model challenged emerging, Clinton-era ideas about an "information superhighway" that promoted an efficient, globalized economy as the ideal outcome for internet use.

Studies of infrastructure examine developing information economies and networked publics to understand how people, systems, technologies, and standards of practice come together within specific lifeworlds under modernity.[7] Focused on infrastructure for addressing HIV, Critical Path's community model carved out ways for marginalized users to make do within

technical systems that were not necessarily of their own making. This approach to infrastructure emphasizes the importance of friction and differential access and is exemplified by queer approaches in infrastructure studies that had begun to develop by the mid-1990s: for example, Susan Leigh Star's "Misplaced Concretism and Concrete Situations," which queers understandings of how infrastructures and social worlds are co-constructed. Star was an information studies scholar and also a lesbian feminist who published on sexual politics and collaborated with the African American, lesbian-feminist poet Audre Lorde. This biography enriched Star's thinking about infrastructures beyond the academic science and technology studies orientations typical of the field.[8]

In "Misplaced Concretism," Star writes that "our collective experiences" working in and across "queer, anti-racist, and feminist publics . . . is one of the richest places for which to understand these core problems in information systems design: how to preserve the integrity of information without *a priori* standardization and its attendant violence." In the same paragraph, Star asks, "Why should computer scientists read African American poets?"[9] Star is not asking rhetorically—she is imploring us to do the work of thinking and theorizing across fields and communities of struggle to understand why, when, and for whom information infrastructures matter.

Star and Kuromiya were worlds apart, and yet they shared a fundamental commitment to exploring information infrastructures from the perspectives of those most vulnerable to their failures. For activists and users living with illness and disability, applying emergent internet infrastructures to HIV could offer radical support to those most vulnerable to information scarcity. Building on Star's work, Lauren Berlant, Steven Jackson, and Nicole Starosielski have each considered how infrastructures are maintained, repaired, or even purposefully broken by

people and collectives trying to manage precarity within difficult conditions not of their own making.[10] Berlant, in particular, imagines infrastructures as forms for critical sociality, whether this looks like working in them, and on them, adjusting (to) them, or slowly transitioning them into something else, however provisionally or temporarily.[11]

AIDS activists and people living with HIV built and used community internet infrastructure as a resource, and a tool for adjusting to how stigma shaped both the distribution of information and the distribution of vulnerability to HIV. Activists during the 1980s and 1990s employed many media technologies to circulate information about HIV within these conditions. They used video and public-access television programs, posters, pamphlets and print ephemera, porn, and emergent online networks.[12] Critical Path's infrastructure model systematized an idea that was common across these practices—that media technologies could create alternative networks designed by and for those most vulnerable to HIV. The infrastructure concept allowed Critical Path to understand and address the AIDS crisis as being about state-sanctioned abandonment and the unequal distribution of vulnerabilities among people of color, queer people, and people who were poor, incarcerated, or did sex work, all of whom experienced limited access to new computing technologies that directly affected their life chances.[13]

Kuromiya explained the organization's turn to a community infrastructure model in the Critical Path newsletter. His words critiqued the inexorability of a corporate-controlled, economically rationalized internet.

> We decided that we must not only be content providers but provide free access to the Internet and do so by becoming Internet hosts ourselves. We understood that many of the persons we wanted to reach were on disability or lower incomes and

would never be able to access the Internet if they needed to pay America On Line

$20 a month. We also disagreed with those who felt that this new state-of-the-art

technology was inappropriate for those without college educations and high

incomes. After all, we knew that this whole generation had grown up learning

from television and video games, not reading books and technical literature. We

felt they deserved the best our technology could provide them.[14]

Kuromiya critiques Clinton-era approaches to communication infrastructure development, in

which internet access was managed as a resource for economic advancement.[15] In other words,

"Community-Based Infrastructure for AIDS Information Dissemination on the Internet" is a

response to the ways in which access to communications infrastructures was deeply stratified by

ability, income, and carceral status. By 1996 the "AIDS crisis" was just reaching a mature stage of

biopolitical management, but only for those with privileged access, while the relatively

undeveloped World Wide Web presented growing uncertainties about how online

communication might fundamentally revolutionize social life.

The ease with which community-based AIDS information infrastructure could be

articulated to larger concerns around the developing consumer internet revolution is indicative of

infrastructure's broader sexual politics during this period. As Nancy Fraser argues, Clintonism

imagined social welfare through "infrastructure development" as a new kind of public good,

conceived within a neoliberal framework that pursued "investment" in "high-tech, fiberoptic

communications systems" but not "public day care, public housing, or public health."[16] For the

Clinton-Gore administration, designing an online regulatory framework presented an uncharted

opportunity to demonstrate how government ought to treat infrastructure more broadly: regulate

content minimally to ensure "decency" while staying out of the way of formal and technical development so that the private sector could manifest the medium's revolutionary trajectory.

There were, in a sense, two internets within Clinton-Gore infrastructure rhetoric: one focused on form, the other on content. The first emphasized the novelty of network technology itself, which would democratize access to information and revolutionize business and human communication. This version of the internet was fast-moving, inevitable, and would advance the economy while simultaneously reducing or eliminating inequalities among people.[17] The second version of the internet focused on problem content: pornography, hate speech, and gratuitous violence that could be eliminated through good regulation.[18] Children factored in both approaches, as either the beneficiaries of programs aimed at rebuilding a failed, inequitable public education system through internet access or as innocents threatened by unregulated online content.[19] The children Clinton-Gore invoked were not sexually active teenagers in need of honest, explicit information about HIV; rather they were younger, sweeter, more innocent future users who might dial up at their school library or virtually attend the first webcast White House Easter Egg Roll (1998).[20]

The desire to leave technical infrastructure unchecked combined with the drive to regulate sexual content led to cumbersome early regulatory frameworks, including the CDA and the 1996 Telecommunications Act.[21] The acts took a hands-off approach to regulating ownership structures and technical design, concentrating power and control over new communication technologies in the hands of corporations and government.[22] Wendy Hui Kyong Chun has shown that the CDA and the Telecommunications Act of 1996 promised to ensure open access to the internet for all citizens on the surface while deregulating technologies and their ownership structures at a deeper level. These regulations imposed surveillance and corporate content

management by justifying digital certificates, age and identify verification measures, and other forms of data collection that ultimately aided online business development rather than community use.[23]

Chun argues that the CDA *appeared* to support access: "Congress decided that it must stop the free circulation of some obscene ideas in order to ensure the free flow of others, in order to make cyberspace truly public, where public means free from pornography."[24] This logic narrowed the terms for what access entails by sidestepping "the relationship between access and infrastructure/income/education."[25] Put simply, the CDA was a substantial step in the internet's ongoing neoliberalization, which Kuromiya directly critiqued. Through the CDA, Clintonism took a hands-off approach to the internet's technical development while imposing content restrictions that would limit speech about sex. Working against this framework, Kuromiya and Critical Path imagined alternative models for online access that would work around the gatekeeping measures presented by the CDA and corporate convergence. These frameworks threatened "Community-Based AIDS Internet Infrastructure's" potential as an accessible method for doing equitable, grassroots, and potentially anonymous communications among vulnerable user groups. Critical Path built community infrastructure that marginalized users could readily use, carving out ongoing enclaves for the internet as a public utility that needed to be actively built, maintained, and protected from private interests and conservative sexual values. This work marks infrastructure not as a background operation that keeps business operating as usual but as a field of struggle people living with HIV get by within, or build, in ways that materialize solutions to the shared vulnerabilities they care about.

Kuromiya Goes to Court: Community AIDS Infrastructure versus the CDA

Kuromiya's activist commitments emerged from his experiences as a gay, HIV-positive, formerly interned Japanese American. His biography contextualizes the political goals behind Critical Path's infrastructure model and the organization's critique of the CDA. Kuromiya was born at the Heart Mountain Japanese internment camp in Wyoming, where his family was forcefully relocated from suburban Los Angeles. In a 1997 interview with historian Marc Stein, Kuromiya explained that while he could not remember the camp, "I'm sure it affected my own activism and my own attitudes toward our government, war, racial issues."[26] Kuromiya moved to Philadelphia in 1961 to start school at Penn State, and he came of age as an activist within civil rights–era Black freedom struggles and antiwar movements.[27] He spent 1964–71 under FBI surveillance for his antiwar activism, and information about his life, housed at Philadelphia's LGBTQ community archives, contains a redacted copy of these surveillance files, acquired by the archives through a Freedom of Information Act request after Kuromiya's death.[28]

When Kuromiya seroconverted in the late 1980s and became deeply involved in Philadelphia's AIDS activist communities, he brought commitments to antiracism, queer models for sexual expression, and anticarceral consciousness drawn from his family's history of incarceration. As I argue in detail elsewhere, Kuromiya discovered that information systems could be an outlet for addressing these intertwined issues through his relationship with the technological philosopher and architect Buckminster Fuller, most noted for designing the geodesic dome.[29] Kuromiya was Fuller's assistant in the early 1980s and helped him write the

book [A]*Critical Path* (1981), which argues that social problems could be addressed through thoughtful information systems.

[B]<Fig 7.01 ABOUT HERE>

Thinking through Fuller's systems theories, Kuromiya understood social problems and their solutions as intertwined within sociotechnical networks. For example, his anticarceral internet activism imagined the prison as a space not just of confinement but also one walled off from internet access. Bringing prisons into existing AIDS information networks could address the unique health needs of incarcerated people. Such integration also enables those who were incarcerated to share their own activism and strategies of survival with the wider HIV/AIDS community. To do this, Critical Path's newsletter featured regular articles by incarcerated writers, also published online through the organization's ISP. The newsletter was also free for subscribers in prisons (and all subscribers living with HIV/AIDS).[30]

Kuromiya's identity as an Asian American committed to antiracist organizing also shaped Critical Path's infrastructure model. As Che Gossett argues, to understand Kuromiya as solely an AIDS activist would "invisibilize the contributions and theorizations of queer of color activists."[31] Gossett argues that Kuromiya's multiple, entwined positions in social justice movements manifested a capaciousness for thinking across communities of struggle and imagining otherwise, characteristic of queer of color theory and activism.[32] In a way, Kuromiya *was* the computer scientist (or "skilled amateur," as he put it) reading African American poets who Susan Leigh Star had imagined.[33] Critical Path's infrastructure model, designed from within and also across these political orientations, developed out of enmeshment in multiple social

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[A] Pls. add this book to the bib. Done.
[B] The placement of this image had been at the very end of the chapter but it makes more sense to place it here, where you are providing biographical info about him. Cait: Works for me, thanks.

justice worlds and an attendant understanding of HIV as a larger resource-distribution problem. In other words, Kuromiya could manifest his particular vision of the internet becaus he was able to imagine, through AIDS, other ways of being in collaborative relations of difference with people, systems, and problems.

The CDA put forward a vision of the internet that threatened this community infrastructure model. Specifically, the act would impose technological limitations on Critical Path's goals of networking across various sites, reducing barriers to access, and building online spaces where diverse sexualities could proliferate. The act's implications were unthinkable within Kuromiya's vision of what online communication ought to be doing for people living with HIV, hence his frustrated incredulity to the judge: "I'm not sure how to interpret that law. I do not know what indecent means."

Hobbyist, tinkerers, and internet activists like Kuromiya worked away at building and maintaining their own online infrastructures while large institutions fought publicly about what the internet would become. The mid-1990s was a period of regulatory scrambling in which government, telecom and tech companies, and lobby groups like the ACLU and Electronic Frontier Foundation vied to put in place policies and protocols to support their visions for online communication. Focused on free speech concerns, the ACLU announced that it would seek a temporary restraining order (TRO) against the CDA's "indecent" and "patently offensive" clauses even before the law was passed. This TRO was granted by a Philadelphia federal judge one week after the CDA passed, and the case was heard by the three-judge Federal District Court just two months later. On June 12, 1996, this court ruled in favor of the ACLU.

When the government appealed this decision, the United States Supreme Court agreed to review the case, ultimately striking down these clauses in June 1997. As the earliest attempt at

online content regulation, the CDA was part of a larger public education campaign about the internet as a public utility and a form of basic infrastructure; journalists covering the ACLU's challenge to the act were tasked with explaining to readers the ins-and-outs of how online communication worked, and why this technology warranted a political debate that ought to matter to the public. Ultimately this case set a precedent for content regulation online and informed how a developing user base thought about the web as inseparable from communication about, and through, sexuality.

The Supreme Court's opinion, striking down the CDA's indecency clauses, understood online communication as personal telecommunications rather than broadcasting or publishing. Restricting access to sexually explicit materials was found unconstitutional under the First Amendment: as Justice John Paul Stevens, author of the majority opinion put it, "In order to deny minors access to potentially harmful speech, the CDA effectively suppresses a large amount of speech that adults have a constitutional right to receive and to address to one another."[34] These sexually explicit forms of speech might include porn but also "serious discussion" about "birth control practices," "safe sexual practices," "homosexuality," "artistic images that include nude subjects," "the consequences of prison rape," "and arguably the card catalog of the Carnegie Library" (if it were to be transmitted online).[35] Materials that might be "obscene" or "patently offensive" to some had clear public utility that justified deregulating sexual expression online.[36]

The court agreed with the ACLU's argument that the internet presented a unique community-based form of communications infrastructure because it could be used easily and inexpensively by regular people. Internet users, even amateurs, could circulate information on a wide scale, including information about all kinds of sex practices, not limited to sharing porn. Demonstrating the court's understanding of the niche social worlds that could thrive online

through technologies like Critical Path's website and bulletin board, Justice Stevens wrote, "There are thousands of such groups, each serving to foster an exchange of information or opinion on a particular topic running the gamut from, say, the music of Wagner to Balkan politics to AIDS prevention to the Chicago Bulls."[37] This odd, flippant sandwiching of HIV-related information between German opera and a 1990s sports dynasty perfectly demonstrates how AIDS activism came to matter in *ACLU v. Reno*: as a limit case for why online infrastructures needed to remain open to sex as just another everyday topic of vital interest to many different kinds of users. Kuromiya's affidavit and testimony listed a range of potentially "indecent" topics that were at risk for censorship. These acts and subjects were critical to doing meaningfully sex-positive HIV education aimed at a wide range of people, and included sex work, needle exchanges, massage parlors, "rimming," "blow-jobs," anal sex, sex toys, gags, and dildos, to name just a few.[38]

Kuromiya was the first of forty-six ACLU plaintiffs to address the Philadelphia district court, including Planned Parenthood and the Electronic Frontier Foundation. Journalists' accounts of the court proceedings highlight how Kuromiya's position resonated most clearly with judges. The *New York Times Cybertimes* blog cited Kuromiya's testimony as the most significant in informing the court's decision.

> While it is difficult to say which of the witnesses most influenced the judges in their trail-blazing decision, the first major opinion about free speech and the Internet, lawyers agree that Kuromiya played a pivotal role. Time after time while hearing the case, judges cited Kuromiya's testimony when questioning government lawyers. Several times during the decision, they mentioned the

problems the law would create for him. "I think he was the perfect symbol of

speech that is about sex and has strong social value," said Christopher A. Hansen,

an American Civil Liberties Union lawyer and one of the lead attorneys in the

case. "He also symbolized that speech is of value to minors as well as to adults.

Somehow, Kiyoshi came to symbolize the essence of what this case is all

about."[39]

The details behind this ACLU lawyer's "somehow" are key to understanding AIDS activism's role

in online infrastructure development. Reading across court transcripts, news coverage, and

Justice Stevens's majority opinion, AIDS-related community internet infrastructure successfully

shored up the ACLU's case in a few distinct ways. First, the model demonstrated in concrete

terms what marginalized users could do with access to computer networks, within the very

timely rhetoric of a mature "AIDS crisis." Kuromiya succeeded at showing the court that AIDS

activist work online was both vital and too large in scale and dispersed in its network structure to

reasonably monitor within the act's terms; as one activist stretched for time and money,

Kuromiya could not possibly vet content on thousands of databases Critical Path amalgamated

for its users or censor the message boards built collaboratively by these users. A grassroots

organization like Critical Path would collapse under this manual content moderation workload.

While intended to protect small organizations from this burden, this argument has had lasting

repercussions for the CDA. Section 230 has shielded corporate platforms from liability for users'

speech, and more recently, encouraged platforms to ban sex workers from communicating with

clients under 2018's SESTA/FOSTA amendments to the act.[40]

Second, Kuromiya used Critical Path's model to systematically dismantle the CDA's

vague definition of what was "indecent" or "patently offensive." He critiqued the idea that

tagging or filtering technologies, or even well-meaning people, could make good judgments about the value of sexually explicit information. As Kuromiya, out to the court as a gay man, warned in his affidavit, discussion of sex acts and diverse sexual orientations necessary for doing HIV outreach "may be considered by some to be 'offensive' or 'indecent'" under the act's terms.[41] Internet users living with HIV/AIDS were creating useful, explicit, and community-specific information about how to have and enjoy sex within a broader public-health climate that singularly preached monogamy, abstinence, or condom use, despite the unpalatability of these measures to many.[42] As Kuromiya explained it, reaching these users with information that made sense to them might require "colloquial street terms that would be widely recognized in particular communities" or visual and written material at "a range of levels to be understood by various groups in our community, either people with low literacy levels, (or) people for whom English is a second language."[43]

Teenagers represented the most significant and controversial of these community groups within the CDA's terms, which did not ban "indecent" or "patently offensive" materials outright but rather criminalized their circulation to minors. Kuromiya was unequivocal in asserting that young people needed explicit information about sex, precisely because they were *having explicit sex*. When questioned by Department of Justice lawyers, Kuromiya gave what transcripts suggest was an impassioned response.

> I can only repeat what I said. I know the difficulties of living with this disease.
> I've been infected for something like 15 years, and have had full-blown AIDS by
> the CDC definition since 1993. And yes, I would want to protect people who are
> potentially going to contract HIV and we know that from current Government

statistics that two-thirds of all high school students are sexually active. And so

yes, we're providing the information for people who are sexually active and are

potentially exposing themselves, maybe because of lack of information or the lack

of a source where they can get anonymously information that they need to protect

themselves.[44]

Within Patton's "national pedagogy," youth of color and queer youth are figured as sexually

active and in need of information about HIV "in order to inscribe the heterosexual [white] teen as

safe from AIDS."[45] Critical Path's community infrastructure model implicitly challenged this

division between "good" and "bad" sexuality by promising anonymous access to sex-positive

information, without judgment. Technologies that restrict young people's access to online spaces

through age verification or other forms of identity management threatened to dismantle this

community health model. The idea that sexual-health information for youth ought to be explicit

in order to be meaningful challenged the logic behind designing technological systems that could

sort "bad" porn from "good" sexual health materials.[46] Critical Path's model showed that

building conservative sexual values into developing internet technologies would diminish HIV

prevention for young people. Here, AIDS activism hoped to ensure a "free and open" internet, and

ultimately, the proliferation of diverse sexualities online, including through internet porn.

While the Supreme Court's decision did ensure AIDS activist approaches to sexuality

online could continue unfettered by age verification, the terms through which the case was

argued may have ultimately paved the way for future technological regulations in this vein. The

CDA required sites hosting "indecent" or "patently offensive" materials to place them behind

some kind of age-verification interface, the technological details of which were vague, in part

because legislators writing the act did not understand how the web worked. Many of the

submissions put forward by both the ACLU and the government at both levels of court involved explaining "hyperlinks," "websites," and "email" to the court. To do this work, both sides grilled expert witnesses on the technical details of potential tagging schemes, widespread "parental" controls, and credit-card verification systems.

The ACLU argued, relying on Critical Path's affidavit, that "barring older minors from access to explicit safer sex information or other communications that may help them deal with the onset of sexuality" was unethical. But their case laid out a secondary, technological critique of the act that was perhaps equally convincing to the court.[47] Through an argument titled "Future Technology Cannot Save a Statute That Criminalizes Speech Today," the ACLU built in a fail-safe to their case: the government's proposal is moot because it is not technically possible . . . yet.[48] In their brief to the court, the ACLU wrote, "Industry continues to invent new ways to empower parents—from the user end—to control Internet content, illustrating that less restrictive alternatives to the CDA's draconian burdens are clearly available."[49] Filtering technologies that could sort porn from G-rated sexual health materials would become widely available in the decade to follow. Case in point: in 2003 the Supreme Court upheld the Children's Internet Protection Act (CIPA), which requires all K–12 schools and public libraries to install internet filters for materials that are "obscene" or "harmful to minors." This act prevents any young person without the means to obtain private internet access from finding the kinds of meaningful, potentially "indecent" information about sexuality, including HIV, that Critical Path's model worked to protect and circulate.

Conclusion

The CDA brought together two of the great "crises" of the 1990s: the AIDS crisis and the infrastructure crisis, which justified many transformations in public spending and utility (de)regulation. This approach strategically disarticulated public investment in new internet infrastructure from the material, gendered needs of women, people of color, and people living with HIV. Kuromiya made explicit that the internet's utility for these users depended on access to information that the CDA would prohibit. He understood the internet as an infrastructural resource that reconfigured existing communication paradigms. Conversely, the CDA's authors understood the internet through previous media systems: the highly regulated and controlled broadcasting and publishing industries.

Since the CDA decision, the internet has become a utility that AIDS service organizations use regularly for outreach, particularly within men who have sex with men (MSM) communities. At its best, this work translates community health-care models to networked digital environments, taking what Sharif Mowlabocus, Craig Haslop, and Rohit Dasgupta call "contextually relevant harm reduction work" online.[50] But as these authors argue, this work is constrained by the corporate-driven sexual politics of apps and platforms—the mature online infrastructures enabled by the commercialization Chun traces back to the CDA.[51] Other online tools for HIV outreach, such as viral-load trackers, leverage personal risk-management models that are far from the community-based resource and information sharing Kuromiya imagined. Alexander McClelland argues that these apps support surveillance, exert biopolitical control over data, facilitate HIV criminalization, and are ultimately only useful to those with the capacity to actively and routinely measure and manage their health.[52] The 2017 end to net neutrality

regulations further threatens those living with HIV who rely on accessible and affordable broadband to learn about and access public services, especially nonjudgmental, queer and/or antiracist health information.[53] Net neutrality protects the affordability of broadband access and ensures the content agnostic treatment of online information by ISPs.

In the shadow of this context, Critical Path continues to help marginalized internet users get online. The organization has transitioned into a publicly funded community service that provides basic training and free internet access to low-income people at computer centers across Philadelphia.[54] The contrast between smart-phone-based apps within already networked MSM communities and the basic community infrastructures Critical Path continues to maintain for poor or street-involved users shows that within a mature internet era, communities vulnerable to HIV use the internet in many different ways. The technological inequities of access Kuromiya worked against persist, as do community infrastructure models for interrupting them.

Critical Path's model placed vulnerable users at infrastructure development's center. People living with HIV/AIDS not only *needed* a particular kind of community-oriented internet; they had already built this for themselves, within crisis conditions, and through movement-based labor that exceeded the CDA's narrow sexual politics. AIDS activists' work to adjust to, adapt, and even transform new computer networks placed sexuality, social justice, and crisis conditions at the center of how online communications developed.

Notes

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[C] Please clarify what this is. A Google search yields just one hit: that McClelland was on a panel with this title with two others. Can you provide the title of his presentation instead? This was a paper presentation at a conference. I've added the paper title and here is a link to the abstract: https://bigdatariskconference.wordpress.com/program/abstracts/.

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[1] Kuromiya, *Testimony of Kiyoshi Kuromiya*.

[2] Kuromiya and Bauer, "AIDS Information Dissemination."

3 Broader in scope today, Critical Path continues to operate as a digital literacy center and free computer lab for traditionally marginalized user groups. See http://criticalpath.org.

4 Patton, *Fatal Advice*, 38.

5 McKinney, "Printing the Network."

6 TheBody is perhaps the best-known online information source about HIV/AIDS during the 1990s; however, more participatory listservs and BBS use by AIDS activists and PWAS was also substantial. See Brown, "Norman Brown's List."

7 Star, "Misplaced Concretism and Concrete Situations"; Star and Ruhleder, "Steps toward an Ecology of Infrastructure"; Edwards, "Infrastructure and Modernity."

8 Star and Lorde, "Sadomasochism."

9 Star, "Misplaced Concretism and Concrete Situations," 152.

10 Berlant, "The Commons"; Jackson, "Rethinking Repair"; Starosielski, *Undersea Network*.

11 Wakeford, "Don't Go All the Way," 70. Wakeford suggests the "prefiguring" of Berlant's work on intimacy and affect in Star's "Misplaced Concretism."

12 Chávez, "ACT UP"; Juhasz, *AIDS TV*; Whitbread and McClelland, "Claiming Sexual Autonomy"; Patton, *Fatal Advice*.

13 Geary, *Antiblack Racism and the AIDS Epidemic*. Geary's recent work on anti-Black racism, HIV, and the prison industrial complex provides a strong model for thinking about HIV and infrastructure and includes some attention to questions of information.

14 Critical Path AIDS Project, "AIDS Information on the Internet," 7.

15 Chun, *Control and Freedom*.

16 Fraser, "Clintonism, Welfare, and the Antisocial Wage," 16.

17 McOmber, "Technological Autonomy," 145–46.

18 McOmber, "Technological Autonomy," 147–48.

19 "Statement by Vice President Al Gore," July 16, 1997, https://clintonwhitehouse5.archives.gov/WH/new/Ratings/19970716-6884.html.

20 The administration's annual NetDay event encouraged tech companies to wire public schools for internet access (1996–2004). Clinton and Gore rolled up their sleeves and ran ethernet cable through the ceiling of a California high school to celebrate the first NetDay. See also "The White House 1998 Easter Egg Roll," April 13, 1998, https://clintonwhitehouse2.archives.gov/WH/glimpse/Easter/1998/index.html.

21 The CDA was a distinct section of the updated 1996 Telecommunications Act.

22 Chun, *Control and Freedom*. Chun also argued that these laws need not stand up to constitutional scrutiny in order to have lasting effects on internet infrastructures

because of how they inspire forms of corporate self-regulation aimed at compliance (120). She gives the example of digital certificates, produced in reaction to the CDA to establish user authenticity but also support e-business.

23 Chun, *Control and Freedom*, 77–120.

24 Chun, *Control and Freedom*, 112.

25 Chun, *Control and Freedom*, 113.

26 Stein, "Philadelphia LGBT History Project."

27 Stein, "Philadelphia LGBT History Project."

28 "Federal Bureau of Investigation File on Kuroimya," box 44, Kiyoshi Kuromiya papers on HIV/AIDS research and organizations, John J. Wilcox Jr. GLBT Archives of Philadelphia.

29 See McKinney, "Printing the Network." Kuromiya remained a devotee after Fuller's death in 1983. He co-administrated a BBS board dedicated to Fuller's work, and Critical Path's newsletter included many attempts to think about the problem of HIV through Fullerian systems thinking.

30 Smith, "Tales from behind the Wall." This column was written by Gregory Smith, prisoner #22043 at Trenton State Prison. Smith authored a webpage on Critical Path's server, which the newsletter described as "the nation's first Internet website operated by an incarcerated PWA."

31 Gossett, "We Will Not Rest in Peace," 36.

32 Gossett, "We Will Not Rest in Peace," 46.

33 Kuromiya, *Deposition of Kiyoshi Kuromiya*, 25.

34 Stevens, "Opinion of the Court," 874.

35 Stevens, "Opinion of the Court," 871–78. "The consequences of prison rape" is not a random addition but reflects the affidavit of another expert who ran an activist site called Stop Prison Rape.

36 The CDA vaguely defined the terms of indecency according to "contemporary community standards." Communications Decency Act, 47 U.S.C. § 502 2B (1996).

37 Stevens, "Opinion of the Court," 851.

38 Kuromiya, *Deposition of Kiyoshi Kuromiya*, 83–105.

39 Mendels, "AIDS Activist's Dilemma."

40 Gillespie, "Governance of and by Platforms." See, in particular, controversy over section 230 of the act.

41 Kuromiya, "Critical Path Affidavit," item 16.

42 On these community sex education techniques outside the context of the internet, see Brier, *Infectious Ideas*.

[43] Kuromiya, *Deposition of Kiyoshi Kuromiya*, 76–89.

[44] Kuromiya, *Testimony of Kiyoshi Kuromiya*.

[45] Patton, *Fatal Advice*, 54.

[46] For a literature review on the pedagogical potential of porn, see Albury, "Porn and Sex Education." Patton's "Visualizing Safe Sex" in *Fatal Advice* gives an excellent overview of the relationship between HIV education and porn aesthetics.

[47] American Civil Liberties Union, *Brief of Appellees*, 41.

[48] American Civil Liberties Union, *Brief of Appellees*, 33.

[49] American Civil Liberties Union, *Brief of Appellees*, 34.

[50] Mowlabocus, Haslop, and Dasgupta, "From Scene to Screen," 4.

[51] Chun, *Control and Freedom*, 86.

[52] McClelland, "Big Data, Bodies and Health Risk."

[53] For a selection of takes on how the end of net neutrality might harm Americans living with HIV, see Scurato, "Who Will Be Hit"; Vanderlee, "Net Neutrality Is a Queer Issue"; and Planned Parenthood, "Planned Parenthood Opposes FCC Efforts."

[54] Critical Path Learning Center, "About Us."