

max Search the web using Google



University of Chicago



Pages that have been

A close-up photograph of a computer monitor displaying a web browser. The word "yahoo!" is prominently featured in large, bold, blue lowercase letters across the center of the screen. The background shows various browser elements like search bars, navigation buttons, and small icons, all slightly out of focus. The lighting is soft, highlighting the texture of the screen.

Your back

7. [Tutoriel 2](#)

Match found



Accepted

[Click here to DOWNLOAD](#)

Extremely Online

Home in the Advent of the Digital

Delete "Facebook"?

Deleting this app will also delete its data.

Cancel

myspace.com
a place for friends

[Home](#) | [Browse](#)

Blogs

Terminally Online

A term for people who spend too much time on the internet used by people who spend too much time on the internet.

is one of those 'terminally online' 32-year-old stunted ex-

gal 12 ❤️ 100 👤 24

Error 404

Adam-Joseph Ghadi-Delgado

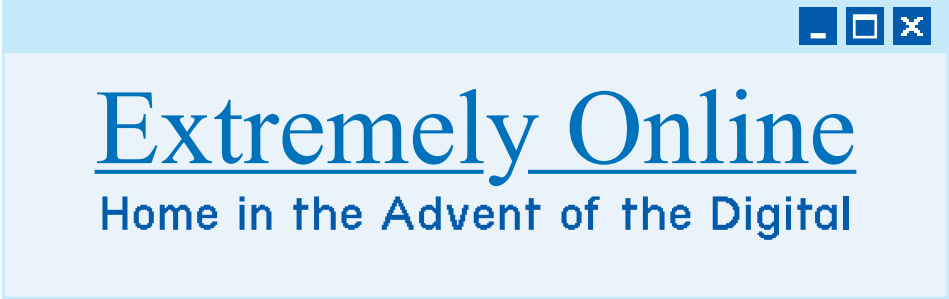
HTTP Web Server: Item Not Found Exception

BOTTOM TEXT



Nai du

FREE



Extremely Online

Home in the Advent of the Digital

Adam-Joseph Ghadi-Delgado

This publication is part of the École Polytechnique Fédérale de Lausanne's Architecture cursus for the Master of Architecture diploma, the *Énoncé Théorique*.

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Extremely Online: Home in the Advent of the Digital
2024, Adam-Joseph Ghadi-Delgado

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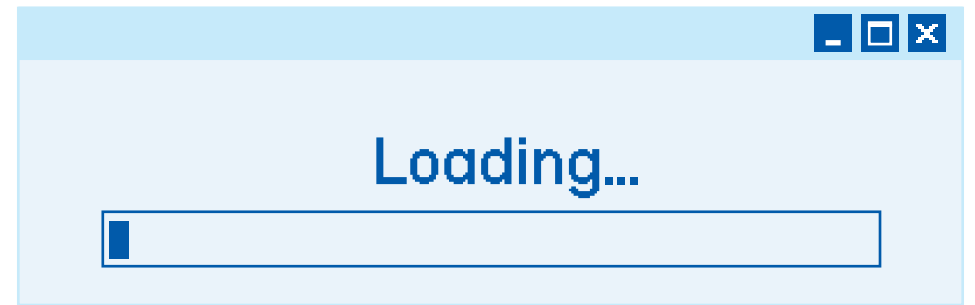
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to my mother, Digna Ivonne Delgado Roa — te lo debo todo

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Preface



Childhood Home

Blue hue, deep and endless well

Reflected windows to elsewhere

Liquid crystal at my fingertips

Accept my confession as I accept your terms and conditions

Lapis lazuli virgin in lost innocence

Capture me in your World Wide Web

Hold me tight, wrapped in your warped cords

Sighted blue hyperlinks turn lilac

As artificial as IKB, hex code #002FA7

Electric blue depends on Cobalt blue

You are like a father to me

Hold my synthetic dreams and memories

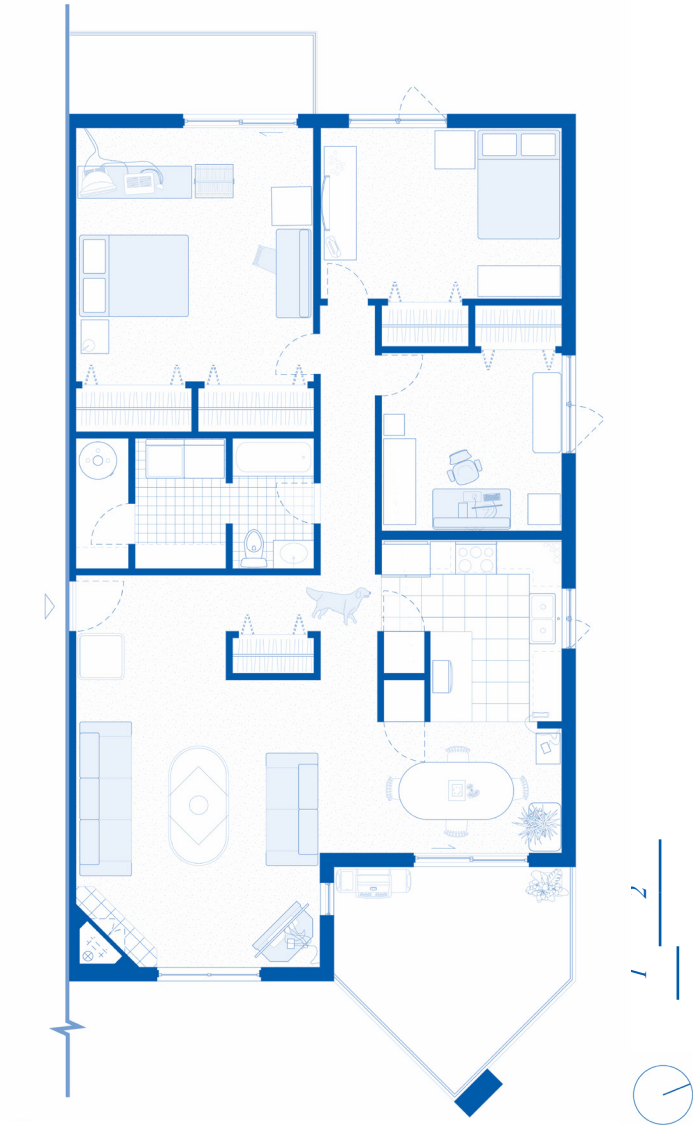
Allow me to enter others'

Entertain me from dawn to dusk to dawn again

Glowing always in my bedroom window

Find rest in my visage as I stare at my reflection

My home is yours, and within you



FW: Genesis

The cyborg would not recognize the Garden of Eden; it is not made of mud and cannot dream of returning to dust. Perhaps that is why I want to see if cyborgs can subvert the apocalypse of returning to nuclear dust in the manic compulsion to name the Enemy. Cyborgs are not reverent; they do not remember the cosmos. They are wary of holism, but needy for connection – they seem to have a natural feel for united front politics, but without the vanguard party. The main trouble with cyborgs, of course, is that they are the illegitimate offspring of militarism and patriarchal capitalism, not to mention state socialism. But illegitimate offspring are often exceedingly unfaithful to their origins. Their fathers, after all, are inessential.

– Donna Haraway¹

I was born and raised in Montreal, Quebec, Canada, in 1997 as a single child of the diaspora. The same year, Wi-Fi was invented; how convenient. I grew up with my Venezuelan mother, without my Libyan father, after age 5. She valued my education above all else and, like many other parents, felt the cultural pressure of the domestication of computers and the Internet. As a child, the web welcomed me directly as a ‘digital native,’ thus influencing my perception of home, and the internet impacted my habits in the household.² I grew up with the Internet as a father figure.³ The following work serves as a dissection of my own identity and segments of new realities lived at home influenced by the advent of the Internet at home in the 1990s. This reflection, grounded in existing literature, provides clues to a larger hegemony as influenced by technology developed in Cold War America.

¹ Donna Haraway, “A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century,” in *Simians, Cyborgs and Women: The Reinvention of Nature* (New York: Routledge, 1991), 152.

² Johnny Ryan, *A History of the Internet and the Digital Future*, (London: Reaktion Books, 2013), 163.

³ Author simultaneously writes this work and an article in magazine *SITUATION 002* titled “The Internet is my Daddy.” Publication date TBD.

As I grew up in Montreal, my mother always prioritized my well-being and happiness. To do so, she worked a job that would bleed into the household using Information and Communication Technologies (ICT). She used a cell phone constantly and gave me one early on for emergencies. For a time, she even worked in selling fiber technology, which is widely used today for the Internet. While she worked, cooked, and generally provided for me throughout childhood, I would spend time with other technologies, namely the computer. I had a television in my bedroom with a VCR. That was in addition to the television in the living room that had satellite and, subsequently, cable. The computer was intertwined and prioritized.

With the luxury of ICTs at home, a rising common occurrence for households in the 21st century in North America, I spent most of my time at the computer while my mom settled around the telephone and kitchen. These at-home habits point to gendered, hierarchical relationships being reinforced or defined by ICTs. Indeed, ICTs enter domestic spaces already under gender and authority hierarchies.⁴ The computer was soon connected to the Internet, where my story of being *Extremely Online* began.⁵ It started with videos and video games, sometimes researching personal interests related to school work. The computer was placed in a specific room at first, which we would call the computer room. Eventually, that room became a storage room, holding my mother’s memorabilia she kept religiously. So the computer was moved out to different spaces,

⁴ Elaine Lally, *At Home with Computers*, (Oxford: Berg, 2002), 8.

⁵ According to the website Urban Dictionary, *Extremely Online*, or *Terminally Online*, points to a person that is continuously on the Internet. “Someone who spends so much time online that it becomes their whole world...”

including my room and the junction between the living room and dining room later. One of my mother's most significant decisions in regards to my being online was giving me agency by allowing me to choose the next generation of computers that we would introduce into our home, effectively acknowledging my technological literacy around age twelve. In that act, my mother had given over perceived ownership over the computer.

Within the home, other artefacts enabled the connection to the Internet. The modem and router were next to the kitchen, routed from my room at the time, which would be the entrance port for the coaxial cable feeding the house connection from the Internet Service Provider (ISP). There is a symbolic nature to this banal relationship of cables routed within the walls and my relationship with my mother, in which there is an interdependence embedded in the walls of the apartment between the Internet and ourselves. The position of these Wi-Fi enablers within the home influenced the spots I occupied in the house. I occupied my room for private browsing, including adult content I was too young for, and the computer for public browsing or things I didn't mind my mom spying on, introducing spatial hierarchies based on the type of media consumed. Honestly, if I could have, I would have removed all the walls and set the router and modem in the center of the apartment so that the whole apartment could get uniform Wi-Fi. Although this exercise would have restrained the websites, I used more than any parental controls could, speaking to a need for privacy and the introverted nature of Internet usage in the home.

In later stages, the modem and router also moved behind the television in the living room next to the window and the fireplace, a sign of evolving broadband technologies and the dislocation of the importance of the television in the household as a central point for the "hearth" of the household.⁶ When my mother and I used the living room together, I was usually on the couch that was least convenient for watching television and had another ICT to engage with, such as my laptop or phone being accustomed to consuming two forms of media simultaneously.

When my mother called me for dinner, I was often too locked in on an ongoing activity like gaming to come within a reasonable lapse of time. My friend Albert, on the other side of the screen, and I would keep screaming for "5 more minutes" or that we were nearly done. These were some of the few words I could understand in his native Teochew dialect he spoke with his mother, the same way he would understand me screaming in Spanish. Although for four years we went to the same school, our friendship lived on the Internet for decades and ongoing. This event exemplifies the changing relationships I had with my mother and the Internet, making the Internet essentially my "more fun" parent or enabler. Moreover, the Internet acted as a gateway to further worldwide diaspora by being able to interact freely with individuals outside our EST time zone.

⁶ Lynn Spiegel, *Make Room for TV: Television and the Family Ideal in Postwar America*, (Chicago u.a.: Univ. of Chicago Press, 2010), chap. 2, subchap. "The Family United".

We had two different ISPs over the 16 years of inhabiting what I would qualify as my childhood apartment apartment. When my mother lost her job and was diagnosed with depression, the Internet was a monthly expense she could no longer afford. I remember learning how to brute-force passwords onto my neighbours' Wi-Fi. Despite being illegal, it would not have been the first or last illegal act carried for or on the Internet. The password I remember was MOKA2013. I was connected for a while, and it lasted until the owner could find a strange Internet Protocol (IP) address on their network and changed routers. This act highlighted, then and now, a need for the Internet at home as an essential utility. Shortly after, I found a job and started paying for the Wi-Fi. In the perception of ownership of ICTs within the household, I had an effective monopoly. It included the Internet by that point, which continues today; I paid for my mom's phone and Internet until only recently when I moved out ultimately for studies.

The desktop computer was the most immobile of artefacts that still travelled depending on the need for a faster Wi-Fi connection or Ethernet for online video games, but other uses arose. The desktop occupied the computer room initially but migrated to my room; I found it redundant with acquiring a laptop. It then travelled to the junction between the kitchen and living room, where it stayed until we moved. The latter seems to be a common spot for computers in *At Home with Computers* by Elaine Lally.⁷ These changes point to an ever-changing location dependence within the home for the consumption of media via the Internet and the location of computers within the home; it is an endless negotiation.

⁷ Lally, *At Home with Computers*, note that the stories of interviewees are peppered in, but the location is explored at chap. 9, "The Domestic Ecology of Objects."

While using other ICTs like my phone or laptop, I was a little more free for location, so I went to comfortable surfaces like the couch or my bed out of habit – mind active, body resting. Something as banal as changing the location of the device connected to the Internet for the sake of a better connection to Wi-Fi changes the dynamics of the home and its users, better understood when *Deep Mapping* personal domestic experience.⁸

When on the Internet, the household I lay claim to comfort was a spec in a wide network of other households using similar infrastructure to connect. This network can be understood with several actors who, over time, have defined relationships within domestic space. Some of the actors in this story are the Internet Service Provider (ISP), Internet Exchange Points (IXP), and Servers, all of which will be re-introduced when appropriate. This story begins at the start of the Internet as we know it today: way after ARPANET, the Cold War American military program started in 1969, and also after the invention of e-mail by Ray Tomlinson in 1971. Even though some homes were already connected by then, this domestication event took place right after the creation of the World Wide Web by Tim Berners-Lee in 1991.⁹

⁸ Shannon Mattern, *Deep mapping the media city*, (Minneapolis, MN: University of Minnesota Press, 2015), Shannon Mattern refers to archeologists Mike Pearson and Michael Shanks who define the idea as such: "[Deep mapping attempts to record and represent the grain and patina of place through juxtapositions and interpenetrations of the historical and the contemporary, the political and the poetic, the discursive and the sensual; the conflation of oral testimony, anthology, memoir, biography, natural history and everything you might ever want to say about a place.]"

⁹ Ryan, *A History of the Internet and the Digital Future*, 106–107.

The beginning of our story starts with AT&T's first interactive banner ad featured on "hotwired.com" (a.k.a. WIRED) in 1994, soon after the Bill Clinton administration, with Al Gore as vice-president, passed several bills concerning the liberalization of the Internet, particularly for educational purposes and privatization of infrastructure. After the telegraph, the photograph, the radio, the telephone, and the television, there was the Internet and its computers and smartphones. Through this story constituting snippets of cultural reactions, an image of the early 21st century home will emerge through an overview of the Internet and the spaces needed to support their behaviors inside and outside of domestic space, highlighting a changing attitude regarding the home. The Internet in the early 21st century is a ubiquitous cultural artefact in domestic space in North America and beyond.¹⁰

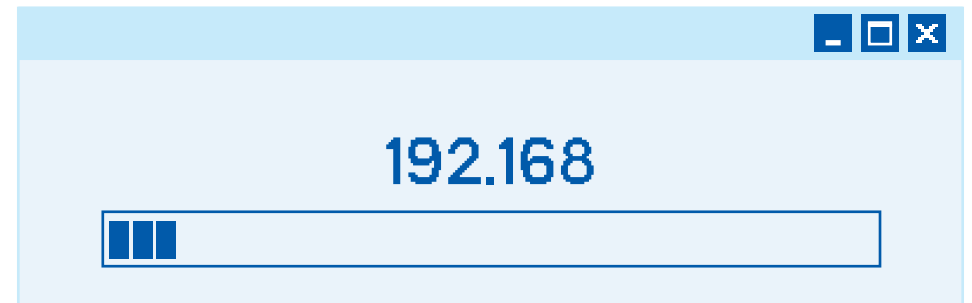
¹⁰ Lewis Waller, "How The Internet Was Stolen," YouTube, 2022.

<https://www.youtube.com/watch?v=oLLxpAZzy0s;>

See Bo Burnham's Welcome to the Internet for a stylistic rendition of Internet culture. Bo Burnham, "Welcome to the Internet," in "Inside," Netflix, 2021.



Introduction



HERE? – YOU WILL

The medium, or process, of our time – electric technology – is reshaping and restructuring patterns of social interdependence and every aspect of our personal life. It is forcing us to reconsider and reevaluate practically every thought, every action, and every institution formerly taken for granted. Everything is changing – you, your family, your neighborhood, your education, your job, your government, your relation to ‘the others.’ And they’re changing dramatically.

– Marshall McLuhan, *Quentin Fiore* ¹¹

In 1994, the Internet looked very different than it does today. Websites had to be searched using a guide; Google did not exist yet. In that sense, websites existed without echo, as if each was a small town or village. WIRED magazine, or rather hotwired.com, was the first commercial online magazine.¹² At the time, the magazine featured articles relating to technology and pop culture, crediting Marshall McLuhan as a patron saint in early colophons or mastheads.

Hotwired.com would be largely regarded as the first website to host interactive banner ads, of which one would stand tall among the others: American Telephone & Telegraph’s *Have you ever clicked your mouse right HERE? – YOU WILL* ad. The ad was designed by TANGENT Design for AT&T, with the premise of a novel way to communicate to a new audience: an Internet audience.¹³

¹¹ Marshall McLuhan, and Quentin Fiore, *The Medium is the Massage*, (Toronto: Random House, 1967), 9.

¹² Michael Stevenson, “Big Ideas from the Small Web: HotWired’s Legacies, 20 Years Later.” Medium, October 27, 2014. https://medium.com/@_mstevenson/big-ideas-from-the-small-web-hotwireds-legacies-20-years-later-ca1dc2d41448

¹³ As named on the website <http://thefirstbannerad.com/youidid.html>: Strategic and Creative Team: Otto Timmons (TANGENT Design), Joe McCambley (Modem Media), Craig Kanarick; Production Team: Brent Hood (TANGENT Design), Dave Evant (TANGENT Design), Craig Kanarick; Modem Media Executive Team: G.M. O’Connel, Doug Ahlers; Client Partner: Bill Clausen (AT&T).

The ad had a successful 44% click-through rate. In comparison, the consensus average of any ad hosted by Google in 2023 represents around 6% in the best-case scenario.¹⁴ This ad would inform a new form of media that would captivate corporations World Wide: interactive media. With the help of the liberalization of the Internet under the Clinton administration from 1993 to 2001 and Al Gore as a prominent figure in the institutionalization of the computer as an educational need for children in the United States, homes became subject to the political forces in reinforcing a zeitgeist for technocratic liberal optimism.¹⁵ Homes needed to be more and more connected as a result, and corporations with the ability to build infrastructure could see the domestication of the Internet as a viable opportunity; AT&T was such an actor and took the reins, following the reign of America Online (AOL), CompuServe, and Prodigy. The telephone, radio, and television were already prominent Information and Communication Technologies in the home. Now, computers and the Internet join their ranks as essential objects to renegotiate at-home relationships. The period of early Internet domestication was also a transition time when computers went from having a comparable cost to a car to being comparable to a television. Early adopters of computers such as the Apple Lisa or Compaq 386/486 had gained a “handle on the future” through, sometimes, financial sacrifice.¹⁶

¹⁴ Joe McCambley, “The First Ever Banner Ad: Why Did It Work so Well?”, (The Guardian, December 12, 2013), <https://www.theguardian.com/media-network/media-network-blog/2013/dec/12/first-ever-banner-ad-advertising>.

¹⁵ Ben Tarnoff, *Internet for the People: The Fight for our Digital Future*, (London: Verso, 2022), see chapter 1 “A People’s History of the Internet,” subchapter “The Electronic Shopping Mall.”

¹⁶ Lally, *At Home with Computers*, chap. 4 “Handle on the Future.”

The computer is described as an artefact that is doubly articulated, meaning it is an object and subject to the media it presents, making its relationship to the home complex even ineffable.¹⁷ Compared to television, this media is now interactive beyond changing channels. Users interact with each other; content creators rise as a creative form of media production; video games become commonplace; relatable memes are shared *en masse*, all nestled within the comfort of the household. The Internet enables users to have agency over a digital space previously reserved for information sharing for scientists during the age of ARPANET. But what exactly was ARPANET?

¹⁷ Roger Silverstone, et al., *Consuming technologies: Media and information in domestic spaces*, (London: Routledge, 2005), often repeated as a foundational argument

fig.6 AT&T's Banner Ad



fig.7 AT&T's Ad Landing Page

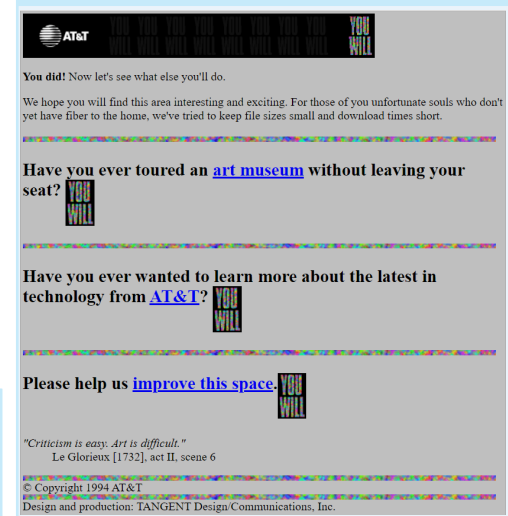
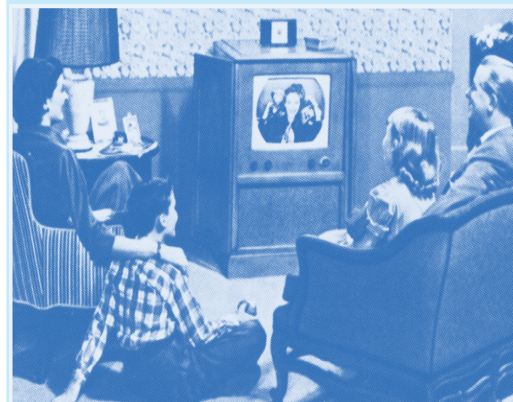


fig.8 American Hearth



The Revolution Will Not Be Televised

ARPANET was a revolution for information transmission that shook the core of predominant theories of telecommunication at its inception in 1969. Its goal as a Cold War American military program was to build a completely decentralized, resilient information transmission network in the event of nuclear war or collapse. The million-dollar (or trillion in this case) idea came from packet switching as opposed to circuit switching. Instead of wiring cables and changing connections as needed by telephone operators at AT&T, packet switching would use binary digits or bits to break up information into puzzle pieces and reassemble them at destination, similar to how a telegraph would have sent a signal as an on and off switch as if bits. The entire Internet and all of its contents are stored as 1s and 0s. A unit is a bit; eight makes a byte. Over the course of ARPANET's life, protocols were developed to unify methods of communication between devices in the network: IP, and TCP came from this need as the network grew too large to manage.¹⁸ E-mail also gained footing in this context, allowing scientists within the network of networks to message each other.¹⁹ ARPANET's successor, NSFNET (National Science Foundation Network), reinforced the scientific nature of the technology, leaving the military behind. NSFNET was active from 1986 to 1995, providing high-end computing power to universities nationwide.²⁰ During this time, the average American household was still negotiating the television's place within the household's innermost sanctum: the hearth.

¹⁸ Ryan, *A History of the Internet and the Digital Future*, 39–40.

¹⁹ Ibid, 49.

²⁰ David Hart, "A Brief History of NSF and the Internet," (NSF. Accessed December 31, 2023).
https://www.nsf.gov/news/news_summ.jsp?cntn_id=103050.

In Make Room for TV, Lynn Spiegel explains:

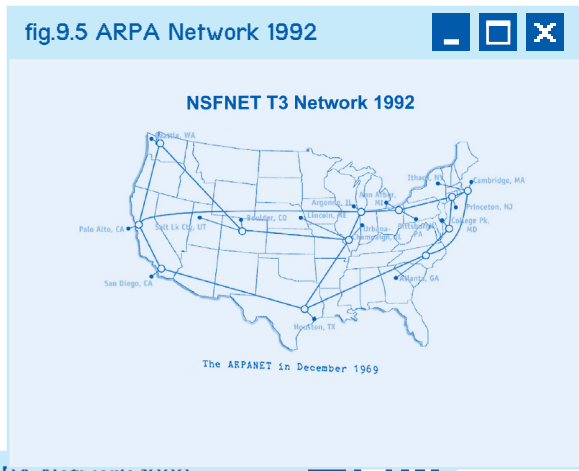
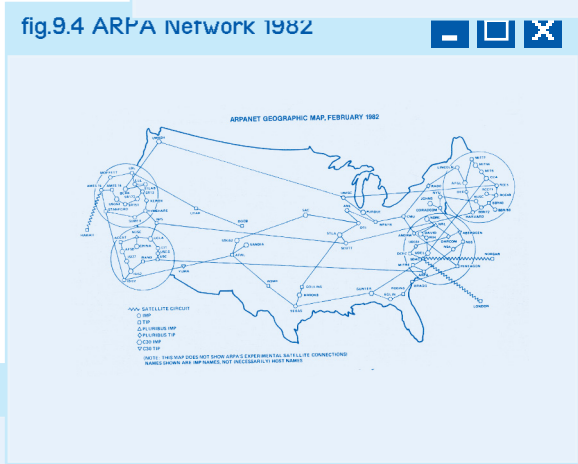
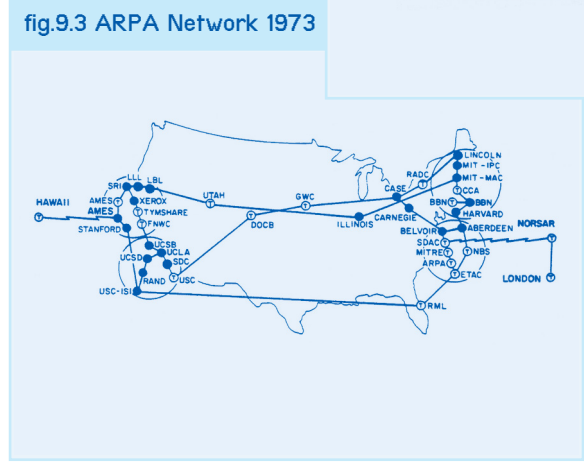
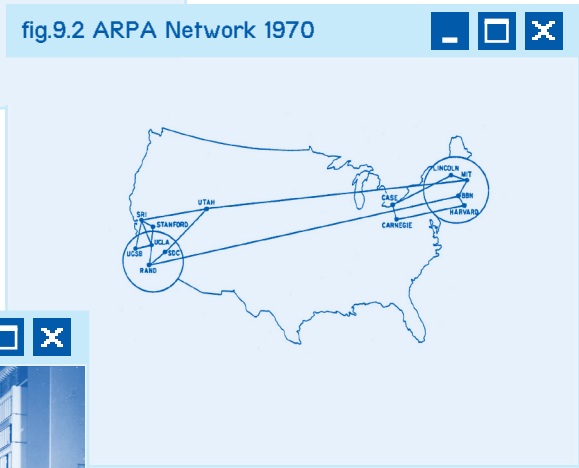
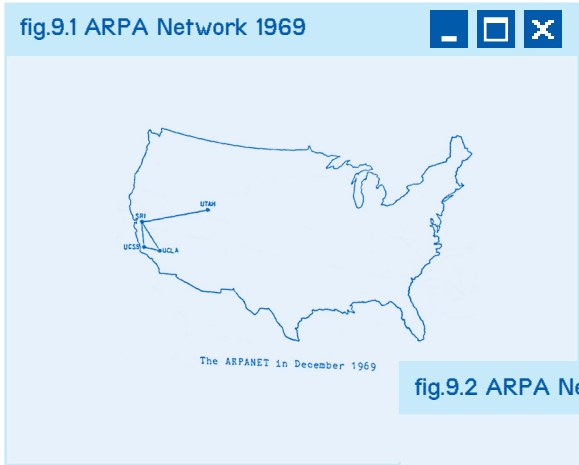
*As the television set moved into the center of family life, other household fixtures traditionally associated with domestic bliss had to make room for it. Typically, the magazines presented the television set as the new family hearth through which love and affection might be rekindled.*²¹

Shortly prior to NSFNET gave way to privatization, in 1991 Tim Berners-Lee at CERN in Geneva invented the World-Wide Web, operating similarly to a phone book for Internet websites using Domain Name System (DNS) or what is commonly referred to as a (hyper) link or web address. The stars took little time to align with the United States Congress to privatize the network and allow other players into the ring (or rink, depending on the weather). Privatization of the Internet and its dependent infrastructure happened after 1993, as NSF transferred assets.²² The Clinton administration promoted accessibility to the Internet in schools and promoted computers as a key factor in children's education, instilling a feeling of being left behind if a child could not access such luxuries.²³ The Internet was on its way to becoming ubiquitous. Mosaic, then Netscape, became a user-friendly interface for users to surf the web at home with the use of the new World Wide Web. Welcome to the dawn of the domestic Internet.

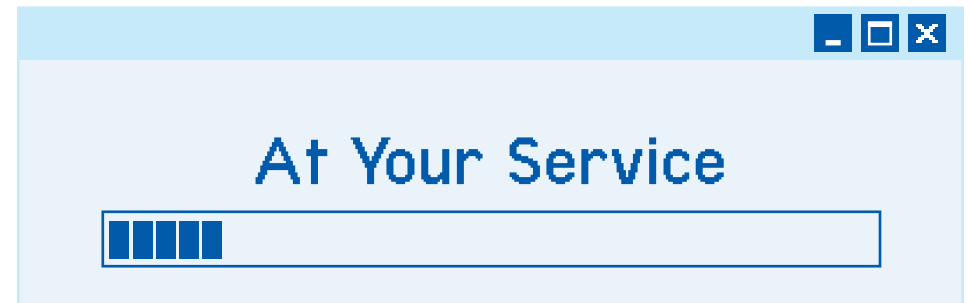
²¹ Spiegel, *Make room for TV*, The Family United.

²² Hart, "A Brief History of NSF and the Internet."

²³ Lally, *At Home with Computers*, 58, see ad quote; White House Press, "VICE PRESIDENT GORE KICKS OFF 'COMPUTERS FOR LEARNING' PROGRAM," (10/24/97: Vice president Gore Kicks off "computers for learning" program, Accessed December 31, 2023).
<https://govinfo.library.unt.edu/npr/library/news/computers.html>.



Part I.



The Beginning of an Ad Venture

Like an ideal eighteenth-century servant, the digital domestics are paradoxically both invisible and present, dependent yet also, to a certain degree, autonomous and constantly available, always online.

— Markus Krajewski ²⁴

AT&T became a key player as an Internet Service Provider in this Internet revolution in the United States by using existing telephone infrastructure to provide Internet access to households through Dial-Up. Dial-Up used telephone infrastructure, hijacking the telephone line while rendering it unusable to access to the Internet, placing AT&T in a critical position to provide Internet to households within the United States and Canada through their infrastructure. In their early Dial-Up format, ISPs were subject to the common carrier rule in the United States, which changed in 2005 under the Bush administration.

*In 1998, 92 percent of Americans had the choice of seven or more ISPs simply by using a modem over their phone line. But in the aftermath of a 2005 Supreme Court decision that affirmed the Bush-era deregulations, the big ISPs began refusing their competitors access to their infrastructure.*²⁵

ISPs now needed to provide their own infrastructure, thereby ostracizing smaller ISPs.²⁶ In fact, AT&T was criticized in the 1982 lawsuit AT&T vs. the People for having a monopoly over telephone infrastructure, which ended in a consent decree, breaking up the “Bell Babies” in 1984.²⁷

²⁴ Markus Krajewski, *The Server: A Media History from the Present to the Baroque*, (New Haven: Yale University Press, 2018), 317.

²⁵ Tarnoff, *Internet for the People*, see chapter 2 “The Plunder Continues”

²⁶ Ibid.

²⁷ Andrew Pollack. “Bell System Breakup Opens Era of Great Expectations and Great Concern.” *The New York Times*, January 1, 1984. <https://www.nytimes.com/1984/01/01/us/bell-system-breakup-opens-era-of-great-expectations-and-great-concern.html>.

AT&T, as argued in the lawsuit, had an effective monopoly over telephone infrastructure. In addition, the lawsuit did not stop current-day AT&T from reforming and reabsorbing most of the Bell Babies, which are primarily being split between AT&T and Verizon today.²⁸ AT&T is also one of the significant reasons the Internet is controlled by so many actors, never allowing a single entity to own a major stake in the infrastructure after the “Bell Babies” lawsuit. Indeed, “[t]he divestiture stated that any long-distance traffic had to be carried by a different provider (IXC’s) than the 7 regional Bell operating companies (RBOC’s). This gave rise to the Carrier Hotel in cities where the RBOC’s would pass traffic to the new long-distance companies or IXC’s.”²⁹ The dynamics and divisions in the chain reinforces Client-Server relationships between the domestic space and the data center in which the Internet Exchange Point acts like a middle-man in the transaction. The irony lay in that AT&T was initially offered to fund, research, and develop the Internet but refused, claiming not wanting to invest in its own potential competitor, packet switching vs. circuit switching.³⁰ With new capitalist incentives, AT&T and similar companies saw an opportunity to provide the last mile of the information highway to households, and domestication of the Internet entered a rhizomatic acceleration comparable only to mycelial networks. AT&T’s ad exemplifies a new relationship with the Internet in its apparition in 1994:

²⁸ Jose Pagliery, “How AT&T Got Busted up and Pieced Back Together,” (CNN Money. Accessed December 31, 2023). <https://money.cnn.com/2014/05/20/technology/att-merger-history/index.html>.

²⁹ “When Is a Hotel Not a Hotel? When It’s a Carrier Hotel, of Course!” Cologix, March 14, 2022. <https://cologix.com/resources/blogs/interconnection-part-1-what-is-a-carrier-hotel/>.

³⁰ Ryan, *A History of the Internet and the Digital Future*, 30.

it can be monetized, aggressively marketed, and made more user-centric for the domestic dweller. The ad's landing page featured sections for new Internet uses like visiting digitized collections of museums around the world, learning more about the technology offered by AT&T, and a section dedicated to getting feedback data from its users under "Please help us improve this space."³¹ This effectively was a method of market research for AT&T to assess the viability of deploying Internet infrastructure to the home. AT&T launched their Internet service WorldNet in 1996 as competition to AOL, which had bought CompuServe in 1997, itself merging with Time Warner in 2000.³² Prodigy and Genie failed to start, falling to aggressive marketing.³³ Dial-up ingrained a specific and recognizable connection sound into households in the 1990s, garish and obnoxious. The Internet had officially appended itself onto the household, notifying and informing users ever since.³⁴ Dial-up did not survive for an extended length of time, likely because of the perceived sacrifice of another ICT important to the household at the time: the telephone. Broadband was introduced into most households thereafter, mimicking cable television infrastructure. Today, lit fiber cables are the norm for Internet transmission into the household. The click sends a request through the Internet, ending up somewhere completely different from domestic space.

³¹ "The First Banner Ad: The First Landing Page." TANGENT Design for AT&T, 1994. <http://thefirstbannerad.com/youidid.html>.

³² Shane M. Greenstein, *How the Internet Became Commercial: Innovation, Privatization, and the Birth of a New Network*. (Princeton: Princeton University Press, 2017), 225, 357.

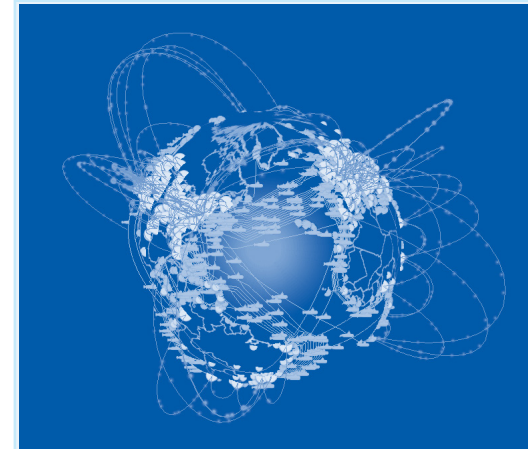
³³ Ibid, 237.

³⁴ Berker, Thomas et al. *Domestication of Media and Technology*, (Maidenhead: Open University Press, 2006),

fig.11 Broadband Eastern Map 1966



fig.12 Internet Cables



Mapping the Click

The click leaves home using an ICT, qualified as a tool, appendage, or extension of the self connected to the Internet, usually through Wi-Fi. The Internet is enabled by an Internet Service Provider providing the first and last mile connection to the household through private infrastructure. From there, the ISP connects to the nearest or most efficient Internet Exchange Point: a place at the intersection of communication, often managed by private companies, like Equinix and Cologix, or government bodies. Considering my upbringing in Quebec, QIX or Quebec Montreal Internet Exchange was, since 1995, of the Réseau d'Information Scientifique du Québec, following in the ethos of the NSFNET.³⁵ RISQ, founded in 1989, is a non-profit company ensuring the connection between education structures within the province of Quebec. QIX, since 2013, has become its own company, still operating as a not-for-profit, using private equipment distributed in and near Montreal.³⁶ These Internet exchange points commonly connect large players within the tech industry, such as Amazon, Google, Netflix, and Meta who benefit from quick connections between them. This act happens in meet-me-rooms, cutting the circuit short and improving service speeds for users of commonly used websites and applications. Meet-me-rooms connect users using equipment resembling blinking, veiny monoliths in turn connected to the vast network. The artefacts within this room require significant HVAC infrastructure to cool the sleepless systems. Despite their spatial condensation, they impact all connected households on the network of networks. This world network does not take any form resembling a cloud; contrary to popular imagination, it resembles naval trade routes.

³⁵ "Échange Internet de Montréal, à Propos." <https://qix.ca/about>. Accessed December 31, 2023.

³⁶ As of publication, these places are documented on QIX's website, (Accessed December 31, 2023). <https://www.qix.ca/pricing?lang=en>.

The Internet, the way it functions today, takes the form of long-line fiber cables on the sea floor connecting IXPs around the world, which then connect areas inland. A map of such networks resembles naval trade networks, taking precedence on telegraph lines because it is easier to mimic routes than come up with new ones.³⁷ The click done within the comfort of the home is routed through these cables, harnessing the speed of light, providing the user with the media requested, resting in servers often contained in large sheds with massive ventilation and cooling systems. So much so that trials in sinking the data center to the bottom of the sea become a viable alternative for optimizing the cooling of the infrastructure and improving the direct connection.³⁸ Data centers holding servers are isolated from the elements as hermetically as possible for sterility and duplicate power sources to prevent the Internet from ever shutting down. The duplicate becomes a recurring theme with the Internet through the self and media.³⁹ The Internet gains cultural qualities in infrastructure only paralleled by clean water running in the faucet and electricity, and the server claims, once again, its central space within the household. The server is the last entity to receive the click before it is whiplashed back the same way using Internet Protocols, which behave similar to sending mail by post. The request is sent to an address, and the server sends it back the same way, using cables as highways, hence "the information superhighway." Information highways function similarly to vehicles on the highway reaching their destination.

³⁷ "Tarnoff, *Internet for the People*, see Preface "Among the Eels."

³⁸ John Roach, "Microsoft Finds Underwater Datacenters Are Reliable, Practical and Use Energy Sustainably." (Microsoft, September 14, 2020, Accessed December 31, 2023). <https://news.microsoft.com/source/features/sustainability/project-natick-underwater-datacenter/>.

³⁹ This is explored more thoroughly in Part II, with an emphasis on the self as a duplicate.

You Wouldn't Download a Car

Before the domestic Internet revolution of the 1990s, computers were largely unaffordable for most households, their cost being comparable to the cost of a brand-new car.⁴⁰ The true value of the car appeared in conjunction with highway infrastructure, not unlike computers. The information superhighway for computers took a couple of notes from the ad language of the highway with the banner ad: a primarily visual stimulus between the user and their destination, recall AT&T's *YOU WILL* ad. Information on this highway is shared with destinations in mind, like a physical address is searched. Like the car, computers, and other ICTs became necessary for the idealized American household.

*Using the example of Ford's Model T, [...] the genius of Henry Ford lay not in his invention, but rather in his ability to create a specific cultural form that meshed with central values of American social life. Ford did not just provide a means of transportation; rather, he helped devise the idea of the family car to be used for leisure pursuits.*⁴¹

As such, the domestication of computers and the Internet happened excessively rapidly during the 1990s as the computers' highways were being built by capitalists with the help of governments with massive cultural support through US policy under Clinton and Gore. Privatization was crucial because the Internet was now accessible to private households. The Internet is now a utility, later evolving culturally into a necessity. Montreal, for example, offers free Wi-Fi in public spaces through initiatives like Île Sans Fil, then MTLWiFi, akin to Switzerland's public water fountains. The users now depend on the accessibility to the service through ISPs, billing every month. The Internet continued to grow under its newly privatized model, creating corporate empires comparable to Rome's. If *all roads lead to Rome*, then under Client-Server architectures, *all roads lead to the server*.

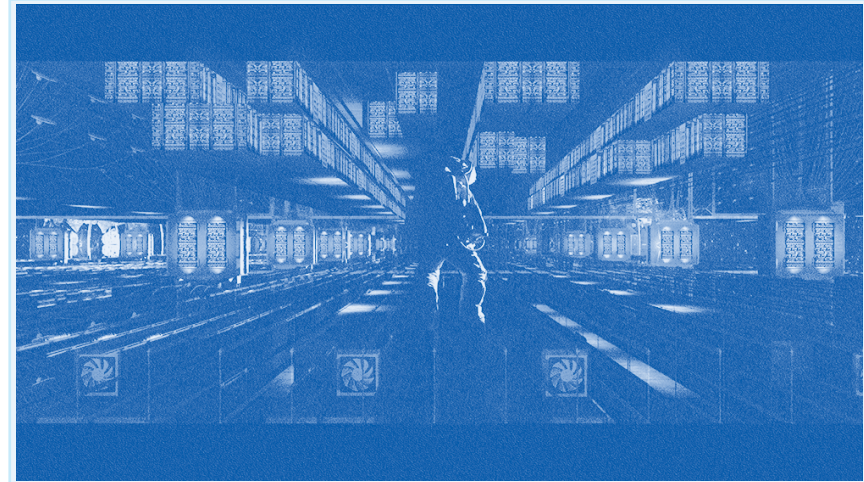
⁴⁰ Lally, *At Home with Computers*, 77.

⁴¹ Spiegel, *Make Room for TV*, see Introduction.

fig.13 Learning from Las Vegas Roadside



fig.14 Astronaut in Data Space



Servers; Farms of Media

Client-Server architectures were invented at PARC, a subsidiary of XEROX, in 1979.⁴² In this relationship, the household relies on a server, much like bourgeois households may have in the Baroque or even, at its very origin, the oikos. In fact, Markus Krajewski argues:

*Being online is the order of the day, and service actors are not exempt from it. The website or homepage (as a virtual oikos) forms a closed unit containing their information supply. No housekeeping without house servants. The server has become the new basis for the whole household.*⁴³

Krajewski comes to this conclusion by studying the historical epistemology of the actor and its agency in the domestic space. Much like the servers of yore, the servers we depend on for media through the Internet are silent in the household, informed, always available, always listening, always at your service. In essence, the relationship in which the server knows more about the household's inhabitants than the inhabitants know about themselves is still valid. In this evolution over the past two centuries, the human server became quasi-objects within the household with gadgets claiming to save time to targeted audiences: often women within the home.⁴⁴ The server the Internet at home depends on for digital media absorbs, as a cultural agent, hierarchies that were historically reserved for human entities within the household. Through the privatization and domestication of the Internet, the server that serves the Internet household has similar hierarchies. The client, in the domestic space, in this case, is the ICT or extension of the self that users control to send requests to the server.

⁴² Krajewski, *The Server*, 310–317.

⁴³ Ibid, 282, see subchapter 6.2, 265–294 and subsequent for further elaboration.

⁴⁴ Ibid, mentioned again in “Roses are Red, Computers are Lilac,” and “Viral Appendages.”

*The ... consequence of the client-server architecture is that the client inserts a new media entity into the chain of human machine-communication. That entity functions according to the principle of in-betweenness that characterizes the tradition of service: the client acts as a mediator for the subject in the virtual domain. Its epistemic status is unclear: neither a full-fledged subject, since it merely stands in for its master, nor an object, since it is endowed with too much authority of its own. The client is both dependent and independent. Its ability to act as a mediator relies on the work supplied by the invisible workers, the servers. They are the ones quietly toiling in the background and carrying out most of the work as the actual movers of knowledge.*⁴⁵

The server was a member of the household with their own dedicated spaces, including secretive hallways, kitchen, living quarters, all the way up to today in a small fraction of what could be characterized as ‘bourgeois’ households. The spaces used by the Internet are invisible, their presence unnoticeable, yet they can provide essential services to the inhabitants. In fact, those very hierarchies presented by the server as an actor in the baroque and the server as an actor in the digital world have seldom changed – especially true in the predominant dogma of Client-Server architecture.⁴⁶ This relationship is invisible within domestic space and in the urban landscape. Wires are hidden within the walls, Wi-Fi radio signals remain invisible to the dweller, and data centers hide in plain sight. Ippolito Pestellini Laparelli writes:

*We are all familiar with our mobile phones and the interfaces they provide, but very little can be accessed (or understood) of what is happening behind the screens, the way our data is captured, aggregated and ultimately marketed. In parallel, very little is known about those spaces where data is stored: the network is not accountable as its architecture remains invisible.*⁴⁷

⁴⁵ Krajewski, *The Server*, 320.

⁴⁶ This architecture is being challenged by alternative architecture such as Peer-to-Peer, explored superficially in *Mimetics – Memetics*

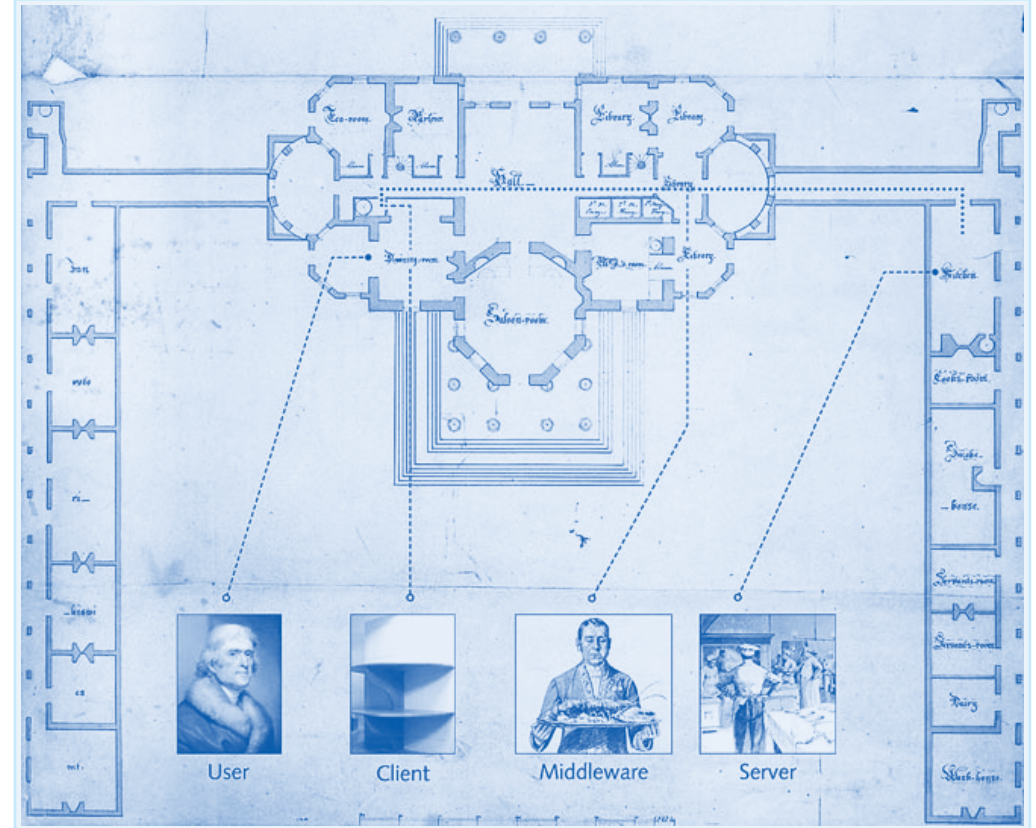
⁴⁷ Ippolito Pestellini Laparelli, “Data (Centers) Controversies,” (*Ardeth* 5 (2019): 164–82), 170.

The way data is captured, aggregated, and ultimately marketed remains opaque. In parallel, very little is known about those spaces where our data is stored. The network is not accountable, as its architecture remains invisible. Data production, consumption, and aggregation continues to grow exponentially, and data centers are expanding rapidly as an urban typology. Built to shape our future, they are contributing to its destruction: if data centers were a country, they would be the eleventh most energy consuming nation in the world. Driven by the market imperative to provide and maintain a 99.9% up-time at any cost, data centers function with the comfort of redundancies embedded in their design, such as duplicate cooling infrastructure as a failsafe and diesel power in case of a power outage. Redundancy even translates in the form of a duplicate back-up building, identical in every way and located next to the original....⁴⁸

The primordial difference becomes the distance of hallways-turned-wires: what used to belong to the inner sanctum of the house takes a long corridor, or wire, in fact, to the data center, probably in Silicon Valley.

⁴⁸ Ippolito Pestellini Laparelli, "Data Architectures." (Intelligence - e-flux). Accessed December 31, 2023.
<https://www.e-flux.com/architecture/intelligence/310404/data-architectures/>.

fig.15 Client-Server Architecture of the Baroque



Such Places as Memory

A digital server, in layperson's terms, is just another computer with, usually, a substantial amount of memory capacity. In server farms or data centers, servers are arrayed endlessly, containing mountains of hard drives or solid-state drives, accounting for the media shared over the Internet under Server-Client architecture. These are such places as memory.⁴⁹ This is where users upload memories; a new place of collective memory materializes. Indeed, memory's place in the 21st century is the data center, much like it could have been in the library or the archives prior. Private photos, videos, notes, shadows of *you* exist in this place as an extension of domesticity.⁵⁰ Maurice Halbwachs speaks of the household as being impacted by others:

*FR: Il reste que notre entourage matériel porte à la fois notre marque et celle des autres. Notre maison, nos meubles et la façon dont ils sont disposés, tout l'arrangement des pièces où nous vivons, nous rappellent notre famille et les amis que nous voyons souvent dans ce cadre. Si nous vivons seuls, la région de l'espace qui nous entoure de façon permanente et ses diverses parties ne reflètent pas seulement ce qui nous distingue de tous les autres. Notre culture et nos goûts apparents dans le choix et la disposition de ces objets s'expliquent dans une large mesure par les liens qui nous rattachent toujours à un grand nombre de sociétés, sensibles ou invisibles.*⁵¹

EN, translated by author: It remains that our surrounding materials carry our marks and the ones of others. Our house, our furniture and the way it is placed, all the arrangement of rooms where we live, remind us of our family and our friends seen in this context. If we live alone, the region of the space that surrounds us permanently and its diverse parts do not only reflect what distinguishes us from the others. Our culture, our tastes apparent in the choice and disposition of these objects is explained by far and large by the links always reattaching us to a great number of societies, sensible or invisible.

⁴⁹ In reference to John Hejduk's *Such Places as Memory*.

⁵⁰ These topics are further explored in Part II.

⁵¹ Maurice Halbwachs, *La mémoire collective*, (Paris: Presses universitaires de France, 1950), see chapter 4 "La mémoire collective et l'espace" second paragraphe.

Indeed, through the Internet, the actors within the household are extended beyond family and close friends to media personalities, Internet friends, live streamers, content creators, video game characters, and so on. As such, these persons impacts how the home is perceived, displayed, and dispositioned. The server holds the connective tissue of this collective memory in which individuals may posit that if Kim Kardashian owns a lamp, they must also acquire it for the living room. The server is an endless well of information readily accessible, but that well contains especially information about its users foreshadowed by the *YOU WILL* banner ad because of its fundamental appeal: interaction and feedback.⁵² Within the household, prevailing technologies connect users to a wide array of private infrastructure built with capitalist incentives, described by Keller Easterling as "Extrastatecraft," connecting users using screens and interacting with media.⁵³ Extrastatecraft describes the hidden political forces embedded in the design and management of infrastructure, like information networks. Easterling further argues that these are tools and means for governance and control, operating beyond geo-political boundaries and creating uniform ideas for cityscapes. These new ICTs and their lit, smooth surfaces dominate at-home behaviors using the Internet. They omit consideration for walls or ceilings by blurring boundaries with radio technologies such as Wi-Fi.

⁵² A phenomenon covered in due time in Part III.

⁵³ Easterling, Keller. *Extrastatecraft*. (London: Verso, 2014), the argument of Extrastatecraft is presented in the Introduction, the book further demonstrates the principles through three stories.

fig.16.1 HMWRK - R.G., A.P.

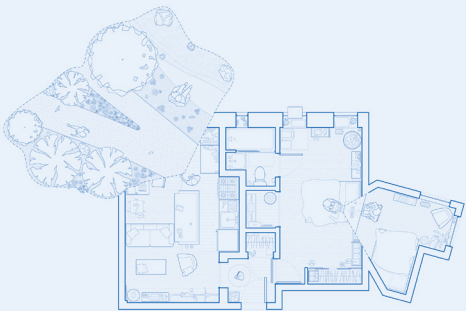


fig.16.2 HMWRK - R.G., A.P.

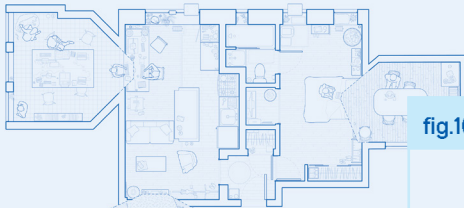


fig.16.7 HMWRK - R.G., A.P.



fig.16.8 HMWRK - R.G., A.P.

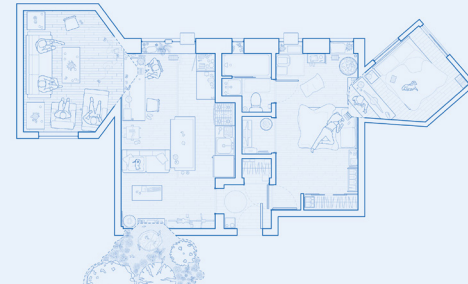


fig.16.9 HMWRK - R.G., A.P.

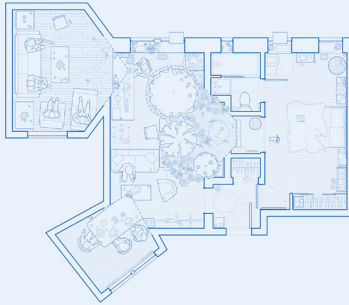


fig.16.3 HMWRK - R.G., A.P.

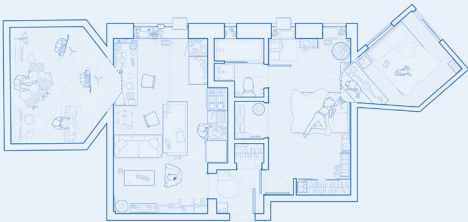
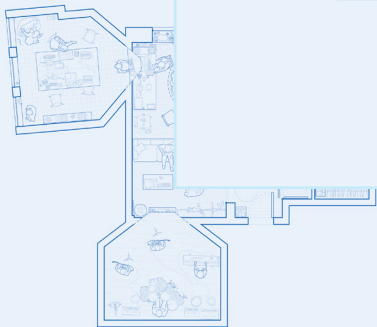


fig.16.4 HMWRK - R.G., A.P.



- R.G., A.P.

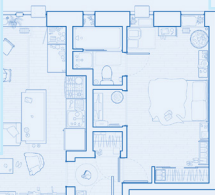
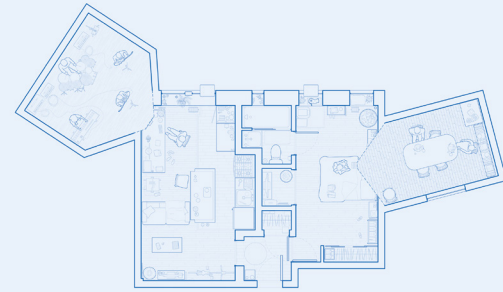
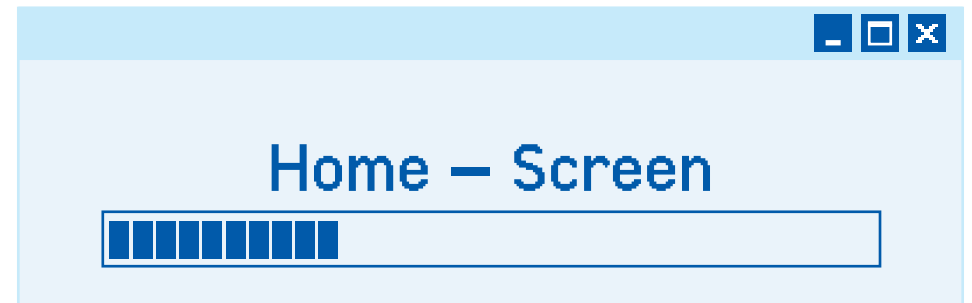


fig.16.11 HMWRK - R.G., A.P.



Part II.



Home is Where the Wi-Fi is

In celebrating this new kind of territory, we recast questions of individual identity in terms of unimaginable levels of connectivity, ignoring the equally dramatic rise of new forms of inaccessibility to stage an institutionalized simulation of euphoria in which discourse about openness, democracy, free exchange, and speed dominates over that of control, surveillance, blockage, sedation, and crime.

The message is clear. Nowhere escapes the net. A map of all the webs passing through any particular space would be impossibly dense. Invisible networks seemingly threaten visible means of defining space, dissolving the walls of buildings. The architecture of borders, walls, doors, and locks gives way to that of passwords, fire walls, public key encryption, and security certificates. Indeed, the idea of a space occupied by networks or superimposed by them has been replaced by that of overlapping networks within which physical space only appears as a fragile artifact or effect. Space itself can only be seen when caught in the net. It is as if the modern perforation and lightening up of architecture in the face of speed, industrialized technology, and mass production at the turn of the twentieth century has gone a step farther as buildings dissolve into information flow, to be either discarded as a relic of a previous time or nostalgically preserved as a quaint memento.

— Mark Wigley⁵⁴

Despite walls hindering waves necessary for connection, the Internet dematerializes predominant architectural features: the floors, ceilings, and walls themselves. The architecture of the home is thereby sacrificed in favor of smooth surfaces controlled by users' fingertips. In the same optic as Victor Hugo's *Ceci tuera cela*, new technologically-favored surfaces take away from the home's architecture by overwhelming them with signals for media consumption.⁵⁵ These smooth surfaces, Byung-Chul Han argues, build a cultural obsession with the smooth, ageless, uncharacteristic surfaces that can truly become anything, hence, doubly articulated artefacts.⁵⁶

⁵⁴ Mark Wigley, "Network Fever." (Grey Room 4 (2001): 82–122.), 83.

⁵⁵ Victor Hugo, "Ceci tuera cela," chap. 2, book 5, *Notre-Dame de Paris*, originally published in 1831.

⁵⁶ Byung-Chul Han, *Saving Beauty*. (Cambridge: Polity, 2018), see chap. 3 "The Aesthetics of the Smooth"; Silverstone, *Consuming Technologies*.

*Today, the beautiful itself is smoothened out by taking any negativity, any form of shock or injury, out of it. The beautiful is exhausted in a Like-it. Aestheticization turns out to be anaestheticization; it sedates our perception... Smooth visual communication takes place in the form of contagion, without any aesthetic distance. The unbroken visibility of the object at the same time destroys the gaze. Only the rhythmic oscillation between presence and absence, veiling and unveiling, keeps the gaze awake... Today, not only the beautiful but also the ugly becomes smooth. The ugly also loses the negativity of the diabolical, of the uncanny and terrifying, and is smoothened out, a formula for consumption and enjoyment. It lacks entirely the fear- and terror-inducing gaze of the Medusa which petrifies everything.*⁵⁷

These very ICTs should not age, become obsolete, slow, die out with software, and end up replaced. As the screen cracks, the image and, thus, imaginary do too. ICTs bear the weight of being ageless, perfect, and smooth, impacting the perception of objects within the home with it. While the conceptual walls of the house crumble, the home screen, home page, and home button prevail in the early 21st century as the new center for experiencing the root or hearth of the household. After all, home is where the Wi-Fi connects automatically.⁵⁸ A new introspective experience originally under the premise of "not being left behind" is now a key asset in choosing a home. Premium connectivity now increases the cost of houses. Fiber optic infrastructure may increase property value by 3.1%.⁵⁹ During this blurring of boundaries of the outer limits of the household, and altering home value, ICTs also blur social expectations for inhabitants of the household.

⁵⁷ Han, *Saving Beauty*, see chapter 1 "The Smooth".

⁵⁸ Francesco Garutti, *Our Happy Life: Architecture and Well-Being in the Age of Emotional Capitalism*, (Berlin: Sternberg Press, 2019), 76–77.

⁵⁹ Gabor Molnar, Scott J. Savage, and Douglas C. Sicker, "High-Speed Internet Access and Housing Values," (Applied Economics 51, no. 55 (2019): 5923–36), note that this research was funded by the Fiber to the Home Council.

Roses are Red; Computers are Lilac

ICTs enter the household as new agents within a space that is, prior to their entry, hierarchized by age and gender. The perception of ICTs, and more specifically, the computer, is not entirely blue or pink.⁶⁰ As a doubly articulated artefact, the computer can be both blue or pink, or in-between, based on the media presented or the object itself. The premise of blue and pink objects was used in a study by Ann Gray in 1992, asking members of different households to label domestic technologies as either blue or pink for gender. The computer, as documented, joined a middle ground. In Gray's study, this was labeled as lilac. As reiterated by Elaine Lally:

*Kitchens and irons were coded as pink, garages and power tools as blue. On the VCR the controls were generally lilac (play, stop, fast forward, rewind), but the timer switch and the remote control were most definitely blue. It seems clear that the home computer, like the VCR, is neither pink nor blue but is lilac in parts, blue or pink in others.*⁶¹

Feminism is interacting with the Internet in various ways, sometimes being critiqued for being dependent on access, ostracizing disproportionately women of color. A more comprehensive account of cyberfeminism can be understood in Donna Haraway's *A Cyborg Manifesto* and subsequent literature and associated critiques.⁶² Technological agency is not in and of itself gendered, according to the study by Gray, but can be impacted by existing hierarchies within the home. Women in Lally's study gained agency within the household through the use of the computer.

⁶⁰ Lally, *At Home with Computers*, chap. 8, "Is the Home Computer Pink or Blue?"

⁶¹ Ibid, 159.

⁶² Haraway, "A Cyborg Manifesto"

Similarly, agency by hierarchy does not apply in a traditional sense within claims of perceived ownership with ICTs.⁶³ As documented by Lally between 1995 and 2000, the claim to ownership is multi-faceted based on existing domestic hierarchies such as parents and children, expertise over the ICT, gender, spatial claim, and intangibles specific on a per-family basis. While the parents often make the purchase, children, if present in the household during the study, often claim ownership over the desktop computer because they would use it more than their parents for homework, playing games, and everything in between. In this way, the children were brought up as digital natives. As commonplace computer users, they would develop authority over the object within the household, making it a central object in their domestic experience and thus claiming ownership.⁶⁴ As such, ICTs could disrupt other existing hierarchies in the household by giving agency to children over an essential element of the home, making them experts of the computer. Parental control over the computer and the use of the web is also documented in cases where parents placed the computer in a space where the children would be supervised in their activities. While blurring hierarchies within domestic space, the Internet and hyperconnectivity also blur boundaries between the inside and the outside of the house. Domestic experience cannot escape media consumption or the outside world's influence.

⁶³ Lally, *At Home with Computers*, note that this is a central argument fully embodied in chap. 11, but also chap. 2 and 7.

⁶⁴ Ibid, chap. 7, "Negotiations of Ownership."

Bug in the Web

The Internet now blurs boundaries between the office, the piazza, and the home, rendering users hyper-connected and reachable at the touch of a button. The role of the town square is offset into domestic space, and the role of the aimless stroll turns into doom-scrolling. This event was already happening during the age of television, according to Beatriz Colomina:

... the flâneur's perception of the nineteenth-century city is understood to have been replaced by an aimless cruising through television channels, and the television is a window through which the spectacle of the city can be seen by a viewer in a state of distraction. But this window is not only about receiving a view: the antenna alongside the satellite dish allows the intimacy of the house to be broadcast to the outside. The home video is no longer the video seen in the home but the video of the home seen in public. Television not only brings the public indoors, it also sends the private into the public domain.⁶⁵

By bringing external functions from the outer world to the inner sanctum of the home, inhabitants mix work, pleasure, leisure, and rest within domestic space and vice versa. The home office phenomenon, evident and exacerbated during the COVID pandemic, creates new imagined boundaries, whether spatial or temporal, within domestic space. Remote working hours define routines within the household that are enabled by the advent of the Internet within the home. Even if the equipment does not change, the relationship between the Internet and ICT changes within domestic space based on the users' predominant function. In its identity, the Internet avoids a spatiotemporal constraint in the distribution of information as utility, akin to running water.

⁶⁵ Colomina, Beatriz. "The Exhibitionist House." In *At the End of the Century: One Hundred Years of Architecture*. ed. Koshalek, Richard, Elizabeth A.T Smith, Zeynep Çelik, and Russell Ferguson. Los Angeles: Museum of Contemporary Art, 1998.

As iterated prior, it is always available, making the employed user depending on communication technologies also permanently available. Assuredly, the Internet has become an essential service for individuals needing to stay connected for emergencies; employers often provide and rely on ICTs for individuals to keep with them, such as laptops or cellphones. In fact, ICTs allow for more flexible time management; as explained by Tim Schwanen and Mei-Po Kwan:

ICTs thus allow for nuanced management of social interaction or micro-coordination, of which various forms have been identified. First, it has rapidly become custom for persons running late to inform others waiting for them about their late arrival, thereby softening their own schedules. Second, people often make intensive and repeated use of e-mail, text messages and (short) calls to iteratively work out the details of meetings or to re-arrange planned activities and trips. Empirical research has suggested that iterative planning and midcourse adjustment are especially important for parents in dual-earner families who have to combine employment, driving the children around and all kinds of errands. Third, people use ICTs to mobilize social networks on short notice. This can be for practical assistance – for instance to arrange instant childcare – but also for leisure and social activities). As a consequence, a shift from place-based connectivity to individual, person-to-person connectivity can be observed. Collectively these strategies point to the rise of more open-ended, interaction-based planning and activity scheduling styles thriving on flexibility and spur-of-the moment improvisations, whereby fixed commitments are traded at least to some extent for flexibility and the possibility to reallocate resources as efficiently as possible.⁶⁶

Through this change in the domestic space hierarchy, the Internet influences the home and brings homework quite literally.

⁶⁶ Tim Schwanen, and Mei-Po Kwan, "The Internet, Mobile Phone and Space-Time Constraints," (Geoforum 39, no. 3 (2008): 1362-77), 1363.

Others have found this opportunity to divorce themselves from specificity in worldly places by becoming “digital nomads,” allowing workers to fulfill their duties or contracts anywhere in the world.⁶⁷ The media consumed on ICTs calls foreign actors to domestic space: political campaigns, cultural events, war footage, and other functions belonging to the public realm enter domestic discourse through the diffusion of media because of the Internet. The media consumption at home with the Internet presents a novel experience after the dusk of television, asserting its dominance over the living room and discarding the need for a piazza. The Internet as it exists today is a vast, nondescript field operating as a third space for users, a digital piazza.

⁶⁷ Specifically Portugal has a tenuous or difficult relationship with digital nomads, many locals criticizing the government for providing legal infrastructure for the phenomenon and drastically increasing the cost of real-estate, thus pricing out locals. Here is an example article concerning the subject: Joshua Askew, “Digital Nomads in Portugal: Can They Be Blamed for a Housing Crisis?” euronews, May 12, 2023. Accessed: December 31, 2023. <https://www.euronews.com/travel/2023/05/12/proto-gentrifies-are-digital-nomads-ruining-portugal>.

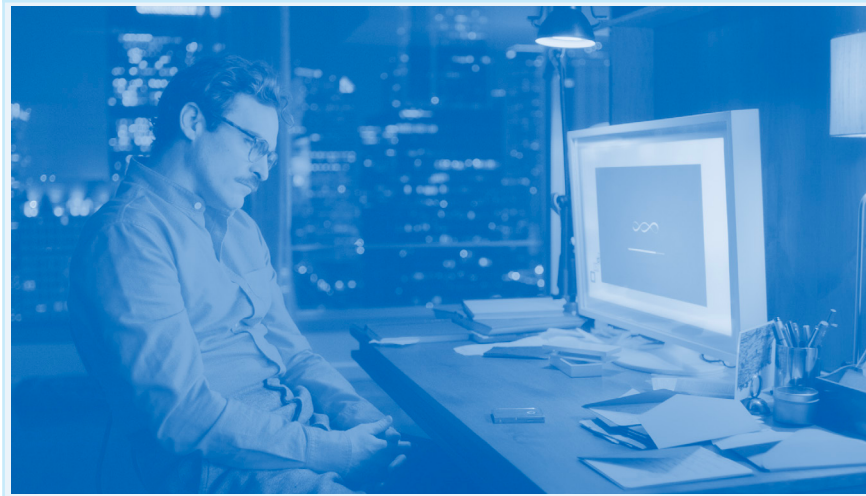
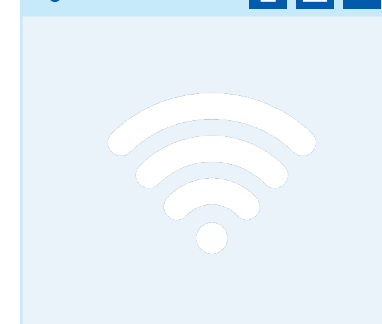
fig.17 Movie Still from *Her*

fig.19 Netscape



fig.18 Wi-Fi



Like, Comment, & Share

The Internet is interpreted as a new pooling of collective memory, creating a new web of life connecting domesticity to information in the last thirty years.⁶⁸ Through forums, blogs, feeds, and social media, users of digital space enter a confessional-type agreement with the blue hue of the screen to find others like them.⁶⁹ This phenomenon is understood with the Internet as a spatiotemporally absent third space creating new senses of self-expression, forms of community, media consumption, and capital incentives.⁷⁰ Third space is explained by Edward Soja as such:

*[Third space] is ... an efficient invitation to enter a space of extraordinary openness, a place of critical exchange where the geographical imagination can be expanded to encompass a multiplicity of perspectives that have heretofore been considered by the epistemological referees to be incompatible, uncombinable. It is a space where issues of race, class, and gender can be addressed simultaneously without privileging one over the other....*⁷¹

The Internet groups all kinds of people into the same space, a wildly unimaginable number of people having direct access to each other's realities. AT&T's *YOU WILL* ad is at the forefront of this expression of the Internet via its interactive nature, unifying experiences attempting to record or document them. Later, blogs, forums, chats, and comment sections would manifest such plurality.

⁶⁸ Fritjof Capra, *The Web of Life: A New Synthesis of Mind and Matter*, (London: Flamingo, 1997), see chap. "From the Parts to the Whole"; Halbwachs, *La mémoire collective*.

⁶⁹ Russell W. Belk, "Extended Self in a Digital World," (Journal of Consumer Research 40, no. 3 (2013): 477-500), 484-485.

⁷⁰ Refer to Homi Bhabha and Edward Soja both of whom write about Third Spaces: Homi K. Bhabha, *The Location of Culture*, (London: Routledge, 1994) & Edward W. Soja, *Thirdspace: Journeys to Los Angeles and Other Real-and-Imagined Places*, (Malden: Blackwell, 2014).

⁷¹ Edward Soja, *Thirdspace*, 5.

Users on the Internet have the agency to choose their self-representation to interact with others and lay claim to ownership of digital assets.⁷² The ownership of digital assets, Russell Belk finds, is as pronounced a relationship as ownership of tangible assets, reporting the case of a suicide of an individual being robbed of their digital assets on *EverQuest*.⁷³ As for the forms of community within this shared third space, users share communal experiences on platforms, social media, and video games, developing a community of like-minded individuals by interacting with each other. In *The Location of Culture*, Homi Bhabha of a third space for culture:

*What is manifestly new about this version of international space and its social (in)visibility, is its temporal measure - 'different moments in historical time . . . jumps back and forth'. The nonsynchronous temporality of global and national cultures opens up a cultural space - a third space - where the negotiation of incommensurable differences creates a tension peculiar to borderline existences.*⁷⁴

In a world where human movement has never been so common, and forms of communication as all-encompassing as the Internet,

⁷² The trend of NFTs displayed this phenomenon, but also includes skins on online video games, digital houses, decorative assets, all abstracted objects existing on a screen.

⁷³ Belk, "Extended Self in a Digital World," 480.

⁷⁴ Bhabha, *The Location of Culture*, 316.

culture overlaps differences previously thought incompatible, as New York proved in the 20th century.⁷⁵ References become universal. The opposite is also true because of engagement algorithms, as anger and bad news are the most engaging of any form of media.⁷⁶ Interests align, clash, and coexist within the same space: the digital town square that is social media.

⁷⁵ Samuel R. Delany, *Times Square Red, Times Square Blue*, (New York: New York University Press, 2019); Guillermo Gómez-Peña, *The New World Border: Prophecies, Poems, & Loqueras for the End of the Century*, (San Francisco: City Lights Books, 1996). Samuel Delany documents living in New York during the 20th century, meeting Italians, Dominicans, Germans, African Americans, the queer community, and a slew of other identities, intersectional, coexisting each with their own experiences. Guillermo Gomez-Peña does a similar exercise in which he documents a melting pot of culture: "This new society is characterized by mass migrations and bizarre interracial relations. As a result new hybrid and transitional identities are emerging Such is the case of the crazy Chica-riricuas, who are the products of the Puertorican mullato and Chicano-mestizo parents When a Chica-riricua marries a Hassidic Jew their child is called Hassidic vato loco", 74.

⁷⁶ Claire E. Robertson, Nicolas Pröllochs, Kaoru Schwarzenegger, Philip Pärnamets, Jay J. Van Bavel & Stefan Feuerriegel. "Negativity Drives Online News Consumption." (Nature Human Behaviour 7, no. 5 (2023): 812–22).



War on the Town Square

Constantly rewarded with echo chamber effects due to algorithmic consumption of media on the web, people find niche communities to belong to. Crowd effects bring like-minded individuals together and give a platform to extreme ideologies. Political polarization is commonplace and hinders two-party systems like the United States by the very existence of the Internet.⁷⁷ While talking politics at Thanksgiving dinner with the radicalized uncle is straining, social media may feel the same, by fighting internet trolls at every waking hour as smartphones permeate every sphere of daily life. The piazza is brought into the home and makes some of the functions of public life domestic. The American idea of the piazza was displaced by televised media long ago. Robert Venturi compares American piazzas to de Chirico's eerie, empty piazzas and writes:

*The piazza, in fact, is “un-American.” Americans feel uncomfortable sitting in a square: they should be working at the office or home with the family looking at television. Chores around the house or the weekend drive have replaced the passeggiata.*⁷⁸

Beatriz Colomina, as quoted earlier, notes this phenomenon by considering the role of the *flâneur*. To take a stroll for the sake of the stroll itself is now a digital occurrence, an often domestic occurrence exploring the news feed, image after image, with new media created spontaneously. In this case, as the services to the home change, so do the users.⁷⁹

⁷⁷ Petter Törnberg, “How Digital Media Drive Affective Polarization through Partisan Sorting,” (Proceedings of the National Academy of Sciences 119, no. 42 (2022)).

⁷⁸ Robert Venturi, *Complexity and Contradiction in Architecture*, (New York, NY: The Museum of Modern Art, 1977), 131.

⁷⁹ Stewart Brand, *How Buildings Learn*, (New York, NY: Phoenix Illustrated, 1997), note that changing services is a central theme in the book.

The exposure to social media has created a rise in radicalization. While the source of the effect is debated, its consequences are undeniable.⁸⁰ Petter Törnberg hypothesizes:

*It is not lack of exposure to competing ideas that lead to polarization but precisely that digital media brings us to interact outside of our local bubble. When individuals interact in clusters, the result tends to be local convergence, resulting in a stable plural patchwork of cross-cutting conflicts. However, when interaction takes place across space, the tendency is for groups to converge along the lines of partisan identity. The result is the crystallization of conflicting identities and the intensification of polarization, driven by a process in which sorting begets sorting and polarization begets polarization. These dynamics thus suggest a feedback loop between partisan sorting and affective polarization: sorting causes partisans to “dislike, even loathe” one another, in turn reducing their mutual social influence which further intensifies the process of sorting. Digital media may in this way disturb the balancing mechanism of plural societies, by pushing conflicts and cleavages to align, creating a maelstrom in which additional identities, beliefs, and cultural belonging become sucked into a growing and all-encompassing societal division, which threatens the very foundation of social cohesion.*⁸¹

Indeed, the Internet takes us outside our locality in many different ways. In this example, the Internet confronts our need for community and locality with global political ideologies. The Internet creates rifts between people, sometimes even within the same household. Sometimes, the Internet brings them together, as documented in Trinidad by Daniel Miller and Don Slater. Indeed, Trinidadians find their fundamental identity within the Internet, according to the authors, described as “Being Trini” and argue that the Internet is “naturally Trinidadian,” thereby strengthening nuclear family relationships in the diaspora and accelerating the digestion of pop culture.⁸² As users of the Internet's behaviors change, so does the space they choose to use accordingly.

⁸⁰ Törnberg, “How Digital Media Drive Affective Polarization through Partisan Sorting.”

⁸¹ Ibid, see conclusion.

⁸² Daniel Miller, and Don Slater, *The Internet: An Ethnographic Approach*. (Oxford: Berg, 2003), note that there is an overview of all topics presented in the book at the end of the introduction in which this is iterated.

This Just-in: Living Live

In the evolution of digital culture, *Twitch.tv* absorbs viewers into a prominent platform that reshapes traditional notions of spectatorship and community interaction. Goodbye, circadian rhythm, as streamers from all time zones enter and leave the arena, and natural light is often omitted from the scene.⁸³ Twitch becomes a way to document a streamer's life in its many facets, mostly in domesticity, the home becoming a calculated space for entertainment, and streamers becoming a personification of their online alias.

*However, Twitch embodies a fundamental shift. As a platform producing and distributing content streamed from within a variety of fragmented domesticities, it emerges as a case study for understanding contemporary interiors as places where the entanglements between live broadcasts, digital interactions, and archival content occur simultaneously... While Twitchers may share similar backgrounds, it does not imply simple equivalence in their domestic environments. Rather, digitally augmenting one's environment becomes a means of appearing digital and digitized on the virtual platform, despite potential disparities in the physical world. This transformative shift has effectively eliminated the need for physical spaces like recording and editing studios or traditional media rooms, which were once integral to these creative practices... Traditional axioms such as the architectural dependence on daylight, or the tectonic window as the inside-outside threshold are contested, often replaced by digital screens as the only connective surface with the exterior world.*⁸⁴

Domestic space becomes the center stage for entertainment; Twitch transforms the virtual space into a dynamic arena where live streaming, gaming, social connectivity, and plenty of drama converge. Rooted in the ethos of user-generated content, Twitch places its users at the forefront, allowing them to broadcast their gameplay, creative endeavors, and social interactions in real time.

⁸³ Contreras, Javier Fernández. "Screens within Screens." Burning Farm, December 22, 2023. <https://burning.farm/essays/screens-within-screens>.

⁸⁴ Ibid.

A central player emerges from this (Twitch) chat. Chat is a crowd effect that stands as a single entity portraying the voice of the viewers, ranging from 0 all the way up to hundreds of thousands concurrently; few streamers rarely achieve the one million mark of viewers.⁸⁵ This redefinition of digital space mirrors the changing dynamics of domesticity, where the boundaries between private and public spheres become increasingly fluid, both in the streamer's room and the viewer's. Domestic space is doctored or green-screened at times, while other times, cleaners come by to support the live streaming business and are literal support actors to the streamer. Beds often become part of the composition, implying that this single room hosts the streamer's entire life, with the bed and computer becoming the two most essential artefacts within domestic space. The platform, akin to a contemporary agora, fosters a sense of shared experience for viewers while also creating a parasocial relationship whip the streamer. Viewers have the impression of meeting the streamer in their most intimate context, for hours at a time, comparable to going over to your best friend's place. Here, the architect's role, embodied by the streamer, takes a digital twist, as the design is not only about physical spaces but also virtual environments that cultivate engagement and community: the content streamed adjacent to the webcam.

Twitch.tv, with its live chat, emotes, and collaborative channels reflects a novel dimension of domesticity—one where the architectural landscape extends beyond brick and mortar to the immersive realms of the Internet, echoing the ever-evolving interplay between home and the Internet. In Twitch's eye, these streamers live in a small area covering the view of the camera within a larger domestic space.

⁸⁵ Ibid.

Square Meter Sacrifice

The definition of home is a flexible one. The poetics of domestic space, a corner occupied in the world as Gaston Bachelard suggests in *Poétique de l'espace*, or the bed, room, and world described in Georges Perec's *Espèces d'espaces*, takes up a different tone in view of digital media via the Internet.⁸⁶ Familiar behaviors ingrained into habits, as much as the innate route taken in the dark to reach the bathroom, also standard with ICTs.⁸⁷ Check messages and notifications in the morning, scroll on the toilet, play some music while getting ready, message your friends and family, play an online game, enter your password and credit card information... Using ICTs as the extension of the self become habitual quasi-automatized responses to stimuli provided by the Internet and domestic space.⁸⁸ In this sense, a perception of domestic importance is tied to the experience of ICTs and seen as necessary—so much so that *digital natives*, particularly, may show preferences towards digital space over physical space by willingly trading physical square meters for access to the web. An example of a South Korean study showed that Gen Z participants living alone would not sacrifice their smart phones within domestic spaces in exchange for larger living spaces.

When given a choice between the television and smartphone, 92 percent (n = 135) of research participants in their 20s preferred the latter to the former; Their early access to smartphone technology may have resulted in unconscious changes in the participants, since smartphones serve as a type of “lean-forward media” – that is, a media technology in which users can be fully immersed... In an in-depth interview, the participants explained that they intentionally or habitually used their smartphones to mitigate the feelings of loneliness and emptiness that they were struck by in their dwelling spaces after school or work.

⁸⁶ Bachelard, Gaston, and Gilles Hieronimus. *La poétique de l'espace*. Paris: Presses Universitaires de France, 2020; Georges Perec, *Espèces d'espaces*. (Paris: Galilée, 2000).

⁸⁷ Lally, *At Home with Computers*, 169.

⁸⁸ Ibid, referring to chap. 9 and chap. 11.

*Therefore, ... participants in their 20s mostly reported that they would prefer living in a cramped space with a smartphone to living in a roomier space without a smartphone... This technology has reduced the opportunities for family gatherings in living rooms and increased the opportunities for media consumption in private bedrooms.*⁸⁹

While this specific study would have to be replicated at a larger scale to understand if this phenomenon is widely true and not specific to South Korean culture for Gen Z solo-dwellers, there may be a hint towards the change in perceived need for space and the use of ICTs, shifting the perception of priorities from physical space to digital. In the case of these South Koreans within the study, the small confines of the space defined their interactions with the online and vice-versa. Most of them would occupy the bed while on their phone and had replaced the media of their walls with “conventional types of analogue media, such as pictures, posters, newspapers, clocks, and calendars, which are posted on vertical walls.”⁹⁰ As such, connection to this amalgam of spatiotemporally divorced information influences behaviors in the household and its spatial perception. Hoyoung Kim noted that the study participants are less aware of their physical environment when using their smartphones. Perhaps this is because these specific inhabitants do not only inhabit physical space but also digital data space; cloud space.

⁸⁹ Hoyoung Kim, “Vacant Wall, Versatile Screen, and Personal Gateway: Design Implications for the Impact of Smartphone Use on the Domestic Spaces of Single-Person Student Households,” (Journal of Asian Architecture and Building Engineering 22, no. 1 (2022): 108–24), 114–115, 120.

⁹⁰ Ibid.

Head in the Cloud

The location of the users' body and the extensions or ICTs associated with said body provide an aura within domestic space, impacting other inhabitants. Whether this is through sound, the lack thereof because of headphones, visual stimuli, or the presence of the body, and lack thereof, there is a supposition that the mind of the user is elsewhere – aloof – altering interactions within domestic space when participating in routine domestic activities. Being asked to do cleaning, laundry, or come to dinner is now at odds with ICTs and their distractions. Furthermore, the Internet enters the imaginary of the home with its *onirique* (dream-like) qualities allowing the users to finally enter dreams – their own and others' by using the image and the screen.⁹¹ These imaginaries use screens as portals to other spaces, extending the home's walls.

*Because today it is by invoking and plugging into a shower of data coming from the Cloud (I did not say "coming from Heaven," but for the ignorant user it has about the same mystifying effect) that you get, by sheer condescension, some traces, on screen or on paper, that resemble—by only resemble—what used to be texts, photographs, films, drawings, and maps... The reality is that of data sets invisible to the eye, inaccessible to the human brain, sent systematically everywhere, data sets that project fleeting versions of their contents, sometimes as spreadsheets, sometimes as texts, sometimes as drawings. The message from the Cloud is clear: "Thou shall get only images."*⁹²

Surfaces are no longer walls; they are interactive and extend domestic space similar to windows. By using a smartphone from dawn to dusk, at all times, the domestic experience and imaginary of home alter.

⁹¹ As per Gaston Bachelard in *La poétique de l'espace*, the French word has been kept by the author for a perceived lack of accurate English translation. Juxtaposing ideas presented in Gaston Bachelard. *La poétique de l'espace*. Paris: Presses Universitaires de France, 1957 & Belk, "Extended Self in a Digital World."

⁹² Bruno Latour's Foreword in John May, *Signal. Image. Architecture*. (New York, NY: Columbia books on architecture and the city, 2019), 16.

One example documented recent adopters of the Internet staying up later and later at night staring at the screen, sharing life stories with people possibly across the world from them on Internet Relay Chat (IRC).⁹³ Charging the phone is a daily necessity. Checking e-mails is as important as the mailbox out front, if not more. Video calling friends might make you change spots in the household, as one frame is more presentable than another. Controlling LED lamps around the house is now a convenient app on your smartphone. These are constant realities that are in motion, emblematic of the early 21st century's domestic experience, displacing the imaginary of home, or the poetics of it for that matter, into a network of ICTs and media representing our footprint on the world better than the plan of the house can. Media consumption is now a new gestalt of fragments, or more accurately packets shared online, by users impacting daily habits of domesticity.⁹⁴

fig.23 Movie Still from *The Matrix*



⁹³ Lally, *At Home with Computers*, 116–117.

⁹⁴ Hito Steyerl, *The Wretched of the Screen*, (Sternberg Press, 2013), 44.

Mimetics – Memetics

CTRL+C, CTRL+ V: Historically, as Walter Benjamin interpreted, perfect mimicry in art is impossible for the lack of an aura.

*For that aura is bound to his here and now; it has no replica. The aura surrounding Macbeth onstage cannot, for the live audience, be detached from the aura that surrounds the actor playing him. But what is peculiar about filming in the studio is that in the latter situation the audience is replaced by a piece of equipment. The aura surrounding the player must thus be lost – and with it, at the same time, the aura around the character played.*⁹⁵

The aura is now displaced. Any loss of the aura is compensated by the LCD light held up near users' faces. The equipment used to transmit perfect replicas of media glows in bedrooms, media transmitted to us by an NPC (Non-Playable Character). Indeed, the reproduction of media is able to close the gap of perfect reproduction to a sliver at the time of publication of *The Work of Art in the Age of Mechanical Reproduction* with the example of film. In the Information Age with the Internet, perfect mimicry, or the duplicate, is the fundamental principle of ICTs and meme culture, being able to replicate images and imaginaries across the world with unparalleled accuracy, compressed into efficient file formats such as MP3 and JPEG, with newer formats increasing compression and accuracy. Image diffusion in the home comes from a lineage of ICTs in the home like the television and radio before it:

*The technological reproduction of sound was tackled at the end of the last [nineteenth] century. These convergent endeavours rendered foreseeable a situation that Paul Valéry described in the sentence: 'Just as water, gas and electric power come to us from afar and enter our homes with almost no effort on our part, there serving our needs, so we shall be supplied with pictures or sound sequences that, at the touch of a button, almost a wave of the hand, arrive and likewise depart.'*⁹⁶

⁹⁵ Walter Benjamin, *The Work of Art in the Age of Mechanical Reproduction*, (London: Penguin Books, 2008), chapter IX.

⁹⁶ Ibid, chapter I.

As recalled by Benjamin, Valéry predicts the claim of media as central to the home in the following centuries. The difference in the evolution of media is now an interaction between users and the rise of alternative communication architectures. Files are efficient to share but sometimes decay over the network as they get compressed from network to network, platform to platform, device to device. Hito Steyerl argues that the nature of this compressed, poor image highlights the very beauty of the network itself:

*The poor image is no longer about the real thing—the originary original. Instead, it is about its own real conditions of existence: about swarm circulation, digital dispersion, fractured and flexible temporalities. It is about defiance and appropriation just as it is about conformism and exploitation. In short: it is about reality.*⁹⁷

MP3 specifically is the file format that gave rise to Peer-to-Peer architectures within the Internet and information piracy, copyright infringement, and so on. Via torrenting, pirates of the same naval trade lines, now undersea wires, leech, and seed packets, duplicating full pieces of media in their assemblage. That is the story of Napster, with Metallica being the first to file a lawsuit.⁹⁸ Under the privatized Internet, financial incentives reign within paradoxical forms of sharing. Anti-establishment sentiments and initiatives such as WikiLeaks or the Blockchain currencies, like Bitcoin, the dark web, or torrenting, build a culture of communally incentivized solutions for institutions. Users hide behind VPNs fearing another Cambridge Analytica, thus becoming anonymous.

⁹⁷ Steyerl, "In Defense of the Poor Image", in *The Wretched of the Screen*, 44.

⁹⁸ Hernandez, Daniela. "April 13, 2000: Seek and Destroy – Metallica Sues Napster." *Wired*, April 13, 2012. <https://www.wired.com/2012/04/april-13-2000-seek-and-destroy-metallica-sues-napster/>; Krajewski, *The Server*, 336.

This culture that comes from a liberalization of the Internet and its widespread use has ties to the very domestication of the technology. Peer-to-Peer is a clear juxtaposition to the premise under which the AT&T ad operated, in that AT&T is in a position of power to define how the Internet would evolve, as seen by the “Help us improve this space” section of the landing page. In an anarchical burst, the domesticized Internet takes the form of communal incentives on the Web that challenge established titans. As such, the paradox is the claim to ownership of a collective memory tied to the transmission of information and images online: one that is inherently communal in nature, one that privatization created despite the near monopolization of infrastructure and access in North America.⁹⁹



⁹⁹ Halbwachs, *La mémoire collective*; Shane M. Greenstein, *How the Internet Became Commercial*, 431.

Domesticated Demons

The Internet conceptually, and often physically because of the modem, router, server, desktop, and other containers of hardware, operates as a black box. Historically, as highlighted by Markus Krajewski’s *The Server*, in the scientific community, a phenomenon that cannot be explained by what is known or understood at the time is personified as a demon; a well-known example of this is Maxwell’s demon. Within this relationship, Krajewski also writes that

The Internet seems to be populated by a dizzying multitude of servers, which, not unlike demons, perform their tasks fairly discreetly behind the scenes. Like Kafka’s ghosts who drink up the lovers’ written kisses, stealing them before they arrive at their destination, the demons that lurk in the channels of communication grow in information labs and secure the circulation and transmission of data by parasitically feeding off them. Unbeknownst to message recipients and senders, they regulate data streams, letting them through and simultaneously feasting on them; they act as guides, identify obstacles, and search for detours. In short, they share the attributes of a reliable and, under usual circumstances, inconspicuous communication server.¹⁰⁰

Demons take a central space as a personification of servers in Krajewski’s writing, yet demons populate other spheres of the Internet. As media is streamed like the faucet turns on and off, this media takes the form of images on a screen. Before the screen was a ubiquitous form of media consumption, Siegfried Kracauer writes of a demonic ambiguity of the image, here taken in the context of media, and specifically the memory-image itself:

No matter which scenes a person remembers, they all mean something that is relevant to him or her without his or her necessarily knowing what they mean. Memories are retained because of their significance for that person. Thus they are organized according to a principle that is essentially different from the organizing principle of photography. Photography grasps what is given as a spatial (or temporal) continuum; memory-images retain what is given only insofar as it has significance. Since what is significant is not reducible to either merely spatial or merely temporal terms, memory-images are at odds with photographic representation.

¹⁰⁰ Krajewski, *The Server*, 2.

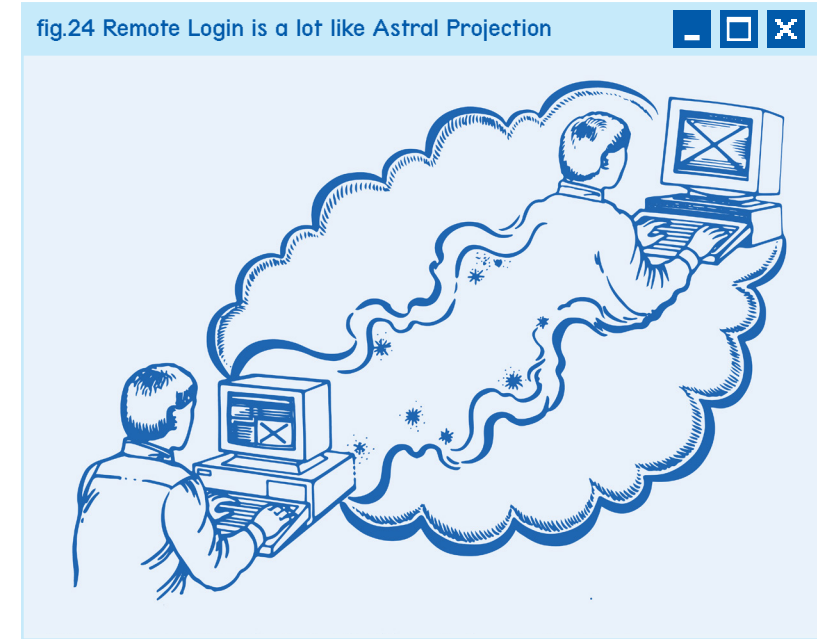
*From the latter's perspective, memory-images appear to be fragments but only because photography does not encompass the meaning to which they refer and in relation to which they cease to be fragments. Similarly, from the perspective of memory, photography appears as a jumble that consists partly of garbage. The meaning of memory-images is linked to their truth content. As long as they are embedded in the uncontrolled life of the drives they are inhabited by a demonic ambiguity; they are opaque like frosted glass that hardly a ray of light can penetrate. Their transparency increases to the extent that insights thin out the vegetation of the soul and limit the compulsion of nature. Truth can only be found by a liberated consciousness that assesses the demonic nature of the drives.*¹⁰¹

It takes two to tango. In essence, Kracauer proposes that the truth of memory lies in the conscious reflection and interpretation of the significance attached to the remembered scenes, to the images that all exist simultaneously in the client, the server, and in-between. The tension between photography and memory arises from the different ways they engage with reality – photography capturing the external, visible aspects, and memory retaining the internal, subjective significance. Indeed, then, the truth of the media and memory-images may only be rendered visible when interpreting and understanding the “drives” and meanings behind memories. Media itself may be personified as a demon until engaged with by the user. The Internet floods screens with such media to be interpreted and interacted with, including AT&T's ad destined for domestic Internet users. In *The Extreme Self*, by Shumon Basar, Douglas Coupland, and Hans Ulrich Obrist, demonification happens to the self through the power of the Internet. By referring to Sigmund Freud and the true self, “a secret unto yourself. To find out who you really were meant decoding clues to dislodge demons buried within you.”¹⁰²

¹⁰¹ Siegfried Kracauer, “Photography,” (trans. Thomas Y. Levin. *Critical Inquiry* 19, no. 3 (1993): 421–36), 425.

¹⁰² Shumon Basar, Douglas Coupland, and Hans Ulrich Obrist, *The Extreme Self*, (Köln: Verlag der Buchhandlung Walther und Franz König, 2021), 188.

The presence of demons implies that the Internet may hold the key to self-discovery by the consumption of world-memory-images, that they might unlock the demons residing within the self. This segment is aptly placed in a sequence of self-reflection and a cheeky, on-the-nose comparison between religion and the Internet. Maybe it is true that login is akin to astral projection, inherently spiritual.



Hyper-Self

The Internet offers the existence of an “Extreme Self” or *Hyper-Self*, as I like to call it, within the “res digitalis” or the realm of the digital.¹⁰³ The hyper-self absorbs the prefix hyper, defined as “hyperactive or unusually energetic” by Google’s Oxford Languages, taken from the hypermodern and hyperlink. It is the most accelerated, least mortal version of the self, represented and defined by interactions on the information superhighway.¹⁰⁴ In fact, this intangible self uses ICTs as a realm for existing, personifying the extension of the self, perceived through the client or technics, an object with embodied memory.¹⁰⁵ Through ICTs, personal objects disappear from domestic space, replaced by files on hard drives. CDs give way to MP3 Libraries; family albums turn into photo folders on drives far away. As ICTs are doubly articulated with the use of the Internet, the claim of ownership extends further than objects. According to Russell Belk, this phenomenon does not diminish ownership over the media, and purchasing online artefacts in digital spaces does not mean a mental detachment from the object. They are interpreted in this context as part of the representation of the self.¹⁰⁶ The representation of self extends the claim of ownership to elements of culture, consumed media, online experiences, online communities, and so on. The hyper-self is the personification of a digital footprint, the media consumed, and browser history, with frantic and odd search queries included.

¹⁰³ Joohan Kim, “Phenomenology of Digital-Being,” (Human Studies 24, no. 1-2 (2001): 87-111), & Shumon Basar, Douglas Coupland, & Hans Ulrich Obrist, “The Extreme Self.”

¹⁰⁴ John Armitage, *Paul Virilio: From Modernism to Hypermodernism and Beyond* (London: SAGE, 2000), “From Modernism to Hypermodernism and Beyond: An Interview with Paul Virilio.”

¹⁰⁵ May, *Signal. Image. Architecture*, 36.

¹⁰⁶ Belk, “Extended Self in a Digital World,” 479.

This hyper-self can be described as a clone, a mirror, a specter, a simulacrum, a ghost, a twin, a cyborg, or otherwise a shadow of oneself.¹⁰⁷ We, like our ICTs, become doubly articulated, our devices becoming reflections. In the interface with the online, Internet users choose media to represent themselves, whether through a profile photo or otherwise. This representation is often a photo of themselves or of an element that represents them. The *New Yorker*’s comic published in 1993 by Peter Steiner, captioned: “On the Internet, nobody knows you’re a dog,” calls back to this experience early in the history of the Internet’s domestication. Agency in self-representation is a novel potential for further exploration of identity within the domestic experience through the choice of representation on multiple social interfaces. Character selection or modification screens in online video games become the first step to a social interface with other players. The profile photo is the first line of interaction or digital handshake with other users on social media. It is also the first thing prospective employers stalk. This representation of self extends to all media consumed online. Byung-Chul Han describes this reflection as such:

*The digital world, in a manner of speaking, is a world that the humans have coated over with their own retina. This humanly networked world produces a permanent self-mirroring. The closer the net is woven, the more thoroughly the world shields itself against the other, the outside. The digital retina turns the world into a screen-and-control monitor. Inside this autoerotic visual space, in this digital inwardness there can be no sense of wonder. The only thing human beings still like are themselves.*¹⁰⁸

The Internet users’ spitting image is of Narcissus staring into the depths of his reflection in the water, as the smartphone captures another selfie.

¹⁰⁷ Ollivier Dyens, *Metal and Flesh: The Evolution of Man: Technology Takes Over*, (Cambridge, MA: MIT Press, 2001), 81-87 & Haraway, “A Cyborg Manifesto.”

¹⁰⁸ Byung-Chul Han, *Saving Beauty*, see last paragraph of “Digital Beauty.”

People using the Internet at home relate to these fictitious media artefacts, identifying as them and developing their own “real” identity.

*But, in the present digital age, our online physical invisibility and command of the virtual re-embodiment of self-created avatars provide an easier and less risky environment for such self experimentation. For example, people often come out in new sexual identities after first doing so online.*¹⁰⁹

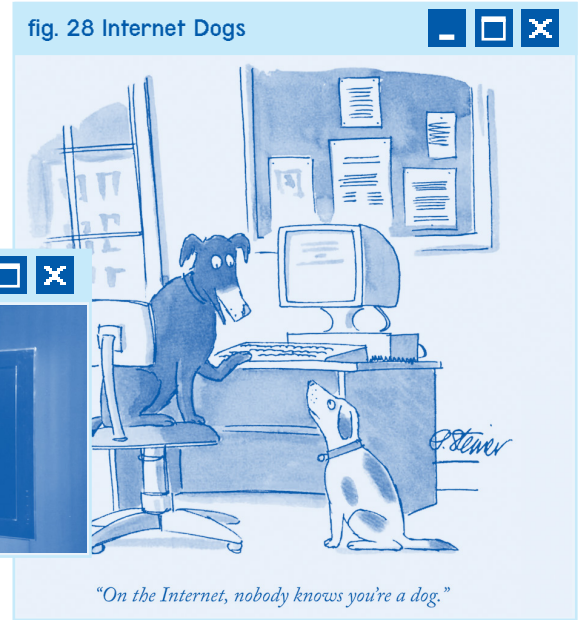
Sharing this identity becomes one of the most intimate experiences: full access to an identity free of social expectations or constraints. It is as intimate as entering the bedroom of domestic space, if not more, the difference being that no one makes funerals for abandoned Instagram pages (yet), while sometimes real obituaries scroll by on Facebook feeds. On this social interface, the Internet user cooped up at home is levelled with other users by allowing them the same means. In that sense, the domestication of the Internet is a great leveler among users, but only by empowering the owner of data.



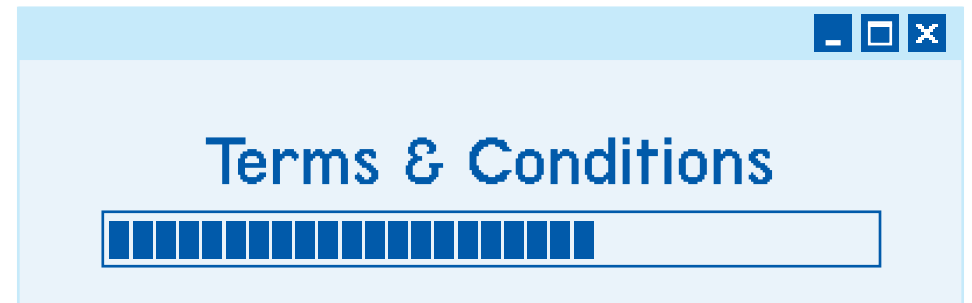
¹⁰⁹ Belk, “Extended Self in a Digital World,” 482.



fig. 29 Steyerl's Stike



Part III.



Viral Appendages

As the world furthers its decentralization – away from the West, towards new centers, and the return of old empires – the beliefs of the ‘rest’ of the 85% of the earth’s population exert greater impact, economically, ecologically, politically, and on the global imagination. One effect of planetary communication is the formation of globalized communities of belief.

Countless people – millions or even billions – still argue the world is flat. Or that dinosaurs didn’t die out. They live peacefully on a undiscovered island with Elvis Presley and Mahatma Gandhi. Nothing is too niche nor eccentric. Everyone can find their kin today. As technology brings its own evangelism (e.g. Silicon Valley libertarianism and transhumanism), there are rising antitechnology movements. For some disaffected urbanites, the only way forwards is backwards to a prelapsarian, pretechnological time.

I’ve a friend who, in a fit of existential rage, smashed his smartphone with a roadside rock. He said he wanted the outside world to feel like the outside world again, and not just an appendage to the screen. Maybe in the din of ubiquitous information and disinformation, belief is a distinguishing act of authenticity. Perhaps belief protects you against the chaos of endless relativism.

...Even if that belief is strictly limited to a belief in yourself.

– Shumon Basar, Douglas Coupland, Hans Ulrich Obrist ¹¹⁰

Devices multiply in domestic space emphasizing hyper-connected environments for living: personal computers, smart phones, smart appliances, smart thermally-activated light bulbs, automated heating, sensor-based shades, teddy-bear cameras, small round vacuums as pets, and so on.¹¹¹ The smart-home ideal is at a legal boundary of surveillance capitalism. Every new apparatus now has a camera, microphone, sensors, and leeches on the electricity and the Internet, confirming the place of the Internet as a fundamental utility of the household in the 21st century.

¹¹⁰ Basar, Coupland, and Obrist, *The Extreme Self*, 180–181.

¹¹¹ Francesco Garutti, *Our Happy Life*, 81.

Farzin Lofti-Jam’s *My Domestic Routines* highlights the presence of so-called Smart products in everyday domestic life. In this installation and through drawings, Lofti-Jam sees domestic space through these virus-like appendages within the home, through surveillance cameras and sensors placed on appliance-appendages.¹¹² In this sense, it is not dissimilar to the Aware Home Research Initiative (AHRI), which developed a house in which sensors could attempt to predict the needs of inhabitants.¹¹³ These objects connect through the Internet, create a domestic network, and are continuously updated using the same logic as objects like the Lazy Susan. These are the objects that constitute the network that participates in the network of networks: the Internet. The Lazy Susan, as Krajewski analyses, is part of this gradual epistemological transformation of the role of the server in the household.

The Lazy Susan may seem like a modest ‘invention.’ But despite its simplicity it paradigmatically illustrates the process of substitution that takes over the organization of domestic household work. With the introduction of mechanized service, domestics are gradually replaced with media like the Lazy Susan or other versions of the mute / dumb waiter. Simultaneously, an alternate definition emerges, suggesting not just a shift in meaning but an overall transformation of the cultural practice of service.¹¹⁴

Krajewski follows this lineage until the digital server and Client-Server architectures, invented at PARC, a subsidiary of XEROX, in 1979.¹¹⁵

¹¹² Farzin Lofti-Jam, “Farzin Farzin: My Domestic Routines,” (The Architectural League of New York, August 30, 2022), <https://archleague.org/article/farzin-farzin-my-domestic-routines/>.

¹¹³ Robert J Orr, “Georgia Tech’s Aware Home Research Initiative.” (The Aware Home Research Initiative). <https://sites.cc.gatech.edu/fce/house/house.html>.

¹¹⁴ Krajewski, *The Server*, 254.

¹¹⁵ *Ibid*, 310–317.

Ironically then that new “gadgets” that invade the home are dependent on such architectures, making the digital server the central entity for these new quasi-object servers. The dishwasher and washing machine were developed in the previous century to make domestic life more comfortable and carefree; new appendages follow the same logic at the cost of data privacy.¹¹⁶ The early 21st century has a Roomba that connects to Wi-Fi. Objects like it in domestic space reinforce the need for the Internet as a central actor within it. The Internet is taken for granted in the domestic imaginary through these. In addition, this shapes the domestic experience as devices and appendages evolve.¹¹⁷ “A blissful but anxious surrender is taking place, incomplete but very much underway.”¹¹⁸ John May also labels memory itself as part of these technics, objects that define a tool or usage, also representing an extension of the self: “All memory is technical memory.”¹¹⁹ These objects represent a collective memory of home as dependent on the Internet. But why does my fridge need Twitter?¹²⁰

¹¹⁶ Ibid, 310.

¹¹⁷ Garutti, *Our Happy Life*, 78–81.

¹¹⁸ May, *Signal. Image. Architecture*, 24.

¹¹⁹ Ibid, 40

¹²⁰ In reference to a popular tweet by Twitter user @thankunext327 on

August 8th 2019: "I do not know if this is going to tweet I am talking to my fridge what the heck my Mom confiscated all of my electronics again."

fig. 32 *My Domestic Routines*, F. L.-J.

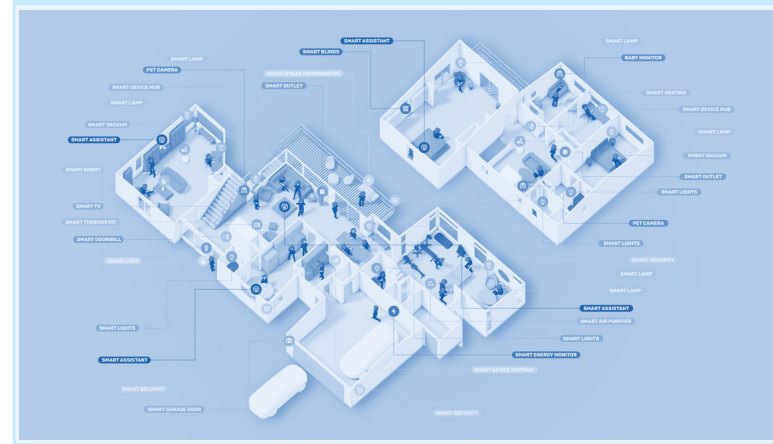
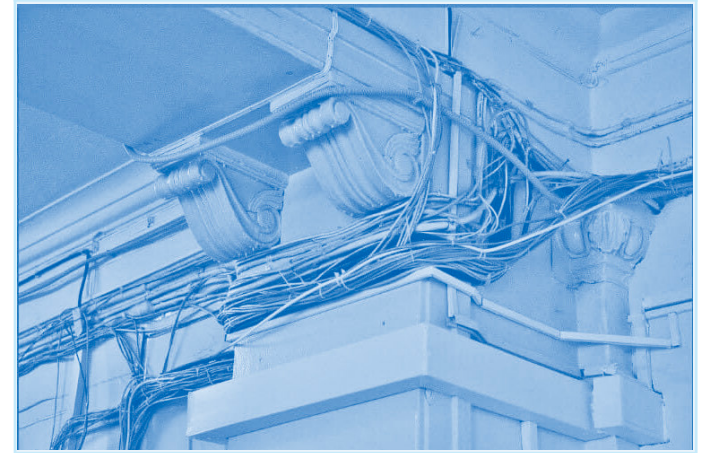


fig. 33 Wires Virally Appending



Are you young enough to access this?

The Internet introduced a dramatic break in the domestic space hierarchy for the nuclear and non-nuclear families. With its integration into domestic space, children born in the last 30 years were disproportionately affected by its influence. Factually, children stay at home longer than before, a phenomenon Sonia Livingstone explains as “extended youth.”¹²¹ Domestic behaviours have changed because of different systems beyond the Internet influencing at-home experiences, such as the rising cost of real estate, distribution of domestic responsibilities, and so on. Specifically, the Internet, in this question, poses real opportunities and threats to the domestic status quo. An abridged chart of these is found in *Children and the Internet*:¹²²

Online opportunities

Access to global information
Educational resources
Social networking among friends
Entertainment, games and fun
User-generated content creation
Civic or political participation
Privacy for identity expression
Community involvement/activism
Technological expertise and literacy
Career advancement/employment
Personal/health/sexual advice
Specialist groups/fan forums
Shared experiences with distant others

Online risks

Illegal content
Paedophiles, grooming, strangers
Extreme or sexual violence
Other harmful offensive content
Racist/hate material and activities
Advertising and stealth marketing
Biased or misinformation
Abuse of personal information
Cyber-bullying/harassment
Gambling, phishing, financial scams
Self-harm (suicide, anorexia)
Invasions/abuse of privacy
Illegal activities (hacking, copyright abuse)

¹²¹ Sonia Livingstone, *Children and the Internet*, (Cambridge: Polity Press, 2013).

Note that the extended youth is a central argument to the work.

¹²² *Ibid*, 30.

*As youth culture has come to fill the growing space between childhood and adulthood, the result is children and young people's growing autonomy in the realms of leisure, consumption, sexuality, appearance, identity, rights and participation. Pressures towards independence and dependence are, in short, in tension with each other psychologically (hence the 'discovery' of adolescence and the teenager as fraught life-stages in conflict with adults), socially (hence the notion of the "generation gap" and its associated social conflicts) and historically (hence the sense that these are new problems and the adult nostalgia for the established traditions of hierarchy, authority and respect for one's 'elders and betters'). Further tensions also exist — the new youth market is largely funded by parents rather than by any growth in youth employment; efforts to increase youth participation now anticipate the voting age; protections for legal minors seem to constrain teenage rights (in relation to sexual experience, for example). In this new period of 'extended youth', children and young people are betwixt and between, caught in a series of cultural shifts whose effects are at times contradictory rather than complementary.*¹²³

The digital natives grew up in a different social landscape that included the Internet within domestic space, influencing their interface with everyday life, routine, domestic habits, and relationships within the home. To combat some of these influences, parents started using parental controls on ICTs present within the home. As a novel form of punishment, parents could also take away children's ICTs. Parents were also affected dramatically by the Internet's interface. Ashley Madison's data breach in 2015 leaked users' private information, many of whom partners were not aware of the implications of the website, creating tensions within the domestic sincerity and authenticity between parents.¹²⁴

¹²³ *Ibid*, 6.

¹²⁴ Alex Hern, Carmen Fishwick, and Matthew Weaver, "Ashley Madison Customer Service in Meltdown as Site Battles Hack Fallout," (The Guardian, July 21, 2015). <https://www.theguardian.com/technology/2015/jul/21/ashley-madison-customer-service-meltdown-hack-fallout>.

Children within the context of at-home Internet have seen their domestic relationships deteriorate as the Internet offers the possibility of preferable horizontal relationships with others over Wi-Fi as opposed to vertical relationships with domestic actors like parents and siblings.¹²⁵ This could also reinforce relationships with the “favorite cousin” that lives far away that we only get to see once or twice a year, meaning family in the diaspora could be preserved as in the case of Trinidadians documented by Miller and Slater introduced prior.¹²⁶ Single parent households are also jumbled into the new mess the domestic Internet leaves in its wake, offsetting some parental responsibilities onto ICTs within domestic space, also creating drastic changes to domestic hierarchy.¹²⁷ K-Hole’s Youth Mode, published in 2013, argues the definition of Youth is changing. Youth is no longer about age but about attitude:

It used to be possible to be special — to sustain unique differences through time, relative to a certain sense of audience. As long as you were different from the people around you, you were safe. But the Internet and globalization fucked this up for everyone... For a while, age came wrapped up in a bundle of social expectations. But when Boomerang kids return to their parents’ Empty Nests and retirement fades into the horizon, the bond between social expectations and age begins to dissolve. We’re left using technological aptitude to divide the olds from the youngs — even though moms get addicted to Candy Crush, too. Demography is dead, yet marketers will quietly invent another generation on demand. Clients are desperate to adapt. But to what? Generational linearity is gone. An ageless youth demands emancipation.¹²⁸

¹²⁵ Livingstone, *Children and the Internet*, 10.

¹²⁶ Miller and Slater, *The Internet: An Ethnographic Approach*, 11.

¹²⁷ Berker, Thomas, *Domestication of Media and Technology*, (Maidenhead: Open University Press, 2006). changes in hierarchy are explored under various approaches by multiple authors throughout the work.

¹²⁸ Greg Fong, Sean Monahan, Emily Segal, Chris Sherron, and Dena Yago, “YOUTH MODE,” (New York/São Paulo: K-Hole, 2013).

Indeed, in the “trend report,” Youth Mode is a negotiation between being a Normcore NPC and being so niche and avant-garde that the tower of Babel is needed to communicate with real people, as the Internet developed its own tower of Babel with TCP/IP. As such, the Internet has changed a slew of behaviours within domestic space, making communication between individuals within spatial bounds more difficult by connecting others outside.



fig. 35 Young Expert

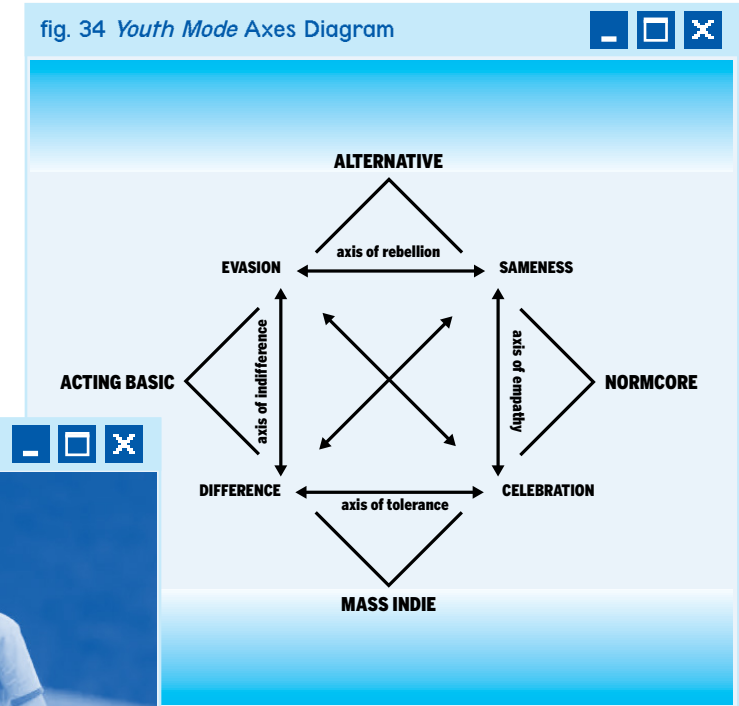


fig. 34 Youth Mode Axes Diagram

Keeping Tabs

As browser tabs are opened and closed, the hyper-self leaves a trace of usage through browser history, cookies, and fragments of behaviors for keeping tabs by the user and the provider of data. 1984's Big Brother becomes Big Data and Big Tech, as the National Security Agency populates buildings essential to communication like 33 Thomas in New York, also known as the AT&T Long Lines building, itself embodying the Cold War approach and the resilient data communication under which ARPANET was developed. The NSA's primary function is to keep the population of the United States safe by means of an internal understanding of communication structures and their contents. Internet users feed, through the hyper-self, the domestic and most intimate image of themselves to the web. This interaction with our domesticity creates a data-driven economy, or information economy, for service providers relating their activities to the use of the web, creating capitalist giants such as Google, Amazon, Microsoft, Apple, etc., impacting directly the experience of the "online" via data-harvesting, akin to Orwellian surveillance, posing questions of privacy within the household. More recently, the Biden administration passed a bill on November 15th, 2023, for investments in Internet service provision in under-represented communities to "prevent digital discrimination."¹²⁹

¹²⁹ "Statement by Vice President Kamala Harris on the Federal Communications Commission's Vote to Adopt New Rules to Prevent Digital Discrimination," (The White House, November 15, 2023). <https://www.whitehouse.gov/briefing-room/statements-releases/2023/11/15/statement-by-vice-president-kamala-harris-on-the-federal-communications-commissions-vote-to-adopt-new-rules-to-prevent-digital-discrimination/>.

Despite that, Brendan Carr, commissioner of the Federal Communications Commission of the United States (FCC) called it an "unlawful power grab... over free market capitalism."¹³⁰ This event would focus central powers of ISPs into a central governmental agency. In Michel Foucault's presentation of the Panopticon and Gilles Deleuze's further analysis, several elements resonate with the way the Internet functions under Client-Server architecture. The screen's blue light is the light raining down in the panopticon, making prisoners visible.

*FR: Visible: sans cesse le détenu aura devant ses yeux la haute silhouette de la tour centrale d'où il est épié. Invérifiable: le détenu ne doit jamais savoir s'il est actuellement regardé; mais il doit être sûr qu'il peut toujours l'être... Le Panoptique est une machine à dissocier le couple voir-être vu : dans l'anneau périphérique, on est totalement vu, sans jamais voir; dans la tour centrale, on voit tout, sans être jamais vu.*¹³¹

EN, translated by author: Visible: without arrest, the detained will have in front of his eyes the high silhouette of the central tower, from where he is observed and spied. Unverifiable: The detained must never know if he is currently watched, but he must be sure that he could be. The Panopticon is a machine that dissociates seeing from being seen: in the periphery, we are completely seen without ever seeing; in the central tower, we see it all without ever being seen.

*FR: La formule abstraite du Panopticism n'est plus donc « voir sans être vu », mais imposer une conduite quelconque à une multiplicité humaine quelconque.*¹³²

EN, translated by author: The abstract formula of Panopticism is then not to "see without being seen" but rather to impose a given conduct onto any multiplicity of given humans.

¹³⁰ Brendan Carr, "Carr Opposes President Biden's Plan to Give the Administrative State Effective Control of All Internet Services and Infrastructure in the U.S," (Office of Commissioner Brendan Carr, November 6, 2023). <https://docs.fcc.gov/public/attachments/DOC-398244A1.pdf>.

¹³¹ Michel Foucault, *Surveiller et punir*, (Paris: Gallimard, 1975).

¹³² Gilles Deleuze, *Foucault*, (Paris: Éd. de Minuit, 1986), 41.

ndeed, the panopticon's surveillance hierarchy, described by Deleuze as diagrammatic and abstractable, makes users of the Internet prisoners of their own homes, voluntary prisoners of Client-Server architecture. In this hierarchy, data giants collect these images of the hyper-self to define financial models upon which advertisements, ads that used AT&T's *YOU WILL* ad as a progenitor, curated objects, and forms of consumption reach the screens of unsuspecting domestic Internet users, fully targeted, fully premeditated. Given the gravity of the conduct imposed through this Panopticism, ads on the Internet bear a severe social responsibility within domestic space. Despite that, ads have been shown to be detrimental to human happiness.¹³³ The most recent billionaires have been at the forefront of monetizing data like oil barons have before. "Data is the new oil" is the predominant ideology of advertisers and large data digesters, hinting at the latest industrial revolution.¹³⁴ It must be refined, analyzed, and broken down before it is re-sold to the masses. Google's primary objective, through data harvesting, is to know what the user desires before they even realize it with innocent cookies.¹³⁵ The clues are in the search box. With this, Google documents the world: calendars, travel maps, speakers, thermostats, digital assistants ("Hey Google!"), thermostats, high-resolution earth photos, word processing, "anything that could tell [Google] something about their users' interactions with the world."¹³⁶

¹³³ Chloe Michel, Michelle Sovinsky, Eugenio Proto, and Andrew J. Oswald, "Advertising as a Major Source of Human Dissatisfaction: Cross-National Evidence on One Million Europeans," (The Economics of Happiness, 2019, 217–39).

¹³⁴ "Data is the new oil" was originally coined by Clive Humby in 2006 at a talk given at an "Association of National Advertisers" conference.

¹³⁵ Waller, "How The Internet Was Stolen," 1:07:26–1:18:05.

¹³⁶ Ibid.

Google is "very aggressive in throwing its money around Washington and Brussels, and then pulling the strings."¹³⁷ It is no secret that your data is prone to investigation. Indeed, Peter P. Swire writes:

*Since the attacks of September 11, 2001, many voices have supported much greater information sharing to protect national security. The bipartisan 9/11 Commission Report emphasized this point repeatedly. For instance, the Report criticized the lack of information sharing between law enforcement and intelligence agencies, between immigration databases and the Federal Bureau of Investigation (FBI), among first responders and between domestic and international collections of information. The Report called for a major shift in philosophy, from the old "need to know" approach to a new culture of "need to share." ... the need for greater information sharing has been emphasized by President Bush, the Congress and expert groups such as the Markle Foundation Task Force on National Security in the Information Age.*¹³⁸

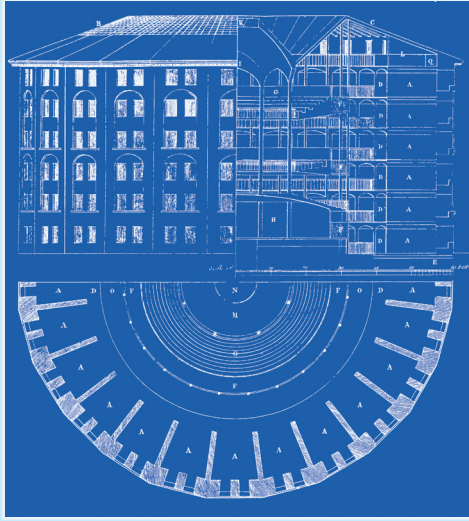
During the fear-mongering of post-9/11 political discourse, domestic data becomes the first line of defence in the war on terrorism. The mentality had switched: if an attack could be prevented through information, then it should. Through lavish spending for political lobbying, such companies acting as major actors in telecommunications afford luxuries through lax and changing legislation, including AT&T spending 48 million USD between 1991 and 1998, during the decade of Internet domestication.¹³⁹ Data is the early 21st century's principal resource of exploitation; that being the case, its quarry is in domestic space.

¹³⁷ Kenneth P. Vogel, "Google Critic Ousted from Think Tank Funded by the Tech Giant," The New York Times, August 30, 2017. <https://www.nytimes.com/2017/08/30/us/politics/eric-schmidt-google-new-america.html>.

¹³⁸ Peter P. Swire, "Privacy and Information Sharing in the War on Terrorism," (51 Vill. L. Rev. 951 (2006)).

¹³⁹ Mike Mills, "Telecom's lavish spending on lobbying" The Washington Post, December 6, 1998. <https://www.washingtonpost.com/archive/business/1998/12/06/telecoms-lavish-spending-on-lobbying/b3f35aec-aab0-4a9d-8f48-3212572df8ec/>.

fig. 36 Panopticon

fig. 37 Servers as depicted in *Silicon Valley*

Stolen Community

The broadband gap is the very problem the Biden-Harris administration is attempting to fix through the legislation signed in November of 2023. This gap is created because of ISP's "Extrastatecraft" attitude towards this neo-liberal infrastructure, which is the Internet to the home. This is effectively reinforcing a digital redlining. Infrastructure built by private companies influences the redlining capabilities of single corporate actors. Investors look for a return on investment, meaning communities disproportionately impacted by redlining policies in the United States are at odds with the bottom line.¹⁴⁰ Shara Tibken elucidates:

The gap in broadband coverage in a poorer neighborhood is effectively a digital form of redlining, a now-banned practice that denied service based on race. In the 1930s, banks started developing maps to withhold loans for high-risk, "undesirable inhabitant types," who were almost always poor people of color. The redlining extended to a refusal to insure residents in low-income neighborhoods, denial of health care and decisions not to build essential facilities like supermarkets. Even Amazon has been accused of not serving poor, predominantly Black neighborhoods with its Prime same-day shipping plan.¹⁴¹

Targeted policy for non-discriminate access to the Internet, according to the Information Technology & Innovation Foundation, must target the right level of the problem, which may be in differences in income, which itself is not necessarily attached to race but is indeed attached to a history of disparity. Communities are targeted and fleeced through a fine-tooth comb, areas more prone to lack of access than others, and a utility that is compared to water itself is undemocratically distributed, confirming the influence of ISPs.

¹⁴⁰ Kane, Joe, and Jessica Dine. "Broadband Myths: Do Isps Engage in 'Digital Redlining?'" RSS, September 10, 2022. <https://itif.org/publications/2022/04/13/broadband-myths-do-isps-engage-digital-redlining/>.

¹⁴¹ Shara Tibken, "The Broadband Gap's Dirty Secret: Redlining Still Exists in Digital Form." CNET, June 28, 2021. <https://www.cnet.com/home/Internet/features/the-broadband-gaps-dirty-secret-redlining-still-exists-in-digital-form/>.

urthermore, the Internet has affected the image of homes and community policies through apps like Airbnb, just as it was through reality television.¹⁴² In fact, Airbnb used the Internet’s third space mentality and encroached onto the physical domestic space while also endangering the fabric of existing communities. Its advertisement motto, “We imagine a world where you can belong anywhere,” was built on a sense of community involving perfect strangers, but such optimism is not always clear-cut.¹⁴³ In *The Airbnb Story*, Leigh Gallagher documents some potential pitfalls of domestic spaces’ interface with Internet actors and its consequences. Strangers’ homes are turned into drug-fueled bizarre orgies, hip-hop parties fronting as a golf event, housing held hostage for sexual favors, pawn auctioning furniture ransacked for loose change, and the list goes on.¹⁴⁴ Homes posted are not liable through Airbnb, such as accidental deaths due to property mismanagement. Finicky situations and outright racial discrimination in host-client interfaces are increasingly tricky.¹⁴⁵ Regarding local communities and their laws, Airbnb presents a threat:

As it turns out, the very activity behind Airbnb, renting out one’s home on a short-term basis, violates existing laws in many places. The laws are hyperlocal and vary not just state by state or city by city but town by town. And the regulatory patchwork is complex: hosts can run afoul of local laws governing short-term rentals, tax collection, building-code standards, zoning bylaws, and more. In many markets, Airbnb has worked with regulators to amend these rules to allow it to operate legally.

¹⁴² Garutti, *Our Happy Life*, 122, chap. “House Dreams.”

¹⁴³ The motto was coined in a series of billboard ads by the company.

¹⁴⁴ Leigh Gallagher, *The Airbnb Story: How Three Ordinary Guys Disrupted an Industry, made Billions... and Created Plenty of Controversy*. (Boston: Houghton Mifflin Harcourt, 2018), see chap. The Bad and The Ugly.

¹⁴⁵ Ibid.

*It has forged key agreements over the years with cities like London, Paris, Amsterdam, Chicago, Portland, Denver, Philadelphia, San Jose, Shanghai, and many more to liberalize laws, to create new ones, or to collect taxes. The company is actively engaged in talks with many more municipalities to do the same.. The company’s ideals promote a world where home sharing lets regular people open up their homes to strangers, whether the host is in the residence or out of town, providing a unique and special way to travel. But whether Airbnb likes it or not, it also presents a cold, hard arbitrage to be played—the difference between what a housing unit can pull in each year in nightly rents can be double what it can generate as a longer-term rental. And many people, from property managers to corporate real estate giants to mom-and-pop entrepreneurs, have over the years jumped in to play it.*¹⁴⁶

New York City specifically is a complex housing market to navigate, making the app a threat to locals and long-term renters as investors hoard properties intended for long-term housing to provide short-term hotel-like services. Airbnb started putting up job postings for “Community Organisers” with experience required in political campaigning and community organisation to maintain an image that was not founded in “‘landlordism’ or ‘renterism’ but rather local communities standing up for their local areas.”¹⁴⁷ Despite this, by 2020, hosts on the website owning more than one property on the website made up 63% of the host user base.¹⁴⁸ Airbnb became a way for real estate investors to consolidate their investments; landlords became just that much more lucrative.

¹⁴⁶ Ibid, see chap. “Air Rage.”

¹⁴⁷ Waller, “How the Internet was Stolen,” 1:34:00

¹⁴⁸ Ibid.

In Platform Socialism, James Muldoon explains a cognitive dissonance between the very idea of community and financial expansion through the digital interface:

*By blurring the lines between community and company, Airbnb is engaged in an insincere gesture to pass itself off as a social enterprise. According to the spin of tech CEOs, making billions of dollars is almost incidental to – or a welcome but unexpected by-product of – their social mission of connecting the world and giving people a sense of belonging in community. But we have reason to be suspicious of these claims from the world’s leading ‘community-washers’ like Facebook and Airbnb because in nearly every single case the business came first and the sense of purpose was invented along the way... There is a deep irony in one of the world’s most successful entrepreneurs portraying his company as a champion of grassroots community. Throughout its long history, the growth of capitalism has led to the disintegration of communities across the globe and the destruction of traditional ways of life. It seems we have now reached a time at which the very forces responsible for the erosion of community are now attempting to sell it back to us in a monetised form. Community and capitalism are becoming increasingly entwined in a new relationship through digital technology. Notions of community are at the heart of the practices and rhetoric of many of the latest generation of platform companies. Tech companies have come to see community as a new domain of profitable extraction. Companies profit from our longing for traditional forms of community by stepping into a space left open by globalisation and social disconnection. Community is such a powerful marketing tool because it taps into one of our deepest sources of meaning.*¹⁴⁹

Through this interface with privacy, housing, and community, the Internet has changed the image of domestic space by commercializing privacy, allowing ISPs the luxury of choice in the provision of utilities to specific communities and the luxury of impermanent housing, giving room for real-estate investors to displace well-established communities.

¹⁴⁹ James Muldoon, *Platform Socialism: How to Reclaim our Digital Future from Big Tech*, (London: Pluto Press, 2022).

To Mine Cobalt or To Mine Bitcoin?

These practices within and outside the household, driven by digital extraction, are also fundamentally extractive in terms of material, profiting a global mining economy based on disparity of persons and territories.¹⁵⁰ Martin Arboleda explains in a “stylized and oversimplified” description the phenomenon:

As opposed to the “spaces of flows” and “liquid modernities” that populated earlier visions of globalization, the notion of the planetary designates a convoluted terrain where fences, walls, and militarized borders coexist with sprawling supply chains and complex infrastructures of connectivity. This realm is traversed by deeply contradictory and yet complementary tendencies toward advanced functional integration in the world economy and toward radical ethnoracial and sociospatial fragmentation.

*Crucially, the shift from the global to the planetary is also understood as a stepping stone toward novel formations of collective consciousness and of collective agency. The planetary mine is the geography of extraction that emerges from and underpins this contradictory state of things. If we put together all the phases that comprise the transnational circulatory system of primary-commodity production and trace the journey of copper from its point of extraction in the Andean plateaus of Chile to its point of destination in the spaces of advanced manufacturing in China, a bewildering panorama emerges: Autonomous trucks and shovels working at nearly 4,000 meters above sea level put the metal into a semiautomated train, which then takes it to a smelting and electrorefining facility, where computerized ovens transform it into copper cathodes. The cathodes are put into containers and sent to one of the megaports of the mining industry in the Atacama Desert, where gantry cranes load the cargo into a container ship. After crossing the Pacific, our container is unloaded by the swiftness of the vast mechanical systems of the capital intensive Chinese ports. Finally, the copper cathodes end up in one of the infamous “dark factories” of the Pearl River Delta. Here, robots and computer numerical control (CNC) machine tools operate in the dark, turning copper into the wires that hundreds of thousands of human laborers in electronics assembling facilities will later etch into the electronic gadgets we carry in our pockets.*¹⁵¹

¹⁵⁰ Kate Crawford, *Atlas of AI*, (Yale University Press, 2022), note that this is the central argument of the work.

¹⁵¹ Martín Arboleda, *Planetary Mine: Territories of Extraction Under Late Capitalism*, (London: Verso, 2020), see chap. 1 “Openings,” subchapter “Excavating the Planetary.”

The Internet as a utility depends on power itself at the level of electricity, but also geopolitical. In fact, ICTs and the so-called green revolution depend on the extraction of precious metals that drive current geopolitical agendas and power dynamics between nations upholding echoes of colonialism. Hard drives, batteries, and processing units depend on cobalt, lithium, aluminum, gold, silicon, and so on; hence the name *Silicon Valley*. China is currently the largest producer of Silicon, the second most abundant element on Earth, creating less tension over the geospatial ownership of the specific mineral, although contributing to China's agency as a geopolitical, economic power in technology.¹⁵² However, silicon's neighbours near the motherboard are in tension with international political powers. As documented by Siddharth Kara in *Cobalt Red*, this is a neocolonial power dynamic, making the people of the Democratic Republic of Congo dig their own quarried graves in exchange for copper, nickel, and cobalt.¹⁵³ This led to a Congolese man self-immolating in protest on November 8th, 2023, because of the genocide within the country related to securing access to the country's valuable mineral resources.¹⁵⁴

¹⁵² United States Geological Survey, "Mineral Commodity Summaries," (2023, 2023, 158–59).

¹⁵³ Siddharth Kara, *Cobalt Red: How the blood of the Congo Powers our Lives*, (New York, NY: St. Martin's Publishing Group, 2023), note that this is the central argument of the book.

¹⁵⁴ Verma, Nitish. "Congolese Man Self-Immolates to Highlight Overlooked Genocide in Congo." BNN Breaking, November 14, 2023.

Up to 90% of cobalt mined in the RDC is moved to China, where it is processed. *Volt Rush: The Winners and Losers in the Race to Go Green* by Henry Sanderson documents the lithium and cobalt dominance in batteries in post-oil energy using the electric car as a foundational artefact representing the green revolution.¹⁵⁵ ICTs use the same lithium-based batteries present in electric vehicles, ironically bearing a striking similarity to global oil extraction.

In the Democratic Republic of the Congo I saw private jets landing at the small green and white airport in the mining town of Kolwezi while all around children and families mined for cobalt by hand; in Chile I stood in the searing heat of the Atacama Desert overlooking giant pools the size of Manhattan where lithium was extracted; and in China I visited battery factories and lithium plants running twenty-four hours a day using coal-fired power next to fields where buffalo roamed freely. All this was part of the electric car supply chain. A host of companies were even planning to mine the deep sea for these minerals, opening up one of the last unexplored wildernesses to extraction.

*Every day, we rely on metals and minerals to power our iPhones and transmit our electricity. Digital technologies give us a sense that we live in an ethereal economy untethered to the material world. In fact, we are mining more minerals than at any time in our history, a dependence that is only set to increase. Despite talk of artificial intelligence, the Internet of things, and an imminent takeover by robots, our societies have in many ways not moved on from the practices of the past, when the need for oil drove Europeans to carve up the Middle East. The consequences of the transition will not just be economic – they will also be environmental. Extracting and processing these minerals requires large amounts of energy and pollutes local ecosystems.*¹⁵⁶

¹⁵⁵ Henry Sanderson, *Volt Rush : The Winners and Losers in the Race to Go Green*, Oneworld Publications, 2022. ProQuest Ebook Central, note that this is the central topic of the book.

¹⁵⁶ Ibid, 7.

The brine-based lithium mines of Chile are at odds with the delicate ecosystem of the *Salares*, specifically the *Salar de Atacama*.¹⁵⁷ The cadaster of the place depicts the Salares as a lifeless space, ready for the taking. Further North, Kate Crawford explains in *Atlas of AI* that in the deserts of Nevada, lithium mines are now active in a territory once taken from the Mexican people for other metals:

*The history of mining, like the devastation it leaves in its wake, is commonly overlooked in the strategic amnesia that accompanies stories of technological progress. As historical geographer Gray Brechin points out, San Francisco was built from the gains of pulling gold and silver out of the lands of California and Nevada in the 1800s. The city is made from mining. Those same lands had been taken from Mexico under the Treaty of Guadalupe Hidalgo in 1848 at the end of the Mexican-American War, when it was already clear to the settlers that these would be highly valuable goldfields.*¹⁵⁸

In February of 2023, Mexico's president, Lopez Obrador, caused a stir with its northern neighbors by nationalizing its new-found lithium deposits, creating tensions with the USMCA agreement. Obrador stated, "What we are doing now ... is to nationalize lithium so that it cannot be exploited by foreigners from Russia, China, or the United States," clearly outlining the importance of the metal and highlighting key players.¹⁵⁹ Internet use is power-hungry, as our devices stay on continuously.

¹⁵⁷ Marina Otero Verzier—Data Mourning, (YouTube. Columbia GSAPP, 2023), 12:55.

¹⁵⁸ Crawford, *Atlas of AI*, 26.

¹⁵⁹ Carolina Pulice, Nelson Bocanegra, and Valentine Hilaire. Edited by Jonathan Oatis and Alistair Bell. "Mexico's Lopez Obrador orders Ministry to Step Up Lithium ...," February 19, 2023.

In countries still dependent on oil, coal, and gas for energy within households and green energy being a product of large infrastructural systems pressuring contested materials into the foundation of the chain, sustainability is fundamentally at odds with hyper-connectivity.¹⁶⁰ The new weight of the domestic experience is inescapable and reinforces real-world geopolitical, neocolonial, and capitalist relationships. The data economy is one of political power and power consumption in addition to materially expensive, making users complicit by the very act of "being online" in their domesticity.

fig. 38 Chilean Lithium Extraction

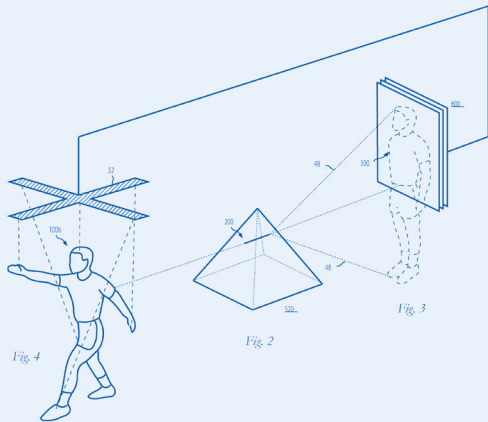


fig. 39 Artisanal Cobalt Miners in DRC



¹⁶⁰ Pablo Rosado, and Hannah Ritchie. "Energy Mix." Our World in Data, July 20, 2020. <https://ourworldindata.org/energy-mix>.

fig. 40.1 Atlas of AI, K. C.



Atlas of AI, K. C.

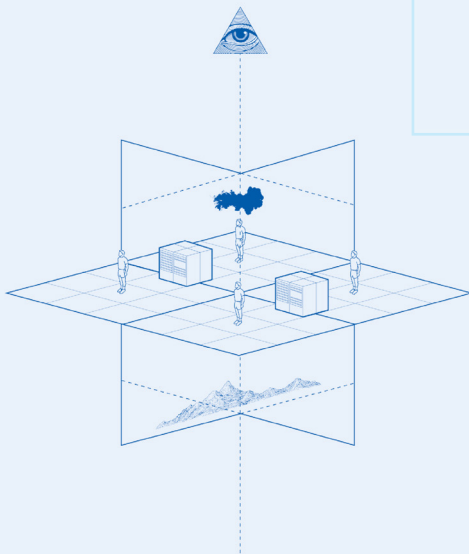


fig. 40.3 Atlas of AI, K. C.

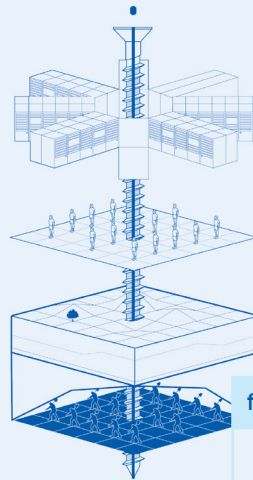


fig. 40.4 Atlas of AI, K. C.

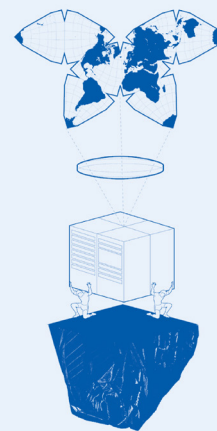
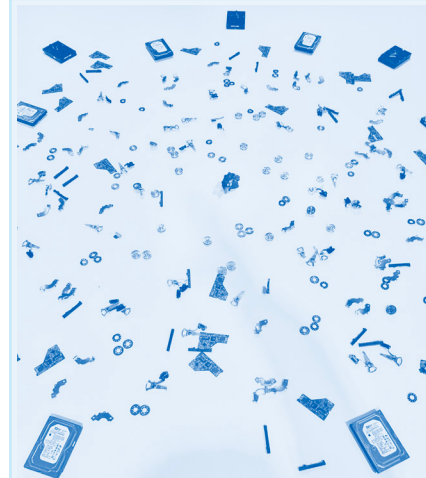
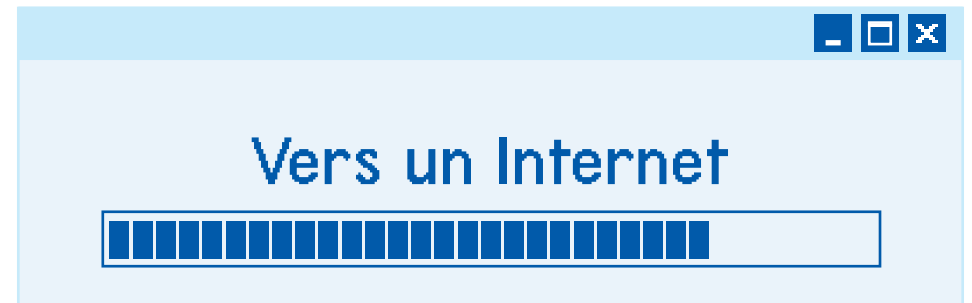


fig. 41 HDD Dissection



Conclusion



The New Oikos

More recently the house has been reconfigured by and around the computer, as a new generation of architects emerges for whom computers are as commonplace as televisions ...

— Beatriz Colomina ¹⁶¹

Starting with the AT&T ad, the domestication of the Internet through privatization becomes clear as key private actors expand infrastructure under the guise of utility for the home through capitalist growth. Infrastructure is privately owned and operated; Big Tech companies lobby for their power. These actors have a direct, although sometimes unclear or undecipherable, impact on domestic space. The symptoms explored throughout hint at the overarching imaginary of home in the 21st century, contesting the corner taken up in the world and turning it into the world itself.

Architecture in the 20th century has proposed interesting avenues for developing the house and domestic space through media, as seen in Beatriz Colomina's writing by juxtaposing home design and media.¹⁶² Similar approaches may prove productive in a changing technological landscape impacting persons identifying as citizens and netizens. Buildings change, demands for services change, and so does domesticity as we trade atoms for bits.¹⁶³ As the Internet becomes an essential part of domestic space on the same plane as water and electricity, domesticity falls into subordination to the service provider. Thus, the ubiquitous forces of the Internet deeply influence the image of home in the 21st century, some documented in this work, some intangible or ephemeral.

¹⁶¹ Colomina, *The Exhibitionist House*, in *At the End of the Century*, 160

¹⁶² Ibid & Beatriz Colomina, "The Media House," (Assemblage, no. 27 (1995): 55–66), note that both these articles follow similar themes and suggest how media has impacted the way architecture is diffused to the masses, designed and consumed.

¹⁶³ Brand, *How Buildings Change*, note that changing services is a central theme in the book; Nicholas Negroponte, "Being Digital," 4.

The domestic experience is impacted at several levels in regard to the Internet. ICTs permeate the household: boundaries collapse; hierarchies change; domestic relationships deteriorate; ads flood fields of view; priorities are shifted; the place of memory is questioned; smart artefacts are acquired; collectivity is disowned and warped; social interactions challenge geographies and borders; tweets are sent through refrigerators; media extends the self; terms & conditions blindly accepted, etc. This image of the home exists in the 21st century as a cultural echo of decisions, political and otherwise, made regarding telecommunications, the Internet's privatization, and its domestication during the late 20th and early 21st century. The Internet challenges the depiction of home and attitudes towards it. As people become accustomed to the Internet, the first order of business when visiting a friend is asking for the Wi-Fi password. At-home behaviors influence the design of home as these forces all mingle as the new image of the home challenges previous notions of domesticity.

In contrast, the domestic space in Ancient Greece depicted by Hannah Arendt in *The Human Condition* had clear boundaries between the private and public functions according to spaces, blurred over time into modern "Volkswirtschaft" or collective housekeeping.¹⁶⁴ Domestic space was the basis in which there was a semblance of ego and id distinction, where essential human needs were fulfilled in domestic space, and social roles fulfilled by men in the public interface.¹⁶⁵

¹⁶⁴ Hannah Arendt, *The Human Condition*. (2nd ed. Chicago, IL: University of Chicago Press, 1998), 28.

¹⁶⁵ Sigmund Freud, *Gesammelte Werke: Chronologisch geordnet*. (Frankfurt am Main: Fischer, 1999). Freudian Ego (Ich) and Id (Es) distinguish human needs as the Superego (Überich) might reflect some aspects of the user interface with the Internet.

The obligation of needing a house to participate in the realm of the polis in the Ancient Greek and Roman context is shifted to a requirement of Internet connection in the 21st century. The domestic space, traditionally considered a private realm according to the insights of political theorist Hannah Arendt, is experiencing a redefinition. Arendt explains this phenomenon of contemporary society as such:

*The emergence of society—the rise of housekeeping, its activities, problems, and organizational devices—from the shadowy interior of the household into the light of the public sphere, has not only blurred the old borderline between private and political, it has also changed almost beyond recognition the meaning of the two terms and their significance for the life of the individual and the citizen. Not only would we not agree with the Greeks that a life spent in the privacy of “one’s own” (idion), outside the world of the common, is “idiotic” by definition, or with the Romans to whom privacy offered but a temporary refuge from the business of the res publica; we call private today a sphere of intimacy whose beginnings we may be able to trace back to late Roman, though hardly to any period of Greek antiquity, but whose peculiar manifoldness and variety were certainly unknown to any period prior to the modern age.*¹⁶⁶

When Markus Krajewski recalls the oikos, it also recalls Hannah Arendt’s analysis and proposes that The Server is the foundation of the household; it displaces the home and introduces a new model for domesticity as seen through the symptoms of the Internet in domesticity.¹⁶⁷ Krajewski’s perspective adds a layer to Arendt’s ideas by illustrating how the traditional household has transformed in the digital age. The virtual oikos, with its reliance on digital servers, symbolizes a shift in the way individuals engage in private activities and manage their lives. The Internet, akin to the digital oikos, introduces a complex interplay between the public and private dimensions while introducing a digital dimension.

¹⁶⁶ Arendt, *The Human Condition*, 38

¹⁶⁷ Krajewski, *The Server*, 292. For quote see page 40, footnote number 43.

Krajewski’s description of the website or homepage as a “closed unit” resonates with Arendt’s emphasis on the private realm as a space separate from the public sphere, except the private realm now exists in the server, where data is collected and owned. The closed nature of this virtual oikos implies a boundary between the personal and the external, much like the physical household in Arendt’s rhetoric, making the server the deepest place of domestic experience by juxtaposing the hierarchy of the oikos’ plan. The hierarchy is now shaped into public, private, digital, back to public. Donna Haraway adds:

*The cyborg is resolutely committed to partiality, irony, intimacy, and perversity. It is oppositional, utopian, and completely without innocence. No longer structured by the polarity of public and private, the cyborg defines a technological polls based partly on a revolution of social relations in the oikos, the household. Nature and culture are reworked; the one can no longer be the resource for appropriation or incorporation by the other.*¹⁶⁸

The concept of a home, once secluded from the external public sphere, now serves as a gateway to an expansive digital world. Further displacing the Internet as it currently functions as a potential new Internet for the community, the municipality, the city, and so on, inherently changes domesticity again.

¹⁶⁸ Haraway, “A Cyborg Manifesto,” 152.

Internet Forum

In a lecture titled *Data Mourning* given at GSAPP, Columbia University, Marina Otero Verzier outlines the importance of the relationship between data and its coexistence with systems that feed it.¹⁶⁹ She highlights the irony of the digital between material extraction and displacement of indigenous knowledge and, in doing so, argues for other forms of knowledge preservations at odds with the server. With this in mind, she argues that capitalist expansionist attitudes towards data and the Internet are, by definition, unsustainable and must slow down, hence the importance of mourning data. Beyond this, the Internet still exists as a utility in domestic spaces throughout the world at varying rates of accessibility, denoting cultural preferences or outright social stratification, and does not seem to want to slow down.¹⁷⁰ Therein lies an essential hiccup of “Internet for all”: its material weight and energy consumption. The design of domestic space has a material and energetic responsibility towards the use of utilities, including the Internet. Designing the Internet, in turn, also designs domestic rituals in a public-private-digital-public understanding of domesticity.

To do so, the study of predecessors is necessary to understand the feasibility of entry points for systems as large as the Internet itself. Barcelona’s DECODE initiative functions as an experiment in digital democracy.¹⁷¹ “Nowhere were citizens’ wishes translated into policy so quickly, radically changing the image of the city.”¹⁷²

¹⁶⁹ Marina Otero Verzier–*Data Mourning*, YouTube, GSAPP Columbia.

¹⁷⁰ Tarnoff, *Internet for the People*, see chap. 2 “The Plunder Continues,” subchapter “The Internet’s Slumlords.”

¹⁷¹ Niklas Maak, *Server Manifesto: Data Center Architecture and the Future of Democracy*, (Berlin: Hatje Cantz Verlag, 2022), 60.

¹⁷² Ibid.

The DECODE project, having been tested in London with EU support, allowed the public to decide the nature of the data shared and the ones that ought to be kept to themselves. Francesca Bria is at the helm of the project, recognizing that if we choose to disrupt surveillance capitalism, the legal and public frameworks must be altered accordingly at the source where data is handled.

Gig in Chattanooga, Tennessee, decided to take the power supply into their own hands out of the private sector in 1935. The city owns the electricity distribution, not unlike Hydro-Quebec, which belongs to the public realm of Quebec. Following the same initiative, in 2010, the public Electric Power Board began offering broadband to the citizens of Chattanooga.¹⁷³ Through the use of their existing power grid, EPB was able to provide fiber to home at reasonable rates for some of the fastest speeds available in the country and the world. EPB, as a service provider, also offers a service for low-income families, giving them 100 megabits per second at a lower cost. As highlighted by Tarnoff in *Internet for the People*, Harvard researchers found that community-owned FTTH networks charge less for their services than their private counterparts.

North Dakota has a community-owned ISP, too, as private counterparts found it insufficiently remunerative to invest in infrastructure. North Dakotans took the matter at heart, investing in rural exchanges bought from major telecom and now have the possibility of 100% of North Dakota having access to gigabit Internet, as opposed to private entities generally neglecting rural areas. The network’s primary goal is to offer the best possible service and keep reinvesting.¹⁷⁴

¹⁷³ Tarnoff, *Internet for the People*, see chap. 3 “The People’s Pipes.”

¹⁷⁴ Ibid.

In Detroit, racial inequality in broadband is apparent and deplorable, in the same vein as digital redlining. Since 2016, the Equitable Internet Initiative has worked on the Detroit Community Technology Project, bringing broadband into the homes of previously neglected communities at zero cost to the user. The former director of the operation also found that community ownership of infrastructure leads to a likely participation rate in maintenance, evolution, and innovation.¹⁷⁵ With a pathos of promoting the community's long-term health through its social, economic, and environmental axes, the EII highlights the possibility of the Internet becoming a communal resource and catalyst for the well-being of inhabitants.¹⁷⁶

The opposite is sometimes true: communities willingly evade the Internet in search of stronger community ties. Going off-grid is nearly impossible, “giving rise to so-called Wi-Fi refugees.”¹⁷⁷ The National Radio Quiet Zone surrounding Green Bank, Virginia, has banned mobile and Wi-Fi signals under state and federal law because of the National Radio Astronomy Observatory, avoiding radio noise for deep space research. Long-term residents are at odds caught between new influxes of Wi-Fi refugees, at times eco-anarchists, at others, til-foil hats, and laws hindering their technological up-to-dateness.¹⁷⁸

¹⁷⁵ Ibid, see subchapter “The People Rule”

¹⁷⁶ Ibid.

¹⁷⁷ Garutti, *Our Happy Life*, 94.

¹⁷⁸ Ibid.

Compiling

Free/Libre Open Source Software as ideology or *modus operandi* presents a different approach to the Internet to displace power structures as they currently exist on digital interfaces and the end user. Horizontal and participatory in nature, FLOSS allows users to customize their experiences and share their work using Open Source code, but it should not only settle at this. FLOSS outlines a framework and should not be banalized into simply democratizing and empowering. Theodora Vardouli and Leah Buechly elaborate as such:

*...FLOSS exemplifies both a new model of production and a social vision, building on the emancipatory potential of non-hierarchical and egalitarian production where individuals and collectives can access, modify and distribute the technologies they utilize. Denoting both a pragmatic organizational model and an ideological position, the ideas and practices of FLOSS have now transcended the world of software and are gaining ground in the collective imaginary.*¹⁷⁹

In a spirit to challenge the Internet as it operates in the status quo, FLOSS may be utilized to redistribute responsibility in the chain of command of the Internet and its relationship to domestic space. These ideas are developed in Niklas Maak's *Server Manifesto*, Ben Tarnoff's *Internet for the People*, James Muldoon's *Platform Socialism*, and Ethan Zuckerman's *The Case for Digital Public Infrastructure*, where the imaginary of home and its social role shifts again its role within the network landscape.

Maak: *What is missing above all, however, is a place where one can understand, and make visible to a large majority of the population, what the situation actually is—that governance, the governability of communities, cities, and countries, is no longer possible without access to data; that Europe and Africa are politically and technologically squeezed between two hegemonic blocs—*

¹⁷⁹ Theodora Vardouli, and Leah Buechley. “Open Source Architecture: An Exploration of Source Code and Access in Architectural Design,” (*Leonardo* 47, no. 1 (2014): 51-55), 51.

on the one hand, surveillance capitalism, in which tech companies are taking over the healthcare system and encroaching on security, undermining education policy and other sovereign tasks of the state, and on the other hand, the Chinese Big State, with its social point system and the ultimate abolition of individual liberties. Both Europe and Africa urgently need to free themselves from digital colonization—which is difficult when the state, the public sector, has largely abandoned the political shaping of a digital future and handed it over to private digital corporations. Architects have played a strange role in this game so far: while the engineers of the server farms work on important ideas for saving energy, their architects are primarily cosmeticians; they beautify what needs to be legally rebuilt, aestheticizing what should in fact be political. The past few years have been marked by a new privatization of cities and societies, by their reshaping according to the commercial interests of corporations that exploit their data. The consequences for democratic life, for fundamental ideas of self-determination and social equality are not foreseeable.¹⁸⁰

Tarnoff: *What comes after the online mall? When real malls die, birds build nests in the food court. Bushes and trees claim the floors and walls. The enclosure no longer really encloses: skylights shatter; doors hang open, the line between inside and outside breaks down. Some decades or centuries later, a forest appears. We can imagine something similar happening to the online equivalents. What's important is the pluralism of this picture. Down the stack, the community network is the main character in the making of a democratic Internet. Up the stack, it's not quite so straightforward. There is no main character. The greater diversity of forms one encounters at this altitude, the distinctness of the different online malls and their entanglements, requires a greater range of approaches.*¹⁸¹

Muldoon: *We need to shift our focus from 'privacy, data and size' to 'power, ownership and control'. The first set of issues are important, but they're secondary to a deeper set of concerns about who owns the platforms, who has control and who benefits from the status quo. Technology can either be controlled by private companies and used to generate profit for the few, or it can be directed by communities to benefit the many. Reclaiming our sense of collective self-determination requires a new kind of platform economy.*

¹⁸⁰ Maak, *Server Manifesto*, 56

¹⁸¹ Tarnoff, *Internet for the People*, see chap. 9 "Toward the Forest," subchapter "Birds in the Food Court"

*How do we imagine an alternative that is neither private oligarchy nor unaccountable state bureaucracy – an alternative outside of rule by Big Tech or Big State? The answer lies in new forms of participatory and decentralised governance which place human freedom over profits and ensure the benefits of technology are equally distributed. It involves citizens' active participation in the design and control of sociotechnical systems rather than their after-the-fact regulation by a technocratic elite. I call this idea platform socialism – the organisation of the digital economy through the social ownership of digital assets and democratic control over the infrastructure and systems that govern our digital lives.*¹⁸²

Zuckerman: *The real civic impact of a wave of innovation in special-purpose social networks would go beyond learning about how online communities can be better managed. It would contemplate the true integration of online and offline civic processes.*¹⁸³

Redesigning the Internet also means designing potential communal initiatives around Internet infrastructure as a catalyst to reinforce locality. Internet infrastructure can be celebrated and debated in the public domain, its role intrinsic to the private. It is also an opportunity to design domesticity itself in the 21st century as the meaning of home gains flexibility. In this mindset, domestic space is a reflection of local and social landscapes with the addition of extended social media interfaces forged via the Internet with the public-private-digital-public reflection. Much like the Internet reflects its users. The change necessary in digital living is through data sovereignty and autonomy, a change where the total weight of the network is portrayed adjacently to domestic space, reinvigorating social functions of domestic space and socio-local functions around the recognition of the digital as part of everyday life reflected onto the local built environment.

¹⁸² Muldoon, *Platform Socialism*, see introduction.

¹⁸³ Zuckerman, Ethan. "The Case for Digital Public Infrastructure." Knight First Amendment Institute, January 17, 2020. <https://knightcolumbia.org/content/the-case-for-digital-public-infrastructure>.

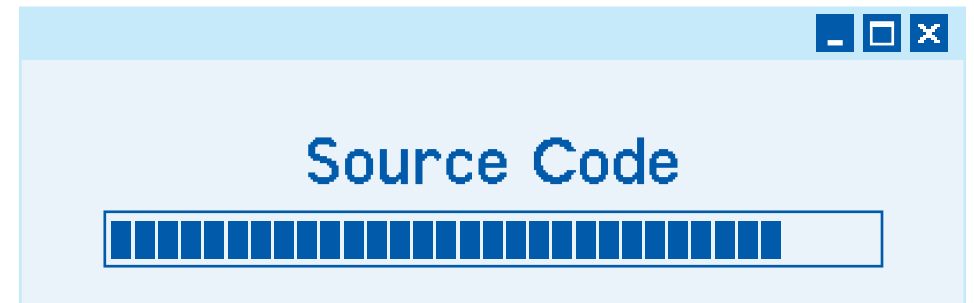
The premise of this research is to truly make an open-source architecture for domesticity in the context of a community, digitally, programmatically, and physically. The goal is to hand back the power tied to memory back to its creators. In conclusion, the privatization and subsequent domestication of the Internet at the turn of the 21st century have challenged the very fabric of domestic life, socio-communal functions around it, and the necessary extraction of all kinds to support it. As Hito Steyerl puts it, the internet is moving offline.¹⁸⁴ Users are in feedback loops with the Internet, as they were with their close communities prior, influencing quite literally everything. The architect's responsibility in this context is to design within this new fabric responsibly, understanding the facets of new domestic life impacted by the Internet, which shrouds the changing poetics of domestic space in its blue glimmering mantle.

The design of space is no longer an indicator through which we can detect, identify, and track societal shifts or even revolutions underway during our present time – built space is no longer zeitgeist or manifesto. Instead we must now investigate how the principles and the communication systems of the project of happiness, rooted in a different concept of “measuring,” have become generative. What we measure is now decided by companies and organizations who identify the personalities, brands, and objects worth tracking – such that what we measure can range from new relational systems among neighbours, friends, and strangers to television shows and to different conceptions of time and chronotype.
– Francesco Garutti ¹⁸⁵

¹⁸⁴ Hito Steyerl, “Too Much World: Is the Internet Dead?,” e-flux Journal #49, November 2013. <https://www.e-flux.com/journal/too-much-world-is-the-internet-dead/>.

¹⁸⁵ Garutti, *Our Happy Life*, 59.

Notes



Defragmentation

The research presented takes on the form of a quote-heavy text. This deliberate decision is a stylistic choice to emulate the plurality of voices encountered online and through media. Ceaseless bickering, objection, *yes and*, reinforcing, and assemblage, as it exists on the Web. Just like analyzing a comment section and collaging ideas to create a uniform work is akin to what *corecore* is to online videos. *Corecore* is a product of 2020's youth culture, emulating internet aesthetics and memes with short videos chaining different videos to create new narratives.

The research cannot be claimed as complete. Completing research on a topic as broad, vast, World Wide even, as the Internet since the 1990s is impossible. Instead, the choice became to provide an overview of diverse topics to provoke reflections on domestic life with the Internet as a central actor. Akin to short-form Internet videos, the chapters never exceed four pages, at times referring to each other, poking at diminishing attention spans.

This research is accompanied by a video hosted on the Internet at the time of publication. It shall live on a hard drive somewhere in the world until its inevitable wipe. The video is titled *Adam is Extremely Online* and approaches most topics explored in this publication without going in-depth. It adds depth through cultural references and audio-visual media.

Selfish in nature, this research is introspective. I wanted to discover my own identity through the elements constituting my upbringing.

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Figures

Fig. 1 Author circa 1999

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Fig. 2 Author circa 1999

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Fig. 3 Bedroom, N. A.

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Fig. 4 pepe var. 1

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Fig. 5 CLICK!

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Fig. 6 AT&T’s Banner Ad

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Fig. 8 American Hearth

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Fig. 10 AT&T Circuit Switching

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Fig. 11 Broadband Eastern Map 1966

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Fig. 12 Internet Cables (he.net)

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Fig. 13 Learning from Las Vegas (Cover + Page 12)

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Fig. 14 Astronaut in Data Space OMA

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Fig. 17 Movie Still from *Her*
Still features Joaquin Pheonix’s character Theodore Twombly in front of a computer in *Her* directed by Spike Jonze, 2013.

Fig. 18 Wi-Fi
Drawn by Author

Fig. 19 Netscape
Screenshot of Netscape 1.0 User Interface. Netscape.

Fig. 20 Relatable
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Fig. 21 You’ll need the Internet for this
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Fig. 22 Street Near One Wilshire
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Fig. 24 Meme
Meme depicting the “American Piazza,” or rather, parking and generic storefronts using standard top text – bottom text format with Impact font.
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Fig. 26 Lain's Duplicate

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Fig. 30 Extremel-Self Excerpt

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Fig. 31 Narcissus

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Fig. 35 Young Expert

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Fig. 37 Servers as depicted in Silicon Valley

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Fig. 41 HDD Dissection

Photo taken by author of exhibition *Image Ecology* at C/O Berlin. September 2023.



