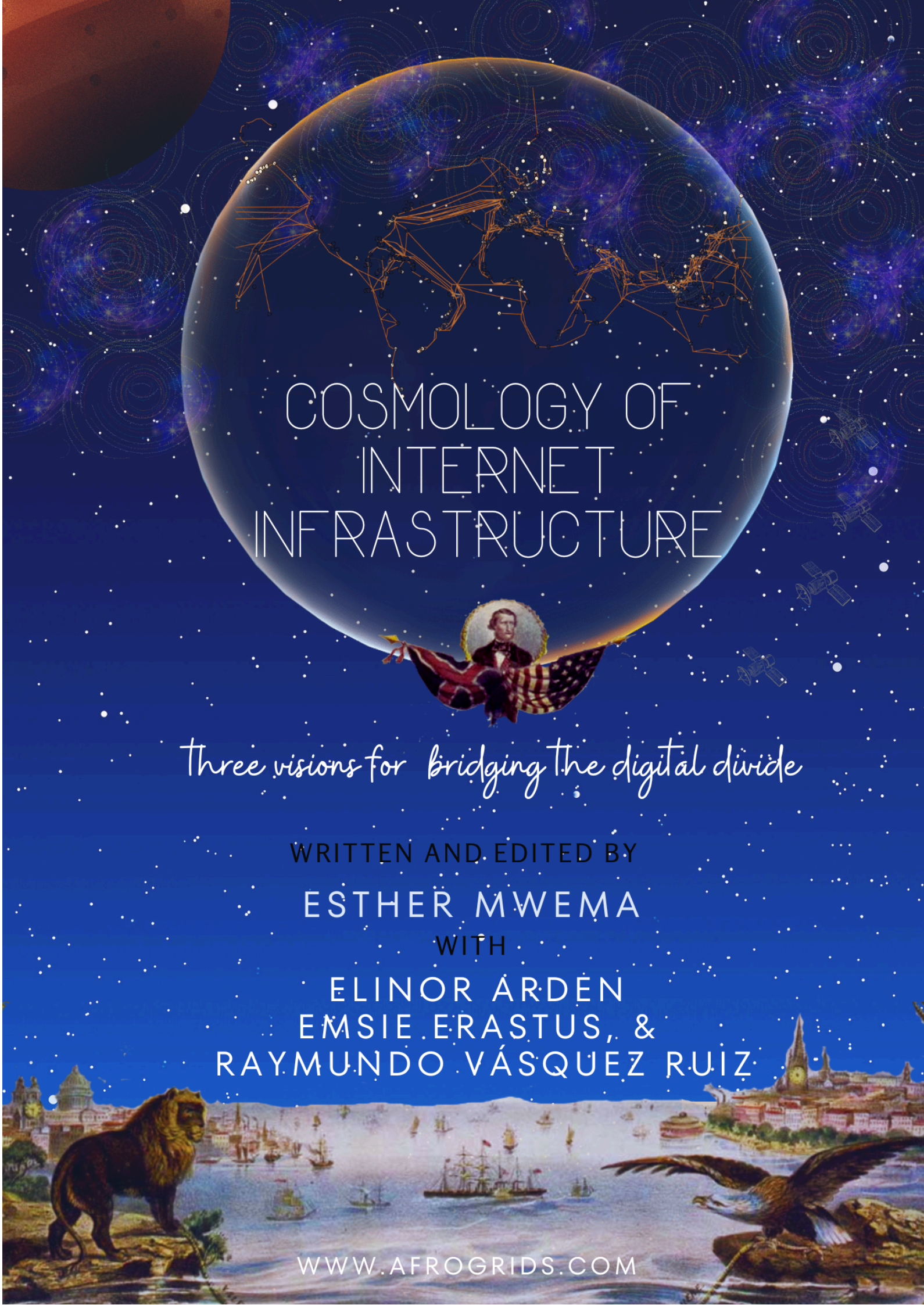
COSMOLOGY OF INTERNET INFRASTRUCTURE
Three visions for bridging the digital divide
WRITTEN AND EDITED BY
ESTHER MWEMA
WITH
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EMSIE ERASTUS, &
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Cosmology of Internet Infrastructure

Three Visions for bridging the digital divide

Written and edited by Esther Mwema

with contributions from Elinor Arden, Emsie Erastus, and Raymundo Vásquez Ruiz

Synopsis

Cosmology of Internet Infrastructure presents, in chapters, imagery on society's belief in the evolution of the (digital) world. The community-centred artwork and research by Esther Mwema connects increased ownership of internet infrastructure by big tech companies to (digital) colonialism, unveiling hidden systems of power in (digital) society. The art component of the project features three cosmologies – past-present, transitory and future – illustrating visions of bridging the digital divide based on the articles written by three multi-faceted practitioners: Elinor Arden, Emsie Erastus, and Raymundo Vásquez Ruiz.

The past-present cosmology, written by Elinor Arden, reflects the colonial logic around internet infrastructure that shapes our current internet infrastructure landscape from 2024 and back to the era after the Transatlantic slave trade.

The transitory cosmology, written by Raymundo Vásquez Ruiz, challenges engineers working within a digital ecosystem that is trying to right the wrongs of the past by adopting the concept of green technologies, along with its fallacies and potential.

The future cosmology, written by Emsie Erastus, plants us in a digital ecosystem rooted in Afro-feminist and decolonial logic, condemning the idolatry of big tech and shining a light on possible equitable futures, with tangible examples on how to get there.

The chapters close with community visions from the collective, translated into the original language of the telegraph: morse code.

One day, when the sky is burdened with tech waste, so we are blind to tell the difference between cosmic bodies, we will look up on a clear night and make a wish upon a burning decommissioned satellite.

Credits

Author, Editor & Artist: Esther Mwema
Contributing Authors: Elinor Arden, Emsie Erastus, and Raymundo Vásquez Ruiz

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Author Bio's

Esther Mwema is award-winning artist and digital inequalities expert working on liberatory issues around Internet governance, Internet infrastructure and Internet freedom. Esther's practice intersects art and tech innovation, interrogating hidden systems of power in digital society ranging from fibre optic cables and digital colonialism to gender inequality.

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Elinor Arden is a researcher and artist who connects material histories, from those flowing through rivers, to surveillance systems and large language models. In a political approach to media archaeology, she examines how the history of media lives on in the present. This informs a practice based on performance, sound and video, which has led Elie from various spaces in the UK (The Serpentine, Wysing Arts Centre, OVADA) to the US, where she is an OSUN Scholarship recipient for her MA in Human Rights and the Arts at Bard College. Recently, she has been investigating the history of minerals in supply chains for communications and "green" technology, which has sparked collaborations with artists and researchers in Latin America. Her artistic and historical research project, 'Conducting Empire', on the British copper industry, triangular trade and the telegraph was presented as an installation-performance at Bard in April 2025.

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Raymundo Vásquez Ruiz is a computer engineer and researcher working in digital infrastructure. He has several years of experience developing software for different industries such as healthcare, logistics, research, and education. He has also participated in different collectives working on autonomous servers and independent media centres. He is interested in the creation, maintenance and reappropriation of technologies from a decolonial vision.

Website: https://vasquezruiz.me

Emsie Erastus is a tech policy and ethics specialist with experience in media, stakeholder strategy, and the ethical challenges of AI and emerging technologies. Recognised as one of the 100 Global Brilliant Women in AI Ethics 2024, she is committed to simplifying complex tech issues and building capacity to ensure digital rights, freedom of expression, and personal autonomy remain at the forefront of progress. Beyond her professional work, Emsie embraces her creative side as both an artist and African art collector.

Discover more about her work on LinkedIn and follow her on Bluesky.

Website: https://www.emsieerastus.com/

Table of Contents

Cosmology of Internet Infrastructure: Three Visions for Bridging the Digital Divide

By Esther Mwema

The cosmos is changing. In 2024, deep in the forests of Zambia, I turned my gaze toward the glittering night sky. I was excited to spot moving constellations immediately; one after the other, they trotted in a single file along the pitch-black sky. Excited, my friends and I wanted to put our wishes on these cosmic rocks until we saw they were too perfect – too evenly spaced out to be organic matter sent from outer space to offer any real hope to our wishes. What we witnessed that night was a long fleet of Starlink satellites orbiting the Zambian airspace.

Growing up in an immigrant family, I was always curious why life was the way it was. My reality felt ordained, as though set in stone, with suffering as a guarantee. At 16 years old, I taught myself how to type so that I could land my first job at an Internet café in the small town of Kabwe, Zambia. The digital world opened me to other realities – from *MySpace* to the advent of *Facebook* and *Twitter* – I had a new name online, new friends I'd never meet, and buzzing questions. How does the Internet work?

The answer was like peeling an onion with an eye-watering effect. The Internet is layered with technical, geopolitical, socio-economic, and cultural implications. I uncovered a myth that the Internet hides somewhere in the cloud. This language was a shroud to a hidden system of power in digital society – Internet infrastructure. Research (AAPTI Institute & Omidyar Network, 2024) "identified four basic 'infrastructures' for the digital ecosystem, namely: data, hardware, the cloud, and standards and protocols", further framing digital infrastructure as critical to addressing gaps in governance of the digital ecosystem (Airan, 2024).

The study of cosmology has two main branches: observational and physical. Observational cosmology involves the use of equipment to study the universe's development and structure, while physical cosmology interrogates the structures and science related to the development of the universe (DOE, n.d). Focusing on both the observational and physical aspects of the Internet, the following chapters will present three existing cosmologies of Internet infrastructure, ranging from the context of the past-present reality of undersea cables to the green transition era we are currently grappling with and the anticipated liberating future. Alongside these chapters is the artwork I made inspired by these cosmologies.

After reading the last Chapter, I hope you will be able to answer the question - What cosmology do you (be)li*e*ve in?

WHAT *IN* THE COSMOLOGY?

According to the Oxford English Dictionary, cosmology is "the science of the origin and development of the universe." NASA defines cosmology as "a branch of astrophysics concerned with the history, structure, dynamics, and evolution of universe." The father of the Internet and co-creator of the Internet Protocol, Vint Cerf, is leading groundbreaking research on interplanetary Internet networks (Moss, 2021). In this digital era, we also have tech billionaires comparing the size of their rockets to see who can be in space faster and for longer (Skibba, 2025. Rannard, 2025). There have been longstanding plans to mine the moon for minerals in a galactic gold rush (Tynan, 2016. NASA Tech Talks, 2025) with the first mood dust samples dubbed ‘rarer than gold’ arriving on Earth 50 years ago (Rannard *et al*, 2025). Artificial Intelligence and efforts to decarbonize has fueled interest in the space tech industry and geospatial intelligence (Lockwood & Kanetkar, 2023). The fabric of the universe, from outer space to the Earth's mantle and deep seas, is now entangled with Internet infrastructure.

The cosmology of Internet Infrastructure investigates the stories we tell ourselves about the origins of the Internet and how this is manifesting in our space-time reality. The measure of time-space shifted during the colonial era, enforced with the telegraph. Elinor Arden, in Chapter One, shows how the invention of the telegraph, predecessors of undersea cables, resulted in the Western hegemonic Greenwhich Mean Time zone (GMT) we globally use today.

Diverse cosmologies existed prior to the ‘civilizing’ mission of Europeans. Benyera (2021) argues that “Coming from a different civilization and a different cosmology, one can be forgiven for concluding that places where there were no household dwellings were actually empty, unowned, and uninhabited lands.” These ‘empty’ spaces were and are sacred cosmoses that house spirits, wild creatures and nature itself. The cosmos now becomes the frontier that the new colonial settlers seek out as a space “to be claimed for extraction, further settlement, and the preservation of the status quo on Earth” (Au, 2023).

The same rhetoric is being repeated about the digital divide as empty, unowned, and unoccupied digital spaces, leading to a new scramble for Africa’s cyberspace (Birhane, 2021., Coleman, 2019.). Euro and North American big tech companies are offering apps, AI and digital space in exchange for spatial space where they plant or float their Internet infrastructure that hosts the data they extract. These are structures created by colonialists to uproot Africans from their cosmology and plant them in an alien Euro- North American one (Benyera, 2021. *p93*). Our capacity for connection is now being conditioned by coloniality as the Internet becomes a consciously constructed time-space where data flows from the "'cosmos database' to our inner information portals" (Rezaire, 2022). Rezaire further cautions that it is critical to interrogate Information and Communication Technologies (ICTs) that serve as modular connections with ourselves, each other, the Earth and the cosmos, interrogating if the technology is a tool of oppression or potential emancipation (*ibid*).

Often, we separate the Internet from the context within which we exist, that is, the natural world. Examining Internet infrastructure through the lens of cosmology allows for a holistic perspective on the impact of this technology on how we perceive ourselves as people in an increasingly digital world. This offers a critical view of our past-present cosmology, the shift toward greening the Internet as a transitory cosmology, toward a future cosmology of liberated peoples on Earth or in space.

PAST-PRESENT COSMOLOGY: EMPIRE'S NERVOUS SYSTEM

The Berlin Conference of 1884 and 1885 earmarked a new age of colonial domination. However, after devastating centuries of the transatlantic slave trade, the empires' mode of conquest shifted with the laying of the transatlantic telegraph cable earlier in the year 1858.

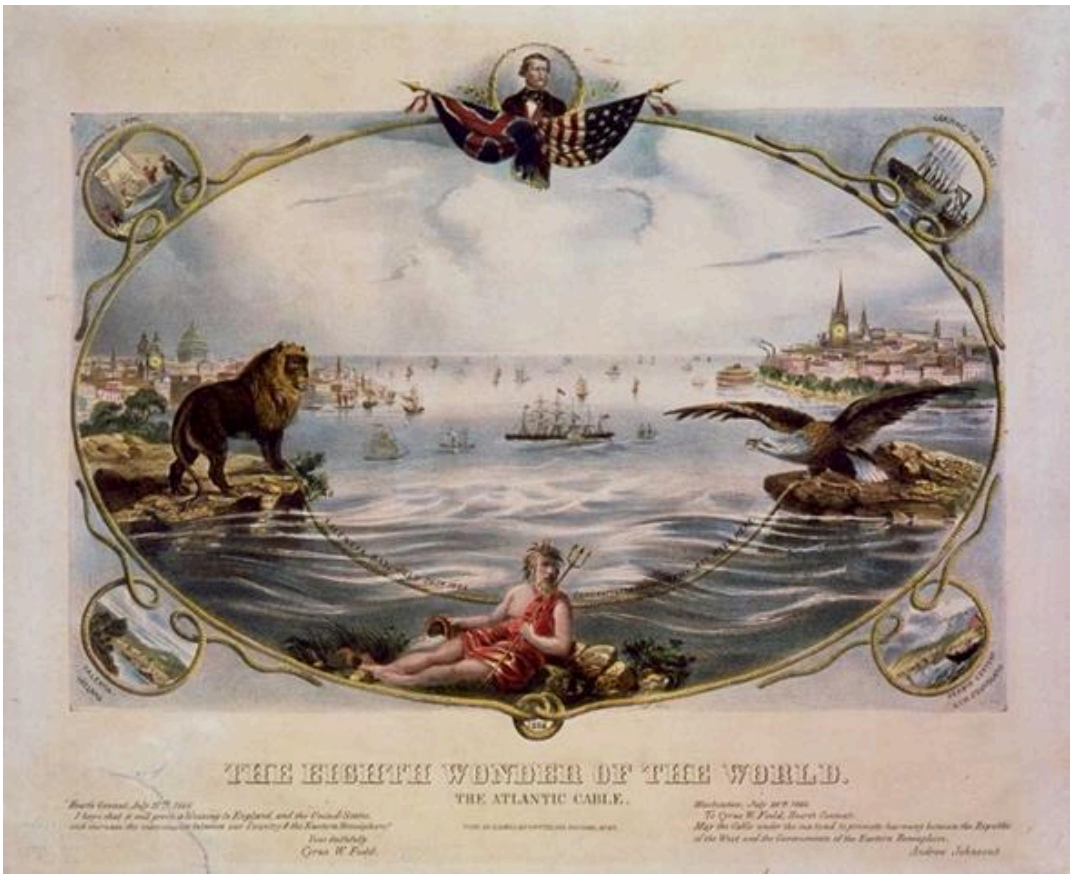


Figure 1: The Eighth Wonder of the World. The Atlantic Cable. N.Y. : Kimmel & Forster, [1866] Source: Library of Congress. This image is embedded in the cover page artwork by Esther Mwema.

The telegraph was seen an instrument destined by Divine Providence to diffuse religion, civilization, liberty, and law throughout the world according to US President James Buchanan (Smith & Browne, 2017) . Dubbed the eighth wonder of the world, the Atlantic telegraph cable served as the empire's nervous system to dominate its colonies as Elinor Arden explores in Chapter 1. A chronological review in my paper with Dr. Abeba Birhane shows how the past mirrors the present: Undersea cables are new frontiers of colonial domination in Africa. For example, St. Helena Island, which served as a transit port for slaves until the 1860s, now serves as a transit port for undersea cables today (Mwema & Birhane, 2024).

Figure 2: Father Neptune blessing Britannia and Uncle Sam on the successful laying of the Atlantic Telegraph Cable. Cartoon by Charles Samuel Keene (1823-1891) from 'Punch' London 11 August 1866. Source: Alamy Images.

In the depiction of Father Neptune blessing Uncle Sam and Britannia to dominate the world with the telegraph, we see the clear beginning of a cosmology that roots domination with technological infrastructure expansion. Father Neptune, in mythology, is the brother of Neptune and Pluto and is known as the god of the sea. Furthermore, Abraham Lincoln gave the nickname 'Father Neptune' to the US Secretary of the Navy during the Civil War, Gideon Welles (Symonds, 2011). The use of cosmic characters, including Father Neptune, mermaids, the great eagle and the lion, served the purpose of translating this domination to the common populace, for which the transatlantic telegraph cable was a testament. The images also reflected common societal values at the time on gender and cultural norms, prominent religious views, and global relations of the imperialist project (Picker, 2013).

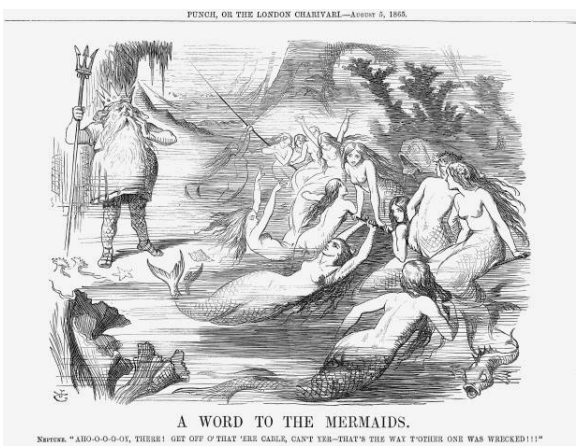
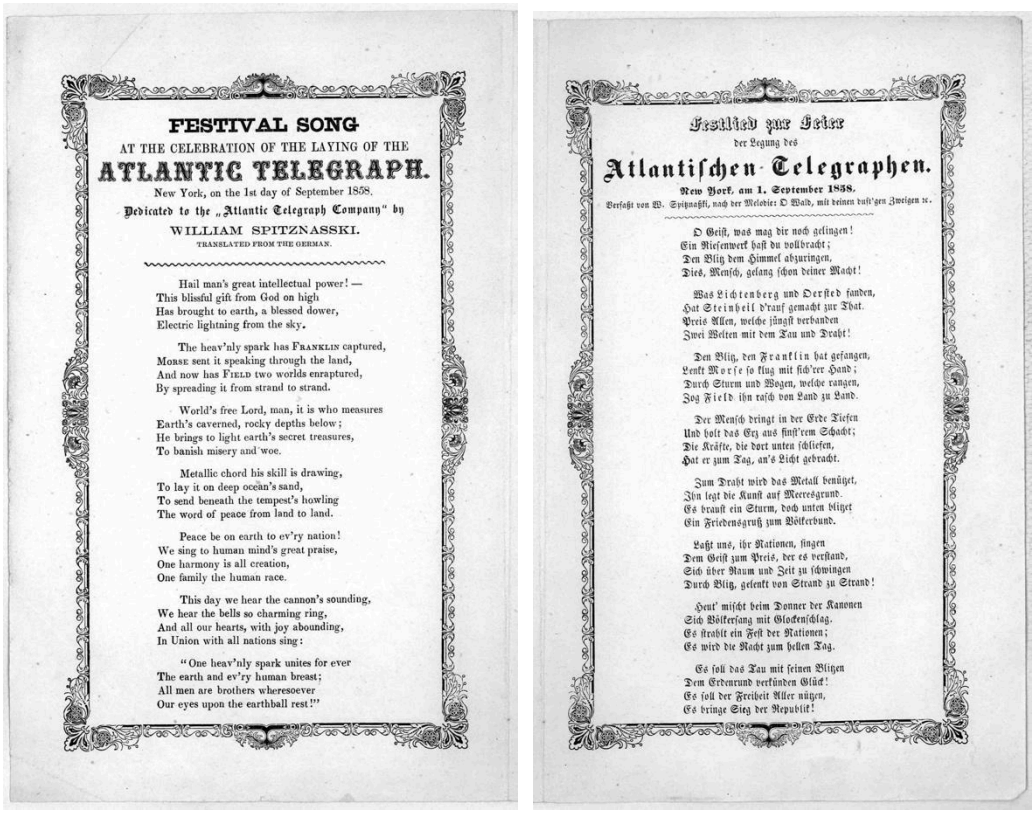


Figure 3: John Tenniel, "A Word to the Mermaids," Punch_ 49 (1865). Figure 4: Under the Dark Blue Waters. 1872. Source: Getty Images.

THE DIVER IN SEARCH OF THE ATLANTIC CABLE GETS INTO HOT WATER.

Even before the Berlin Conference that led to the Scramble for Africa. Germany commissioned a festival song as a celebratory gift dedicated to the Atlantic Telegraph Company at the laying of the Atlantic Telegraph in 1858, claiming it to be the heavenly capture of light and a gift from God.



FESTIVAL SONG

AT THE CELEBRATION OF THE LAYING OF THE

ATLANTIC TELEGRAPH.

New York, on the 1st day of September 1858.

Dedicated to the „Atlantic Telegraph Company" by

WILLIAM SPITZNASSKI.

TRANSLATED FROM THE GERMAN.

Hail man's great intellectual power! —
This blissful gift from God on high
Has brought to earth, a blessed dower,
Electric lightning from the sky.

The heav'nly spark has FRANKLIN captured,
MORSE sent it speaking through the land,
And now has FIELD two worlds enraptured,
By spreading it from strand to strand.

World's free Lord, man, it is who measures
Earth's caverned, rocky depths below;
He brings to light earth's secret treasures,
To banish misery and woe.

Metallic chord his skill is drawing,
To lay it on deep ocean's sand,
To send beneath the tempest's howling
The word of peace from land to land.

Peace be on earth to ev'ry nation!
We sing to human mind's great praise,
One harmony is all creation,
One family the human race.

This day we hear the cannon's sounding,
We hear the bells so charming ring,
And all our hearts, with joy abounding,
In Union with all nations sing:

"One heav'nly spark unites for ever
The earth and ev'ry human breast;
All men are brothers wheresoever
Our eyes upon the earthball rest!"

Festlied zur Feier

der Legung des

Atlantischen-Telegraphen.

New York, am 1. September 1858.

Verfaßt von W. Spitznaßki, nach der Melodie: O Wald, mit deinen duft'gen Zweigen ꝛc.

O Geist, was mag dir noch gelingen!
Ein Riesenwerk hast du vollbracht;
Den Blitz dem Himmel abzuringen,
Dieß, Mensch, gelang schon deiner Macht!

Was Lichtenberg und Oersted fanden,
Hat Steinheil d'rauf gemacht zur That.
Preis Allen, welche jüngst verbanden
Zwei Welten mit dem Tau und Draht!

Den Blitz, den Franklin hat gefangen,
Lenkt Morse so flug mit sich'rer Hand;
Durch Sturm und Wogen, welche rangen,
Zog Field ihn rasch von Land zu Land.

Der Mensch dringt in der Erde Tiefen
Und holt das Erz aus finst'rem Schacht;
Die Kräfte, die dort unten schliefen,
Hat er zum Tag, an's Licht gebracht.

Zum Draht wird das Metall benützet,
Ihn legt die Kunst auf Meeresgrund.
Es braust ein Sturm, doch unten blitzet
Ein Friedensgruß zum Völkerbund.

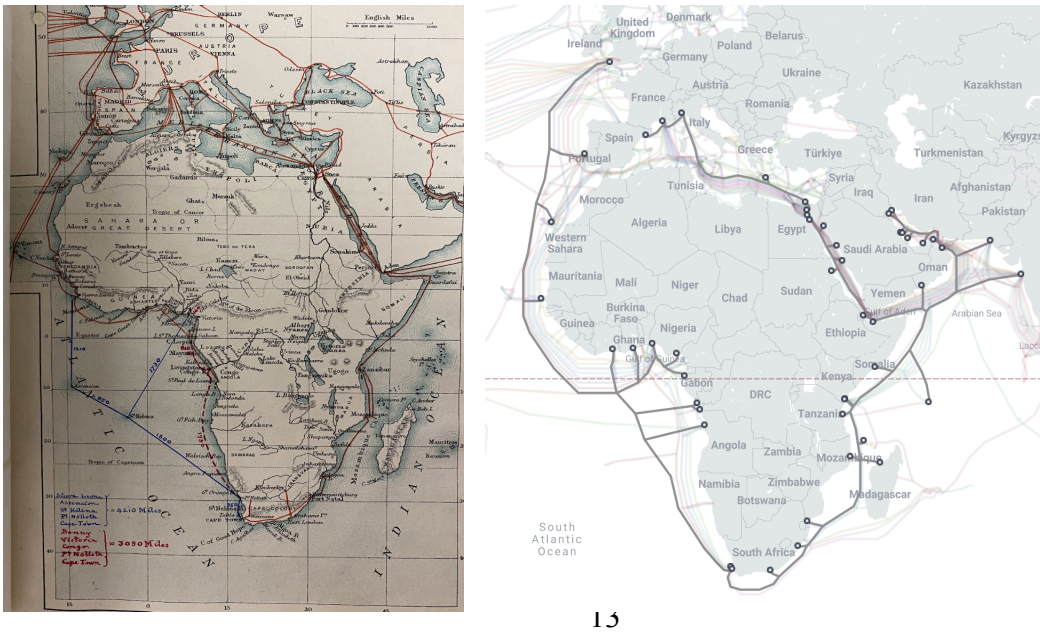
Laßt uns, ihr Nationen, singen
Dem Geist zum Preis, der es verstand,
Sich über Raum und Zeit zu schwingen
Durch Blitz, gelenkt von Strand zu Strand!

Heut' mischt beim Donner der Kanonen
Sich Völkersang mit Glockenschlag.
Es strahlt ein Fest der Nationen;
Es wird die Nacht zum hellen Tag.

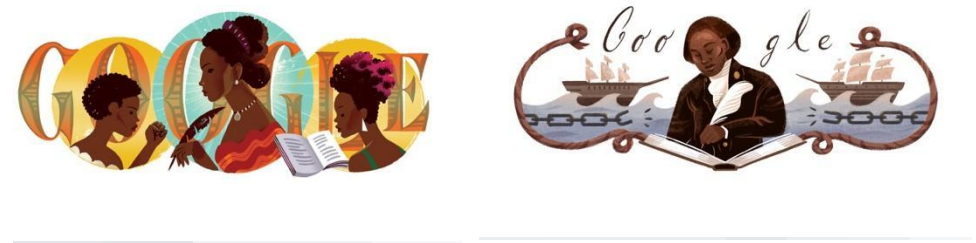
Es soll das Tau mit seinen Blitzen
Dem Erdenrund verkünden Glück!
Es soll der Freiheit Aller nützen,
Es bringe Sieg der Republik!

Figure 6: Festival song to celebrate the Atlantic telegraph. New York, on the 1st day of September 1858. Dedicated to the "Atlantic Telegraph Company" by William Spitznasski. Tr. from the German. Source: Library of Congress.

The past-present cosmology is further reinforced by the telegraph maps from the 1700s, which are identical to the undersea cable maps of 2025 (see Chapter 1). The longest undersea cable in the world, 2Africa, owned by a consortium led by Meta, mirrors the one drawn in 1700s Britain. The cosmology rooted in Infrastructure expansion for domination continues to manifest with big tech companies increasingly owning undersea cables around Africa (*ibid*).



Google gives a nod to the colonial context of undersea cables, having named its undersea cables in Latin America and Africa after abolitionists Maria Firmina dos Reis and Olaudah Equiano. Google's 'Firmina' undersea cable connects the United States and Argentina (Arden, 2025). Google's 'Equiano' undersea cable transverses West Africa on the same oceanic route that Olaudah Equiano was forcibly taken as a slave.



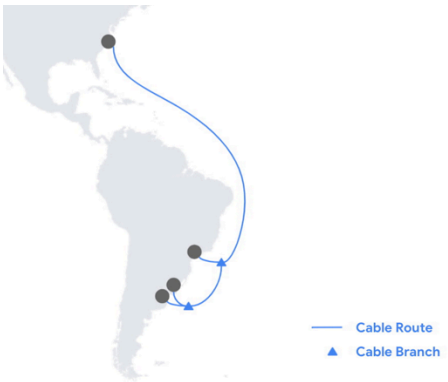


Figure 11: Google's 'Firmina' undersea cable.

Figure 12: Google's 'Equiano' undersea cable

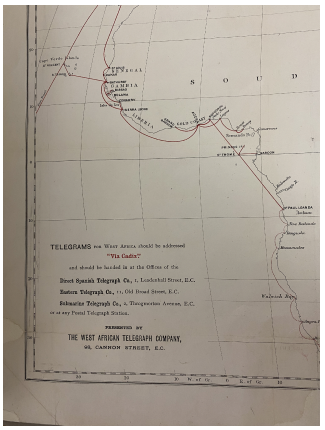


Figure 13: West African Telegraph Map. Source: Elinor Arden

The unprecedented demand for Artificial Intelligence has put big tech companies in a new race to invest in and build AI infrastructure, including massive data centers expected to become a trillion-dollar industry by 2028 (Procter, 2024). We are now in an active transitory cosmological shift where infrastructure ownership will shape the future of people and planet.

TRANSITORY COSMOLOGY: SACRIFICE ZONES

Since the drought of 2024, Zambia has experienced intense load shedding, with daily power cuts of up to 18 hours and, in some instances, 24-hour blackouts as of the time of this publication. However, crypto miners are drawing consistent and cheap hydroelectric power from the Zambezi, the fourth-largest river in Africa. The Zengamina hydro-power plant, owned by a foreign company, in the remote Kalene Hills of Zambia generates up to $80000 per coin in 10 minutes while charging the local community to access any excess electricity (Tidy, 2025). These crypto miners posit themselves as saviours of this rural community, which did not have stable electricity until they arrived, notwithstanding that they are earning more money per coin than the average community member may ever earn in a lifetime. This is all about economic interest, where "humanitarianism" is a front to preserve a profitable situation (Freire et al., 2018). The crypto miners plan to vacate the area once the mine runs dry, according to the glowing BBC documentary.

Computer Engineer Raymundo Vásquez Ruiz presents the fluid shift corporations have taken toward 'greening' digital technologies in Chapter 2. The competing cosmologies between capitalistic extraction for 'green' technology by former settler-colonialist nations and the resistance of Indigenous peoples of Africa and America to protect the land are shaping our transition into the digital future. Where dominant Western ideology has a historical narrative which views dispossession as a natural step to achieve order, progress and civilization through the creation of sacrifice zones: the 'sacrificed' land, nature and peoples see our humanity as intricately tied to how we treat our environment due to centuries of history of resisting the dispossession from the same actors vying to control and shape the globalized digital future. Naomi Kleine describes sacrifice zones as places "where residents lack political power, usually having to do with some combination of race, language and class." (Kleine, 2015.,Turner, 2014).

The greenwashing of technology relies on the fantasy that dystopia is far flung from our reality. Yet, for many, the world is ending: a mountain collapsed in DR Congo, revealing tonnes of copper (Al Jazeera, 2024); child labourers are exposed to toxic chemicals as they mine for green technology they will never use (McKie, 2021); and methane-powered xAI data centers are releasing nitrogen oxide and polluting a historically black neighbourhood with toxic chemicals (Democracy Now, 2025). For parts of the Earth, the world has already ended: thousands of environmentalists have been murdered protecting the land against the greed of billionaires (Global Witness, 2024., Bir, 2024., Omrow & Stoett, 2024), a Zambian river died overnight due to an acid spill from a Chinese copper mine (Politico, 2025), and the installation of undersea cables is permanently disrupting fragile marine ecosystems (Taormina, et al 2018., Calamaio, 2023); to name a few examples.

The existential harm to people and climate has done nothing to rein in the heavy financial investment toward increased Internet infrastructure ownership by tech billionaires. The US government received the promise of investment worth $20 billion for US Data Centers from

Emirati billionaire Hussain Sajwani (Reuters, 2025). Three tech firms, OpenAI, Softbank, and Oracle, endorsed by US President Trump, are raising $500 billion to build the "largest AI infrastructure in history" called Stargate (Duffy, 2025). BlackRock acquired Global Infrastructure Partners (GIP) to manage $170 billion in infrastructure assets. Microsoft and Nvidia have created the Global AI Infrastructure Investment Partnership (GAIIP) to raise over $100 billion dollars in debt as an investment in their infrastructure (Woolard, 2024).

Google, Amazon, Microsoft and Oracle are now considering nuclear energy as green solutions to power their data centers (Patrizio, 2025., Swinhoe, 2025., New York Times, 2024). Meta, after successfully launching the longest undersea cable in the world, 2Africa, has new ambitions to build and be the sole owner of a $10 billion worth undersea cable that spans the entire globe (Lunden, 2024). Starlink, owned by Elon Musk, accounts for up to 60 per cent of active Satellites to date (Irwin, 2024., Cuthbertson, 2024). Satellite operators are secretive about their operational practices, ground station locations, data collection, and technology deployment, as well as the identities of their contractors (Paci & Sayinzonga, 2024). With this power in the hands of private corporations, they get to buy and sell people's data to the highest bidder.

Space debris falling out of the sky is no longer a phenomenon limited to superhero movies, as "sacrificial mass" falls from the sky every day, crashing to the earth, as happened in a remote village in Kenya (David, 2025; Thompson, 2025). Additionally, the surge of crashing satellites is polluting Earth's atmosphere, with up to five satellites falling each day (Roston et al., 2025). Newer Starlink satellites are leaking thirty times more radiation than their predecessors, which could affect astronomers' ability to study the universe (Baker, 2024; Pultaroza, 2024). These satellite constellations are also creating light and sound pollution that will have profound negative consequences on "cultural, scientific and social practices that rely on dark skies and silence (Au, 2024. 31)." To put this into perspective, up to 120 Starlink satellites crashed in January alone as Musk puts more satellites in space to raise money for his vision to colonize Mars (Tripathi, 2025., Pultarova, 2025). Besides funding space colony fantasies, Low Earth Orbit (LEO) satellites serve a dual purpose of civilian and military functions, with some new classes of satellites having improved capabilities to zoom in on and identify individual people, thereby raising concerns about privacy and surveillance (Paci & Sayinzonga, 2024). There is an active imagination that is funding our transition to the digital future where, for these companies, profit takes priority, even at the cost of individual freedoms and global climate health.

Ruha Benjamin's book *Imagination* points out that "transition imaginaries are concerned not only with restructuring the world out there but with transforming worlds in here – our identities, our psyches, our spirits" (Benjamin, 2024). When the reality of our digital footprint is hidden from us, it fosters the belief that we can consume endless streams without incurring costs to ourselves or our home planet. Capitalistic extraction across global geographies under the guise of 'growth' distorts, degrades, and denies the humanity of the majority to benefit the few (Varon & Clarote, n.d.). A transitory cosmology rooted in continual extraction and pollution of designated sacrifice zones is one where oppression, injustice and death continue unabated in the hope that the greed of billionaires will not, in turn, consume us as they escape the consequences of the climate collapse in underground bunkers, floating houses or literally, leave Earths' atmosphere (Naraharisetty, 2022).

Infrastructure is critical for shaping our digital world, and those who own it amass a wealth of hidden power – not only financial but also geo-political and socio-economic. There is work being done for sustainable infrastructure for the climate transition (PPIAF, n.d), imaginaries

for public-owned Artificial Intelligence (Lichfield, 2025), and concerted efforts for sustainable subsea (or undersea cable) networks (SubOptic, n.d). These counter-imaginaries may not be as mainstream as investments by big tech companies, but they offer time, vision, and investments for public ownership of Internet infrastructure.

Vásquez Ruiz, in Chapter 2, emphasizes on the role of engineers in building technology that values people over profit. Our time, investments, and imaginations today will shape the future that becomes our reality. Bridging the digital divide must be more than just a stunt for corporate growth; it must reflect what and who we value: real, not fictional, future people. This creates the seed for our future – as Butler called it: Earthseed.

FUTURE COSMOLOGY: EARTHSEED

Octavia Butler's 1993 novel *Parable of the Sower*, among the list of banned books in 2025 America, laid out a vision of our place in the stars as a path to escape oppressive systems. The main character in the novel, Lauren Olamina, a black woman, observes the breakdown in society and maintains fervent religious hope that the "destiny of Earthseed is to take root among the stars" (Butler, 1993). Octavia's fantasy has an opposing force in the tech billionaires' own fantasy to take a foothold in space – co-opting an imagination of liberation that would exist as a portal of freedom to one of expansive growth, extracting from all living things to fit the billionaire's ever-expansive ego. The colonialist vision of domination has expanded to space, while they do nothing to alleviate the climate crisis happening on our planet today. Longtermist, William MacAskill, in his book 'What we owe the future' suggests that our current world is saturated with diverse ideas, and to survive as a species, we need to set a common moral standard to survive for as long as the sun shines – 500 Billion years – alongside Artificial General Intelligence (AGI). Tech billionaires, with their cult-like following, then posit themselves as prophet-leaders in the religion of technology (Sigal, 2023; Noble, 1999).

US President Trump, bolstered by the same billionaires, shared his administration's aspiration to "pursue our manifest destiny into the stars" to plant the stars and stripes of the American flag on the planet Mars. Manifest destiny is the "widespread belief that white settlers were destined by God to colonize the Americas, thereby justifying the forced removal of Indigenous peoples from their lands" (Benjamin, 2024). We can see this reflected in the Trump administration's proposals to embattled countries, such as the Democratic Republic of the Congo and Ukraine, to surrender as much as 90 per cent of their rare earth critical minerals in exchange for peace. Or how the United States and Silicon Valley aspire to colonize Greenland as the new libertarian utopia as part of their manifest destiny to conquer the territory with untouched rare-earth minerals (Levy and Ulmer, 2025).

And when the world experiences eventual climate collapse due to such extractive actions to fuel AI, the world's billionaires have an extraterrestrial exit plan. For example, at least one million people "mostly white and male – as those who would survive into the future because they are the best of the human race" in the safety of the new Mars colony *(ibid)*. When this human colony on the red planet ends in a likely mass death (Tangermann, 2024), there is another plan for digital descendants that will live on as transhumans in an all-powerful collective 'galaxy brain' (Torres, 2023). OpenAIs Sam Altman has already signed up for his brain to be revived by Artificial Intelligence in the future (*ibid*).

Macedo, in *Pedagogies of the Oppressed*, challenges that an oppressor consciousness desires to transform anything organic into the inorganic by approaching life as though all living persons were things to be dominated. "The earth, property, production, the creations of people, people themselves, time – everything is reduced to the status of objects at its disposal" (Freire, et al, 2018). Science and technology are being applied as powerful instruments for the maintenance of the oppressive order through manipulation and repression. The power of who is connected, how, and what they do online, as they utilise Internet infrastructure owned by billionaires, will be at the mercy of these 'self-made' tech gods. In such a future cosmology, the few make decisions that impact the majority, including the natural world.

This is the premise on which Emsie Erastus, in Chapter 3, calls for Africa's exodus from digital oppression and the dismantling of the altars of big tech. The African continent has a unique positionality in this cosmology because the past-present, transitory and future cosmologies is centered on resource and data extraction through Internet infrastructure that depends on critical minerals, human labour, and data from the continent. This is also situated in a history where cosmology was central to colonial resistance, as Architect Thandi Loewenson calls it in her article on *Celestial Settler Frontiers* (Loewenson, 2025). There is, of course, a shifting trajectory with reclaiming Africa's time-space and materiality from digital colonialism; such as the Democratic Republic of the Congo suing Apple for abuses in the mineral supply chain of their tech products (Vivuya, 2025); the African Union creating the African space agency focused on astronomy, earth observation, satellite connectivity and navigation (African Union, 2018) and the application of non-western philosophies such as Cosmo Ubuntu to emerging technology.

The African philosophy of Ubuntu translates to "a person is a person because of other persons". When decolonization is applied to emerging technologies, such as Artificial Intelligence, this becomes a philosophy of Cosmo-Ubuntu by returning to ancestral wisdom that does not separate human beings from the land, our ancestors and the universe (Cossa, 2020). This is a future cosmology of reparation, where we repair our dignity and autonomy as the human collective by embracing our humanity in a balanced relationship with nature.

This was the reality of the Bakongo people, who predated European contact in the 1400s and held the longstanding circular symbol of the Kongo cosmogram, which shaped their identity within the cosmos, fusing the physical and spiritual worlds (Latedjou and Pwo, 2022; Rezaire, 2019). Centered on the Dikenga – a cross-like symbol showing the circular phases of life, the Kongo cosmogram travelled along the Atlantic Ocean with black survivors of slavery into the Americas as colonial resistance The latent space presented in the Kongo cosmogram can be applied for culturally relevant Machine Learning and ethical Artificial Intelligence, according to American digital artist and educator Nettrice Gaskins (2020). Cosmologies that challenge extraction and embody a holistic view of technology aligned with nature are not only possible but already exist across the globe (Dellanoce et al, 2018). We have been relying on the illusion that the technology is neutral. By examining the past-present and transitory cosmologies, we begin to see that the values we embody shape our collective digital futures.

INTENTION, DIGNITY AND HUMANITY

As it is, we are living in an imagination that began in the 1700s post-abolition of the slave trade, transported to our current time-space through the telegraph cables that were the ancestors of the undersea cables that transport nearly all our digital communications today. Our actions; what we talk about, what we do, what we invest in, and what we believe can sustain a cosmology that sentences the masses to death or supports the lifeforce, dignity and autonomy of people and planet today and in future.

The visions outlined are a call for all of us to build a new cosmology - one that does not bear the hallmarks of a dystopia where things are broken because they moved too fast to notice the crushing. This new cosmology is one, to borrow from Freire's terminology, where there is neither oppressor nor oppressed (Freire et al., 2018).

Ultimately, the cosmology of Internet infrastructure allows us to uncover the empire’s nervous system (Elinor Arden, Chapter 1), challenge the creation of sacrifice zones, greenwashing emerging technologies (Raymundo Vásquez Ruiz, Chapter 2) and tear down the altars of big tech in an exodus from digital oppression (Emsie Erastus, Chapter 3).


March 3, 1807
President Thomas Jefferson signs into law the Act Prohibiting Importation of Slaves, passed by Congress the day before.
January 1, 1808
The ban on the international slave trade goes
effect. Ship manifests were required at port
as proof the slaves had not been imported
1808. These ship manifests contained
information about the ship owner and
December 6, 1865
ight months after the end of the Civil War, the U.S. Constitu
to outlaw the practice of slavery in the United St
ATLANTIC
OCEAN
MAP
OF THE SUBMARINE
ATLANTIC TELEGRAPH

Chapter One: Past-Present Cosmology (Sea)

Artwork by Esther Mwema illustrating Past-Present Cosmology (Sea)

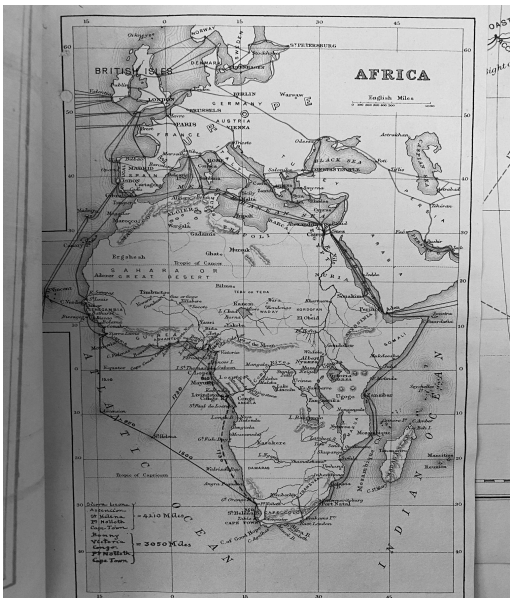
The ocean was the route for trading bodies, drowning souls, and transplanting one part of the Earth to another. This composite artwork by the author presents images, maps and artwork from the 19th Century when the Atlantic Telegraph was born – the ancestor of the undersea cables that carry up to 95 per cent of our Internet today. At the heart of the artwork is an image of South African black laborers pulling a telegraph cable to shore, during the colonial era. After the slave trade was no longer profitable, free trade was introduced through telegraph cables, at the expense of the colonies. The map of Africa is transposed over the images as a central character in this cosmology centered on extraction and capitalism.

Elinor Arden, in Chapter One, introduces us to the telegraph, the 'Empire's Nervous System'.

Conducting Empire: Towards a Genealogy of the Internet's Backbone

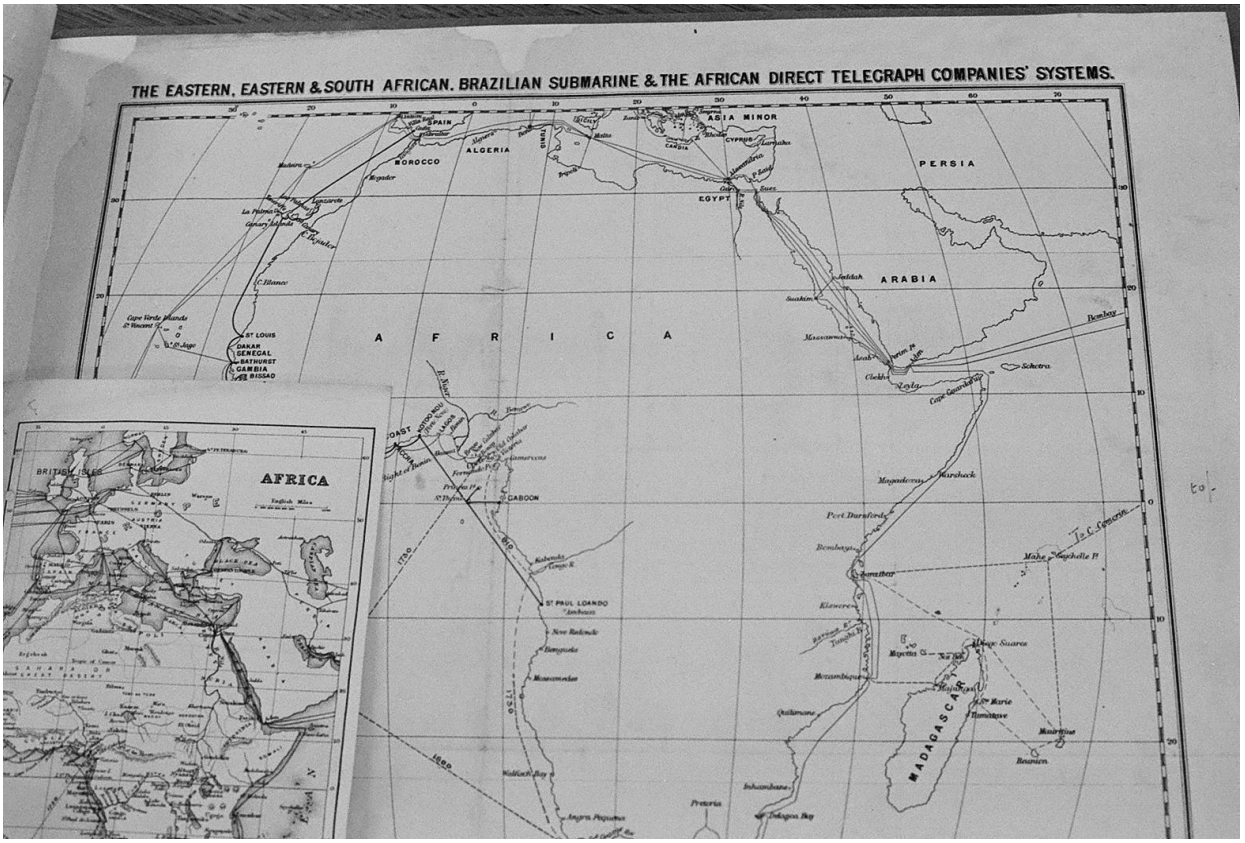
By Elinor Arden

On an exceptionally cold January day, as the world was waking up to 2025, the British National Archives were quiet, buzzing with their usual eeriness. Late in the afternoon, staggering towards the end of a fruitless day, I found some maps. They were in a file from the year 1887, on the Eastern Telegraph Company and Africa Direct Telegraph Company: two of the thirty-two companies owned by the nineteenth-century's "cable king", John Pender.[1] These maps showed British-owned telegraph cables surrounding the African continent.[2] They were not different to others I had come across over weeks of trawling through colonial files. But what struck me was their similarity to a map I had seen before.[3] Google and Meta's African undersea cable projects draw more or less the same lines around the continent. However, '2Africa', 'Equiano' or 'Umoja' are projects built over the last decade, and only very recently began to function for super-fast fibre optic communications.[4] For projects almost 150 years apart, the images are disturbingly alike.



(Left-Hand Side: Authors' Photos of Maps found in National Archives at Kew. Right-Hand Side: Map of Meta's 2Africa Cable)

[1] British National Archives at Kew, London, Catalogue Number: MPG 1/923
[2] 'African Direct Telegraph Company' by Bill Glover, Atlantic Cable Project Online, https://atlantic-cable.com/CableCos/AfricanDirect/index.htm
[3] See Mwema, E., & Birhane, A. (2024). Undersea cables in Africa: The new frontiers of digital colonialism. *First Monday*, *29*(4).
[4] '2Africa', the longest submarine cable in the world, is still under construction. The Umoja Project went live in 2024. The Equiano cable has been ready for service since March 2023. All information taken from https://www.submarinenetworks.com



(Above: Authors' Photos of Maps found in National Archives at Kew)

On one level, the similarity between the maps is not surprising, given that geographically, the cable network is one of the most static infrastructures in the history of communications.[5] Cables have been layered along the same international routes for over a Century. But why have these particular routes been established and reinforced? Through my archival research, I confirmed that the first cable network was a decisively imperial project. In the 19th Century, the network was monopolised by British telegraph companies with strong ties to imperial interests, in the form of subsidies and landing rights. A global network of telegraph cables was part of the British imperial mission, since it enabled instantaneous communication between the metropole (London) and the colonies. At its height, the British government named the network the 'All Red Line', which cut across the globe in the Empire's signature shade of blood red. By 1900, the imperial government was debating whether to bring the network under state control, but decided against it because politicians believed that private British companies were a greater asset to the Empire.[6]

As I looked through files from British colonial territories across the Atlantic, it became clear that undersea telegraph cables were not only a way of strengthening imperial interests in the 19th Century. They were also a tool for "free trade" – an economic policy put into practice after the so-called abolition of slavery in the British Empire, during the industrialisation of

[5] Nicole Starosielski, *The Undersea Network* (2017)
[6] George Peel's 'The Nerves of Empire' in *The Empire and the Century: A series of Essays on Imperial Problems and Possibilities by Various Writers* (John Murray, Albemarle Street, London, 1905)

the British Isles.[7] The telegraph mogul John Pender was a British entrepreneur who founded the majority of cable companies at the time, prevailing over the global communications network. He earned his fortune in the Manchester textiles industry, buying slave-grown cotton from American plantations, and reinvesting this wealth in cable projects.[8] My forthcoming research at the Center for Human Rights and the Arts shows that ties between transatlantic slavery and the cable network were far more widespread than this single connection – but that's another story.[9]

(Above: Author's Photo, Statue of Queen Victoria in Victoria Square, Birmingham, UK)

Britain's built environment is full of this history. The act of comprehending the wealth generated in this era transforms cities across the country into monuments of British industrialisation, slavery and imperialism. The architecture of the cable network, on the other hand, is hidden, lying quietly on the ocean floor. Yet like Britain's vast Victorian building projects, the network was constructed to serve and reproduce this crucible of violence.

The infrastructure we now refer to as the "backbone" of the internet was initially constructed as an imperial communications system. In the 19th Century, this took the form of submarine telegraphs - transmitted via Morse Code - but it laid the foundations for our fibre optic cables. This revolution in information processing was the beginning of what's known as the "information society", as James Beniger would put it in his book, *Control Revolution*.

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[7] See Eric Williams, *Capitalism and Slavery* (1944)
[8] For John Pender's Biography, see Atlantic Cable Project Online https://atlantic-cable.com/CableCos/CandW/Pender/.
[9] My research titled 'Conducting Empire: "Free" Trade and the Transatlantic Cable Network' will be available in June 2025, via the Center for Human Rights and the Arts, Bard College.

Beniger points out that information technologies, or communication networks, were never merely about the transfer of information. Infrastructures are always about moving material things, matter and energy. In communication networks, labour and goods are converted into information. This information helps to control and regulate the transportation of matter. For example, the telegraph was invented to control railways in the 19th Century, so that train schedules could be synchronised to transport the maximum amount of goods in the minimum amount of time. Before the telegraph, each train station used a slightly different time zone, since time was measured using sundials. The fact that Greenwich Meantime – regulated, Western, hegemonic time – was imposed across the globe relatively recently is quite shocking.[10] The undersea telegraph network was an extension of this regulatory system, allowing merchants across the Atlantic to communicate with one another in record time, strengthening imperial economies. In this case, shipping routes (rather than the railway) were the equivalent of transportational infrastructure.

(Author's photo: The view of the Thames from Enderby's Wharf, Greenwich, where the first transatlantic telegraph cable was constructed. Also, where Greenwich Meantime was established)

In the imperial context, the word 'regulation' takes on several meanings. While the transport of matter across the Atlantic was regulated by the undersea telegraph network, the network also regulated human bodies in the service of the imperial government. Undersea telegraph cables were a tool for policing and disciplining colonised subjects and labourers, since governors across the Empire could communicate instantaneously as soon as resistance broke

[10] "What is Greenwich Mean Time?", Royal Museums Greenwich. 2021. 'Standardising Time: Railways and the Electric Telegraph', Science Museum, October 4 2018.

out.[11] This is particularly evident in the archival documents from the British West Indies. When formerly enslaved people were beginning to resist colonial rule, telegrams were sent between colonial governors. In 1896, C.W. Earle of the West India and Panama Company - advocating for a cable between Bermuda and Jamaica - wrote to Lord Chamberlain: 'while writing, I have received a message from the West Indies reporting serious rioting and incendiarism at St. Kitts for the last two days. I presume, as in similar cases in former times, the Telegraph will have been put into operation to summon assistance.'[12] Here, CW Earle employs the language of colonial panic (a fear of losing regulation or control over the colonies) to persuade Lord Chamberlain to invest in the proposed 'line'.

Unlike today's cable network, 19th-century telegraph cables were not used by working-class people: messages were sent across the ocean by colonial governors, planters and merchants. The network was described as the "nervous system" of the Empire. This bodily metaphor speaks to the philosophy behind the Empire's conception of its subjects. In this conception, the body is controlled from the Center - the metropole, London; the Empire's "brain" - while the Peripheries merely provide information and resources to be computed, digested and interpreted. The Center is the source of all discipline and control, while the Peripheries are conceived as an informational body, held together with cables. A Cartesian mind-body dualism is projected onto the Empire.[13] The informational body is controlled and disciplined to increase the efficiency and, therefore, the wealth of the Center. From the perspective of the Imperial Governor, the body of the racialised, colonised subject is also a machine to be exploited for his benefit.

If the cable network was built as *the Empire's sensorium*, it was used to control the bodies bound to the Empire: *its flesh and blood*. In turn, these bodies were forced to plunder the earth-as-body in mines and plantations. The wealth generated through this system of plundering was used to fuel technological developments in Britain's famous Industrial Revolution. That is, the beginning of information societies; computation; industrial agriculture; new types of mining; the technological "innovations" causing today's climate crisis. The cable network, by 'annihilat[ing] space and time', was a crucial element of this Modernity, which slowly captured every side of the Atlantic in its grinding, metallic grip. Writing on the transatlantic crossing of the slave-ship Zong, from which hundreds of Africans were thrown overboard for insurance compensation, nourbeSe philip writes:

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[11] See Dhanashree Thorat, 'Colonial Topographies of Internet Infrastructure: The Sedimented and Linked Networks of the Telegraph and Submarine Fiber Optic Internet' (2019); The Telegraph from Below: Race, Labour and the Indo-European Telegraph Department 1862–1927, *History Workshop Journal*, Vol. 97, Spring issue, April 29 2024; Juan Pablo Pacheco Bejarano, 'Ruins across the Atlantic: speculations on the colonial and mythological genealogies of the internet's submarine infrastructure' (2021)

[12] C.W. Earle, 'Letter to The Right Hon. Joseph Chamberlain, MP', Colonial Office, February 22, 1896. CO 318/286, p. 30-32.

[13] The problem of the relationship of mind to body stems from 17th-century French philosopher and mathematician René Descartes, who gave dualism its classical formulation. A decolonial critique of Descartes' mind-body dualism, as explored by thinkers like Enrique Dussel and Aníbal Quijano, challenges the Eurocentric and colonial assumptions embedded within Cartesian philosophy, arguing that it reinforces a view of the body-as-machine, as well as a hierarchical distinction between forms of knowledge.

> ‘All elements of life have been caught in the grand experiment that is modernity, the engine that grinds everything down to its lowest common denominator’.[14]

The cable network, following these same routes across the Atlantic, was another infrastructure in this process of ‘grind[ing] down'. Today's cable network carries us in the form of data - the lowest common denominator of embodied life - to be bought and sold by Big Tech companies.

(Above: Author’s Photo, factory in Southern England)

It's important to note that today's cable network is also what I will call an infrastructure of extraction. Though some claim that data is the "new oil", the cable network is still used to control the transport of matter and energy across the Earth. Our data is used to predict our purchases – that is, the stuff we buy. That's how Big Tech makes money from our data, and why Google and Meta are constructing their vast cable network, making data processing more efficient and more centralised. From the corporation's perspective, imperial conceptions of natural resources (land and humans) are more real than ever. Yet today, corporations and governments have a new tool at their disposal. This tool is the narrative of emancipation, encapsulated in the magical infrastructures of development, which "connect" regions where internet access is lacking.

Material resources are still the reason why the cable network exists, and this is particularly evident in the construction of cables today. Aside from Big Tech projects, the imperial significance of cables in Africa is unmistakable in the US Government's new 'DiasporaLink’

[14] nourbeSe philip, *Zong!: Fifteenth Anniversary Edition* (Spiral House, 2023)

Project.[15] This is a project being pushed through Congress, which plans to build a state-owned cable from the US to Ghana and Nigeria, via the US Virgin Islands. Though the project has not been reported on in mainstream media, the minutes from the House of Representatives in March 2024 show Congress members arguing in favor of the project, especially in terms of minerals. In the meeting, Congresswoman Plaskett argued that the cable would counter Russian and Chinese influence:

> 'We need to be clear about the minerals that are in Africa that are being extracted continually by both Russia and China. Niger is the world's seventh largest producer of uranium. The Ministry of Mines says that Mali has one of the largest deposits of gold, and lithium, as well; cobalt in the Democratic Republic of the Congo; Sudan, which also has tremendous minerals; and Burkina Faso with bauxite and phosphate. These are things being exploited by our adversaries on the continent, which we must have our own dedicated interest in.'[16]

The competition between the US and China over cable infrastructure is well documented, yet the DiasporaLink project is particularly strong evidence of the ties between this infrastructure and the extraction of minerals.[17] Furthermore, the fact that the US Government wants to invest in a state-owned cable, rather than simply allowing a US-based corporation to build it, is a major indicator of the importance of this connection for US imperialism in Africa.

My research supports the understanding that infrastructural impositions have been a central tenet of Western imperialism since the 19th Century.[18] The links between transportation and information infrastructures – like the railway and telegraph – are also entirely relevant today. In the last few days of his presidency, Biden travelled to Angola to sign off on the Lobito Corridor railway project, a USD $10 million, US and EU funded project which connects the copper mines in the Congo to international markets, through the port of Lobito on Angola's Atlantic coast.[19] The railway, connecting to transatlantic shipping routes, will inevitably be linked to a cable infrastructure. The "Scramble for Africa", which officially began in the 19th Century, continues through these networks.

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[15] Mwema, E., & Birhane, A. (2024) 'Undersea cables in Africa: The new frontiers of digital colonialism' *First Monday*, *29*(4); see USVI News, 'US Virgin Islands could play key role in trans-atlantic fiber optic cable project, Diaspora Link', March 11, 2024.

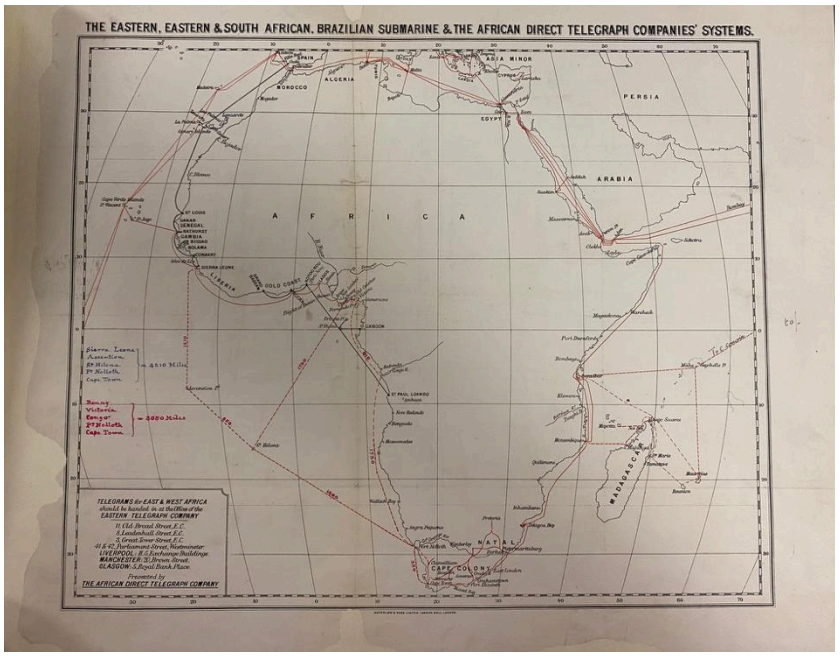
[16] Minutes of H.R.3385 — 118th Congress (2023-2024), Senate - 03/06/2024, Received in the Senate and Read twice and referred to the Committee on Commerce, Science, and Transportation. https://www.congress.gov/bill/118th-congress/house-bill/3385/text

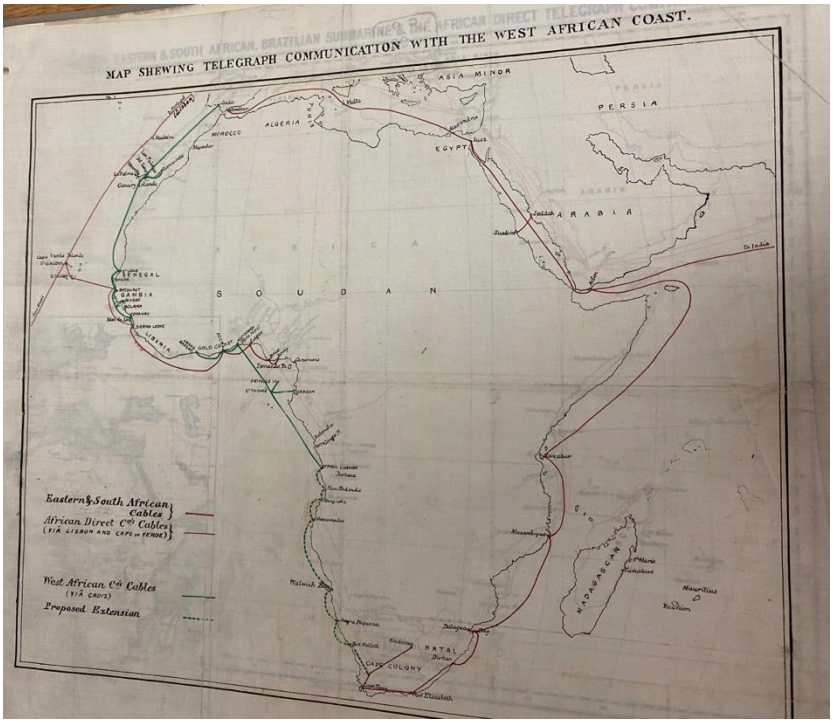
[17] See Reuters Article, https://www.reuters.com/investigates/special-report/us-china-tech-cables/.

[18] See also, Kwet, Michael. Digital colonialism and infrastructure-as-debt. University of Bayreuth African Studies Online. 2022: 65-77., Available at SSRN: https://ssrn.com/abstract=4004594

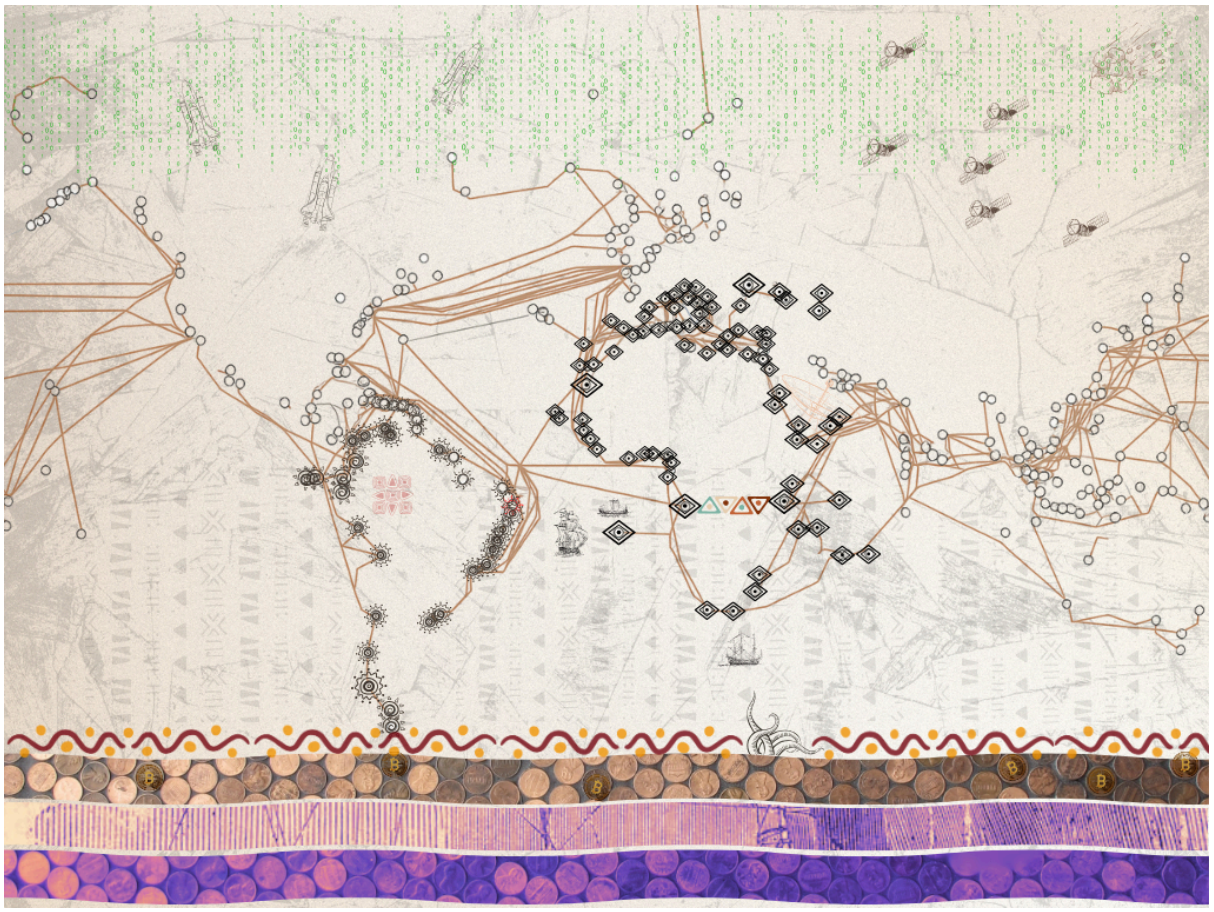
[19] See Sarah Way, 'What to know about the Lobito Corridor—and how it may change how minerals move', Atlantic Council, December 20, 2024 and Joshua Frank, 'Copper Colonialism: Copper Colonialism Is Wrecking Zambia's Farmlands and Waterways', The Nation, October 17, 2024.

(Below: Elinor Arden's Photos of Maps found in National Archives at Kew)





Chapter Two: Transitory Cosmology (Land)



Artwork by Esther Mwema illustrating Transitory Cosmology (Land)

The land is continuously feeding our technological dreams. This cartography artwork by the author outlines territories surrounded by undersea cables that are increasingly owned by big tech companies, serving as the lifeblood of emerging technologies like AI. Green technologies require the extraction of rare earth minerals, and whilst these are found on various continents, certain parts of the planet are designated for mass sacrifice. These are lands, previously sites of oppression through slavery and colonialism, are resisting through a return to indigenous ways where people, nature and spirit lived in balance. A central aspect of this imagery represents the competing narratives of ecological preservation and extraction.

Raymundo Vásquez Ruiz, in Chapter Two, challenges the existence of Sacrifice Zones.

Sacrifice Zones: Greenwashing Digital Infrastructure for Profit as an Illusion for Sustainability

By Raymundo Vásquez Ruiz

Like many, I've grown increasingly concerned about the environmental and social impacts of the digital sector. Motivated to make a difference, I focused my work on data centers and cloud services that deviate from conventional models by prioritizing carbon footprint awareness. This pursuit has taken me deep into the world of Green Technologies: scrutinizing sustainability claims in the data center industry, collaborating on sustainability projects and communities, and attending events dedicated to this topic. Yet after over two years, I have not found a satisfactory answer to my concerns for this sector.

The rapid growth of AI has exacerbated these problems dramatically. Despite optimistic talk, the industry's overall resource consumption continues to climb at an alarming rate. Sustainability efforts are being outpaced and often undermined. While technology can be a force for good, meaningful change will require confronting fundamental issues in how the digital world operates.

Value Change: On Green Technology

In IT, Green Technology is primarily shaped by private companies controlling the world's digital infrastructure, either by direct influence or by respecting their narratives and agendas. These companies wield significant power and operate under the same ideology that has fuelled the crisis we face today: the pursuit of infinite growth, the assumption of infinite natural abundance, the creation of sacrifice zones[20], and the perpetuation of global hierarchies. This ideology is fundamentally at odds with proper care for nature and has found an ally in national governments[21] [22].

As such, current discussions on Green Technology often focus on measuring and reducing energy consumption in applications and equipment and finding alternative power sources from renewables, primarily because energy use is closely tied to CO2 emissions. This approach also mirrors the limited scope adopted by public institutions, like the EU[23]. In doing so, the climate crisis is framed as a technical problem rather than a societal, environmental, economic, and political one. As a result, proposed solutions tend to be superficial: software tools that track or estimate energy usage, orchestrators that shift computations around the

[20] See Sacrifice Zone (Wikipedia)
[21] See Politico article 'Plug, baby, plug': Macron pushes for French nuclear-powered AI.
[22] Garth Friesen explains Trump's AI Push: Understanding The $500 Billion Stargate Initiative.
[23] European Commission Clean Transition Energy and the Green Deal 2019 - 2024 Priorities

world depending on the energy mix[24], AI systems designed to calculate potential emissions reductions, and nowadays, even more radical, building or repurposing nuclear reactors to power the infrastructure. However, these solutions fail to address the broader consequences of such global-scale operations[25] and do not take Jevons paradox[26] in consideration. The paradox occurs when technological advancements make a resource more efficient, and as a result, overall demand increases, causing total consumption to rise; a concept born in 1865 England from coal consumption analysis.

These efforts create little more than an illusion of *sustainability*. They ignore the deeper systemic issues by treating this as an energy emissions challenge. Worse, they can obscure the hidden costs of so-called "green" facilities. For instance, the construction of renewable energy facilities often involves land grabbing, aggressions against environmental defenders, and massive water usage and pollution [27] [28] [29]. These realities are also particularly evident in regions where raw materials like lithium are extracted[30] [31]. Yet, in Green Tech forums that I have attended, online and in person, even mentioning the socio-ecological impacts of lithium mining is dismissed as regressive, often met with hostility.

Mainstream practices in the tech industry show little interest in meaningful discussions about reducing data extraction and storage[32], minimizing material demand, extending the lifespan of devices, or collectively deciding which technologies and services are essential and which ones are not. Instead, the focus remains on ensuring everything is always on, available, and growing exponentially. Concepts like scalability, high availability and redundancy—both in infrastructure and applications—are so deeply ingrained in the engineering mindset that they hold back any meaningful dialogue about alternatives. Moreover, there is limited discussion about the underlying ideologies that drive these practices or why they dominate the industry. As a consequence, computing hardware and the infrastructure to sustain it, mainly data centers, grow exponentially[33] while its utilization remains low [34] [35].

Digital technologies can uniquely present themselves as agents of productivity, efficiency, progress, and, now, even sustainability. They effectively conceal the true costs of their creation, use, and disposal: slavery, mining, extraction, conflicts, pollution, and land grabbing are rarely part of the consumer's decision-making logic when purchasing. This is not

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[24] See Google's blog We now do more computing where there's cleaner energy
[25] Ismael Velasco writes Carbon Aware Computing: Next Green Breakthrough or New Greenwashing?
[26] See Jevon's Paradox (Wikipedia)
[27] Zárate-Toledo, Ezequiel, Rodrigo Patiño, and Julia Fraga. "Justice, Social Exclusion and Indigenous Opposition: A Case Study of Wind Energy Development on the Isthmus of Tehuantepec, Mexico." *Energy Research & Social Science*, vol. 54, 2019, pp. 1–11. *ScienceDirect*, https://doi.org/10.1016/j.erss.2019.03.004.
[28] Hamza Hamouchene writes The energy transition in North Africa Neocolonialism again!
[29] Össbo, Å. Hydropower histories and narrative injustice: state-owned energy companies' narratives of hydropower expansion in Sápmi. *Water Hist* 15, 201–219 (2023). https://doi.org/10.1007/s12685-023-00328-z
[30] See EcoServants The Environmental Impact of Lithium Mining: The Hidden Costs of Powering the Green Energy Revolution
[31] Salomón J., Amrah. (2022). New Gold Rush, Same Genocide. Retrieved from https://www.researchgate.net/publication/357732208_New_Gold_Rush_Same_Genocide
[32] See Dark Data (Wikipedia)
[33] Zachary Skidmore writes Data center energy consumption set to double by 2030 to 945TWh - DCD with US and China Accounting for 80 percent projected growth
[34] See Georgia Butler Study: Only 13% of provisioned CPUs and 20% of memory utilized in cloud computing
[35] Meisner, David & Gold, Brian & Wenisch, Thomas. (2009). PowerNap: Eliminating Server Idle Power. ACM SIGPLAN Notices. 44. 205-216. doi: 10.1145/1508244.1508269.

accidental under capitalistic values, where large marketing budgets are spent to ensure consumers feel attracted to a product, in both conscious and unconscious ways.

As long as private companies set the agenda, there will be no incentive to challenge the status quo or prioritize genuine change that could reverse the damage. The primary goal of these corporations is to maximize profits for themselves and their investors and acquire more power on a global scale. The exclusion of local communities from decision-making processes will continue as any relationship with the territory could challenge their interests. Instead, "being green" will continue being used as a marketing tool, turning sustainability into a new frontier for extraction and profit.

Systems Change: Shifting the narrative

We must rethink the whole thing and move beyond capitalist interests, individualism, hierarchies, and dispossession. Actual change requires a shift in perspective—one that prioritizes autonomy, conviviality, collective well-being, and justice. In undergraduate school, I worked in autonomous servers and radio stations in remote regions in southern Mexico. This experience developed my love for digital technologies that served communities around me.

The engineering community holds considerable power in making this happen. However, I consider that some aspects need to change fundamentally.

First, we need to stop being technocentric. We must understand that technology does not exist in a vacuum and is neither inherently good, bad, or neutral. The experience of technology is from interactions between the social, political, and economic forces around it. Different cosmologies will give shape to different types of technologies, and failing to recognize this leads to the illusion of a universal, one-size-fits-all approach.

Second, we must stop assuming that more technology is the solution to societal and environmental challenges. As engineers, our first instinct is often to frame things as a dichotomy *of problem versus technical solution.* This narrow perspective prevents us from uncovering the deeper root causes of these issues. Instead, we must broaden our view, considering the full web of relationships that shape the problem.

Third, we need to abandon the myth of infinite growth. The latter is physically impossible and contributes directly to environmental destruction. Instead, we need to focus our efforts on the communities' needs to create new technologies only when they are truly necessary.

Finally, we need to start centring technologies around care—care for the land or territory that we inhabit and care for the communities that sustain it. Centring on care is a simple way to reverse the hierarchy that the dominant ideology has been imposing for too long.

Equity Partnership: Transitioning away from corporate power

In several regions in southern Mexico, *communality* is key to how we organize ourselves and inspires diverse technological cosmologies. Communality is not an ideology but a way of living, one that dissolves the false dichotomy of *human versus nature*. This fosters a symbiotic relationship with the territory, which emerges as the *source*, as all life is interconnected through the land[36].

[36] Martínez Luna, Jaime (2010) "Eso que llaman comunalidad"

This way of life favours plurality, reciprocity, complementarity, and care. It functions through decision-making processes through assemblies, where participation from the entire community is requested, ensuring no voice is left out. It forges authorities that emerge from dedication to communal work, and their roles are in constant rotation to avoid creating hierarchies. This way of living has allowed indigenous communities to survive the colonial genocides and resist matricide (killing our mother earth).

There are existing digital infrastructure projects that start from communality, resulting in autonomy from Tech giants in the sector. In Oaxaca, my home state, there are indigenous cell phone networks[37] that promote cooperation, trust and shared commitment as values, opposing market logic, individualization and consumption. These networks extend across remote regions and are funded and maintained by the communities themselves, and everyone is invited to participate in making the network possible. Such projects demonstrate that technology does not have to be extractive or imposed from above; it can emerge from the needs and values of the people, fostering autonomy rather than dependency.

A transitional implementation requires expropriating digital infrastructures from private companies. When complete expropriation is not immediately feasible, a model under shared equity between private entities, national institutions, and local communities that will host them can be implemented. Decisions on creation, maintenance, and removal must follow rigorous procedures and remain subject to public scrutiny. This redistribution of equity would also dismantle the political power these companies hold.

The purpose of digital infrastructure must be decided collectively, especially regarding which services truly require 24/7 availability and extensive power. For example, keeping a hospital digital service is critical, but the same cannot be said about 4chan. Deciding whether millions of litres of drinking water should be channelled toward training an AI model is also extremely important and would require input from the impacted community. This can be approached by starting from a limited resources point of view by using only what the hosting community is willing to provide and deciding collectively how to allocate it.

Autonomous infrastructure can also be reinforced within the current system. Federation through decentralized protocols like ActivityPub[38] has shown that communities can become responsible for their servers and communicate with peers without a commercial entity managing the ecosystem. Expanding such models beyond social media could lead to new forms of digital autonomy, at Milpamérica we are already exploring this possibility[39].

Additionally, adopting practices from compost engineering[40] and frugal computing[41] to reduce extractivism and extend the lifespan of hardware equipment and electrical appliances. These practices reverse the trend that equates progress with continuous production of new equipment while ignoring extraction and waste as part of that cycle.

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[37] See Autonomic Community Infrastructures Rhizomatica.org and TIC-OMV

[38] Decentralized Social Networking Protocol ActivityPub.rocks

[39] Milpamérica – Semillero de futuros ancestrales

[40] Egaña Rojas, Lucía, y Joana Varon. Compost engineers and sus saberes lentos. A manifest for regenerative technologies. Rio de Janeiro: Coding Rights, 2024. https://codingrights.org/docs/compost_engineers.pdf. Retrieved from https://luciaegana.net/textos/compost-engineers-and-sus-saberes-lentos-a-manifest-for-regenerative-technologies/

[41] See Frugal Computing

Systemic change, shifting values, and reclaiming digital infrastructure are essential practices to move forward.

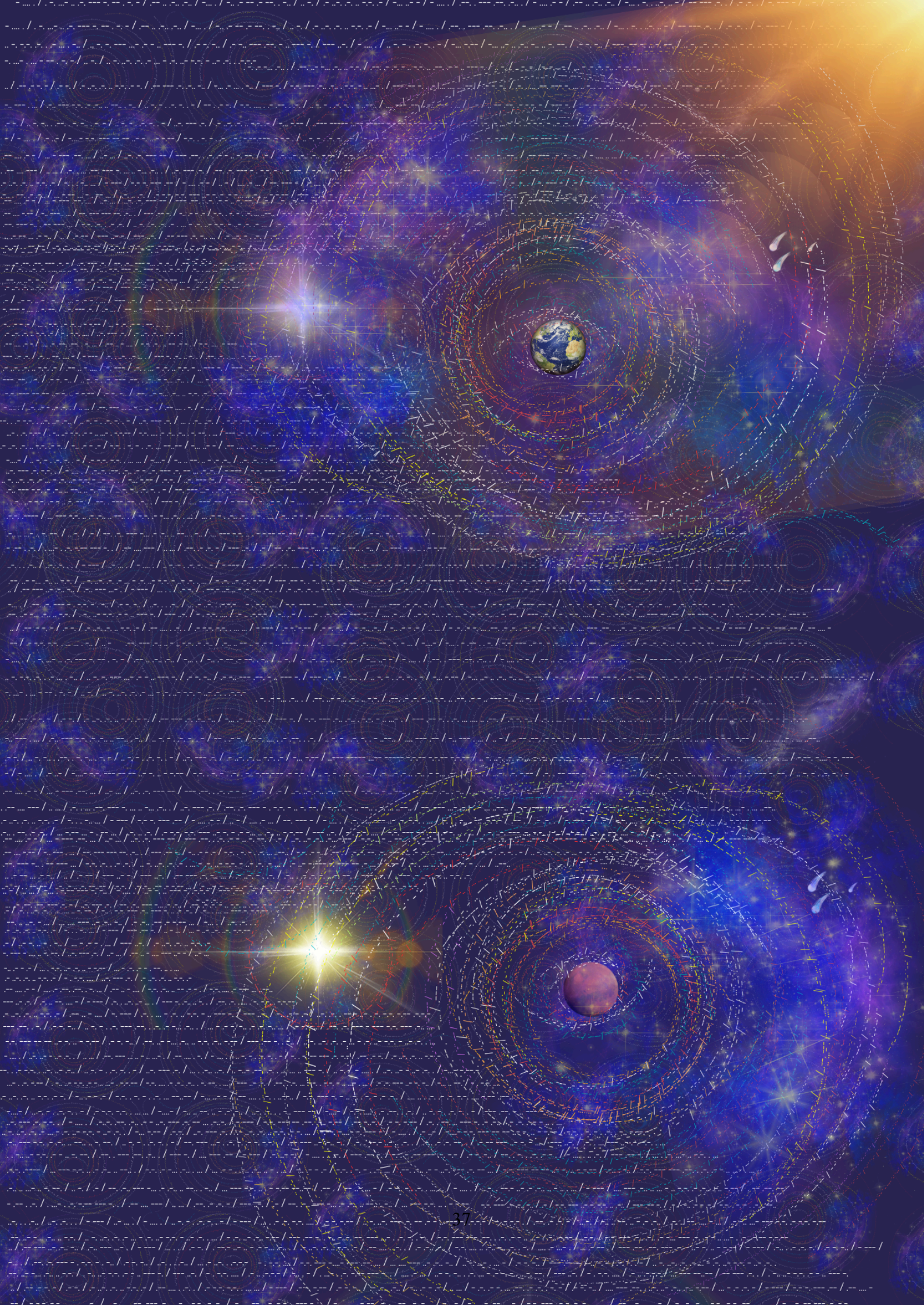
Conclusion

Technology becomes dangerous when conceived as singular, static, and universal—where it ceases to be a space for diverse ways of living, narratives and worldviews, and instead becomes an instrument of extraction and exploitation, carefully designed to obscure its harms.

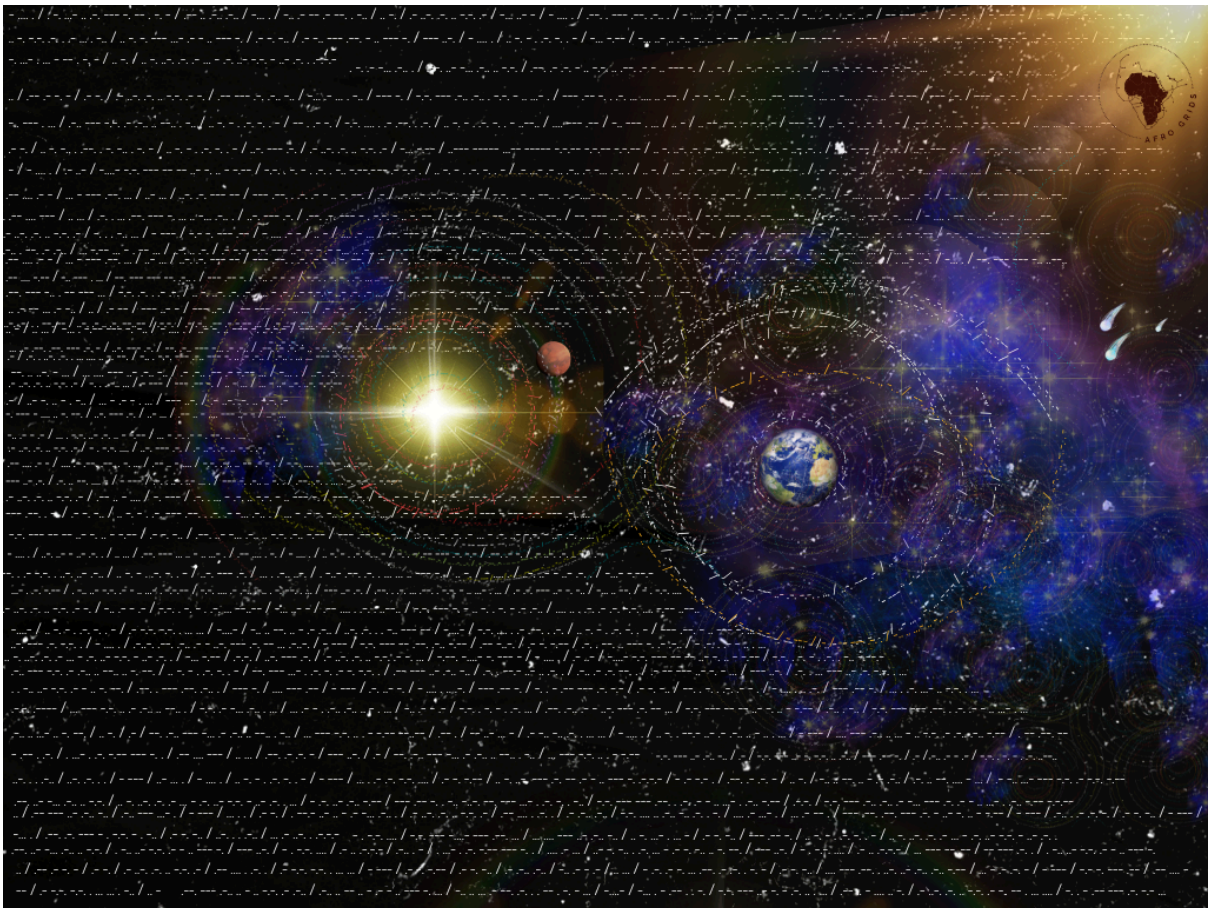
To find alternative imaginaries, we don't need to look very far. Our indigenous ancestors have long developed technologies that sustain relationships with land and life by embracing interdependence rather than dominance and recognizing our own vulnerabilities. These cosmologies show us that another path exists: one where technology is not a force to control and dominate in infinite expansion, but a practice rooted in care, dignity, and reciprocity, becoming agents in our collectivity.

My imagination takes me to a place where we reunite with nature as a family, where polluting a river or extracting minerals from a mountain would be seen as harming an ancestor. Where organized communities draw from intergenerational knowledge to build convivial, careful, and fully appropriable technologies in solidarity. Where technology is not measured by its scale or efficiency, but by its ability to sustain life with dignity and become a partner in our reunification. Where we are not trapped in the illusion of perpetual growth but recognize when it is time to rest, transform, or even disappear without leaving destructive traces.

This is a world where infrastructures are collectively decided upon by local communities, reflecting the needs and rhythms of their territories. Where its elements, tangible and intangible, are kept under local authorities' control. Where these infrastructures also inhabit our territory, contributing to the narrative of our relationships with it and, therefore, untangling the false knot that only private corporations can build technology.



Chapter Three: Future Cosmology (Space)



Artwork by Esther Mwema illustrating Future Cosmology (Space)

The original language of the Telegraph was Morse Code. Much like ancient civilizations used symbols as a means of communication, many indigenous traditions today center religious, moral and cultural messages in art and materials, such as African fabric. The transitory cosmology will birth the future – whether it is one where big tech exploit sacred land for their transhumanist aspirations, or one where indigenous ways of recognizing life as circular and transcendent with acknowledgement of our place among nature and spirit. In a digital world, it is easy to forget that we already exist in a complex moving universe. We are floating on a space rock. And grasping for the meaning of eternal life.

Emsie Erastus, in Chapter Three, envisions a future rooted in 'Earthseed'

Artificial Intelligence (AI) & Data Idolatry: Africa's Exodus from Digital Oppression

By Emsie Erastus

Abstract

Society today idolises data, Artificial Intelligence (AI), and emerging technology as gods who will come down and solve all our problems. Big Tech instils this belief and behaves like preachers, misleading the flock while profiting off them with one hand and claiming to save them with the other. Humans are digitised insensible figures, where massive data farms and unsupervised algorithms replace human relationships and dignity.

Instead of worshipping modern technology as the solution to every global crisis (it has not solved them thus far), we must regain our digital freedom and humanise our online experiences. This paper makes a case for a future where communities can choose their digital fate.

It is a challenge to disassemble Big Tech's mandated faith in nascent technologies and construct systems that authentically embody human values and recognise African heritage. Ultimately, this manifesto is a rallying cry to resist, disconnect where and when necessary, and build a world that genuinely serves humanity, not one that preys on our autonomy and causes us to genuflect at the altars of technology.

Introduction: From Digital Innocence to Awakening

The genesis of social media was warm and inviting. It was a space where memories, celebrations, and important personal connections could be shared without the limitations of physical boundaries and expectations.

When I first joined Facebook in 2008, it felt like I was entering a new era of innovation. I was excited to be part of this global community where I could engage with friends worldwide. Transcending physical boundaries, I was immersed in expansive spaces, connecting with diverse people, sharing different cultural experiences, and reconnecting with old friends. We were a global village where access and reach seemed infinite and positive.

However, soon this digital innocence began to wane, replaced steadily by disillusionment. The annoying and unending requests for my real name, phone number, email address and requests to turn on my microphone or location became a routine that demanded I accept and submit to the terms or risk complete disconnection from what seemingly became the pulse of all human communication.

I realised that social platforms are not only about personal connections or posting personal milestones. They are a marketplace; we, the users, are the product. Furthermore, I felt betrayed, as my personal experiences were monetised by a few groups of white men who lived in offices in Silicon Valley. They were becoming ultra-rich and extremely powerful and morphed into a cultist standard feature on Forbes' World's Billionaires List (Forbes, 2024).

These technocrats cultivated a digital religion and preached a gospel highlighting digital platforms as the panacea to humanity's socioeconomic problems. They actively coaxed users to cede personal identities and liberties, implying this to be the currency of digital development at both individual and community levels. My name, images and personal stories are stripped of all significance and reduced to mere datasets to profit a few elites (Zuboff, 2019; Noble, 2018). This is not just apartheid or colonialism; it is a cult, demanding complete submission without adhering to any global frameworks that govern mutually beneficial commitments, such as the Universal Declaration of Human Rights (United Nations, 1948).

With data, AI and emerging technologies as the new idols of worship and the human being as fodder, I had become subject to a religious cult of some kind, my identity and autonomy being the sacrificial lamb.

My disenchantment deepened during my time as an online journalist in Namibia. I witnessed the systematic suppression, even exclusion, of local news firsthand. Stories on indigenous communities, such as those concerning the OvaHimba women and girls, were often filtered out by biased algorithms of Western social media, even though similar reports were freely cited in Western media (Diop, 2025; Urama, 2024). This censorship was not just a question of technical flaws; it was an active elimination of our cultural identity, a reduction of our rich and varied lives to a series of digitally manipulated data points (Emejulu & McGregor, 2019).

This paper calls for reclaiming our identity. It also challenges tech users to dismantle the altars erected by Big Tech. It calls for a future where technology is designed to serve humanity, protect communal heritage, and secure personal autonomy.

In this paper, I outline the doctrine of big Tech before examining how it closely resembles coerced devotion. I then explore the hidden costs of digital worship and argue why Africans must resist and engage with our innovations rooted in African imaginaries. The second part of this paper shifts focus to *The Road Ahead*: Africa's Exodus from Digital Oppression. This chapter presents a manifesto, an urgent call to Africans and technology rights advocates to reshape the digital future radically. It challenges the grip of technological determinism, rejecting its idols and redefining innovation as a way of life. This section explores new approaches to fostering critical thought and free expression, reassessing the ecological impact of innovation, and strengthening democratic values through fair community engagement.

THE CHURCH OF BIG TECH: COERCED DIGITAL DEVOTION IN TECHNOLOGY

The Hidden Cost of Digital Worship

The digital gospel of Big Tech is seductive and subliminal. Using slick marketing and lofty promises, tech companies claim their data centres and unsupervised algorithms can address, even resolve humanity's social, economic, political and environmental challenges (Benjamin 2019).

Technocrat prophets preach that AI and other emerging technologies are the great equalisers, a god-like force that can neutralise divides, eliminate poverty, cure diseases, and solve climate change. But a mere scratch of the surface exposes the grim reality that our identities, culture, and very humanness are in jeopardy.

Every interaction, online or otherwise, including every click, like, share and comment, is recorded and turned into data that can be mined, sold, bought and even weaponised.

In this process, Africa's plural cultural legacy and unique identities become only numbers in massive datasets.

This represents a loss of privacy and a profound erosion of our humanity. The Big Tech industry reduces our lives to raw, tradable commodities (Noble, 2018). Some scholars call this practice data colonialism (Couldry & Mejias, 2019), recalling the dark history of colonialism in which European colonisers stole Africa's wealth without considering its inhabitants.

Likewise, today's technocratic elites mine our data, but only a fraction of the economic gains are returned to our communities. According to the World Economic Forum (2020), data is the new gold. While this idea sounds impressive, it mainly benefits Big Tech. The Forbes (2024) List shows that seven of the top ten wealthiest people are Tech entrepreneurs whose fortunes are built on our data. In Africa alone, over half a billion people use digital platforms run by these companies, with technologies like digital IDs, AI assistance, and other innovations. To illustrate, Google's search revenue in 2024 reached about USD54 billion (Alphabet Inc., 2025); however, returns to African countries are unknown.

Africa's 526 million internet users (ITU, 2021) and its projected growth cannot simply be seen as an economic issue; this is a form of contemporary extraction that dehumanises us and maintains global inequities. Further, the actual price of this digital worship goes deeper than the prosperity and individual freedom we have lost.

These systems are nestled in massive data centres utilising vast amounts of energy, significantly contributing to environmental degradation (Zuboff, 2019). Every byte of the data harvested from us is processed in industrial facilities that burden our planet, connecting our digital submission to environmental destruction. Essentially, we pay dearly for our data, not just with our privacy or culture, but for the unsustainable practices that threaten our future.

To see why we need to reject this imposed digital cult, we need to examine the mechanisms of control that Big Tech uses to sustain its monopoly. The "machine" that makes our digital experiences possible is not some abstract force; it is the work of corporate executives, engineers and policymakers who construct and enforce systems for maximum profit. Zuboff (2019) argues that in ever-increasing amounts, these technocrats pick up our data in a feedback loop shaped by unsupervised algorithms and digital infrastructures, constructing the online experience, and thus defining what users are fed and exposed to.

Take Kenya's Huduma Namba biometric system, for example. Introduced to promote national unity and improve public services, it turned out to be a hotbed for unmitigated digital control. In contrast, the Kenyan government was contracted with global technology companies such as IBM, Huawei, and NEC Corporation to provide the technical architecture and biometric solutions required to implement the system (Business Insider Africa 2024). The model faced criticism for its opaque data practices, insufficient safeguards, and evident biases (Business Insider Africa, 2024). Instead of being in the service of the public, this system became a surveillance apparatus, documenting personal information and classifying citizens without their informed consent.

This system is an example of how, generally, the solutions of Big Tech chains us more tightly than they liberate us. On 24 February 2020, the Kenyan High Court issued a ruling stating that while Huduma Namba could help provision of public services and foster national unity, its expansive and opaque data collection practices raised substantial concerns on privacy and warranted the potential of state surveillance (Privacy International, 2020). The ruling pointed out that the system reduces personal identities to mere data points, echoing digital exploitation and commodification patterns. Thus, it urged strong data-protection safeguards and transparent monitoring for such systems to benefit the public, rather than just generate profit (Privacy International, 2020).

Concurrently, digital platforms have been very effective in distorting, silencing, or even excluding Indigenous voices. As an online journalist in Namibia, I noticed narratives about Indigenous groups, for example, stories involving the OvaHimba, were algorithmically censored, that is, dotcom algorithms filtered them out and reconfigured to prioritise other types of stories (Diop, 2025; Urama, 2024)

Such practices demonstrate the inherent bias built into emerging tech systems, such as AI, and show how our narratives are treated very differently from those originating in the West. When digital platforms filter out African cultural stories, they often erase significant parts of our collective history and identity. This is not merely a case of erasing or filtering African content; it is a war against Africa's rich heritage. Our traditions, beliefs, and experiences are being demolished, including new ideas that our current and future generations seek to bring forth (Emejulu & McGregor, 2019).

And this symbolism of this digital control echoes biblical ominous signs. Many have also noted how Big Tech's data-driven mandates parallel the “mark of the beast” in Revelation 13:16-18 (New International Version). Today, this warning resonates in the context of Big Tech's growing influence, especially in its alignment with MAGA and conservative Christian movements in the United States. These communities, which see the likes of Elon Musk (Jenkins, 2024) as divinely ordained leaders, have unwittingly embraced the "church of Big Tech," where the pillars of AI and technological innovation are worshipped as the answer to society's problems (Herrington, 2021; Jenkins, 2024). This form of idolatry risks transforming faith into a tool for advancing the agenda of elite groups, who exploit religious narratives to legitimise their control.

Big Tech preachers like Elon Musk have positioned themselves as cultural Christians, leveraging religious rhetoric to gain support from conservative Christians while simultaneously promoting an agenda that prioritises technological colonisation, whether through AI, space exploration, or digital surveillance. This paradoxical relationship sheds light on how big Tech has been able to weaponise religious narratives to create a facade of moral legitimacy, making it appear like big Tech was "doing the right thing" and forcing communities to accept its narrative, without questioning the morality of its implications (Jenkins, 2024).

Furthermore, various religions warn against systems or individuals that seek to gain absolute global control. In Islam, a figure of the Dajjal is seen as a deceptive evil leader who tricks people into following him, pretending to offer salvation (Nasr, 2006). Similarly, Hinduism talks about Kali Yuga, a time when society falls apart due to greed and corruption (Radhakrishnan, 2009). Buddhism warns against being too focused on material things and ignorance, which can lead to people being treated as commodities, much like how personal data is bought and sold today (Armstrong, 2000). These teachings encourage people to stand up against systems that value power and control over community and spiritual well-being.

Although not a direct reference, these religious beliefs powerfully capture where we stand: as if we are branded by systems that demand our obedience and where the consequences of our actions feel out of our control, being cursed on the timeline of existence (Browne, 2015). This is the 21st-century version of enforced worship, where our souls are offered up on an acutely commercialised online altar.

Why Africans Must Resist: Our Imperative for Digital Freedom

Looking to the future, Africa is set to experience explosive growth. With around 1.4 billion people, the continent is projected to nearly triple its population to just under 4 billion by 2100, a rise of about 2.6 billion young people (United Nations, 2022). This means that Africa will have the youngest population in the world and a vibrant, dynamic mass that could reshape global trends. However, billions of young Africans may face serious consequences if we don't act now.

As Africans, the battle for digital sovereignty is not a philosophical discourse but a matter of our cultural survival and a question of regional wealth in the future. Our continent stems from a legacy of technological ingenuity and communal creativity. Thousands of years before the colonisation of Africa, empires such as the Malian and advanced societies like the Yoruba significantly contributed to astronomy, mathematics, and engineering while cultivating rich cultural expression (Ndlovu-Gatsheni, 2013). But colonial exploitation

wanted this legacy to disappear, to be seen as primitive, and our inventiveness, our societies, as parasitic.

Today, Big Tech's ruthless digital extraction echoes this legacy where our data has become a source of appropriation and a commodity without equitable benefit, furthering systems of inequality and control (Diop, 2025; Urama, 2024). We must care because our cultural patrimony, intellectual inheritance, human rights, indigenous development and sovereignty are all at stake. When our data is reduced to algorithms, our voices become monetised and our identities corroded.

The unequal treatment in terms of digital censorship, where the voices of Indigenous communities are silenced and the narratives of the West are retained, is an analogue for a more significant problem, where not all voices are seen as valuable (Diop, 2025; Urama, 2024). These practices do more than stifle our diversity; they risk exiling us into a future where Africa's rich, complex history is marginalised even further. And resisting Big Tech's imposition of dominion means reclaiming our right to a digital future, a future that respects our identity and protects our planet. To this end, we must not allow our communities to be stripped down to data points; we must advocate for a future in which technology is designed with us, which is foremost based on human values, social justice, and ecological sustainability.

THE ROAD AHEAD: AFRICA'S EXODUS FROM DIGITAL OPPRESSION

This chapter is a manifesto for radical change. It is an invitation to regain control of digital infrastructures that have long conspired against Africans. What we need to do next is simple: draw from the intrinsic wisdom of our African culture, just as we did in the past. We need to break apart these systems of coercion by creating and redefining innovation altogether, establishing regulatory frameworks that revolve around our identity, and directly combating surveillance capitalism and Big Tech worship. A few elites based in Silicon Valley cannot drive the current tech ecosystem. We must reject such narratives, dismantle them, and create an innovative future based on our values as Africans. The colonisers came for our land, they came for our people, they stole our minerals and cultures, and now they are coming for our identities that make up our souls. My dear Africans, your name, date of birth, eyes, and fingerprints are yours to keep and protect; don't be fooled by the tech prosperity gospel. Don't bow, resist and reform!

Rather than being passive consumers of technology, reclaim our right to be its architects, designing technologies to support local innovation, promote cultural ingenuity, and favour social and ecological justice. In participating in this exodus, we are not just refusing a regime of digital surrogacy imposed on us, but creating an alternative path, based on a genuine, non-mediation human experience. Here, technology is a tool for empowerment that can improve daily life, rather than subjugating it to profit-driven motives. Africa's call to action should be dismantling big Tech's altars, envisioning a liberated digital landscape, and creating a path that serves humanity instead of bowing down to technological tyranny.

A Radical Reimagination: Beyond Technological Determinism

As the invisible but weighty tolls of digital worship, identity commodification, cultural erasure, psychological strain and ecological destruction catch up with our postmodern era, we must reassess the narratives and creeds that Big Tech feeds us.

Some scholars criticise this abstraction, insisting we should track progress not in the number of bytes of digital data or the prevalence of cutting-edge equipment, but in how human flourishing is promoted, community connections reinforced, and the natural world preserved (Sen, 1999; Nussbaum, 2011). Benjamin (2019) and Zuboff (2019) painstakingly describe how, behind the shiny surfaces of digital progress, are the contested spaces where profit-seeking motivations and inscrutable practices compromise individual and communal well-being.

In this vein, Srnicek (2017) urges us to realise that technology is not a neutral force but is embedded within and shaped by cultural values and political tensions. However, debates persist. On the one hand, some scholars argue that technology could be a liberatory force if it is undergirded by robust regulatory frameworks and inclusive practices (Feenberg, 2002; Benkler, 2006). Others warn, however, that the architecture of digital capitalism itself can compromise those emancipatory possibilities. This lingering controversy forces us to go beyond the constraints of technological determinism and envision an innovation paradigm oriented towards human health, community solidarity and ecological sustainability.

Rejecting the Idols of Technological Determinism

At the core of this reimagination is a firm and unyielding refusal to accept that technology is the sole engine of human progress. Big Tech companies and their ideological defenders regularly parade tech progress as the natural trajectory of our future, branding themselves as visionary heralds of an unavoidable digital fate. According to Peña Gangadharan (2020), such a viewpoint is inherently political, explicitly linking techno futures to corporate profit and control. Classic studies by Winner (1986) and Latour (2005) remind us that the artefacts of technology are embedded within existing social power structures and, therefore, not neutral forces.

Timnit Gebru's (2024) work further exposes how AI systems, despite claims of objectivity, inherit biases from historical legacies of oppression. In parallel, Castells (2009) urges us to reflect on the dual capacities of digital networks: while capable of fostering connectivity, they may also reinforce repressive structures when governed by unequal power. Floridi (2019) argues that recognising the ethical dimensions embedded in technological design is essential for resisting seductive narratives that often mask fundamental justice issues. While some scholars argue for the potential of technology to democratically empower and enable collective action (Dahl, 1989), others maintain that the deterministic model simply extends existing inequalities and power imbalances.

This discussion echoes the necessity to question the belief that unrestrained technological advancement is a good thing, encouraging us to lobby for a commitment to ensuring innovation is more critically engaged and politically conscious.

Innovation as Living: Redefining Progress

We need innovation with inclusion, and that requires rethinking our starting point, realising that technological progress does not equate to social progress. As Rawls (1971) and Sen (1999) have long argued, true innovation cannot be divorced from the experience of life in all its human dimensions, where progress should be measured not by technological outputs alone but by how we enrich our cultural, emotional and communal existence. As John Mbiti

(1970) has convincingly articulated, many African communities have conceived innovation as a relational activity, grounded in practices that bolster community cohesion, collective memory and custodianship of land and nature. Bijker et al. (2012) assert that technological artefacts cannot be autonomous entities but products of, and perpetually reshaped by, social and cultural models.

The Matrix and Black Mirror are allegorical critiques that ask if humans are losing out in their relentless rush for technological supremacy, or do questions of artistic integrity get left behind? Split views liven up this debate; on one hand, some argue that digitally enhanced progress will transform today's entire society in ways never previously dreamt of. Others assert, however, that it often merely leads to a superficial mechanical imitation of rich embodied interaction, as sterile algorithmically processed encounters have replaced that part. (Turkle 2015).

Ultimately, redefining progress by placing people and their lived experiences at the centre challenges us to look beyond mere technological outputs and pursue equitable, morally acceptable, and emotionally satisfying development.

Cultivating Critical Thought and Free Expression

For society to genuinely thrive, we need to create conditions for critical thought and free expression that exist outside algorithmically generated echo chambers. Benjamin (2019) and Noble (2018) have peer-reviewed literature that systematically assessed how such platforms are imposing on cognitive diversity by doubling down on existing distinctions while silencing dissident perspectives. Scholars like Freire (1970) and Bell Hooks (1994) argue instead for an educational praxis that embraces critical inquiry and a self-reflective and transformative dialogue as crucial to fostering intellectual freedom. As Giroux (2011) reminds the reader, empowering educational practices can serve to counterbalance against the homogenising effects of the algorithmic processes that pervade the digital world, reinvigorating the public sphere and democratic debate.

In contrast with the idea, that digital media in itself has a democratising potential by enabling stories based on different perspectives to reach people quickly, many works emphasise the mechanisation and digitisation of communication and its role in flattening out and abstracting human experiences, thereby limiting the ability to exchange nuanced ideas benevolently and empathetically, as we do in face-to-face communication (Twenge, 2017; Turkle, 2015). In more recent triangulations, there's also the phenomenon of digital fatigue and the ephemeral quality of online conversation, which can tend to undermine deep intellectual investment. So, the actual contribution of the digital landscape to our educational renewal and the development of a lively, healthy, democratic society must be reoriented to our online practices towards dialogue and open-ended debate.

Reconsidering the Ecological Dimensions of Innovation

A sustainable future requires that technological progress is harmonised with ecological balance rather than set against it. Wangari Maathai (2004) asserts that actual progress must incorporate the stewardship of our natural environment alongside technological development. The environmental degradation linked to unchecked digital expansion finds its early warnings in Carson's (1962) seminal work, Silent Spring, and is further elaborated by Daly (1996), who cautions against uncritical growth models.

As Agyeman (2005) and Norgaard (2010) have highlighted, Indigenous knowledge systems offer ways to optimise human development while ensuring ecological sustainability. Pushers of green Tech argue that, when done right, new Tech can mimic natural systems and support regenerative practices. By contrast, critics caution that efficiency-driven and high-speed-evolution technologies are creating more significant ecological imbalances and deepening resource depletion.

The dialectic highlights a broader debate: must innovation come at any cost, or can it be shifted to promote environmental renewal?

This thread reiterates that technological progress and environmental conservation are not merely technical problems but ones that demand moral action in sustainable development determined by and responsive to the social community.

Democratic Empowerment and Equitable Community Participation

A reimagined innovation model must foster democratic empowerment and ensure all communities participate equitably in shaping their futures. As Nanjala Nyabola (2018) has pointed out, dominant technological architectures concentrate choice in the hands of a few, excluding local voices and entrenching existing power differentials.

Habermas's (1984) concept of a communicative public sphere suggests that democracy is fostered through inclusiveness and collective reasoning. An additional approach drawing on the work of Sandel (2012) and Rawls (1971) takes its point of departure from the idea that a society's moral fabric is knitted together when its members have a role in bringing about policies that govern their lives.

The debate is diverse, and the visions conflict. On the one hand, some imagine a future in which technology brings about local empowerment through seamless connectivity and real-time participation. At the same time, some warn of uncritical dependence on digital tools that would merely perpetuate old hegemonies in a new skin.

These worries highlight the need to steer Tech toward genuinely participatory democratic systems that empower instead of subjugate, ensuring that progress is a path toward collective welfare and the greater good instead of something wielded as a tool to consolidate power in the hands of the few.

These ideas challenge us to reckon with a profound, uncomfortable reality.

However, until we redefine innovation to include every aspect of human experience, from cultural and emotional health to ecological sustainability and democratic values, we must accept that we are not so much "moving toward the future" as we are tangled in the wreckage of outdated paradigms of technological determinism.

Only through a holistic reorientation that acknowledges and debates the complex interplay between technology, society, and the environment can we aspire to forge an equitable and sustainable future in which technology serves humanity rather than dictating its destiny.

Conclusion: Reclaiming Our Digital Destiny

The challenge before us is enormous, yet we must confront it head-on. Big Tech's current digital order reduces our rich, multifaceted identities to mere data points, fuels environmental degradation, and perpetuates global inequities.

The servile worship of technology and its sub-products, characterising this system, is not inevitable. We can collectively destroy these corporate altars of control and build a future where technology serves humanity, not the other way around. For Africans and all those who value our richly varied cultural heritage, the fight for digital sovereignty is a global fight for our future, the lifeblood of who we are, our privacy and our planet. We must reject the narrative that our digital life is destined to be harvested for the profit of detached technocrats. We must also distance Africa from the program of digital advancement that seeks to replace human value with the corrosive exploitation of AI. Instead, we must create a landscape of innovation that amplifies our voices, protects our environment, and harnesses our human greatness.

Africans should strive for a world where our data is not a commodity sold on global markets for a few western bourgeoisie to profit. This is the time for us to allow our creativity to define innovation. Imagine technology that connects rural communities to quality healthcare, preserves our indigenous languages and traditions, and supports equitable economic growth. Now, imagine Africans owning such technologies!

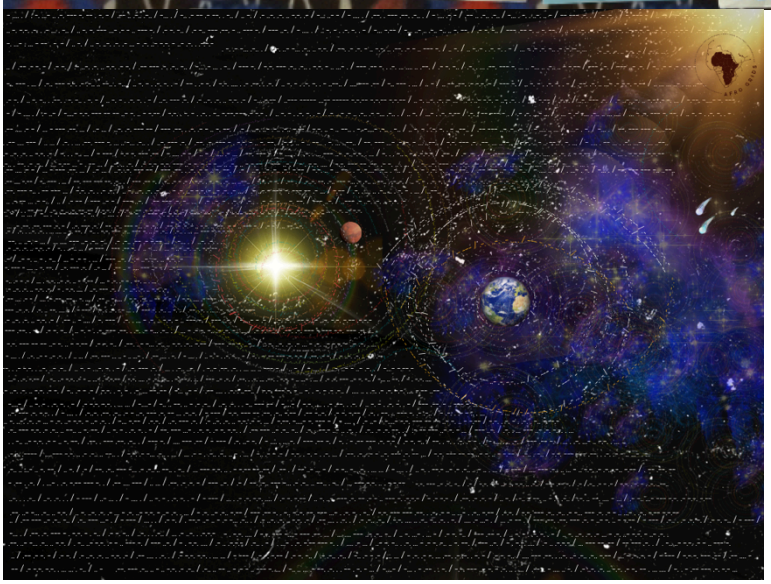
This future is not just a distant dream but a possibility we can create through determined collective action, scholarly insight, and cultural pride. We need to invest, make visible and create a community for our innovators; after all it takes a village to raise a child!

The time to act is now. Our destiny is ours to shape. We must seize this opportunity to reclaim our freedom from technological tyranny and the vicious grip within which, currently, suffocates Africa's ability to immerse itself in indigenous development, fuelled and defined by its values. The revolution is not merely digital; it is deeply human.

The journey toward reclaiming our path is urgent! Our identity, environmental sustainability, and collective future depend on our ability to break free from Big Tech's gospel to create systems built on human dignity, innovation that encourages creative thinking, and invests in innovation that is not disruptive to our existence. Together, we have the strength to dismantle these *Elite* altars of exploitation and usher in a future that genuinely serves us all.

A Luta Continua

Community Visions for African Internet Infrastructure



Contributors shared their visions for equitable internet infrastructure across Africa. These visions were then translated into morse code – the original language of the Telegraph. The artwork at the top is the collection of sticky notes on artwork by author. On the left, the morse code translations of these visions are transcribed across the universe, surrounding the continent and the cross as a guiding light to a harmonious future centered on freedom, equity, and autonomy of human beings. Contributions were collected at conferences including Mozilla Festival, MozFest House and the Forum for Internet Freedom Africa.

TEXT FROM STICKY NOTE	*MORSE CODE TRANSLATION*
I 100 percent agree with the stickers at the bottom	.. / .---- ----- ----- / .--. . .-. -.-. . -. - / .- --. .-. . . / .-- .. - .... / - .... . / ... - .. -.-. -.- . .-. ... / .- - / - .... . / -... --- - - --- --
Green data centers in Africa – for Africa – by Africa	--. .-. . . -. / -.. .- - .- / -.-. . -. - . .-. ... / .. -. / .- ..-. .-. .. -.-. .- / ..-. --- .-. / .- ..-. .-. .. -.-. .- / -... -.-- / .- ..-. .-. .. -.-. .-
Legal systems fir accountability of tech companies Enforced + rights based	.-.. . --. .- .-.. / ... -.-- ... - . -- ... / ..-. .. .-. / .- -.-. -.-. --- ..- -. - .- -... .. .-.. .. - -.-- / --- ..-. / - . -.-. .... / -.-. --- -- .--. .- -. .. . ... / . -. ..-. --- .-. -.-. . -.. / .-.-. / .-. .. --. .... - ... / -... .- ... . -..
Make Internet available in very remote areas – establish strong Internet	-- .- -.- . / .. -. - . .-. -. . - / .- ...- .- .. .-.. .- -... .-.. . / .. -. / ...- . .-. -.-- / .-. . -- --- - . / .- .-. . .- ... / . ... - .- -... .-.. .. .. / ... - .-. --- -. --. / .. -. - . .-. -. . -
+1 *Socialize* *- Cables* *- Satellites* *- Data centers* *- Platforms Community led cooperatives*	.-.-. .---- / ... --- -.-. .. .- .-.. .. --.. . / -.-. .- -... .-.. . ... / ... .- - . .-.. .-.. .. - . ... / -.. .- - .- / -.-. . -. - . .-. ... / .--. .-.. .- - ..-. --- .-. -- ... / -.-. --- -- -- ..- -. .. - -.-- / .-.. . -.. / -.-. --- --- .--. . .-. .- - .. ...-	
Force the "platforms" to comply w/ any regional treaties	..-. --- .-. -.-. . / - .... . / .-..-. .--. .-.. .- - ..-. --- .-. -- ... .-..-. / - --- / -.-. --- -- .--. .-.. -.-- / .-- -..-. / .- -. -.-- / .-. . --. .. --- -. .- .-.. / -.-. . .- - .. . ...
MESH NETWORKS	-- . ... / -. . - .-- --- .-. -.- ...
Educating people on how to run their own network and generate their own services	. -.. ..- -.-. .- - .. -. --. / .--. . --- .--. .-.. . / --- -. / .... --- .-- / - --- / .-. ..- -. / - ....-. / --- .-- -. / -. . - .-- --- .-. -.- / .- -. -.. / --. . -. . .-. .- - . / - ....-. / --- .-- -. / ... . .-. ...- .. -.-. . ...
Who is responsible for protecting citizens? *Gov'ts?* *Corps?* *Citizens themselves?*	.-- .... --- / .. ... / .-. . ... .--. --- -. ... .. -... .-.. . / ..-. --- .-. / .--. .-. --- - . -.-. - .. -. --. / -.-. .. - .. --.. . -. ... ..--.. / --. --- ...- .-..-. - ... ..--.. / -.-. --- .-. .--. ... ..--.. / -.-. .. - .. --.. . -. ... / - .... . -- ... . .-.. ...- . ... ..--..
WHAT HAPPENS WITH CLIMATE CHAOS?	.-- .... .- - / .... .- .--. .--. . -. ... / .-- .. - .... / -.-. .-.. .. -- .- - . / -.-. .... .- --- ... ..--..
Make some data centers located in regional intra-governments jurisdiction	-- .- -.- . / ... --- -- . / -.. .- - .- / -.-. . -. - . .-. ... / .-.. --- -.-. .- - . -.. / .. -. / .-. . --. .. --- -. .- .-.. / .. -. - .-. .- -....- --. --- ...- . .-. -. -- . -. - ... / .--- ..- .-. .. ... -.. .. -.-. - .. --- -.
Feel free to use the internet to search any information. Take part in Digital Rights advocacy	..-. . . .-.. / ..-. .-. . . / - --- / ..- ... . / - .... . / .. -. - . .-. -. . - / - --- / ... . .- .-. -.-. .... / .- -. -.-- / .. -. ..-. --- .-. -- .- - .. --- -. .-.-.- / - .- -.- . / .--. .- .-. - / .. -. / -.. .. --. .. - .- .-.. / .-. .. --. .... - ... / .- -.. ...- --- -.-. .- -.-. -.--
- Internet access *- Digital Freedom* *- Cheaper internet options*	-....- / .. -. - . .-. -. . - / .- -.-. -.-. . ... / -....- / -.. .. --. .. - .- .-.. / ..-. .-. . . -.. --- -- / -....- / -.-. .... . .- .--. . .-. / .. -. - . .-. -. . - / --- .--. - .. --- -. ...
Political limitations / disagreements -> between countries within African	.--. --- .-.. .. - .. -.-. .- .-.. / .-.. .. -- .. - .- - .. --- -. ... / -.. .. ... .- --. .-. . . -- . -. - ... / -....- / -... . - .-- . . -. / -.-. --- ..- -. - .-. .. . ... / .-- .. - .... .. -. / .- ..-. .-. .. -.-. .- -.
Community and publicly owned infrastructures	-.-. --- -- -- ..- -. .. - -.-- / .- -. -.. / .--. ..- -... .-.. .. -.-. .-.. -.-- / --- .-- -. . -.. / .. -. ..-. .-. .- ... - .-. ..- -.-. - ..- .-. . ...
#IAMSAD I am out of words after learning of 2Africa	.. .- -- ... .- -.. / .. / .- -- / --- ..- - / --- ..-. / .-- --- .-. -.. ... / .- ..-. - . .-. / .-.. . .- .-. -. .. -. --. / --- ..-. / ..--- .- ..-. .-. .. -.-. .-
Podemos crear infraestructuras autonomas y resilientes ?	.--. --- -.. . -- --- ... / -.-. .-. . .- .-. / .. -. ..-. .-. .- . ... - .-. ..- -.-. - ..- .-. .- ... / .- ..- - --- -. --- -- .- ... / -.-- / .-. . ...-.. .. . -. - . ... / ..--..
ENABLE PUBLIC PARTICIPATION IN INTERNET STARDARDS	. -. .- -... .-.. . / .--. ..- -... .-.. .. -.-. / .--. .- .-. - .. -.-. .. .--. .- - .. --- -. / .. -. / .. -. - . .-. -. . - / ... - .- .-. -.. .- .-. -.. ...
Localization could lead to a more divided and censored internet	.-.. --- -.-. .- .-.. .. --.. .- - .. --- -. / -.-. --- ..- .-.. -.. / .-.. . .- -.. / - --- / .- / -- --- .-. . / -.. .. ...- .. -.. . -.. / .- -. -.. / -.-. . -. ... --- .-. . -.. / .. -. - . .-. -. .

Data security strategies	-.. .- - .- / ... . -.-. ..- -. .. - -.-- / ... - .-. .- - . --. .. . ...
Does localized Internet mean cheaper internet? How does it impact on internet privacy issues?	-.. --- . ... / .-.. --- -.-. .- .-.. .. --.. . -.. / .. -. - . .-. -. . - / -- . .- -. / -.-. .... . .- .--. . .-. / .. -. - . .-. -. . - ..--.. / .... --- .-- / -.. --- . ... / .. - / .. -- .--. .- -.-. - / --- -. / .. -. - . .-. -. . - / .--. .-. .. ...- .- -.-. -.-- / .. ..- . ... ..--..
WHY DOES GOOGLE OWN DATA CENTERS? CAN WE "GLOBALIZE" INTERNET INFRASTRUCTURE?	.-- .... -.-- / -.. --- . ... / --. --- --- --. .-.. . / --- .-- -. / -.. .- - .- / -.-. . -. - . .-. ... ..--.. / -.-. .- -. / .-- . / .-..-. --. .-.. --- -... .- .-.. .. --.. . .-..-. / .. -. - . .-. -. . - / .. -. ..-. .-. .- ... - .-. ..- -.-. - ..- .-. . ..--..
HOW DO WE ENSURE AWARENESS AMONGST INTERNET USERS... NOTICE ON EVERY SITE	.... --- .-- / -.. --- / .-- . / . -. ... ..- .-. . / .- .-- .- .-. . -. . ... / .- -- --- -. --. ... - / .. -. - . .-. -. . - / ..- ... . .-. ... .-.-.- / -. --- - .. -.-. . / --- -. / . ...- . .-. -.-- / ... .. - .
Nothing for us without us	-. --- - .... .. -. --. / ..-. --- .-. / ..- ... / .-- .. - .... --- ..- - / ..- ...
AFRICA TECH FOR AFRICA	.- ..-. .-. .. -.-. .- / - . -.-. .... / ..-. --- .-. / .- ..-. .-. .. -.-. .-
Africa Rise	.- ..-. .-. .. -.-. .- / .-. .. ... .
What stops us from operating a fully citizen-led internet? Would this even be good?	.-- .... .- - / ... - --- .--. ... / ..- ... / ..-. .-. --- -- / --- .--. . .-. .- - .. -. --. / .- / ..-. ..- .-.. .-.. -.-- / -.-. .. - .. --.. . -. -....- .-.. . -.. / .. -. - . .-. -. . - ..--.. / .-- --- ..- .-.. -.. / - .... / . ...- . -. / -... . / --. --- --- -.. ..--..
It is beyond the union. Open your eyes.	.. - / .. ... / -... . -.-- --- -. -.. / - .... . / ..- -. .. --- -. .-.-.- / --- .--. . -. / -.-- --- ..- .-. / . -.-- . ... .-.-.-
THE ENVIRONMENT WILL BE DAMAGED IN AFRICA BUT THE PEOPLE THAT WILL BENEFIT MORE ARE NOT IN AFRICA	- .... . / . -. ...- .. .-. --- -. -- . -. - / .-- .. .-.. .-.. / -... . / -.. .- -- .- --. . -.. / .. -. / .- ..-. .-. .. -.-. .- / -... ..- - / - .... . / .--. . --- .--. .-.. . / -.... .- - / .-- .. .-.. .-.. / -... . -. . ..-. .. - / -- --- .-. . / .- .-. . / -. --- - / .. -. / .- ..-. .-. .. -.-. .-
A United States of Africa	.- / ..- -. .. - . -.. / ... - .- - . ... / --- ..-. / .- ..-. .-. .. -.-. .-
Gifts should always be free	--. .. ..-. - ... / ... . --- ..- .-.. -.. / .- .-.. .-- .- -.-- ... / -... . / ..-. .-. . .
Localizing Internet Governance would require large amounts of resources	.-.. --- -.-. .- .-.. .. --.. .. -. --. / .. -. - . .-. -. . - / --. --- ...- . .-. -. .- -. -.-. . / .-- --- ..- .-.. -.. / .-. . --.- ..- .. .-. . / .-.. .- .-. --. . / .- -- --- ..- -. - ... / --- ..-. / .-. . ... --- ..- .-. -.-. . ...
Increased innovation and adoption of the internet by building and owning infrastructure. Local investment in infrastructure.	.. -. -.-. .-. . .- ... . -.. / .. -. -. --- ...- .- - .. --- -. / .- -. -.. / .- -.. --- .--. - .. --- -. / --- ..-. / - .... . / .. -. - . .-. -. . - / -... -.-- / -... ..- .. .-.. -.. .. -. --. / .- -. -.. / --- .-- -. .. -. --. / .. -. ..-. .-. .- ... - .-. ..- -.-. - ..- .-. . .-.-.- / .-.. --- -.-. .- .-.. / .. -. ...- . ... - -- . -. - / .. -. / .. -. ..-. .-. .- ... - .-. ..- -.-. - ..- .-. ..- -.-. - ..- .-. . .-.-.-
Public infrastructures truly owned/governed cooperatively + collaboratively!	.--. ..- -... .-.. .. -.-. / .. -. ..-. .-. .- ... - .-. ..- -.-. - ..- .-. . ... / - .-. ..- .-.. -.-- / --- .-- -. . -.. -..-. --. --- ...- . .-. -. . -.. / -.-. --- --- .--. . .-. .- - .. ...- . .-.. -.-- / .-.-. / -.-. --- .-.. .-.. .- -... --- .-. .- - .. ...- . .-.. -.-- -.-.--
Open and interoperable standards and protocols	--- .--. . -. / .- -. -.. / .. -. - . .-. --- .--. . .-. .- -... .-.. . / ... - .- -. -.. .- .-. -.. ... / .- -. -.. / .--. .-. --- - --- -.-. --- .-.. ...
Tech co-ops should invest and own Internet infrastructure	- . -.-. .... / -.-. --- -....- --- .--. ... / ... . --- ..- .-.. -.. / .. -. ...- . ... - / .- -. -.. / --- .-- -. / .. -. - . .-. -. . - / .. -. ..-. .-. .- ... - .-. ..- -.-. - ..- .-. .
African data centers, but where? Continental hierarchy?	.- ..-. .-. .. -.-. .- -. / -.. .- - .- / -.-. . -. - . .-. ... --..-- / -... ..- - / .-- .... . .-. . ..--.. / -.-. --- -. - .. -. . -. - .- .-.. / ....-. .- .-. -.-. .... -.-- ..--..
Public Education of Tech AI. Let everyone has understanding of Tech AI. So, more EDUCATION	.--. ..- -... .-.. .. -.-. / . -.. ..- -.-. .- - .. --- -. / --- ..-. / - . -.-. .... / .- .. .-.-.- / .-.. . - / . ...- . .-. -.-- --- -. . / .... .- ... / ..- -. -.. . .-. ... - .- -. -.. .. -. --. / --- ..-. / - . -.-. .... / .- .. .-.-.- / ... --- --..-- / -- --- .-. . / . -.. ..- -.-. .- - .. --- -.
An Independent Internet for Africa by 2030!!!	.- -. / .. -. -.. . .--. . -. -.. - -. - / .. -. - . .-. -. . - / ..-. --- .-. / .- ..-. .-. .. -.-. .- / -... -.-- / ..--- ----- ...-- ----- -.-.-- -.-.-- -.-.-- / .. -. ..-. .-. .- ... - .-. ..- -.-. - ..- .-. . / -... -.-- / .-.-. / ..-. --- .-. / .- ..-. .-. .. -.-. .- -. ... / -.--. -....- -. --- - / - .... . / .- ..- / -....- -.-. --- -- -- ..- -. .. - -.-- / -.-. . -. - . .-. . -.. -.--.-

Infrastructure by + for Africans (-Not the AU -Community Centered)	.. -. ..-. .-. .- ... - .-. ..- -.-. - ..- .-. . / -... -.-- / .-.-. / ..-. --- .-. / .- ..-. .-. .. -.-. .- -. ... / -.--. -....- -. --- - / - .... . / .- ..- / -....- -.-. --- -- -- ..- -. .. - -.-- / -.-. . -. - . .-. . -.. -.--.-
Living in a globalized society, we must address the inequalities to holistically empower everyone who is part of a globalized society	.-.. .. ...- .. -. --. / .. -. / .- / --. .-.. --- -... .- .-.. .. --.. . -.. / ... --- -.-. .. . - -.-- --..-- / .-- . / -- ..- ... - / .- -.. -.. .-. . ... / - .... . / .. -. . --.- ..- .- .-.. .. - .. . ... / - --- / .... --- .-.. .. ... - .. -.-. .- .-.. .-.. -.-- / . -- .--. --- .-- . .-. / . ...- . .-. -.-- --- -. . / .-- .... --- / .. ... / .--. .- .-. - / --- ..-. / .- / --. .-.. --- -... .- .-.. .. --.. . -.. / ... --- -.-. .. . - -.--
Peaceful internet for self expression in the future =)	.--. . .- -.-. . ..-. ..- .-.. / .. -. - . .-. -. . - / ..-. --- .-. / ... . .-.. ..-. / . -..- .--. .-. . ... --- -. / .. -. / - .... . / ..-. ..- - ..- .-. . / -...- -.--.-
Could a council own a data center?	-.-. --- ..- .-.. -.. / .- / -.-. --- ..- -. -.-. .. .-.. / --- .-- -. / .- / -.. .- - .- / -.-. . -. - . .-. ..--..
I would love to see an equitable Africa where all children have same opportunity to learn and to be protected and feel safe.	.. / .-- --- ..- .-.. -.. / .-.. --- ...- . / - --- / ... . . / .- -. / . --.- ..- .. - .- -... .-.. . / .- ..-. .-. .. -.-. .- / .-- .... . .-. . / .- .-.. .-.. / -.-. ....-.. -.. .-. . -. / .... .- ...- . / ... .- -- . / --- .--. .--. --- .-. - ..- -. .. - -.-- / - --- / .-.. . .- .-. -. / .- -. -.. / - --- / -... . / .--. .-. --- - . -.-. - . -.. / .- -. -.. / ..-. . . .-.. / ... .- ..-. . .-.-.-
I want an Africa where access to any and all data is transparent and hopefully start to know who accessed it	.. / .-- .- -. - / .- -. / .- ..-. .-. .. -.-. .- / .-- .... . .-. . / .- -.-. -.-. . ... / - --- / .- -. -.-- / .- -. -.. / .- .-.. .-.. / -.. .- - .- / .. ... / - .-. .- -. ... .--. .- .-. . -. - / .- -. -.. / .... --- .--. . ..-. ..- .-.. .-.. -.-- / ... - .- .-. - / - --- / -.- -. --- .-- / .-- .... --- / .- -.-. -.-. . ... -.. / .. -
A refreshing decolonial lesson!	.- / .-. . ..-. .-. . ... -. --. / -.. . -.-. --- .-.. --- -. .. .- .-.. / .-.. . ... --- -. -.-.--
Africa needs to know that it has got the resources needed. We are not a charity case!!	.- ..-. .-. .. -.-. .- / -. . . -.. ... / - --- / -.- -. --- .-- / - .... .- - / .. - / .... .- ... / --. --- - / - .... . / .-. . ... --- ..- .-. -.-. . ... / -. . . -.. . -.. .-.-.- / .-- . / .- .-. . / -. --- - / .- / -.-. .... .- .-. .. - -.-- / -.-. .- ... . -.-.-- -.-.--
Support for global participation at IGF	... ..- .-. .-. --- .-. - / ..-. --- .-. / --. .-.. --- -... .- .-.. / .--. .- .-. - .. -.-. .. .-. .- - .. --- -. / .- - / .. --. ..-.
I want an African world based on collective ownership and responsibility of our data.	.. / .-- .- -. - / .- -. / .- ..-. .-. .. -.-. .- -. / .-- --- .-. .-.. -.. / -... .- ... . -.. / --- -. / -.-. --- .-.. .-.. . -.-. - .. ...- . / --- .-- -. . .-. ... .-. / .- -. -.. / .-. . ... .--. --- -. ... .. -... .. .-.. .. - -.-- / --- ..-. / --- ..- .-. / -.. .- - .- .-.-.-
The future is positive when the internet network PAN AFRIKA	- .... . / ..-. ..- - ..- .-. . / .. ... / .--. --- ... .. - .. ...- . / .-- .... . -. / - .... . / .. -. - . .-. -. . - / -. . - .-- --- .-. -.- / .--. .- -. / .- ..-. .-. .. -.- .-
Our Right to refuse online presence!	--- ..- .-. / .-. .. --. .... - / - --- / .-. . ..-. ..- ... . / --- -. .-.. .. -. . / .--. .-. . ... . -. -.-. . -.-.--
Very educative! Challenges our perspectives around big tech	...- . .-. -.-- / . -.. ..- -.-. .- - .. ...- . -.-.-- / -.-. .... .- .-.. .-.. . -. --. . ... / --- ..- .-. / .--. . .-. ... .--. . -.-. - .. ...- . ... / .- .-. --- ..- -. -.. / -... .. --. / - . -.-. ....
Africa needs to be proud and truly utilize its resources for its benefit. The continent is not a beggar!!	.- ..-. .-. .. -.-. .- / -. . . -.. ... / - --- / -... . / .--. .-. --- ..- -.. / .- -. -.. / - .-. ..- .-.. -.-- / ..- - .. .-.. .. --.. . / .. - ... / .-. . ... --- ..- .-. -.-. . ... / ..-. --- .-. / .. - ... / -... . -. . ..-. .. - .-.-.- / - .... . / -.-. --- -. - .. -. . -. - / .. ... / -. --- - / .- / -... . --. --. .- .-. -.-.-- -.-.--
Africa needs to own its stuff!	.- ..-. .-. .. -.-. .- / -. . . -.. ... / - --- / --- .-- -. / .. - ... / ... - ..- ..-. ..-. -.-.--
Africa with no restriction of data frequency.	.- ..-. .-. .. -.-. .- / .-- .. - .... / -. --- / .-. . ... - .-. .. -.-. - .. --- -. / --- ..-. / -.. .- - .- / ..-. .-. . --.- ..- . -. -.-. -.-- .-.-.-
FREE, FAIR, + ALWAYS AVAILABLE INTERNET INFRASTRUCTURE	..-. .-. . . --..-- / ..-. .- .. .-. --..-- / .-.-. / .- .-.. .-- .- -.-- ... / .- ...- .- .. .-.. .- -... ..-.. . / .. -. - . .-. -. . - / .. -. ..-. .-. .- ... - .-. ..- -.-. - ..- .-. .
	Source: https://morsecode.world/international/translator.html

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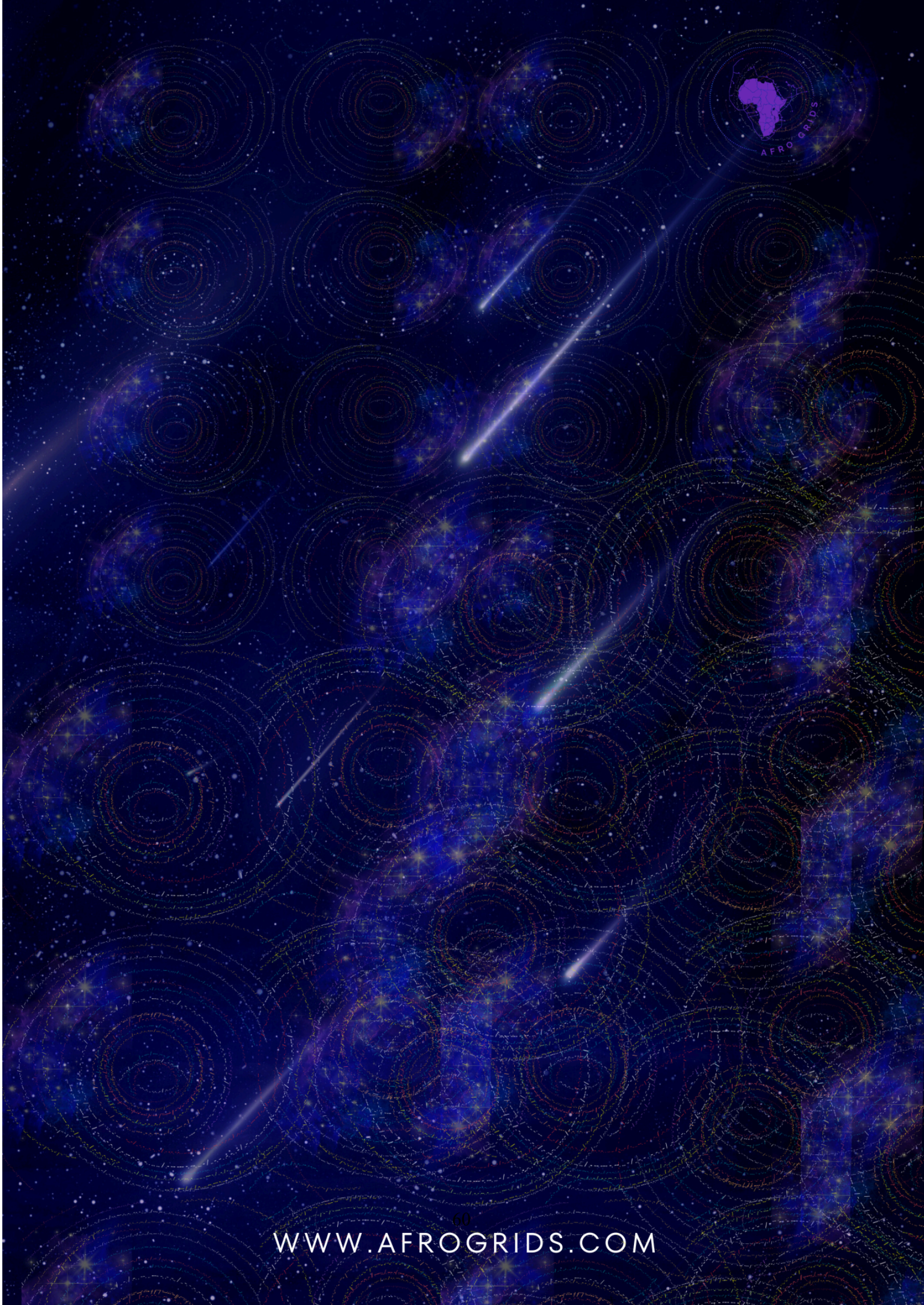

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