The Insidiousness of Information Overload

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## Introductory Note

In 2018, there was still a breathless excitement about information access, expansion, and bounty, leading to futurescaping scenarios of interactive smart cities, self-driving autonomous vehicles, and 5G inspired virtual environments that we shall all live and interact in. The promise of the internet (and all things included in that catch-all term) was still expressed in the boundless, limitless, and accelerated information which forms the basis of Big Data dreams as well. However, somewhere around that time, there also emerged a different conversation – about excessive data streams, relentless notifications, algorithmic manipulation, and the capacity to discern the veracity, validity, or value of the information that was circulating so fast that any meaningful interaction with it became difficult. The proliferation of ‘fake news’, in particular, made it clear that the extraordinary and uncontrolled spread of digital information had suddenly erupted as a critical and unforeseen problem.

In addition, with more and more people finding a voice online – we were globally celebrating some powerful hashtags like #metoo and their local consequences – there was also increased backlash, online violence, and abuse directed at them through institutional and informal organization. The excess of information, or information overload, was no longer just an information design and data management question; it had become a weaponized mode of address, leading to silencing, intimidation, and harm. While we were processing these questions, the COVID-19 pandemic shrunk our lives into rectangles on screens and the weariness of increased digital engagement – encapsulated in the cultural zeitgeist as ‘Zoom fatigue’ – led to people’s disengagement from decision-making. People were relying more on automated algorithmic structures to curate the information that they engaged with. We were slowly recognizing the unbearable lightness of digitization and the insufferable weight of information, realizing that the thrill of plenty was now manifesting as the tyranny of overload.

Information overload became the unspoken state of digital being and it took us by surprise. The assurances of search engines, database management, algorithmic curation, peer-2-peer dissemination, wisdom of crowds, intuitive information shaping, and emancipation from the task of remembering everything by putting it into storage seemed to have done their rhetorical work so well that when we started recognizing information overload, it felt like it was new, sudden, and unexpected, and we didn’t quite know how it happened. This essay is an attempt to first recognize and identify this state of information overload as a cultural and political, not just technological, question. It examines the cost of being in this perpetual state of crisis of informational overload and how it shapes our conversations about action and activism. More urgently, it refuses the framework of unexpectedness and surprise and shows how information overload is not the bug but rather the feature of computational network design, and one that has been a long time in the making.

This essay looks at significant milestones, judgments, policies, acts, regulations, controversies, and cultural phenomena that have shaped and signaled the rise and making of information overload. It takes pastiche historicization to break the pattern of responses that accompany the newness of digital media crises: the finding of new digital tools to counteract the existing digital tools and pathologizing the user as the corrupt variable responsible for these crises. When it comes to digital media, the crisis of the now invariably looks for solutions in the future, as if the immediacy of the crisis also precludes all historicity. In this essay, by focusing on the infrastructural production of overload and the informational shaping of the user, I examine how we got to this state of information overload and the crisis of the informational subject.

The first section tries to understand how the state of overload was designed and naturalized through regulatory and policy frameworks on the one hand, and the favoring of specific forms of informational behavior on the other. The second section establishes that the user, who is often seen as the agential unit of digital cybernetic feedback loops, is compromised in agency and autonomy through the championing and the perpetuation of informational overload. Both sections together present a specific account of how we got to this point where information overload is so ubiquitous and insidious that we do not even recognize it as a critical condition and do not understand the materiality and historicity of how it came about. Through an archive of milestones in India – some popular, some lesser studied – this essay offers a way of reading some of the most pernicious problems of our times as a result of the engineering, cultural shaping, and political proliferation of the state of overload.

## SECTION I

## INFORMATIONALLY YOURS: OVERLOADED

In July 2020, when India, and the rest of the world, was reeling from the COVID-19 pandemic, a YouTube video went viral in the country.[[1]](#footnote-1) Made by a self-described *YouTuber and influencer* Shubham Mishra, the video shows Mishra sitting in his car, uttering profanities in unchaste Hindi. He threatened a stand-up comedian Agrima Joshua with physical violence and even rape. Mishra, a staunch nationalist and a moderately popular influencer, who regularly created offensive and threatening videos in the name of *calling truth* for his roughly 2.5 million followers, was aggravated by a stand-up routine or set that Joshua had performed a year earlier in 2019. In that set, Joshua mocked the Indian government’s plans to build a massive statue of the beloved nationalist icon Chhatrapati Shivaji Maharaj off Mumbai’s shoreline and the way people on the crowdsourcing platform Quora were exaggerating and embellishing the features of the proposed statue – laser eyes to kill terrorists, solar cells to power the entire state of Maharashtra, and GPS trackers to identify enemies, for example.

In his three-minute video, like a professional social media berserker, Mishra managed to at once profess his love and loyalty for Shivaji, appoint himself as the vanguard of all communities aggrieved by this attack on their religious/nationalist leader, and call for the cancelling of such *progressive* stand-up comedies. Announcing his respect for women, he went on to lambast Joshua, call her the ‘N’ word (coincidentally doing it while Black Lives Matter was taking global anchor in its second uprising), and casually threaten her with rape and death while inviting his followers to join him in teaching Joshua a lesson.

The video, which has since been deleted and re-uploaded multiple times, went viral amidst polarized responses from those supporting Mishra and those appalled at the blatant display of toxic masculinity and aggression woefully naturalized in the entertainment-hate complex of digital social media. The renewed interest in this video a year later led to a series of quick attacks on Joshua in a manner that has become all-too-familiar by now. The ruling right-wing party in Maharashtra unleashed an army of trolls who started threatening and intimidating Joshua for insulting their beloved warrior king Shivaji. Pratap Sarnaik, a member of the Maharashtra legislative assembly representing the nationalist party Shiv Sena, wrote to the home minister of Maharashtra Anil Deshmukh to prosecute the comedian for making contemptuous comments against Shivaji.[[2]](#footnote-2) Deshmukh himself tweeted to his affronted populace that he had ‘instructed CP (Commissioner of Police) Mumbai and IG (Inspector General) Cyber to take legal action expeditiously’, and urged everybody to ‘maintain calm’ and let the law take its course.[[3]](#footnote-3) Caught in the storm, Joshua tweeted an apology video and took down the offending recording, even as angry mobs echoed Mishra that Joshua should be taught a lesson. They ignored her apology, ransacked the café where the comedy sketch had been hosted, and committed multiple acts of vandalism and destruction.[[4]](#footnote-4)

This narrative of digital bullying, intimidation, harassment, threat, violence, and incitement to sexual assault that Joshua experienced – in an intense viral cycle – follows an all-too-familiar trope of women’s experiences on digital social media in India. It exemplifies the 2018 Thomson Reuters Foundation report that pegged India as one of the most dangerous countries for women[[5]](#footnote-5) and the 2020 Global Press Freedom Index which ranked it 142 out of 180 countries for erasure of the right to free speech.[[6]](#footnote-6)

The Joshua–Mishra story might well have ended here, except for an unexpected narrative twist. Outraged by Mishra’s particular brand of misogyny, a growing movement began protesting the impunity with which Mishra, together with a slew of hate-spewing influencers, was apparently able to continue unaffected. Following a public outcry, the National Commission for Women (NCW) took cognizance of the case,[[7]](#footnote-7) and Mishra was arrested by Vadodara Police on charges of obscenity, outraging the modesty of a woman, provocation to break public peace, public mischief, and criminal intimidation. Police also seized his phone and booked him under the Information Technology Act, 2000, for publishing and transmitting lascivious material.

The Joshua–Mishra story is unremarkable in how such incidents have become normalized on the Indian social web. However, some responses were significant. Many of those responsible for joining the social media outrage that had led to Mishra’s arrest were surprised, alarmed, and angry, but also genuinely shocked to see their favorite video-sharing platform hosting such content. Several were apparently discovering such content for the first time on the web. There were heated discussions on the YouTube video, on Quora and on Reddit, about how this might be *scripted content*, a *publicity stunt*; how this amount of hatred is *not natural*. People were busy examining Mishra’s previous videos (his followers and video views increased tenfold in the process) trying to present this instance as anomalous, hinting at a larger conspiracy theory of who might have *put Mishra up to the job* or what might have *triggered him* to use such language. It seemed impossible to view casual misogyny as the naturalized state of digital entertainment in influencer cultures. There appeared an overwhelming felt need to find deeper, somehow more profound, explanations alongside hidden conspiracies that might have made this video at all possible.

Mishra’s supporters, too, were analyzing his loathsome diatribe, seeking to prove that, while admittedly violent and hateful, it did not either explicitly or conclusively threaten Joshua with rape. Progressive liberals were, they claimed, twisting Mishra’s profanity-laden words and misinterpreting them because he was standing up for national honor. In his own apology video, which he was forced to make after being threatened with legal action, Mishra reiterated that he had not attacked Joshua, but rather defended the honor of his people. He was indeed the *victim* here, of conspiracy, of being baited by the secular press and media to suit their own agendas of nation-hating.

For Mishra’s supporters and critics, this in-your-face video and its production and reception were deemed suspicious. Debates arose on both sides on what, to use Kellyanne Conway’s phrase, the ‘alternative facts’[[8]](#footnote-8) were, how the video could not be taken at face value, and how it didn’t necessarily mean what it said.

I point here to the ease with which both outraged factions slipped into the examination of conspiracy, unable to see the obvious. Together with the large amount of information generated around this entire phenomenon, a critical new mode of subjectivity was created: that of being *informationally overloaded*. I propose that the natural propensity to take almost *any* digital content and expect something *more*, something *hidden*, something *extra* than what meets the eye or is available on the surface indicates a particular condition where blame, responsibility, and culpability become ever negotiated and constantly oscillating values without fixity. The production of Joshua, as a perpetrator who had to apologize for her acts, and the presentation of Mishra, as a victim being wronged by angry Twitterati, are not exceptional, but rather a regular occurrence in an ever-expanding zone of crises produced by social media.

Information overload produces, then, a state of permanent crisis – one that allows for inversions and suspensions, and allows for fixed values to come *unstuck*, enabled by a set of paradoxes that frame our debates around contemporary digital social media. In an attempt to unravel these paradoxes, this essay provides a symptomatic reading of three major *digital crises* that have emerged in India (along with the rest of the world) over the last two decades that saw an astonishing democratization of digital technologies even as it saw the digitization of democracy. Building through these crises, the sections in this essay help us understand the implications of a naturalized information overload, and how such a condition allows us to unpack the almost paralyzed debates on misinformation, verification, fake news, and post-truth – contexts that destabilize nearly all our conversations on political governance, from climate to social justice.

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## The Information (Overload) Crisis

I begin this section with a fundamental proposition: In the last few years, without us even realizing it, and in an almost nondramatic fashion, we have foundationally changed our idea of who we are as information subjects. We increasingly define information as a *condition* of our existence, a condition of naming ourselves and each other. Our informational condition is now also what defines our authorship, which in turn defines who speaks, on behalf of whom, in what voice, and with what authority. Our questions of agency, choice, freedom, and truth are all tied to conditions of informationality.

It appears also to be widely accepted that such a condition of informationality exists at three different levels, in the three kinds of relationships we have with information. First, as subjects *of* information, where we don’t need personal and social media or smart and quantifying devices to tell us that, primarily, when we talk about anything at all, we talk about ourselves. A large part of our everyday life is spent in producing information about who we are, what we do, and how we relate to the world around us. It is not a surprise that, with the rise of easy-to-access digital devices, we built *social media* which built something that was not *new* as much as it was a documentation of our authoring of our selfhood immersed within this informational condition.

At a second level, informationality also makes us subject *to* information, as it shapes our informational realities and the contexts we live in. Our identities, subjectivities, opinions, choices, tastes, preferences, and desires are continuously designed and influenced by a variety of other information hubs. This is at the heart of communication and marketing, and this is also the hold, in analogue media, of advertising and propaganda. It is, then, not surprising that with the rise of algorithmic data mining practices we are being written more and more into information structures that *determine various markers of who we think we are*. An emerging global concern of invisible data being stored and circulated and manipulated and reintroduced into our lives is essentially a recognition that we are more written against than writing.

Third, and perhaps most significantly, informationality also makes us *subjective to* information. Not only do we produce habits of filtering information that do not directly pertain to us, we also have a *positive bias* toward information that is relatable, accessible, and customized to our specific needs. These needs box us into filter bubbles in digital networks, and explain why so many of our conversations are in echo chambers of network neighborhoods that protect us from people who are unlike us. We are aware that information can be excessive, intense, and paralyzing, and hence we have learned to selectively filter out the streams that can sustain our modes of being. This relationship is historical as well as ingrained in our daily practices of life, labor, language, and love. And because this relationship is so central to our very biological, social, political, and emotional survival, we have guarded it fiercely across history.

One of the ways in which we have protected ourselves within such a relentless informationality is by thinking about what constitutes a reasonable amount of information for a human person to process, analyze, and execute. Hence, the much used, abused, and sometimes dismissed notion of information overload. The moment you read this phrase, I know you have a reaction to it – you are either rolling your eyes, shaking your head in empathy, or bookmarking it for later because right now you have a dozen other tabs open that are competing for your attention.

While information overload has been talked about extensively in the last decade or so, connected with precarious labor in attention economies, with scattered and fragmented lives shaped by #FOMO (Fear of Missing Out), and data circulation in digital networks, it is good to remember that it is not as contemporary a concern as it appears. Ann Blair, a historian of information, points out that in the Judeo-Christian traditions of the West, the concern around *too many books* surfaced as early as in the 1st century, where in Ecclesiastes we are cautioned: ‘[But beyond](https://biblehub.com/hebrew/3148.htm) [these,](https://biblehub.com/hebrew/1992.htm) [my son,](https://biblehub.com/hebrew/1121.htm) [be warned:](https://biblehub.com/hebrew/2094.htm) [there is no](https://biblehub.com/hebrew/369.htm) [end](https://biblehub.com/hebrew/7093.htm) [to the making](https://biblehub.com/hebrew/6213.htm) [of many](https://biblehub.com/hebrew/7235.htm) [books,](https://biblehub.com/hebrew/5612.htm) [and much](https://biblehub.com/hebrew/7235.htm) [study](https://biblehub.com/hebrew/3854.htm) [wearies](https://biblehub.com/hebrew/3024.htm) [the body.](https://biblehub.com/hebrew/1320.htm)’[[9]](#footnote-9) This warning was echoed in moral philosophy where Seneca, in his *Treatises*, mourned the dangers of abundant information:

Even for studies, where expenditure is most honorable, it is justifiable only so long as it is kept within bounds. What is the use of having countless books and libraries, whose titles their owners can scarcely read through in a whole lifetime? The learner is, not instructed, but burdened by the mass of them, and it is much better to surrender yourself to a few authors than to wander through many.[[10]](#footnote-10)

Similarly, even at the height of the accumulation craze in the mythical libraries of Alexandria in Egypt, the concern about *How much is too much?* was very much alive. As Kathleen Fitzpatrick shows in her history of information design, *Planned Obsolescence*, it was the idea that too much unfiltered exposure to information might paralyze the reader that gave rise to librarians as custodians and keepers of the keys rather than as access points and facilitators of knowledge.[[11]](#footnote-11) Mark Rose talks about scribal cultures in the 5th and 6th centuries a.d. in England, where the Church educated young men to take the sacred duty of copying the Holy Writ for circulation across the land.[[12]](#footnote-12) However, not just anybody could become a scribe. Apart from privileges of birth and gender, the to-be-scribe also needed to show moral fortitude and the capacity to deal with the excessive information he would be exposed to in the course of his literary education. Even when scribes were finally granted an epiphany and tasked with the holy book, they were kept in cloistered isolation so as not to transmit any possible madness that may emerge from excessive sensory and information overload.

At the turn of the 16th century, with moveable type democratizing information access, the concern around information overload took on a more gendered tone. As Virgina Woolf, in her 1929 novel *A Room of One’s Own*, reminds us, in her commemoration of Aphra Behn, ‘the blue stocking with an itch for scribbling’, the trope of too much information leading to more depravity was also used as a justification for keeping women from reading or writing literature.[[13]](#footnote-13) Kate Millet, in her seminal 1970 thesis *Sexual Politics*, reminds us that there was a systemic relationship between madness and reading, where the woman was considered too fragile to deal with the cerebral processing that came as a part of too much exposure to information.[[14]](#footnote-14)

In the late 19th century, the arrival of mass communication, especially the telephone, opened the door to anyone being able to call to give you information – spammers, cold callers, wrong numbers, heretics with dubious content, strangers with predatory intent –putting us all in the continued danger of lapsing into a state of excessive information that would leave us uncertain about our own identities. The anxiety at this point was not about our *ability* to discern credible information from lies, but about an *instability in our sense of self* and its well-being.

So strong was this idea of sudden bursts of information overload as harming the self, that it even translated into facetious-sounding but earnestly written editorials vilifying and demonizing the technology apparatus itself. Carolyn Marvyn, a historian of information technologies, in her book *When Old Technologies Were New*,fishes out an editorial from *The Electrical Review* that relates the story of an affluent Chicago woman who was looking for a housekeeper she could entrust her children to while she traveled for a family emergency. A housekeeper who was tending to another house recovering from scarlet fever was recommended. As Marvyn recounts, ‘…she was urged to expedite arrangements by telephone’. At first, she was ‘aghast at the proposition, and was sure there would be great danger of infection’ by wire, her fears a metaphor for all the elements of the world beyond domestic control. After weighing the arguments of a knowledgeable friend, she concluded:

Well, I suppose I must risk it. I’ll have a servant call up the house and tell them be sure that the housekeeper changes her clothes and the sick children aren’t in the room where the telephone is; then I may feel justified under the circumstances in talking with her.

In 1894, *Electrical World* had reported that the ‘editor of a prominent Philadelphia daily newspaper had cautioned his readers not to converse by phone with ill persons for fear of contracting contagious diseases.’[[15]](#footnote-15)

This idea of information overload – either caused by unexpected information, excessive information, shocking information, dangerous information, or misinformation, all resulting from what Alvin Toffler described in 1970 in his famous *Future Shock* as ‘an information explosion’ – has been naturalized and brooded over.[[16]](#footnote-16) For those of us old enough to have lived through the turn of the millennium, we still have memories of the Y2K scare where the entire world order was going to collapse, as time-counting mechanisms of modern-day computers, unable to grasp the millennial turn, would throw us into an information chaos. The crisis-that-never-happened was perhaps best enshrined in the iconic Nike advertisement that showed a jogger ‘just doing it’ in a world slowly deteriorating into Y2K anarchy.[[17]](#footnote-17) The biggest worry about Y2K was not just that infrastructure would crash – satellites collapsing, planes crashing, banks coming to a halt – but a sudden savagery that we would all regress into because the machines that regulated our information consumption would give up on their task of information regulation.

I give you this huge, ahistorical, symptomatic overview to go back to my proposition – that somewhere, in the first two decades of the 21st century, our relationship with information shifted, and that this shift is perhaps best characterized by information overload. This is not, as my sketchy history shows, a new phenomenon – every technology that sought to expand knowledge documentation and information production has triggered worries about who we will become. In short, we have always worried about what happens when we lapse into information overload.

What is, however, *new* for the digital turn that we live in is that we may have, perhaps for the first time in history, *stopped worrying about information overload*. Or, to make it clearer, we no longer think about information overload as the exceptional moment when we get bombarded with too much information. Such a condition is not evidenced through isolated incidents, nor does it require special coping mechanisms and skills to deal with it and escape it. Our overflowing inboxes, our continuous stream of notifications, the smart devices we see, and the smarter devices that are invisible but watch us, have all created a new informational subject – a subject whose *ontology* lies in information overload. This has become our naturalized state of being, not a futuristic phenomenon or a momentary condition to be separated and dealt with in isolation.

If the older information subject was a subject worried about information overload and how to escape it, the new information subject understands itself *through* the condition of incessant information. This is why we participate in the continuous mining of data by devices that give us beautiful visualizations masquerading as profound self-knowledge and truth. It is perhaps why we subject ourselves to the ever-expanding field of algorithmic surveillance that gives us convenience for privacy. This may also be why we see ourselves as willfully participating in polarized positions that are neither illustrative nor reflective of our subjective selves, but performative of the networked mechanics that shape the digital.

I seek to establish this naturalization of information overload as a *condition* of crisis, which not only engineers and perpetuates the contemporary crises around automation, fake news, algorithmic polarization, and filter bubbles, but is a *crisis in itself*, which needs to be unpacked beyond the questions of usage, penetration, regulation, and control that are often addressed when dealing with information overload.

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## The Information Overload (Continual) Crisis

The information overload crisis, as in the case of the Joshua–Mishra controversy, can be studied – and has indeed been mainly analyzed – at the level of content: in editorials, analyses and conversations about the nature of hate speech and the polarizing formats of digital engagement. However, such analyses do not always help us understand the phenomenon where *both* Mishra and Joshua are presented as victims, and how *all* the narratives seem to be received as potentially fake and are thus at once informationally overwhelming as well as deficient in credibility. This particular condition of information overload as both *saturated* and *depleted* by informationality has to be understood as *itself* a crisis as opposed to the *reason* for a crisis. It establishes information overload not as a future horizon or a historical event but a *specific condition of the digital* perpetuating and generating itself as a continuous condition.

In technology studies, and particularly in critical code and software studies, such a crisis has received a lot of attention. The French media philosopher Bruno Latour proposed the idea of ‘reversible black-boxing’, where he takes the example of a broken overhead projector to propose that, upon breakdown, a technological object transforms from being an enclosed object to a network of different agents – actants – making up the performance or idea of the object.[[18]](#footnote-18) This framework has found much traction because it recognizes the breakdown as a state of crisis where the user’s attention is directed from the system as an enclosed object to an awareness that the system is constituted by different parts.

It is possible to take the Joshua–Mishra case as an instance where the expected smoothness of social media gets interrupted by the intrusion of the legal apparatus that seeks to regulate the content and its distribution. It is important to notice that the Terms of Service of digital services and the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 were ineffective in actually curbing the spread and the visibility of this hate speech. Despite multiple people reporting the videos and the call for action, neither Instagram nor YouTube took responsibility for censoring and removing such content. Even as people were commenting on the broken nature of this social media engagement, amplified by discussions in traditional media, it was clear that multiple agents were needed to make sense of this digital crisis. The swift intervention of the law, the arrest of Mishra, the stepping in of different celebrities and politicians, the response from the political party that sought to investigate Joshua as also culpable, all suddenly make themselves visible in the infrastructure of otherwise opaquely transparent interfaces of our digital devices where these crises play out.

American sociologist Susan Leigh Star builds on Latour’s work in her ‘call to study boring things’.[[19]](#footnote-19) She seeks to understand crisis as located in neglected and invisible systems – not systems that work and might break, but systems that have long stopped working, but are still around, forming a massive infrastructure of what German media theorist Wolfgang Ernst calls ‘undead media’.[[20]](#footnote-20) While Star was particularly interested in thinking of ‘computers as information highways’ and ‘as symbolic sewers’ to open up the back ends of global information flows, which otherwise remain ‘buried in inaccessible electronic code’, Ernst, by contrast, was identifying the crisis in the time criticality of digital computational media which converts the computer into ‘a complex time machine’ and manifests it as ‘equiprimordial’ (temporally undistinguishable).[[21]](#footnote-21) Media do not have a historical past, says Ernst: while in operation, they exist outside of historic time in a state of micro-temporality, a synthesis of the past and the present in the now.

New Media theorists Hertz Garnett and Jussi Parikka draw on Ernst’s idea of crisis as constituted in the very operation of media, and propose that *all media is always in a state of degeneration* and hence always on the precipice of obsolescence – a state of continual crisis. Hertz and Parikka present ‘planned obsolescence’ as a crisis horizon that can both be bent and differed as art and design practices ‘resurrect, reanimate, and reappropriate’ discarded dead media, turning them into new assemblies of ‘zombie media’.[[22]](#footnote-22) This resonates with Lauren Berlant, who, in their exposition on *Cruel Optimism*, reminds us that the naturalization of crises of ‘life-building’ has so overwhelmed our experience of living that ‘adjustment seems like an accomplishment’.[[23]](#footnote-23) Critical Code studies theorist Wendy Chun begins her book by claiming that ‘new media exist at the bleeding edge of obsolescence’, thus necessitating a continued state of ‘updating to remain the same’.[[24]](#footnote-24) Chun argues that the ‘twinning of crisis and code/habit’ (perhaps a perfect description of social media engagement) ‘has not diminished crises, but rather proliferated them through an unending series of decisions and unforeseen consequences that undermine the agency they promise’.[[25]](#footnote-25) In her characteristically pithy way, Chun announces that in ‘new media, crisis has found its medium: and in crisis, new media has found its value, its punctuating device’.[[26]](#footnote-26)

Information overload as a condition of crisis is itself critical because it does not seek to dissolve itself or offer any resolutions for the short-lived but intense moments of engagement it generates. Rather, it normalizes a state of continual crisis, manifested in different events that rise and fade without the crisis ever going away. It is from this sense of a crisis that we shall now try and make sense of how digital discourse and practice have been shaped in India.

This essay lays out the story of the internet in India as a story of the naturalizing of information overload. It tries to make sense of current debates around disinformation, fake news, post-truth, and governance as structured and informed by such naturalization. In order to do this, it establishes three paradoxes that mark the naturalization and anchors these paradoxes in *social media crises* that have pockmarked the history of the internet(s) in India. I hope to retell the story of infrastructure, governance, regulation, and policy through the often-overlooked questions of affective, libidinal, and lived experiences of the people. This will hopefully also return our focus back to the human actors who are often a part of the technological crises, but are made invisible by the focus on the technological terrain and the idea of the user as the predominant way of describing and resolving these crises.

## Your Access/Accessing You

On August 25, 2015, the state government of Gujarat imposed an unprecedented internet shutdown on the entire state.[[27]](#footnote-27) For the state, which had built itself up as the poster child of digital development, through reurbanization, opening up public sector projects for private investments and offering tax breaks to information technology companies to build their development-making centers in the state,[[28]](#footnote-28) this was an unexpected and unprecedented move. The promise of economic and inclusive growth, enshrined in the ruling party’s slogan *Sabka saath, sabka vikas* (Everyone’s support, everyone’s development), and the image of Gujarat as a new IT state that was investing in the digital future, made this an unexpected site for a shutdown. While other parts in the country have a continued history of internet shutdowns, these were generally in states that saw conflict, where the suspension of digital access and civil liberties appeared necessary for security and sovereignty.[[29]](#footnote-29)

The movement that ushered Gujarat into this state of digital emergency has a 22-year-old politician, Hardik Patel, as its poster child. The convener of the Patidar Anamat Andolan Samiti (PAAS), a political body that advocates for minority rights for the Patidar community[[30]](#footnote-30) by including them in the category of Other Backward Class (OBC),[[31]](#footnote-31) Patel has been actively involved in organizing massive rallies since the summer of 2015.[[32]](#footnote-32) The on-the-ground rallies have also been accompanied by a popular social media campaign which included YouTube videos, messages, memes, and even two Android apps that mobilized the community through weak people-to-people networks.

It took a small but dedicated core team of young political leaders to put together the *Maha Kranti* Rally (The Epic Revolution Rally) that engulfed the whole state.[[33]](#footnote-33) While each major city in Gujarat was organizing the coordinated demonstration, the biggest protest gathering was planned in Ahmedabad. Beginning at the massive Gujarat Mineral Development Corporation (GMDC) ground, the rally attracted more than half a million members of the community, who, after some political speeches, held the city under siege, marching to the district collector’s office. Patel, who was one of the speakers rallying up the crowds, announced that at the end of the rally he would go on an indeterminate hunger strike until the chief minister of the state herself came to receive the memorandum. Both he and his immediate allies were arrested for not having the adequate permissions to stay on the ground after the rally. Although they were later released, tensions had already escalated and the city saw the deployment of police and paramilitary forces to disperse the agitating crowds that were already demonstrating acts of mob violence. Ten people (police and protestors) would eventually be killed across the state. The state government of Gujarat imposed physical curfews in a few cities along with a complete shutdown of the internet.[[34]](#footnote-34)

The story of PAAS, and the electoral and political results it led to, merits another analysis. Here it is important to place its role in the blocking of internet access, and thus to tell a somewhat different story of the promise of access that has shaped the history of the internet in the country.

*Access* has been one of the primary drivers of digitalization and investment in internet infrastructure that was supposed to leapfrog the country into a digital revolution. In fact, the very first definition in the Information Technology Act, 2000 is for the term access.

*Access* with its grammatical variations and cognate expressions means gaining entry into, instructing, or communicating, with the logical, arithmetical, or memory function resources of a computer, computer system, or computer network.[[35]](#footnote-35)

Even in this definition, both the conditions and means of access are clearly nuanced. Access was not just about usage *but any meaningful interaction with the entire digital ecosystem*. Access was discussed in the context of unauthorized access; storage, retention, and retrieval; licensing and public access; availability and perpetuity; security and legitimation; denial and maleficent blockage of access; privacy and replication of information; and markers of public space.[[36]](#footnote-36) In that very first laying out of the regulations of legal and acceptable forms of transactions in the digital networks, access was clearly one of the most cited and critical clauses.

I have explained earlier that both the emphasis on access as well as the conditions of its possibility are mirrored by Access to Technology (A2T) developments across information societies in the face of digitalization. Access has been fetishized as the aspired-to end of all technological infrastructure, and also as the point of danger that allows for criminal practices to proliferate. Access to technology remains central in IT4D portfolios which look at universal access as the endgame. Government practices recognize lack of access to digital infrastructure as an axis of discrimination and seek to invest in creating access opportunities.[[37]](#footnote-37)

Access, here, typically carries a double bind of anxiety. On the one hand, it generates anxiety about the need to *grant* access. On the other, and immediately afterward, it triggers concerns about the *control and regulation* of practices that emerge. Access-centered discourse overrides the complex terrain of the human-technology relationship – usage, adoption, penetration, internalization, proliferation, nudging – and becomes the single point of obsession in telling the promise of the internet. More than 15 years after India’s first Information Technology Act, 2000, we see this double bind emerging, where we celebrate the participation of young people in ‘Digital India’ economies, while also shaping their behavior by banning undesirable content. Likewise, in the world of user-generated content, there is a celebration of the participatory cultural processes, of peer-to-peer sharing and distribution, and of remixed and reused genres that show the possibility of creative explosion in the age of ubiquitous access. At the same time, there is a growing concern that these new regimes of cut-and-paste creativity are leading to an explosion of information that is being mined by predatory algorithms and data mining practices that make the subjects extremely vulnerable. Access is often thought of as a one-point entry into the digital world.

Yet, in the Information Technology Act, 2000, access was more a *condition* than it was an interaction, and this becomes clearer in the amendments made to the Act in the Information Technology (Amendment) Act, 2008. On the one hand, access became closely tied to the *infrastructure of access*, specifically looking at the emergence of ‘cyber cafes’, and examining the idea of ‘cyber security’.[[38]](#footnote-38) On the other, there arose a particular focus on the extended practices of information and data protection, ‘access, use, disclosure, disruption, modification or destruction’,[[39]](#footnote-39) recognizing the threats that come when ubiquitous access becomes the norm. The amendments mainly concentrated on the potential for transgression that emerged with web sociality. They thus envisaged the instituting of controllers with extraordinary access to computers if ‘he has reasonable cause to suspect’ that the computing network was used to break the laws set out through this regulation.[[40]](#footnote-40)

The Information Technology (Amendment) Act, 2008 recognized the role of service providers and those who would be made responsible for providing access, and thus also for mitigating any threat that emerged out of the access. What such recognition did was to enable the government to ‘issue directions for interception or monitoring of information through any computer resource’,[[41]](#footnote-41) that would eventually introduce the intermediaries as critical to shaping the conditions of access.

On the one hand, the amendments to the Information Technology Act, 2000 clearly acknowledged the internet as a cultural force. On the other hand, the amendments were primarily aimed at containing and regulating the internet, focusing on usability and agency, because of its ability to disrupt ‘public order’ and because it could ‘have [a] debilitating impact on national security, economy, public health, or safety’,[[42]](#footnote-42) all of which needed to be more monitored and contained for better governance. The *promise* of access was not merely one public agency and the right to informational technologies. It was also about training the public into becoming responsible and responsive, and for training regulatory units to meet the expectations of these emerging technologies. The design and regulation of technology was thus simultaneously the design and regulation of the *intended user*, creating the need for devices that shall train the user to become the technosocial subjects to now be shaped around the promise of access.

## 

## Meeting Technologies Halfway

Digitalization was aspirational, arriving before it was experienced and heralded before it materialized. The accent of digitalization was virtuality, but access to the digital went beyond infrastructure. Infrastructure was a way by which the digital user was shaped to meet technologies halfway. This was not in itself an unexpected or unprecedented development. In the mid-1960s, in the United States, when the first idea of mass digitalization was being floated, Douglas Engelbart was examining, as a part of his ‘Augmenting Human Intellect’ project of 1962, how to develop ‘new techniques, procedures and systems’ to enhance the ‘effectiveness of the individual’s basic information-handling capabilities in meeting the various needs of society for problem solving in its most general sense’.[[43]](#footnote-43) Engelbart’s ambitious and influential research came up with many conclusions and recommendations for humans and computers to work together, some of which pioneered and shaped the Graphical User Interface as we know it – from the first prototypes of a Macintosh by Alan Kay to the production and introduction of the mouse and the GIMP design.[[44]](#footnote-44) However, implicit in almost all of the findings was the idea of information overload and information processing.

In staging the problem, Engelbart proposed that ‘the entire effect of an individual on the world stems essentially from what he can transmit to the world through his limited motor channels.’ However, most problems we directly grapple with do not rely on our motor skills but on innate sensory inspection and cognitive capabilities. Engelbart thus broke human capabilities down into four classes: Artifacts, Language, Methodology, and Training, all of which could be stored as information on computer-controlled systems, which could handle massive amounts of information and display it when needed, thus enabling a transfer of knowledge and the adaptive invoking of expertise whenever required for dealing with new problems. Engelbart’s basic presumption was that the human subject was not entirely capable of explicitly recognizing its knowledge and, when confronted with it, not always able to discretely and efficiently process that information or to make the most effective decisions. The human, in Engelbart’s proposal, needed *augmentation* – because we are continually paralyzed by the informational overload of our own knowledge and perception. We needed an external augmentation device that would offer prosthetic help to move from ineffective to effective, and then to brilliantly effective, when faced with complex problems. A *device*, then, which would, as it were, allow us to access our own information through intelligent filters, so that we can cope with massive information without being overwhelmed by it.

The production of the device was not a straightforward digitization process of deep mining the human subject for information, however, though that would become one of the logical fallouts of the process. Engelbart’s own efforts were directed at training machines that can learn from human actions and interventions and, subsequently, training humans to be able to work with these machines. Augmentation was not just an *expansion* but also a *reworking* of human capabilities to work with these machines of expansion. So much so that he wrote a tutorial on ‘Games that teach the fundamentals of computer operation’, where he devised a way by which ‘a group of common laymen’ might be taught how to ‘coax sophisticated information-handling behavior from an organization of simple physical elements […] to simulate various kinds of simple elements by organizing them into a network’ whose behavior is obviously more sophisticated than that of any single element.[[45]](#footnote-45) Whimsical, overly elaborate, and long-drawn as this game might be, it does signal a pivotal moment in technology design, where it became clear that for the *human* to be effective, new information-overload managing technologies would be necessary. Subsequently, for these *technologies* to be effective, the human user would have to be trained to meet technology halfway.

In India, some of the earliest manifestations of this human-technology access and co-design was in the problem of access that was both at the level of infrastructure penetration and systemic unevenness. Through the 1990s, as the first wave of telephone connectivity was receding, the infrastructure of telephony was quickly transformed to become the basic infrastructure for all digital access. People close to the ground, and especially those who were aware of the back-end costs of digitalization, had already recognized that reducing access to infrastructure would not be enough. While it remained necessary to develop the digital ecosystem, a promise of mass connectivity would need more: the design of a user who could indeed be installed and meet the technology development demands.

Hence, Simputer, the first ‘local’ computing machine, proposed in 1998 as a ‘low-cost, usable and *useful* and usable to the common man’ solution. The Simputer group, located at the Indian Institute of Science in Bangalore, under the leadership of Vijay Chandru, found that the ‘high cost of initial acquisition’ made computation unimaginable for the average person. They also recognized that the ‘equally high cost of maintenance and upgrade’, and the ‘complete lack of user-friendly interface’ combined with English as an alien language to a vast majority in the country, made computation prohibitive.[[46]](#footnote-46)

The Simputer – A ‘Simple Computer’ or, as its co-inventor Swami Manohar writes, ‘if you prefer ridiculously complex recursive acronyms, ‘simputer stands for Simple, In-expensive Multi-lingual PeopLE’s :-) comPUTER’.[[47]](#footnote-47) (I am as intrigued by this proposition of access for and by the people as I am by the fact that back then, before the world of emojis had exploded on us, Manohar was already using smileys in his documenting of the project.) The Simputer was a prototype to be designed and commercially sold for under Rs 5,000 to address three key application areas: ‘Transactions, Communication, and Information’. It was supposed to facilitate economic transactions, establish interpersonal communication, and give access to the ‘right information at the right time’ so as to ‘dramatically improve the quality of life at all levels’,[[48]](#footnote-48) including in political and electoral participation and governance.

The ‘make or break’ point of the Simputer was its interface. Or, as the pithy statement said, ‘The simputer IS the user-interface’. For a country struggling with massive illiteracy, functional literacy, and semi-literacy problems across multiple languages, a text-based interface was exclusionary and thus futile. The Simputer group was already zeroing down on voice inputs and speech outputs in local languages, ‘augmented by a minimal single-line display’ as the best, indeed the only feasible, option. Combined with a user interface of the TV remote, this produced the Simputer as a phone with a keyboard – a concept that sounds quaint from the contemporary vantage point, but was revolutionary for that time.[[49]](#footnote-49)

The Simputer, in recognizing the need for a visually dense interface, telephonic connectivity, and simple navigation structures, was already preempting the mobile revolution that leapfrogged India into the information age. However, the really visionary qualities of the Simputer, even though it never quite made it in the mass market, was its way of predicting three critical points in access infrastructure that bring us back to the phenomena of access and disconnectivity we discussed earlier.

The scientists behind the Simputer indicated that the infrastructure of the future would be dynamic. Devices with their own IP address, new protocols to manage these dynamic IP addresses, and hyperconnectivity through Local Area Networks, all this would be part of the architecture managing the projected massification of the internet. In the standardization, they saw a clear hierarchy: the *application* was the responsibility of the intermediary, but the *infrastructure* would be a state enterprise. The state, in their vision, would hold ownership over the entire ecosystem from spectrum to device in order to facilitate a comprehensive suite of transactions. Standardization would necessitate not only the setting up of technical protocols, but also a clear guideline on what can and cannot be said. The state, then, would have to evolve into the digital system to become the primary service provider rather than just a regulator. The state must access the digital before the user does.

However, before the state could access the digital, digital technologies would have to first reach the physical user. With its emphasis on costs and the chief ambition of being ‘inexpensive’, the Simputer advanced the concept of ‘smart card’ access. The project underestimated the seduction of private ownership and was thinking of communal access devices where entire communities would use one Simputer to manage their needs. This also led to the possibility of a cloud-based, modular infrastructure where, based on the personalized login of a user, the same device could become temporarily personal, thus allowing for multiple ownership and usage paradigms: a structure that (we saw) had been implemented by cybercafes in the late 1990s. With smart card access, the Simputer was already proposing that individual voter identities, electronic cash repositories, and other essential services be tied together to form a specific profile which in turn served as an access point to the expanding universe of computational information services. *The individual would have to thus be first accessed by the digital technologies before s/he could be authorized into the system*.

Lastly, the Simputer focused on questions of security. The Simputer group recognized that putting this information, data, and ‘money’ on the digital network came with additional risks of theft, loss of control, and hacked leaks that put the individual in vulnerable conditions. Security concerns were central, but were also a known risk that had to be taken. The personal risk of security breaches is, the Simputer suggested, negligible when compared to the far more real threat posed by the digital transaction ecosystem to the regulatory state. The digital transaction ecosystem identified anonymous transactions, unverified identities, direct access communication between people, and undocumented movement of information as posing serious challenges to the state, even as the state reconfigured itself in digital space. The model of the Simputer thus showed that both the digital infrastructure and the governance ecosystem access each other and share the information around the user before the user could be given access to the promise of the digital revolution.

It is telling that the Simputer had already embodied the basic paradox of information overload and access. In order for the user to access the information superhighway, the user needed to be *made accessible*, thus meeting demands of both state and technology for legibility as well as intelligibility. The user needed to be designed toward specific protocols and behaviors in order for a digital transformation to emerge. This also preempted the fact that universal access was not only about building access infrastructure, but that it was also about leapfrogging users into a techno-governmental regulation model that would shape them to meet technologies halfway.

The Simputer was part engineering, part science fiction, part fantasy. It imagined a future that we have now naturalized, even though it never managed to be a significant player in that future. It preempted the principles of the mobile revolution as well as the rapid transitions of the Indian state toward ‘Digital India’ policies. However, more than anything else, the Simputer presented the first model of a *user who would be designed and regulated*, both because of the user being information-hungry as well as informationally overloaded, alongside a new model of a fresh state-technology nexus to sift credible data from the mass of unnecessary information that surrounded it.

## 

## What You Get is What You Want

The digital turn, we have argued, was aspirational. We may take this a step further and argue that the aspiration was for transgression. The dramatic changes in media practices that the digital ushered in have found many terms – convergent media, post-media, disruptive media, collaborative media, connected media. Regardless of the name, what marks digital media practices is their power of transgression, the capacity to not just blur boundaries but produce an aggressive disregard for any boundaries at all. The promise of access as unleashing *unbounded* access in turn produced unbound practices that became central to how we saw the potentials of access.

It is impossible to make an exhaustive list of all the transgressions that digital media practices enabled. Perhaps the most evocative embodiment could be the playful and provocatively fictive ‘Rule 34’ meme that asserts that ‘If something exists, there is [internet] porn of it’. In memetic truth, Rule 34 shows how nothing is off limits when it comes to the internet, and how *accessing the web is to already be in a state of transgression*. It is easiest to understand the state of both transgression and access by looking at the burgeoning phenomenon of net porn. This is particularly true in India, which has the dubious honor of being among the top ten consumers of online pornography ever since MMS-enabled phones became popular.

India’s regulatory authorities have used every technological means at their disposal to try to stop the libidinal flow of pornographic content – from censorship to blocked ISPs, from individual penalization to intermediary liability. The fact that nothing has worked leads me to build a Rule 35: ‘If there is porn on the net, people will access it’. Transgression here means not just accessing the forbidden or blurring the boundaries. The potential of transgressive access is in its capacity to engineer desire, expression, and freedom. I propose that transgressive access needs to be understood as more than an adolescent glee of breaking rules. Transgressive access needs to be understood as a question of agency within the logics of regulation.

It is perhaps possible to tell the story of access as transgression bookended between two of the largest public debates around transgression, morality, and pornography in India. The first instance of transgressive access that is also the most popular (but forgotten in viral time) is the story of the famous DPS MMS (Delhi Public School Multimedia Messaging Service) case. A short, grainy, low-resolution clip that portrayed two students, allegedly studying at the Delhi Public School in New Delhi, went viral in 2004. The pornographic clip, shot by the male student using his then cutting-edge camera-enabled phone, shows the face of the female student performing fellatio as he verbally encouraged her. The male student leaked the video after he was dumped, and the clip first made its appearance on the closed networks of the school. In the friend-of-a-friend logic of digital networks, the clip soon went viral on the internet. Arguably one of the first instances of user-generated pornography in India, it became the origin point of the spy cam – the hidden cam, the POV, and other invasive and amateur pornographic conventions – that has now been mainstreamed and naturalized across various porn tubes.

When the MMS first emerged on the digital landscape of smutty social media in India, however, it took the country by storm. As Namita Malhotra points out in her landmark monograph examining the intersections of law, pleasure, video, and porn in India, everybody was looking for it.[[50]](#footnote-50) On the pervert-2-pervert network, the need to see ‘real people’ with ‘bodies like ours’ having ‘Indian sex’ caught on video resulted in spikes on search engines and local sharing networks. The clip also found its way into grey markets where it was sold as ‘real sex’ as opposed to ‘imported porn’.

Even as the clip went viral, an enterprising student, Ravi Raj, at the Indian Institute of Technology Kharagpur decided to capitalize on the demand and put the clip up for auction on the site Bazee.com where it appeared as an e-book under the scintillating title *Item 27877408 – DPS Gurl having fun!!! Full video + Bazee points*, priced at Rs 125. The state regulatory apparatus, which had no way of recognizing and controlling the ‘nether spaces of p2p networks’ or ‘covert exchanges on mobile phones’ found its first engagement with this e-commerce transaction and immediately banned the offensive clip.[[51]](#footnote-51)

A public interest litigation was filed against the clip and a bizarre case ensued. Once all the bodies involved in the making and circulation of the clip were identified, nobody could be found guilty. Ravi Raj was taken into custody for possession and intention to sell pornographic material but was acquitted in juvenile court and expelled from his university. The male student who was the clip’s producer/actor/distributor was also acquitted: his crime, according to the presiding judge, was of being part of a society that is rapidly being influenced by Western Culture. The female student, the most visible body of the video, was recognized as a victim, and mechanisms were set in place to protect her identity and her future. When none of these three obviously responsible people could be charged with the crime, the state sought a ‘symbolic resolution’ by extraditing the CEO of Bazee.com, Avnish Bajaj, from the United States and recognizing him as ‘the foreign-educated man who had been touched by the spread of such sleaze’.[[52]](#footnote-52) Bajaj was an easy target: it was over his visible body that the case was resolved, at least for the public. He won the case, pitting ‘Terms of Service’ against the Information and Technology Act, 2000, and thus claimed innocence as an intermediary.[[53]](#footnote-53) We shall discuss intermediary liability shortly, but it becomes interesting that in this one case, where several transgressive bodies were identified, and several more desiring bodies were accessing the transgressive material, that the blame eventually was put on the technology itself.

The court judgment argued that the true culprit in this case were ‘the gadgets…which make possible certain kinds of technological conditions’ that caused ‘…obscene material to be published’. The technology – which offered access to a ‘listing which informed the potential buyer that such a video clip that is pornographic can be procured for a price’ – was what needs to be controlled and regulated.[[54]](#footnote-54) The ensuing regulations addressed the control of access to technology. Those found in possession of the clip could be fined and prosecuted. The police in Mumbai were given the authority to carry out digital frisking of people’s phones to check for the objectionable content.

The concern was not about obscenity or pornography, but about the fact that the digital was now producing ways to sidestep the state’s authorial positions, and producing mutable, transmittable, and transferrable products which could be accessed without regulation or control. *The crime was thus not individual but collective*. The culprits were not the four people in the case, but an entire technosocial country participating in the proliferation and consumption of the video clip. Access, an avowed goal of the state’s ICT4D visions, suddenly produced the *user as a potential criminal* whose crime was to access the digital, making such an act in itself into an act of transgression. The *potential* of transgression thus made access into a point of regulation and control: making access into possibly the most contested space of digital engagement, thereby also turning access into infrastructure.

Transgressive access was not just about infrastructure *of* access. It was also about memory making and archiving. Wendy Chun, in her work on Software Studies, points out that ‘the role of the digital is to make memory into storage’.[[55]](#footnote-55) Chun points out that, as physical computation, memory refers to actual storage. The web’s infinite capacity to remember is tied to its material capabilities of storage or information and data. Obsolescence, corruption, and erasure of storage can easily invalidate memories and remove entire archives without any respite.

Transgressive access thus meant that the user, who only had spectatorial memories so far, was also suddenly equipped with archival storage mechanisms. To access something on the web was to also have the potential for storing it. The personal archive for public distribution directly challenged the state’s authority of being the custodian of histories and guardian of memories.

This was evidenced in another famous case around pornography in India, this time enshrined in the illustrated figure of ‘Savita Bhabhi’. Created under the pseudonym of ‘Deshmukh’, India’s first adult comic strip series on the now banned website SavitaBhabhi.com depicted the fantasy-filled sexual adventures of a ‘housewife’ whose husband was traveling a lot for work, which gave her space to engage in pornographic encounters. The 51 stories published in this series destabilized the home as the bearer of family values and foregrounded a woman’s agency and sexual desire. They also made the site the 82nd most visited Indian website in 2009.[[56]](#footnote-56)

In 2009, the Department of Telecommunications (DoT) issued an order asking all internet service providers in the country to block access to the website. The Controller of Certifying Authorities, N. Vijayaditya, explained in an interview that even though there was no legal order for the ban, they were proceeding with it as a sign of respect to the voices of protest from conservative quarters in the country. [[57]](#footnote-57) While Puneet Agarwal, a second-generation Indian entrepreneur in the United Kingdom, eventually acknowledged responsibility for the website and even spearheaded the ‘Save Our Savita Bhabhi’ campaign, he did not challenge the ban, giving into ‘family pressures’.[[58]](#footnote-58) And, thus, Savita Bhabhi disappeared from the Indian web.

In this case, however, when the official distribution channels got pulled down, the users who had been accessing the series revealed that they were not just accessing but also archiving all the content. User-generated torrents of archives marked by obsession, animated by passion, and sustained through personal libido began appearing on social media. Savita Bhabhi was given a viral lease of life as pervert users suddenly became defenders of free speech and protectors of the public memory that was being erased by the regulatory authorities. While the official platforms – the legal owners, the intermediary suppliers, and regulated channels – could be regulated and controlled to make Savita Bhabhi disappear, the personal archives emerging from access could not be subjected to the protocols of the gatekeepers. The checkpoints and chokepoints of regulation could control the conditions of circulation, but not the potentials of access. Transgressive access in this case was not just a retaliation against the state: it challenged the state’s ability to write memories and histories. Access became more than infrastructure – it became a point of archiving – and thus also challenged older forms of regulation and control of information, much as it did in the case of the DPS MMS.

This idea of information access as not just *enabling* transgression, but being *itself* an act of transgression immediately dovetails into the second paradox of information overload: the information you get and the information you want. On the one hand, access to information is seen as a right, a necessary condition for participation and inclusion in the information (overload) networks. Indeed, because information overload is also at the basis of the economic and regulatory models of digital governance and development, it is important to have all users ‘accessible’ on the premise of ‘having access’. However, the peer-2-peer and distributed modes of information dissemination and circulation mean that this access, an act of transgression, is continually seen as a state of crisis, where it is simultaneously both a right and a threat.

## 

## Informationally Overloaded Threats

The regulation of information – its access, ownership, proliferation, and infrastructure – clearly imagines the rise of people participating in information production spaces as a threat. In the hands of young users, the access to and ownership of information became a way of bypassing social conservatism, leading to the proliferation of sexual desires and identities. When equipped with information infrastructure of proliferation, engaged citizens turned into active protestors, as in the case of the PAAS agitators. As computing became ubiquitous, every household with an internet connection became a potential hub for piracy, with pirate crackdowns becoming a major concern. Minority and marginal voices found an amplified presence, sparked off by the tragic case of Rohith Vemula and the discussions around caste-based discrimination.[[59]](#footnote-59) Survivors and victims of violence found platforms to voice their struggles, creating lists that called out systemic perpetrators, as in the case of the #LOSHA (List of Sexual Harassers in Academia) and the #metoo conversations. When used by populist vigilantes, these platforms have mobilized lynch mobs that have hurt and killed people through social participation. The democratization of the internet might have started as a romantic invitation to participate in the political economies of the digital transformation, but the consequences and results of this engagement have been extremely threatening to ways of life and living.

The history of internet regulation has largely been a series of often futile attempts using older models of censorship, blackouts, and control. Many foolhardy attempts at blocking domain names, installing censoring mechanisms, banning content, removing platforms, and hiring ‘content clean-up crews’ litter the landscape of controlling and curtailing access. As Ashish Rajadhyaksha points out in his landmark monograph *The Last Cultural Mile*, there was an inherent conflict in these mechanisms of control: the state was trying to introduce regulatory mechanisms that were relics of a centralized information model, on to a system that was necessarily peer-2-peer and distributed, and hence had different mechanics.[[60]](#footnote-60)

As network engineer and theorist Duncan Watts points out in his ‘Small World Phenomenon’, the digital network is essentially a collection of small worlds – each world self-contained and self-referential, but with an infinite capacity for expansion and replication.[[61]](#footnote-61) The regulation of physical computation networks like the internet needs a different mode of control, one which sets up instances of governance for every ‘small world’ and yet has the capacity to scale that to each world that is simultaneously generic and unique. Martin Warnke, a system theorist and digital cultures critic, along with Carmen Wedemeyer, explains this as a ‘scale-free’ event.[[62]](#footnote-62) Warnke argues that because the physical computing networks do not work through the law of medians, but of correlations – looking not at averages but at unique relationships – it is impossible to govern the space through regulations and laws which are limited in their scale, scope, and speed. Our older forms of regulation were devised around the law of silos, of contained, scaled, carefully demarcated spaces, whereas the internet is necessarily a space of bleeding overlaps, circulating traffics, and flows of information which cannot be regulated or contained.

In the face of this networked logic, the state is often unable to be the vanguard, arbitrator, or gatekeeper of informational control and access regulation. As one of the peers – nodes in a flattened network – the state can serve as a hub through which different nodes operate, but it cannot be a central node from which this control emerges. Hence, it became necessary to think of a new layer of *state-like organizations* that would take up state-like functions in order to help deal with the threat of access.

The need for such a layer was already visible in the DPS MMS case, where the regulation was seen to be the responsibility of a platform like Bazee.com. However, the Terms of Service of service providers like Facebook, Google, or WhatsApp does not hold them accountable for the nature of the content. The service provider – also known as intermediary – consisting of telecommunication companies, platform providers, application owners, device manufacturers – was generally imagined as neutral, whereas the informational relationship and its content was a direct relationship between the state and the citizen-user. In the face of new networked logics, through the 1990s it became quickly clear that the logic and logistics of the central governmental regulation were not going to work. Especially with the rise of hate speech, gendered violence, terrorist recruitment, fake news, and personal attacks, it has become apparent that the intermediary can no longer be treated as a neutral delivery mechanism.

The Information Technology Act, 2000 (Section 79) provided intermediaries with qualified immunity, where, as long as they follow the prescribed due diligence and do not conspire, abet, or aid an unlawful act, their lack of ‘actual knowledge’ of the content and the failure to remove or disable access would not be punished. However, this condition of what constitutes ‘actual knowledge’ has been quite vague. Thus, in the intellectual property case of *MySpace Inc vs Super Cassettes Industries Ltd.*, the Delhi High Court read the Information Technology Act to declare that in the case of copyright infringement, a court order is not required and an intermediary must act to remove the content upon receiving knowledge of the infringement.[[63]](#footnote-63) Similarly, in at least two cases of sexual abuse and lynching through mob violence, the government has indicated that the responsibility of finding solutions is on the service providers who, if they remain mute spectators, would otherwise be ‘liable to be treated as abettors’ and ‘face legal action’.[[64]](#footnote-64)

In April 2011, the Government of India published Intermediary Guidelines that prescribe, among other things, guidelines for takedowns by intermediaries, thus controlling both the conditions of access and the afterlife of access.[[65]](#footnote-65) These guidelines also mark the beginning of post-access politics: control and contestation around access, not just as the point of engagement but in the continued interaction with, and ownership over, the content produced. Under these guidelines, *access became conflated with agency*, where the intermediary was required to ‘publish rules and regulations, privacy policy, and user agreement for access or usage of the intermediary’s computer resource’.[[66]](#footnote-66) The control was not just about the moment of access, but about what happened once access had been established: control, in short, also of *usage*. Similarly, the intermediary was to be held responsible not only for monitoring the access to its ‘computer resources’, but also the control over ‘removal of access to any information, data, or communication link by an intermediary after such information, data, or communication link comes to the actual knowledge of a person authorized by the intermediary’.[[67]](#footnote-67) The guidelines help us understand that access is a two-way link; they monitor not only persons accessing but also persons being accessed. They identify persons who might be violated because of *other* persons accessing *their* data and information and recognize the need for grievance redress mechanisms as part of access regulations.[[68]](#footnote-68)

Such an extension of access control into the afterlife of engagement has had some alarming consequences. The Centre for Internet & Society in Bangalore, along with the Google Foundation, carried out investigative research with a small group of intermediaries to determine ‘whether the criteria, procedure and safeguards for administration of the takedowns as prescribed by the Rules lead to a chilling effect on online free expression.’ Legally and informationally wrong takedown notices were sent to the intermediaries.[[69]](#footnote-69) A large majority of them, without any scrutiny, immediately removed the content, showing the possible ‘chilling effects’ on free speech that result from such intermediaries’ power.[[70]](#footnote-70) The question of the *threat* of access found its solution in controlling the very *conditions* of access by putting the responsibility on intermediaries and allowing their terms of service and takedown powers to override what might be fundamental individual freedoms. This, coupled with algorithmic detections and no-obligation removal practices, produced a different notion of regulation: where any action or expression was removed even *before* it was officially charged with a criminal or objectionable intent, and which considered *all* information – indeed considered the very act of access – as potentially criminal.

## 

## Rightful Information Overload

This right to information has been both a utopian promise and a fundamental prerequisite for information overload to become our naturalized setting. This right began as a question of access and infrastructure shaped as a problem of hardware penetration. However, over the last 30 years, it has become a question of agency, identity, and expression, so much so that universal access is no longer positioned simply as *good to have* but as a fundamental right. Lack of access to the net is discrimination, and a preventive mechanism for the realization of one’s true self. So strong has been this idea of access as *right* that it culminated in one of the largest cases of public consultation and protest around internet policy in India.

It all began with Internet.org, a Facebook-led not-for-profit initiative that seeks to build infrastructure and conditions of universal access. Its mission states that ‘the more we connect, the better it gets’ and sets out to overcome ‘issues of accessibility, affordability and awareness’ in the hope that ‘one day everyone will be connected’. One of the largest initiatives under the umbrella of Internet.org is a program called Free Basics by Facebook, that ‘provides people with access to useful services on their mobile phones in markets where internet access may be less affordable’. The underlying condition of Free Basics is to help improve the lives of people who are hitherto underconnected or unconnected. Free Basics partners with mobile operators to build universal access infrastructure that gives people ‘access to basic websites for free’.

Mark Zuckerberg, the CEO of Facebook, has already been identified as moving the company from being a ‘directory of information’ to a ‘social network’ to a ‘core social infrastructure’ of connectivity.[[71]](#footnote-71) In his 2013 white paper, ‘Is Connectivity a Human Right?’, Zuckerberg announced a new milestone for making internet access available to 5 billion new users. Recognizing the infrastructure-deficit of emerging network societies, his proposal was to expand access with a marginal role for governments as regulators of the spectrum, and then give the responsibility to secure the right of access to intermediaries: technology and telecom industries. Free Basics thus actively sought partnerships with telecommunication and ICT intermediaries in order to build what they saw as universal access.

Given that the Indian government had already recognized access as a critical pillar for development and growth, it did not come as a surprise that Internet.org was welcomed to partner with the government in its quest to create access across the country. The program was first launched in 2015 as ‘Free Facebook’, with viral television and digital media campaigns showing young millennials in India holding up notecards saying, ‘I want free Internet’.[[72]](#footnote-72) Facebook proposed pairing up with Reliance Telecommunications in order to offer free access to a selected set of websites for all consumers of Reliance mobile phones.[[73]](#footnote-73) Effectively, Free Basics was the gateway to users being connected for the first time as it provided them with initial free access that also tied them to the Reliance-Facebook nexus as the basic infrastructure for their internet. In a country like India, where 350 million existing users access the internet through mobile phone, and almost 70 percent of its 1.2 billion population wait for future connectivity, this was a massive market share. Universal access clearly became the philanthropic strategy toward securing a loyal customer base of new users who were being ‘platformed’ into this new ecosystem. The right to access was in the service of expanding the consumer of private telecom ecosystems.

This blatant use of developmental rhetoric to create a future monopoly was severely critiqued by technology advocates, technology entrepreneurs, information activists, and internet researchers. Apart from this transparent ploy of market expansion, however, #SaveTheInternet groups[[74]](#footnote-74) also challenged Facebook’s claims to universal access as threatening two core principles of free and democratic access in the country.[[75]](#footnote-75) They claimed that in its ‘walled-garden’ design, Facebook was creating a restrictive environment and overriding the principles of zero rating and net neutrality in the country. They started a massive campaign, pulling in one of the largest comedy groups, All India Backchod (AIB), into their fold and a public mobilization toward saving the internet and the principles of net neutrality.[[76]](#footnote-76) They showed how Free Basics could create a discriminatory preference of Facebook’s selected websites while downgrading access to the others. They demonstrated how this building of a *super* super information highway would throttle innovation and smaller services, which might be disruptive to Facebook’s future services. Through blogs, hashtags, twitter campaigns, comedy videos, and print media, the #SaveTheInternet group mobilized more than a million emails and comments to TRAI[[77]](#footnote-77) in response to their consultation paper on service differentiation in less than a month, asking for a free and democratic internet that does not get compromised in the quest for universal access.

The Cellular Operators Association of India launched their countercampaign #SabkaInternet (Everybody’s Internet)[[78]](#footnote-78) arguing that Free Basics was a way to leapfrog the population into mobile connectivity. Facebook responded to the #SaveTheInternet email campaign with its own public relations promotions of Internet.org as a ‘step towards digital equality’. Massive banners, emotionally charged advertisements promoting its mission to ‘connect the unconnected’, became a part of its strategy.[[79]](#footnote-79) They created poster children – a farmer who looks up weather information and commodity prices and learns new framing techniques; a woman finding access to independence and a break from patriarchy as she gains access to education through digital services – in order to position themselves as the new saviors helping unconnected India transform into Digital India. Mark Zuckerberg took center stage, talking with Prime Minister Narendra Modi, visiting different parts of the country to promote technology empowerment dialogues, and reassuring everyone that while user growth was good for Facebook, it was only part of a larger mission for a more diverse ecosystem.

Despite its large advertising machinery, Facebook’s Free Basics lost ground. The Telecom Regulatory Authority of India (TRAI) ruled against its ‘differential pricing’ and ‘zero-rating plans’ which allowed mobile phone companies to offer only a few services for free.[[80]](#footnote-80) The judgment endorsed the position taken by the #SaveTheInternet group that in a yet-to-be-connected country like India, ‘allowing service providers to define the nature of access would be equivalent to letting TSPs shape the users’ internet experience.[[81]](#footnote-81) India became the first country that fought against the lobbying powers of Facebook and retained the conditions for free and democratic access, guarding these conditions as critical to the fundamental rights of the citizen. Even with the government’s flagship programs in ‘Make in India’ and ‘Digital India’, which seek to create a ‘digitally empowered society and a knowledge economy’,[[82]](#footnote-82) and despite its close association with tech giants like Facebook, Microsoft and Google, it had to succumb to the idea of access as such a fundamental right that it could not be transferred to intermediaries. It also resulted in the #SaveTheInternet group launching themselves into the Internet Freedom Foundation, with an explicit mission to ‘defend freedom of speech, privacy, and our digital commons’ in the face of the new technosocial nationalism.[[83]](#footnote-83)

The story of Free Basics, its reversal and the continued promotion of universal access, becomes a logical bookend to the story of the internet itself as it got concretized in the Information Technology Act, 2000. It offers an illustration of disconnectivity in far more insidious ways than internet blackouts, regulation of content, or the moderation of expression. It shows how companies benefitting the most from maintaining information overload and all its paradoxes continue to exclude users who participate as data subjects from the new data owners produced in these conditions. The subject remains informationally circumscribed but also severed from the regulation of the digital spaces and, ironically, information overload remains the way by which this exclusion is engineered.

## Stitching Things Together

At the core of the argument around information overload is an attempt to historicize this as a crisis-in-the-making. While the history of computation and the internet has often been written as a history of information access, I have attempted to rewrite it as an history of informationally overloaded access, showing how access is both a multidirectional process as well as a transformative paradigm. It has been well noted that production digitalization is not merely an infrastructural project but a technosocial revolution that rewires circuits and bodies, people and societies. Through the lens of information overload, it becomes possible to see how the infrastructures of digital spread move beyond the hardware of computational networks and incite an entire ecosystem of regulatory, political, and technological actors to create conditions of informationality that anticipate and write a subject to occupy it.

Or, in other words, the story of digital expansion is the story of creating people into becoming users. The success of digital connectivity lies in transforming the subjects into users. They are defined by their presence in these digital systems which access them through informationally overloaded circuits. In this narrative, digital networks such as the internet find their cybernetic nodes in digital users, and the development is thus co-constitutive and interactive, where technologies course through bodies, converting them into digital nodes, which, when assembled, form the layered and stacked network of information transactions.

The problem may well be that the idea of users as agential, and thus in control of the systems of digital networking in which they are installed, may well be misleading. Overwritten in informationality and superseded by the processing power of rapid computing, the user – often the end point of these technologies – is also *excluded* from decision-making practices and processes of digital developments. Such a realization is especially significant given the rhetoric of unlimited choice, individual customization, filter bubble existence, and network neighborhood architecture often presented in the guise of human-centric design of the digital ecosystem. In the following section, I narrate a symptomatic development of digital technologies in India to show how the human user, an infrastructural presence in the growth of these technologies, also remained excluded from their ownership and decision-making.

The first section has been an exposition on the making of digital access systems, and the way they *create* and *validate* specific human users as legitimate operators of these spaces. In the next section, I focus on the making of this user – how different computational logics, network principles, and technosocial standards naturalize the making of this user – and particularly consider the questions of power, agency, and choice as they unfold in these informationally overloaded systems.

## SECTION II

## THE PORTRAIT OF YOU AS A USER

In the summer of 2020, Netflix released a globally trending documentary called *The Social Dilemma* which centered the voices of some of the people who worked in the early years of the Silicon Valley expansion to create the monopoly of the GAFA (Google, Amazon, Facebook, Apple) companies over our attention and data economies. Largely male, white, and rich, these woke voices presented themselves in a *mea culpa* – they screwed up, they set out to save the world and ended up ruining it; they believed in the emancipatory powers of digital technologies but don’t quite understand how these technologies produced the conditions of dread that we now see in our digital futures. Apart from the fact that the documentary failed to address or even acknowledge the voices of critiques, activists, and researchers who have been actively foreshadowing the future, it also failed to acknowledge that these technological problems are not merely technological problems – they are profoundly human and fiercely intertwined in the shaping of our collective and singular identities.

As the film went on, the very people now confessing to their oops moments began positioning themselves as the new warriors who were going to learn from mistakes (that they consciously made during the times of emerging tech) and were now going to build better and more humane technologies to set the world right into order. Each well-curated and crafted message ended with hope that we will only need new technological frameworks, new tools of regulation and control of these technologies, and all would be well. Without any sense of irony, when they talked about their own personal interventions in the field of data surveillance, predictive algorithms, and acute information profiling, they kept resorting to ways of stepping out of information overload. They did not mention information overload *per se*, but in their discussions on design hacks, UIX manipulations, data seductions, algorithmic correlations and profiling, their message was very simple: these technologies have now produced such an overwhelming amount of data and information that, at a very human level, it will be impossible to actually understand, process, and fathom our informational societies leave alone rebuild them. The message was clear: those who can afford it, will find data bubbles where they can escape the onslaught of information overload. The rest of us will just have to bear with it and put our trust in other technologies that will counter the attacks of the current technologies.

Alternatively, if we were to extrapolate from their implicit messages, the only way to fight these current technologies of information overload is to develop yet more technologies of counter-information overload. In many ways, this debate is reminiscent of the first propositions by Alan Turing during the Second World War to break the code of encrypted Nazi information by developing decryption machines. Alan Turing’s so called ‘Turing Test’ is often misrepresented as some kind of purity standard that digital computation has to pass in order to qualify as intelligent. However, a closer reading of Turing’s essay, ‘Imitation Game’, presents a more interesting formulation. Turing wasn’t interested so much in whether a computer network takes the semblance of intelligence or not. He was more invested in the idea that a computer network can perform a manipulation and ordering of abstract symbols (like numbers or language) and thus compute all possible predictions in any value (like a sum or a sentence) and eventually approximate it in such a way that the process of composing that value would become intelligible to a human reader.

Turing’s imitation game was not about a computer imitating a human and fooling us into accepting it as sapient intelligence. He was rather proposing that computer networks are more adept at *manipulating structures and symbols that we may think of as human language* and can thus produce complex results that can no longer be understood or decoded by human faculties. The imitation machine, then, would be the answer to the encryption produced by one machine. At the level of both scale and complexity as well as of speed, the measure of one machinic process would be another machinic process, or rather, the best imitation of a machine would be another machine so that when machines start speaking to each other, the human in the information circuit would either become unbearably overloaded or outright excluded from this information transfer.

Turing was effectively warning us that if we continued to reduce language to nothing more than granular arrangement of data, strip it off all the different contexts, bodies, and affects that give it meaning, we would soon find language becoming a paralyzing rather than a generative force because then the logical machines would take over. The original proposition of the Turing Test – that in a purely text-based environment mediated by a digital screen we might no longer be able to discern whether the person we are talking to is male or female – is signaling that when it comes to information overload, *context collapse is the natural mode of informational existence*, that the individual capacity for discernment, interpretation, and engagement with information is simultaneously both redundant and futile. So much so that the very basic identification of the sex of the person, manifest in so many different ways in embodied interactions, might collapse, thus introducing in us a fundamental existential crisis where we would no longer be able to rely on our capacity to tell a truth, to recognize or engage with truth. The Turing Test was not about being fooled by machines, but about realizing that we were rapidly emerging into a system where our human abilities and histories of truth-telling might be replaced by systems and networks of verification, where the human subject is both ontologically unstable and epistemologically rewritten.

I invoke Turing to come back to our conversation around information overload because, as we have seen earlier, nearly all conversations around information overload have been staged and rehearsed as technological conditions. They typically invite two pre-wired responses: one, that if we only created enough regulations and controls, the technologies would become better; or, two, that we needed to educate and rehabilitate users into coping and negotiating with information overload. In both these responses, the user remained either a problem to be solved or a unit that has to be aligned to the state of continued crisis that we experience in our unceasing and unrelenting state of being informational. The user thus gets defined only as a transactional entity of the computation network. In order to put the questions of agency, affect, embodiment, and intentions into the conversation around information overload and usership, I propose the term ‘Youser’ – a portmanteau of ‘you’ and ‘user’ – in order to anchor the questions of information overload and the movements that naturalize it as personal questions that affect the very making of our bodies, selves, identities, and desires.

The idea of a youser suggests that we need to let go of both the romantic fantasies of ‘stepping out’ of these networks of information overload as well as futuristic impulses of finding a ‘cure’, as if this is just a phase or a temporary state of being. Instead, I hope to map out specific transitions that digital computation-driven information overload enables, and suggest an in-betweenness there that might find resistance, critique, and collectivity, to question informationally overloaded futures otherwise presented to us as both definite and inevitable.

## Making of a Youser

The idea of the youser was perhaps most visible in two almost science-fiction-like predictions that were made in 2014 by two of the biggest digital technology actors, showing us the imagined future of data-driven realities. Google announced the backing of a life-extension company called Calico that aimed to cure not disease but death itself, thus promising immortality. Such immortality would be achieved through extensive data mining of the human code. A company that combines biotechnology, artificial intelligence, deep-learning algorithms, and pharmaceutical experiments was now sure that deep data mining that allowed for unprecedented and unfathomable intimacy of code with human biology would also allow for the production of super drugs to reverse aging and thus defy death itself.

It was surprising and revealing to large swathes of people who identify Google largely as a digital information organization company that the quest of organizing the world’s information is not merely a question of sorting and processing information: it also entailed converting the world into information. As Google built larger and more comprehensive databases where user data got organized, stored, and processed, it also started creating a profile of the user that both mimicked and overrode the knowledge that users had about themselves. In the ambition to cure death, Google’s vast data empire established itself as a digital force that could rescue the human from its fragile, mortal conditions. In offering this hope of being saved, Google could immediately trigger a future that it defined, because it became clear that the older human had to now step out of the model of being either human or relevant and enter this new world where Google would be the savior.

That same year, billionaires Peter Thiel and Elon Musk announced their quest for immortality through singularity by investing in a Thiel Fellowship that encouraged young innovators to ‘hack’ the human body, encode it exhaustively into data, and thus find ways of transferring the data into android smart machines that continued to live on our behalf long after our bodies were claimed by death.

In both visions, concerned in the end with human mortality, the human-technology intersections are clear. In Calico’s vision, human biology is a code that needs to be broken and intercepted so that it can be infiltrated by genetic information that makes us live beyond our natural capacities. In Thiel’s proposition, the body is merely a shell that houses the human: it can be discarded once the ‘essential makeup’ of the human gets transferred to more durable hosts. In this singularity vision, the human body is clearly being positioned as both undesirable and accidental and in need of a reengineering that can cure its mortal uncertainties.

While both seem to mimic science fiction fantasies – and indeed both of them heavily reference immortality quests drawn from popular and historical sci-fi – what they also do is signal a changing model of the human within new data realities. This model of the human-in-technological-transition, liberating and frightening as it is, betrays three intertwined tropes in the discourse around technology and the human, especially with the rise of the digital: the *human as discrete* from the technological conditions; the *human eroded* through the technological engagement; and the *human and the technological as contingent* *and paradoxical in their codependence*.

The ‘discrete human’ has been scathingly critiqued by Asha Achuthan, who argues as a feminist epistemologist of science and technology that such a discrete human has been at the heart of the radical transformation caused by Information and Communication Technologies for Development (ICT4D) in developing networked countries like India.[[84]](#footnote-84) Achuthan posits, through a political history of nation-building, that despite the change in political ideologies of statecraft and governance, even as technologies of governmentality leapfrogged into different forms, the human as a ‘user’ always remained discretely removed and separated from the technological. Achuthan argues that the production of the digital and human as ontologically discrete, and in need of reconciliation, perpetuates the idea that technology is prosthetic and dependent upon human desire and agency for its meaning.

It is a trope that Bruno Latour argues against when he recommends that we ‘inquire into the existence of things and into all the relations in which things enter as well as the behaviours and values they exhibit, in order to exist’.[[85]](#footnote-85) Latour resists imagining technology as neutral, but also warns us against seeing human existence as the teleological means of technological forms. He shows that while reified practices of technology are marked by intention and desire, the singular focus on transactions and actions as the end point of existence willfully remains innocent of the politics that accompany the practices that make the human and the thing coexist as a parity.

The second trope of the human being eroded through technological engagement is underlined by the contemporary vision of a postapocalyptic future where the human has been dislocated from its centrality in our contemporary Anthropocene.[[86]](#footnote-86) It is a vision where the human-technology interaction is seen as a process of extraction, where the idea of ‘use’ is not as simple as a human using technology. As Rosi Braidotti emphasizes in her formulation of the ‘post-human’, the dislocation of the human from its centrality is not just a conceptual tool, it is also a recognition that the idea of the human at the center of the universe, creating use value for all of its resources, is no longer valid; the human is perhaps more *used* than *using* in the future.[[87]](#footnote-87)

Malavika Jayaram points out in her analysis of e-governance structures in emerging networked societies that there is a conceptualization of the human as a data pod, harvested for data that seeks to *replace* rather than *represent* the human subject.[[88]](#footnote-88) This is what I have elsewhere described as *subject of/to technology*,[[89]](#footnote-89) where the very idea of the human subject has been under renegotiation. On the one hand, the human is sought to be reconfigured in the digital matrix, and on the other hand, the human is parsed, processed, and presented only through interfaces that render it recognizable. The call for rehumanizing technology, or mapping the human subject, presumes that the human and the technological are unknown to each other, creating, in the process, opaque structures of dependence and manipulation.

The third trope sees the human and the technological emerge as paradoxical, each as the context for the other. As Arjun Appadurai argues in the unravelling of the conflicting ‘scapes’ that mark modernity, the fixity of geography and genesis are no longer granted to the modern migratory subject who encounters technological transactions in essentially transitory states.[[90]](#footnote-90) The modern subject, for Appadurai, remains bound in technology and media, which then produces all-encompassing and inescapable situations that define the ethnic, ideological, and financial determinants of everyday life.[[91]](#footnote-91) Appadurai’s argument for thinking of the contemporary moment as a moment of fusion – where the inextricable nature of our technologized subjectivity brings forth what Woodhouse and Patton call the ‘technosocial regime’[[92]](#footnote-92) – is important to look at new intersections of politics, policy, and practice. This technosocial subject resonates with Donna Haraway’s ironies that define the cyborg. As she says in *Simians, Cyborgs, and Women*:‘Irony is about contradictions that do not resolve into larger wholes, even dialectically, about the tension of holding incompatible things together because both or all are necessary and true. Irony is about humour and serious play. It is also a rhetorical strategy and a political method.’[[93]](#footnote-93) This technosocial subject, then, does not have the burden of either reconciling or choosing between staged paradoxes, but finds its existence in a continuous negotiation between the two.

This technosocial subject is what I call a youser. The youser, defined by the information overload and circumscribed in the technologies that support it, is no longer outside the computational networks and no longer seeks to escape its matrix. However, unlike the dramatic declarations of Google and Elon Musk, the youser is not constructed overnight. The production of the youser does not carry the same speed and scale of many of our popular social media practices where entire lifetimes get lived and transformed in short-lived trends. Instead, the production of the youser is an insidious process. It takes a long time, and when the shifts happen, they happen almost imperceptibly, as transitions get naturalized and new modes of being and becoming are established as the status quo.

It is important to call out these transitions in order to unpack the processes by which the youser is engineered, produced, verified, and created, and see the possibilities of escape and resistance to this insidiousness of information overload that we have now come to experience as the default of our digital lives.

## From Representation to Simulation

In her much cited and often critiqued ‘The Cyborg Manifesto’, Donna Haraway cryptically introduces the shift from representation to simulation as marking the transition from ‘comfortable old hierarchical domination to the scary new networks… (of) informatics of domination’.[[94]](#footnote-94) Haraway does not expand upon this shift, though she was already writing with others who were examining simulation as a new order of ‘reality making’ in a world of symbols that ruled the abstractions provided by the new social relations tied to science and technology at the turn of the century. The works of Baudrillard[[95]](#footnote-95) and Deleuze[[96]](#footnote-96) are often invoked in thinking through the question of simulation, and the practices of hacking simulations[[97]](#footnote-97) are offered as a way of breaking the simulations open. I am not taking either of those routes, nor am I seeking to develop toolkits on how to work with them. I am more interested in the shift itself – from representation to simulation – as a computational network phenomenon that controls and shapes the politics of informationality. While Haraway does not herself unpack this shift, it is interesting to go down this particular rabbit hole and understand what simulation might mean within a computational network.

Namita Malhotra reminds us, in her analysis of born-digital pornographic objects, that these are essentially simulations.[[98]](#footnote-98) At the back end of a digital video are numbers. These numbers become pornographic images, like bodies without organs, only when they are rendered through a simulation software, such as a web browser or a video player. In fact, one of the continuous struggles in preparing standards for a unified language of the web has been that different simulation software compilations render this material differently, thus reminding us that there is nothing authentically real about digital objects: they are inherently ‘fake’ and capable of being ‘faked’.

Duncan Watts complements ‘fake’ digital media in his description of the mathematical networks that power computation.[[99]](#footnote-99) Watts admits that the mathematical model of a social network is ‘in place of the real thing’, and it does not have fidelity to the external world. Computational networks might have a correlation with the world that they seek to describe and model, but they are not in a state of mimesis. They are not ‘realities’ that can be understood by measuring them up against a physical phenomenon or event. The network is an abstraction of modified information and of the connections made between them. This nonrepresentational characteristic of the network enables a decontextualization of the information that it circulates. Thus, even a stable information set in a network is subject to change as new connections are made, even though there might be no change in the ‘real state’ of the individual or phenomenon that is the source of the information being abstracted. This break from fidelity enables new conditions within which we measure the veracity of information.

This means that the computational network is necessarily *in a state of simulation* and can no longer live up to the expectations of the ‘real’ and the ‘truthful’: concepts premised on a representational paradigm that presumes a material external reality to the represented object, an external gaze that can be used as a verificatory tool when there is doubt about the meaning of the representation. To put it bluntly, within any computation network of simulations everything is ‘fake news’.

Such an eschewing of ontologies of the real is a characteristic of what Albert-László Barabási calls ‘scale-free networks’.[[100]](#footnote-100) As Barabási explains, such a network doesn’t only have a lack of fidelity with the external world, it doesn’t even have any central median value or scale by which other elements of the network might have an ascertained value. A scale-free network is thus an indeterminate system, where each element has a relational value only in the transactional connection that is established between the two.

*The shift from representation to simulation, then, is not just aesthetic but ontological.* It invalidates the meaning-making foundations of our representation-driven expressions and languages. It propels us straight into the world of ‘deep fakes’ and ‘alternative facts’, not as aberrations to a human truth, but as new ‘cyborg unities’ that are corrupt, instable, and without fixity. This shift is also not a futuristic one: it is coded into the very nature of computational networks that drive our digital communication practices. Thus, the ‘you’ in ‘youser’ of information is created *as* a simulation, a fake, an approximation without an original. The youser has to be understood as something created through manipulated information, decontextualized data, faked circulation, and doctored rendering, needing neither certainty nor external verification. This youser now needs to be understood as a ‘cyborg body’ that circulates to create informational instability. As Haraway had prophesized, ‘we can no longer go back materially or ideologically’.[[101]](#footnote-101)

## From Authority to Authorization

Perhaps this shift from representation to simulation is best understood as a shift from author*ity* to author*ization*, illustrated in the stories of ‘fake news’ that have been punctuating the landscape in India regularly.

Take, for example, the extremely charged story of the young political activist Kanhaiya Kumar. In February 2016, Kumar along with other former members of the Democratic Students Union organized a protest at the Jawaharlal Nehru University campus to oppose the capital punishment handed to Afzal Guru who was convicted of terrorist charges for an attack on the Indian Parliament in 2001.[[102]](#footnote-102) The protest ended in clashes with the Hindu nationalist student organization Akhil Bharatiya Vidyarthi Parishad (ABVP), and videos of the clashes and the events went viral. Among these witness videos, there was a set of clips circulated by the Indian news channel Zee News that purportedly showed Kumar and his fellow protestors shouting ‘anti-India’ slogans. These clips became the basis for Kumar to be arrested on charges of sedition.

It required forensic digital investigations for the legal courts to acquit Kumar, as the reports showed that the ‘footage had been tampered with’.[[103]](#footnote-103) Further scrutiny showed that the audio that was inserted into the clips was from a different group of people assembled there, and that it had been overlaid on the video clips of Kumar and his allies. However, their protest performance, which was asking for the death of social evils like caste and communalism, got easily doctored into evidence of seditious sentiments.[[104]](#footnote-104)

Despite the testimonies of Kumar and many neutral witnesses that the video was not ‘true’, it was nevertheless taken as the authoritative version of events. It was eventually disproven only when other forms of contrary digital information came to light. The authority of truth-telling no longer resided in the human witnesses, but in the capacity of one technology to *authorize* the other as invalid.

I mark this as a shift from authority to authorization. Authority here refers to a regime of ‘human-determined’ and negotiated representational veracity, whereas authorization is a ‘post-human’ techno-cultural force that combines affect and the logics of computational networks. Neda Atanasoski and Kalindi Vora in *Surrogate Humanity* provide a critical framework to understand how the fantasies of assistive technologies – robots, artificial intelligence – constitute this shift toward what I shall now call *technologies of authorization*, standing in as ‘surrogates for human workers within a labor system entrenched in racial capitalism and patriarchy’.[[105]](#footnote-105) Authority specifically looks at the assemblage where the technology was an instrument assisting human decision-making; authorization is, on the other hand, a condition where the human becomes a cog in the larger system of decision-making, and human discretion becomes one of the many variables that leads to the final output. Kate Crawford and Vladan Joler, in their visual essay on ‘Anatomy of an AI System’, recognize this shift to authorization as a ‘new form of extractivism’. They write: ‘Many of the assumptions about human life made by machine learning systems are narrow, normative, and laden with error. Yet they are inscribing and building those assumptions into a new world, and will increasingly play a role in how opportunities, wealth, and knowledge are distributed.’ [[106]](#footnote-106)

This shift from authority to authorization – where we essentially depend on one set of digital protocols to validate the others – is a telling symptom of information blackouts. It establishes a digital regime where the representational touchstones of verification are no longer going to be enough to determine the veracity of a digital object. And it is worth noting that, despite the high-profile media trial around this doctoring of evidence and the disproving of the sentiments, the viral reach and accelerated spread of the video was so vast that it started a nationwide rhetoric of branding JNU students as ‘anti-national’ and facilitated draconian control and clamping down of free speech and organization on the campus by the right-wing political party in power.

A similar pattern emerges in WhatsApp lynch mobs, where it is not just the instability of truth in a born-digital simulated object, but the speed of its circulation that leads to a fabricated reality. So it was in the case of the well-documented[[107]](#footnote-107) instance in the district of Bidar, when Mohammad Azam, a software engineer working with Google, had gone off on a long pleasure ride in his car with a relative and friends. One of the members of the group, who was visiting from Qatar, had a box of chocolates with him. At a stop where they were stretching their legs, when he saw a group of schoolchildren passing by and looking at them, he offered to share some chocolates.

What the group did not know was that the entire region was bristling with WhatsApp videos with no provenance warning people of child abductors. Even though there had been no cases in the villages of kidnapping, communities were firmly convinced that multiple children had gone missing. When somebody reported the men stopping in the village and offering chocolates to children, a mob quickly assembled. They started abusing the group. The group fled in their car. However, the information of their arrival had passed much faster than their travel, and in the next village of Murki, they were faced with an angry mob that forced the car to stop. The mob dragged the occupants out of the car and beat them up with sticks and stones. By the time the police arrived, Azam was dead, while the others had sustained critical injuries and were taken to the hospital.[[108]](#footnote-108)

Even though the group that was lynched bore all the markings of affluence and middle-class respectability, the mob insisted on misreading them as kidnappers. In their police reports, the survivors from the group talked about how all their explanations, their identification, and efforts to have a conversation were overridden and they were framed only as confirmed kidnappers who had come to abduct children. In other testimonies, people also note how mob participants saw videos that they had access to and used them as verifying evidence, claiming that the people in their videos resembled the group that they were attacking. And even when the group could escape the first mob, the speed with which information was passed to the connections in the next village eventually turned fatal for the traveling company.

This predominance of authority of digital objects – without recognizing them as simulated and potentially modified – and using them as a way of establishing representational truths, overriding the authority of the individuals but trusting the authorization of the digital information – is the way by which the youser become operational. It is no longer a question of verifying information but of producing information that pretends to be representing a reality and only ends up simulating the small world that works through connections, circulations, recontextualization, and computational realities.

## From Possibility to Probability

The reason why networked authorization works over human authority and discretion is not only to do with the life cycle of rumors and speed of information. It has also to do with the epistemic choices of networked computation. At the heart of counting are two knowledge-making systems. One deriving its laws from logic, and the other from mathematics. In contemporary computation, drawing from Watts’ ‘small world’ hypothesis, it is clear that we have established logic as the default mode of meaning-making. With self-containing systems at its core, the logical world of computation creates a system of referential meaning-making that depends on deduction and reduces the probability of event occurrence. Logical probability insists that if a thing happens once, then the chances of it happening again are large; and if it happens enough times, it is the naturalized order of things so that other alternatives of things happening are reduced.

In her work expanding the second order of logic, Maria Manzano argues that within the first and second order of logic, ‘we will never find a strongly complete deductive calculus… (because) compactness, which could be proven from strong completeness, fails’.[[109]](#footnote-109) She draws from the history of logic to remind us that ‘a complete calculus can never be obtained’, and yet computational networks continue to demand and affirm stability and validity of a probability driven approach. Clemens Apprich characterizes this as the ‘hermeneutical paradox’ where, ‘[i]n order to filter a message out noise, to literally discriminate data to extract information, the discriminatory patterns within the communication process have to work behind the scene’.[[110]](#footnote-110) The logical fallacy that *first* computes all the possibilities and reduces them to a probability coefficient, and *then* uses that probability coefficient as a way of predicting and shaping behavior and events, is deeply located in the four principles of social media as characterized by Jose van Dijck and Thomas Poell: *programmability*, *popularity*, *connectivity*, and *datafication*. As they argue, in our data-driven computational networks, computation now ‘refers to the ability of networked platforms to render into data many aspects of the world that have never been quantified before’.[[111]](#footnote-111) These quantifications, unprecedented in their volume and velocity, being constantly consolidated and circulated, provide the platform basis for a whole new structure of *governance* which tries simultaneously to predict and shape the behavior of the users and redefine our understanding of both engagement and participation.

With this logic of pattern recognition and probability indices, the youser becomes a symbolic construction that only makes sense within the confined and closed universe of a computational network system. The youser has no fidelity, no engagement, and no faithfulness to the person(s) that they might refer to. The idea of the youser is not so much to *describe* the user as it is to *hide* that fact that our digital networks are more expansive and more opaque than we understand when we bring them down to mere transactions made by the user.

The creation of the youser is not wedded to these principles of logic. Yousers are grounded in the mathematical realms of possibility mapping. The first order of mathematics insists that, at any given space-time confluence, there is an almost infinite possibility of things that can happen. Even in making something as simple as a natural number, there is recognition that the value can be infinitesimally granulated so that it only approximates the number but never quite achieves it. Or, to make it more legible, the value of 1 is an infinite possibility of the number ‘0.999999…’ stretched to such infinite levels that it might as well be 1. Mathematical possibility makes transparent the pragmatism of choice, but in doing so it also denies the precluding of all the other things that might happen outside of computed events.

This mathematical uncertainty is closer to human perception and cognition than it is to the logical certitude of computation networks. This uncertainty replaces *scale* with *intensity* and *speed* with *depth*, offering a different register of information within the digital realms – imagining a network of quantum computers invested in calculating different possibilities of human negotiation rather than predicting the scripted routes of controlled behavior. It privileges the making and structuring of authority, and the negotiations with it, rather than the deployment and penalization of authorization that is central to shutdowns.

Perhaps this tension between logic and mathematics is the most visible in conspiracy theories that accompany particular crises. Take the terrifying Facebook streaming of two consecutive mass shootings that occurred at mosques in Christchurch, New Zealand, during Friday prayer on March 15, 2019. The attacker, a white supremacist, was charged and convicted of 51 murders, 40 attempted murders, and terrorist activity.[[112]](#footnote-112) In an attempt to reconcile the population with this heinous act, both the video and the manifesto that it was linked to were banned in New Zealand,[[113]](#footnote-113) effectively putting a temporary lockdown both on the video’s circulation and its capacity to make connections.

However, the erasure of the perpetrator as a Facebook user via modes of internet censorship did not stop a global response and viral consumption of the phenomenon.[[114]](#footnote-114) Additionally, it led to an enormous conspiracy theory group emerging in far-right global mainstream media as well as on the fertile grounds of Reddit where detailed forensic analysis of the video insisted that the entire shooting and its subsequent regulation were staged in order to forward a ‘liberal left agenda’ that would take guns away from people.[[115]](#footnote-115) This wasn’t just a small faction, but these conspiracy theories found huge traction in different media forms and in viral posters and memes that offered ‘rational’ evidence to their irrational analyses.

This particular form of resurgence of a user who has been removed by regulation as a youser that is still circulating and replicating is in the realm of the mathematical possibility that abounds the digital web, so that even when faced with factual or logical resistance, the informationality of the youser only grows in intensity and popularity. From anti-vaccine movements to flat-earth conventions and global climate change deniers, these dabblers in possibility mapping continue to exploit the strength of correlative causality embedded in digital networks to create these alternative ‘small worlds’. They find each other through weak ties of topical interest and the algorithmic correlation of weak ties to form a sustained community consolidated on unregulated platforms, where they emerge as a collective force rather than merely fringe elements of irrational thought. Thus the ‘content possibility’ that enables irrational argumentation, conspiracy theories, and absurd fantasies, none of which get either detected or filtered by the computational networks of weak ties because such networks are only tied to ‘network probability’ that maintains a mythical neutrality toward the information, the theories, and the fantasies being circulated.

The networks pretending agnosticism to content, its traffic and the management of its connections allow for such discourses to emerge uncontrolled into a domain of speculation. Networks facilitate these practices even as they try to establish regulation over social media platforms. And even when legal and governance measures, depending on the fallacy of logical erasure, remove users from these platforms, the networks of circulation and possibility continue to proliferate and replicate such yousers on the social web’s horizons of possibility.

## From Memory to Storage

Computational networks encourage overproduction of information. This happens in part by making users encounter their own information and its relationships, and partly by circulating all information at the same scale and speed, making it almost impossible to take parsing or verifying practices as human practices. In fact, the new mode of countering or blocking information is to flood the topics, hashtags, or viral events with counter-information and misinformation so that human users are so overwhelmed by the information that they disengage from it. This disengagement, however, does not mean a lack of information. It merely means that the responsibility of presenting this information is now given to machine learning and customization practices that we call artificial intelligence. It establishes a new model of information circulation, where the human user is created by an algorithmic data harvest and the targeted information provided to the user is also curated and filtered by another algorithmic network. The human in this computational network – sandwiched between two sets of self-verifying and mutually complementary algorithms – has diminished the agencies that protect free speech and expression.

This is the death of memory – the capacity to remember, the ability to forget, and the need for willfully remembering wrong. This is the relegation of the youser into a database, an information stream that is beyond the capacity of the human, trusted only to the verification and authorization principles of algorithmic machines that mimic human agency and make machine decisions. The role of the digital self is to be bereft of memory, but in the midst of abundance of storage. The responsibility and capacity for memory has firmly been relegated to other things that perform that task.

Both in our bodily practices and data preservation, we persist in being creatures of storage. A look at our hard drives will tell us that we have stored more data than we remember or will ever read. A glance at our digital histories and archives shocks us because just the storage of our self has taken up so much data property that increasingly we are unable to read anything more than the data that we have produced – we have become queries that retrieve the data that algorithms sort for us. Our relationship with our data, as informationally overloaded subjects, is necessarily one of *dis*information. Given the volume, velocity, and vectors of our data, it is now a given that everything we can know about our data is wrong, and that we will be corrected only by the algorithms of storage that will do our remembering for us. We complain about information overload now, not because we cannot remember enough, but because we are aware that digital storage is always going to exceed our capacities of memory, and hence we see ourselves moving into storage. What you can tell about yourself is now wrong. And if your memory is challenged with storage, you know that you are going to lose the battle.

## INSIDIOUSNESS OVERLOAD

In contemporary discourse around the future of digital technologies and the lives lived in those futures, many anxieties get foregrounded. Questions of automation, machine ethics, information extraction, data surveillance, algorithmic censorship, infrastructural silencing, and violence by misinformation have not only become theoretical speculations but lived realities in our increasingly networked societies. The formulation and intervention in these areas are rich with different multilayered approaches and poly-vocal narratives that give attention to the social, technological, embodied, affective, and material consequences of these unfoldings.

Most of these formulations and interventions are circumscribed by a few characteristics. They recognize the problems post facto. The focus on case studies, production of actual events, and reliance on a case-driven narrative invariably means that the problem with all its violence and consequences, often borne by those who are the most vulnerable, is allowed to flourish. The scale with which these problems proliferate in digital circuits also means that countermeasures are slow, lag behind, and not effective in reaching the root cause of these problems.

The identification of the frictions and dangers focuses on dramatic unfolding. While many of these problems are quite spectacular (as also referenced in this essay), it is obvious that these spectacles are neither representative nor comprehensive in understanding the underpinning principles and motivations that create them. They are both, invisible and offered as natural progression, thus making it difficult to identify them when they are being operationalized. In reality, despite knowing these concerns, we become willing actors contributing to the development of these shifts because of the incentives and gratifications that are offered.

There is a tacit understanding that while these technological developments are problematic, they are aimed at the social good and need to be protected and championed. From the market logic of *too big to fail* to the technosocial framing of *technology for social good* or its predecessor concept of *information technologies for development*, most definitions of both good development and bigness are unable to recognize their structurally exclusionary and discriminatory character. The conventional counter to technological problems is inevitably more technology of a similar kind with a slightly different orientation.

What remains problematic to these circuits is the location of the human within them. Visual and popular narratives insist on ease of access and convenience as the end point of users’ interactions with these technologies, and continue under the seduction of the visual interface to create new operational conditions that nudge, train, and produce users into becoming a different kind of subject.

The lens of information overload that I have presented here offers two ways of breaking through these much-repeated modes of inquiry and intervention. In information overload, I identify the axiom that information overload is a computational network necessity, not a human one. In showing the different ways by which information overload is being naturalized, I show how it creates a subject that is rendered vulnerable, fragile, helpless, and in need of rescuing by the very technologies that create this subject position to begin with.

In the shift from user to youser, I show how the technological user is not just being led into new forms of practice and transactions, but rather into an entirely new mode of being and becoming. By making the principles that engineer these transitions explicit, I show that the youser is already in the making, and that access to and of digital technologies has to be complicated to produce a more nuanced idea of who is being accessed, for what purpose, and how this access is creating a new template of a technological user.

Through all this, I want to emphasize that the digital condition (as opposed to digital technologies) is insidious, and it doesn’t merely amplify or augment reality, but replaces it, gently, without fanfare, and then demands and forces us to accept it, spending our energy and focus in filling up the positions and profiles that are created in this new reality. This essay is an attempt to provide a framework where we can think through our digital conditions to create spaces for intervention rather than just making meaning, and to make transparent the ways by which we are seduced into becoming yousers of an insidious informationality.

The history of the digital conditions has been written as the history of digital access. However, digital access is an insidious process that diverts our focus and energy on explicating, understanding, and making meaning of it. In this role, we are always going to be informationally overloaded, temporally lagging, and structurally reactive, falling into predicted futures with scripts where our roles have already been written.

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