Digital natives, digital activists in non-digital environments: How the youth in Zambia use mundane technology to circumvent government surveillance and censorship☆

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A B S T R A C T

This study investigates the technological strategies the youth in Sub-Saharan Africa employ to circumvent government surveillance and censorship. Centered on the 2020 Zambian youth protests and informed by interviews with 37 participants, we explore the youth's innovative use of mundane skills to build digital communities, evade government surveillance, and leverage algorithms. The findings indicate that despite limited online access and government restrictions, the Zambian youth creatively employed their local skills to build social networks, disseminate information, and mobilize for social change. However, two contrasting narratives emerge: one celebrating the innovation and resilience of these young people, with the other raising concerns about the broader implications of their actions. Notably, some youth transitioned from influential activists to government insiders, a shift that may have diluted their capacity to champion social justice. The study emphasizes the need to scrutinize the balance between technological cooperation and potential discord, urging a more profound exploration of technology's role in shaping the trajectory of democracy, especially in settings akin to sub-Saharan Africa. We argue for further research into the role of digital influencers in electoral processes and democratic systems.

1. Introduction

In June 2020, the youth in Zambia sought permission to hold a peaceful protest against what they perceived as government oppression and foreign investor influence. Despite their demands for accountability, curbing corruption, job creation, and inclusion in policy formation, the police denied their requests. Undeterred, the youth proceeded with their planned protest on June 22nd, 2020. However, armed paramilitary forces were deployed by the police to prevent the protest, and warnings were disseminated through various media platforms. Although the youth did not protest on the streets, a video circulated on social media showing them demonstrating in the forest, earning the event the moniker "Bush Protest." This coverage garnered immense attention, with 64 million viewers, 4 million likes, and more than a million comments, making it one of Zambia's most significant protests in history.

Subsequently social media engagement played a pivotal role in voting out the then government (see Fig. 1).

At the heart of this event lie the strategies employed by Zambian youth to challenge the prevailing hegemonic order through the use of social media platforms. While conventional scholarly perspectives often portray these platforms and digital governance as being under the control of elites and corporations, the disadvantaged youth in Zambia emerged victorious, effectively challenging the so-called elite on their own digital turf. This experience resonates with Castells' argument [1] that power is not solely concentrated within institutional structures but is distributed throughout the networks that shape our society. To illustrate, Nemer's ethnographic study (2022) demonstrated how local communities in Brazil's Favelas were able to deconstruct technological hegemonies, adapting them to their specific contexts through everyday encounters. Nemer's study suggests that oppressed individuals often

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employ the tools of their oppressors but in their own pragmatic and mundane ways as a form of resistance. This is precisely what the youth in Zambia achieved; they harnessed social media technologies to outsmart online government censorship, surveillance, and algorithmic control. However, a pertinent question arises: How did they accomplish this feat when the underlying technology is foreign[1] and predominantly controlled by governments and corporations?

This study investigates the strategies employed by Zambian youth to navigate foreign technologies and resist government surveillance during the 2020 protests. Through in-depth interviews with 37 participants, we explore the youth's innovative use of everyday technology to build digital communities, disseminate information, and mobilize for social change. While celebrating their resilience and agency, we also examine the potential risks associated with their integration into governmental
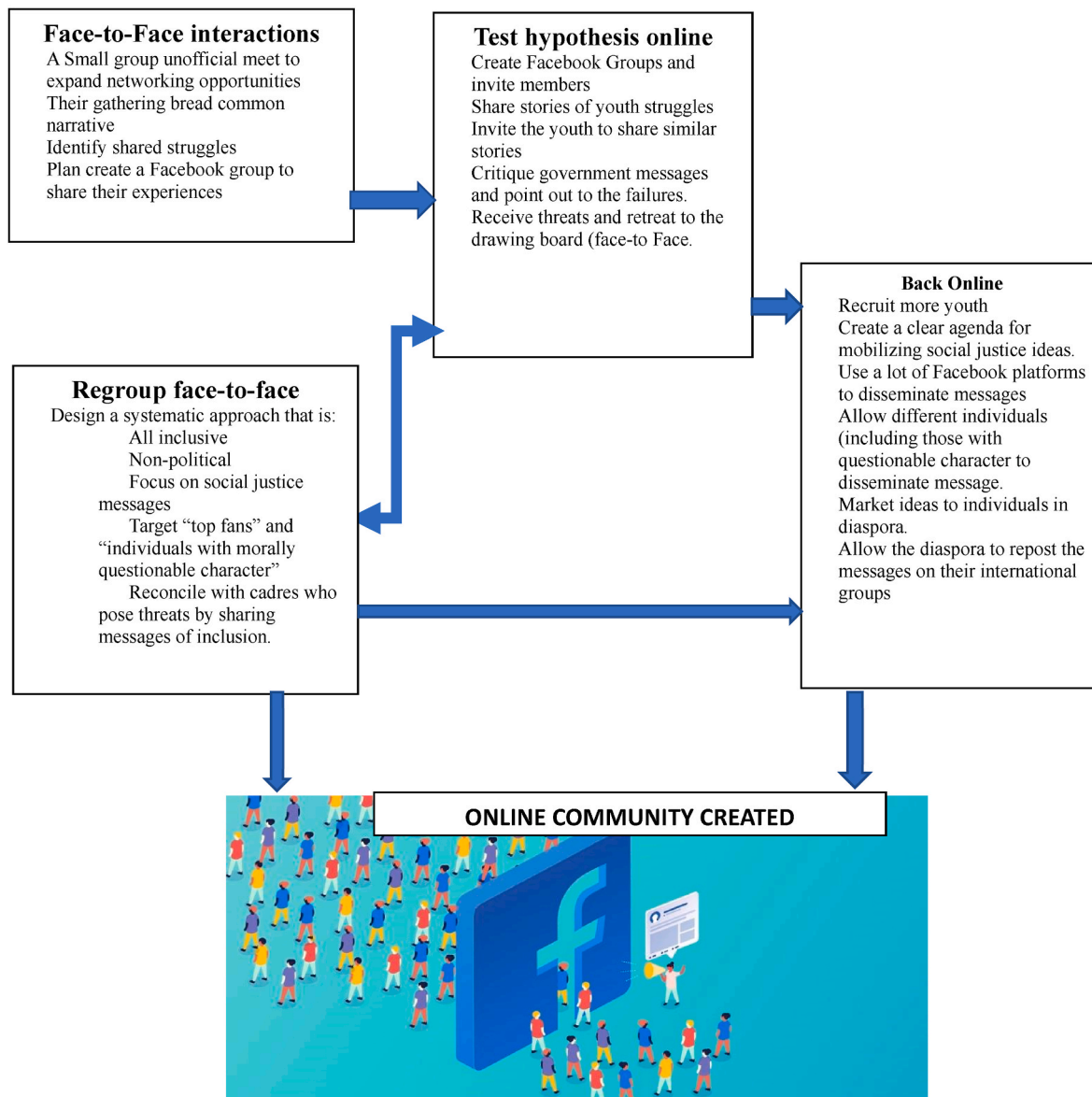
Online Community Orchestration Model

Fig. 1. Online community orchestration model.

[1] The term "foreign technology" in this study refers to the idea that much of the technology used in Africa was designed with little or no consideration for the specific needs and contexts of African communities. Despite this, the increasing globalization has led to the widespread adoption and adaptation of foreign technologies by African youth, often in unconventional ways. For example, mobile phones, originally intended primarily for communication, have been repurposed by many in Africa to serve as tools for mobile banking, financial services, and small business operations.

structures. The study emphasizes the need for further research into the role of digital influencers in shaping democratic trajectories, particularly in contexts like Zambia. The findings not only evoke a sense of utopian aspirations but also proposes effective methods for establishing online social movements and dissident identities that challenge the power structures associated with algorithms, surveillance, censorship, and technological oppression.

1.1. Digital activism among the Zambian youth: Western models, local realities

In recent years, digital technologies have emerged as powerful tools for social and political mobilization, particularly among young people in developing countries [2–4]. Similar to other countries in Sub-Saharan Africa, the Zambian youth, in particular, have embraced these platforms to amplify their voices and advocate for change ([5,6]; Willems, 2019). Through the seemingly mundane ways, the youth in Zambia and other parts of the sub-Saharan Africa have found mundane yet skillful ways to orchestrate strong communities for evading government surveillance – as in whom to target and intimidate during the protests, and strategically manipulate algorithms to effect social change. A most recent example is that of the 2024 Kenyan Finance Bill protests that saw the youth use local and mundane yet unique skills to challenge the government. As most studies have, these processes are a combination of both offline and online networks [4,7,8]

1.2. Organizing online communities

A growing body of research suggests that social media platforms have become conduits and prominent arenas for contemporary political struggles (Alsaad, Alam, & Lutfi, 2023; Greijdanus et al., 2020; Kreiss & McGregor, 2023). Yet most scholars continue to grapple with questions of how individuals mobilize online communities, particularly, strategies for collective action and social distinction amid forces of disinformation from agents that seek to gain or consolidate power. However, certain ingredients such as shared struggles and leadership roles (a.k.a "movement entrepreneurs" who play a critical role in the initiation and organization of social movements ([9]; Staggenborg, 2013), continue to dominate the narratives that inform the dynamic phenomena. In the context of Zambia, most youth are unemployed and a few that find the rare employment, tend to guard it jealously, even to an extent of forfeiting their human rights. Rajaram, Chiwele, and Phiri (2022), for example, examine the expanding but low productivity informal sector (resulting from the stunting of the formal sector) which employs less than 15 percent of labor. Consequently, youth unemployment and inequality continue to surge. These challenges precipitate shared hardships and struggles that are later transferred into online practices [10].

The idea of shared grievances as a mobilizing force resonates with social movement theories that emphasize the role of collective identity and shared grievances in mobilizing individuals (Caren, Andrews, & Lu 2020; Hurst, Gibbon, & Nurse, 2016). Essentially, the emergence of online communities rooted in shared struggles reflect the concept of "connective action", which according to Bennett and Segerberg, (2013), operates on a different political economy that is based on voluntary self-expression shared and recognized in the process of forming large social networks. Unlike older mechanisms, online protests emerging from shared struggles hinge on more personalized expressions and connections beyond social group identity, party membership, or ideology. This approach is unique as it permeates the anachronistic narratives of tribal, political, or religious affiliations that had long characterized the Zambian scenery. Consistent with Bennett (2014), "crowds (in connective action in Zambia) can display remarkable levels of persistence, agenda-setting, and issue-framing. They employ flexible political targeting as opportunities and official reactions change the arenas and conditions of action".

Ironically, the strength of the 'collective action' typology also stands as its main obstacle because of the individualized expressions. In other words, such communities enjoy an evanescent euphoria where individuals holding the group can easily withdraw because of an inventive. The Zambian case serves as a paradigmatic illustration, wherein numerous youth participants who engaged in online protests and contributed to the removal of the ostensibly 'repressive Patriotic Front (PF)' government subsequently received diverse incentives. Consequently, the once vibrant voices of youth activism have waned despite

persistent pleas from local communities. But whether the outcomes for online protests are evanescent and cannot produce substantial policy change, remain a question for extended research. In this study, we examine whether certain cultures or geolocations foster mundane strategies aligning to their environment in their effort to orchestrate online communities. In light of these considerations, we pose the following inquiry.

RQ1. How did the Zambian youth utilize online protest strategies to establish online communities that challenge oppressive corporate and governmental frameworks?

In contemporary society, digital spaces have become instrumental in fostering communities and networks that challenge established power structures, both corporate and governmental. The Zambian youth, faced with oppressive systems and frameworks, have resorted to innovative online protest strategies to create digital communities aimed at resisting and challenging these structures. RQ1, therefore, seeks to explore the mechanisms and strategies employed by Zambian youth to construct online communities that serve as hubs for dissent and resistance. Analyzing their approaches sheds light on the ways in which these communities leverage digital tools to amplify marginalized voices, challenge oppressive narratives, and mobilize collective action against corporate and governmental frameworks that perpetuate inequalities and injustices.

1.3. Circumventing government surveillance and censorship

Surveillance and censorship are pervasive elements of African politics [9,11]. Social media, as highlighted by Ncube (2021) and Tucker et al. [11], presents a paradoxical situation in which an online public sphere is established, but it is simultaneously constrained by censorship, surveillance, and exclusion. Additionally, Adegoke [12] and Roberts et al. [13] argue that countries that traditionally relied on crude forms of in-person surveillance now have access to increasingly affordable and comprehensive tools for mass surveillance. Tucker et al. [11] further posits that social media serves as a battleground for competing political interests, which may not always align with liberal or democratic principles. Consequently, authoritarian regimes have found it convenient to stifle dissenting voices, manipulate information, and distort public discourse.

Recently, the United States Defense Secretary, Mark Esper, noted that China had initiated the development and exportation of high-tech surveillance tools equipped with advanced capabilities, including speech censorship Vergun, [14]. Countries such as Uganda, Zambia, Sudan, and Nigeria are reported to be the primary purchasers of such surveillance technologies [15]. To finance these high-tech surveillance tools, African governments seek external support from nations like Russia, the United States, and China, often justifying such investments as necessary for public safety and the efficiency of service delivery Gondwe, [16]; [15]. Regrettably, most of these tools are employed for digital authoritarianism, especially against individuals or organizations that challenge seemingly oppressive regimes. Significantly, governments frequently employ these tools to intimidate their citizens through various means, including the shutdown of Internet services in critical areas and times, the enactment of draconian laws governing social media usage, and the imposition of unwarranted content censorship. For example, in 2021, the Nigerian government blocked access to Twitter following the platform's removal of a post by the President that violated its rules [17]. The blocking of social media platforms has been documented in over 34 out of 54 African countries, resulting in 88 instances of Internet restrictions since 2015, Surfshark, an online privacy protection company document.

In their pursuit, Zambian youth exhibited foresight and strategically prepared for anticipated government censorship and surveillance. Their actions embody significant theoretical foundations rooted in mundane approaches. Among the insights gleaned from the youth's commendable

endeavors are the concepts of "prefigurative politics" and the utilization of "tactical media." The notion of "prefigurative politics" arises as the youth proactively readied themselves for resistance in anticipation of impending repression. Leach (2022) defines "prefigurative politics" as a strategy based on the principle of direct action, involving a clear implementation of desired changes rather than relying on others to enact those changes on one's behalf.

The concept of "prefigurative politics" is closely associated with another idea known as "Tactical Media," a term coined in the wake of the fall of the Berlin Wall to denote the resurgence of media activism (Lovink & Schneider, 2012). "Tactical Media" encompasses a wide spectrum of non-commercial interventions, ranging from politically informed artistic endeavors to aesthetically informed political activism. This includes practices such as hacktivism, culture jamming, and subversion. In essence, "Tactical Media" occurs when cost effective 'do-it-yourself' media tools are harnessed by groups and individuals who feel marginalized or excluded from mainstream culture (Garcia & Lovink, "The ABC of Tactical Media," 1997). Embedded within these overarching frameworks is the concept of "Tactical Messaging Shifts," which pertains to a shift away from political rhetoric towards shared struggles as a means of reducing government opposition. This shift in messaging strategy aligns with research on the dynamics of political communication within repressive regimes (Howard & Hussain, 2013). It also draws upon theories of framing (Entman, 2010; Gilardi, Gessler, Kubli, & Muller, 2022), where activists strategically frame their messages to resonate with broader audiences while circumventing government crackdowns.

When applied to the Zambian situation, the youth employ a range of strategies to circumvent government censorship and surveillance. The aim was to create a new society "within the confines of the old." This endeavor involved the establishment of counter-hegemonic institutions and modes of interaction that embodied the envisioned transformation. For instance, Zambian youth developed a code-switched satire language intelligible only to themselves. Additionally, they disseminated their messages through Facebook accounts associated with individuals of dubious reputation but possessing active social media profiles. An exemplar of this strategy involved the use of self-proclaimed sex workers, who were subjects of criticism but still garnered a substantial following. Essentially, this approach relied on the premise that individuals considered "morally upright" would refrain from affiliating themselves with such personas, and many individuals used pseudonyms when engaging with them. Other strategies encompassed the utilization of fellow youths residing abroad to post or share their virtual private networks (VPNs). As a result, governments may employ the tactic of Internet access restriction, ostensibly justified by national security concerns or the need to shield individuals from misinformation. Given the challenging situation, it becomes imperative to investigate how minority communities navigate these challenges. Therefore, within the specific context of Zambia, the following research question emerges.

RQ2. What protest strategies were employed by Zambian youth to combat repressive forms of online government censorship and surveillance?

RQ2 aims to explore on the adaptive and innovative approaches used by Zambian youth in navigating an environment marked by online restrictions. It explores how they harness digital platforms, circumvent censorship, and mitigate surveillance to amplify their voices and advocate for change. In Zambia, as in many other countries, the youth constitute a significant portion of the population and are often at the forefront of digital activism. In analyzing the strategies they employ to resist and challenge government-imposed online restrictions the study hints into the new trends of digital activism in which local skills are employed within a foreign technology.

1.4. Leveraging social media algorithms

Despite their limited technological expertise to professionally modify algorithms, Zambian youth effectively leverage social media algorithms. Algorithms are technical mechanisms employed to arrange posts based on relevance rather than publication time (Golino, [18]; Rettberg & Rettberg, 2024). Their primary objective is to prioritize content with a higher potential for user engagement. These algorithms are honed through machine learning techniques by programmers who determine how information is ranked and filtered to cater to specific user communities. Akter et al. [19] and Birhane et al. [20] observe that algorithms often carry an embedded value agenda aligned with the biased interests of a privileged minority.

This observation ties into the broader discourse surrounding the role of algorithms in shaping the distribution of online content (Gillespie, 2018; [8,21]). Essentially, many corporations rely on algorithms for functions such as monitoring, scoring, recommendation, forecasting, and automated transactions. Platforms employ algorithms to deliver personalized news feeds, highlight "trending topics," provide search and autocomplete functionalities, facilitate computational advertising, offer contact and group suggestions, and identify and filter out undesirable content such as pornography, spam, and disinformation (Saurwein & Spencer-Smith, 2021). The drawback is that third parties, including financially capable governments, can harness algorithms for their own gain, including promoting content that aligns with their political agenda, even when it contradicts the views of the majority.

Similar strategies can be employed by those advocating for social justice, as seen in the case of Zambian youth. Their capacity to effectively manipulate algorithms controlled by the elite underscores their adaptability and agency within digital spaces (Bucher, 2012; [4,22]). This adaptability and agency within digital spaces facilitate practices like enhancing message visibility, often achieved by tagging top supporters and like-minded individuals. This practice of tagging and audience engagement relates to the concept of "audience labor" (Munger, 2020) in the realm of social media, where users actively contribute to the dissemination of content. In this context, 'audience labor' is not construed in the sense proposed by Couldry and Mejias (2020), who argue that our engagement on social media serves corporations by having users work for them for free while generating data. Instead, we adopt a perspective in which 'audience labor' is viewed as a constructive endeavor wherein like-minded individuals collaborate to establish networked structures for information propagation ([21]; Pósfai & Barabási, 2016). Therefore, we inquire.

RQ3. What protest strategies were employed by Zambian youth to counteract oppressive algorithms that prioritize elite power structures?

The rationale for investigating protest strategies against such algorithms is twofold. Firstly, it aligns with the recognition that these algorithms are not neutral entities but often reflect and reinforce existing power imbalances, privileging certain voices while silencing others Gondwe, [23]. Understanding the methods employed by Zambian youth to navigate, subvert, or challenge these algorithms is crucial in comprehending the dynamics of digital activism within a context marked by social disparities. Secondly, focusing on the protest strategies specifically employed by the youth in Zambia addresses the agency and resilience demonstrated by this demographic. Despite facing barriers to traditional forms of civic engagement and having limited access to resources, Zambian youth have demonstrated an innovative approach in utilizing social media and digital platforms to voice dissent and advocate for social change.

2. Methodology

This exploratory study aimed to investigate the strategies employed by Zambian youth to achieve three specific objectives: 1) establish an online community for collaborative thinking, 2) navigate government

censorship and surveillance, and 3) reshape the functioning of structural algorithms. The study examined two prominent cases: virtual protests and the use of Facebook platforms by politicians. To achieve these goals, we designed a three-sectional protocol of semi-structured interviews reflecting our research questions.

2.1. Participant recruitment

After obtaining Institutional Review Board (IRB) approval on February 7th, 2024, and ethical clearance from the compliance office in Zambia on March 2nd, 2024, the researcher contacted 88 potential candidates. Some candidates were reached through Facebook Messenger, while others were contacted through friends. The candidates were contact through Facebook messenger while others were contacted through friends. Participants were simply Participants were chosen based on their history of active engagement in social media and their resistance to oppression over time. To be eligible, participants were required to self-identify as youths. The definition of youth in Zambia encompasses both denotative and connotative elements. Denotatively, the Commonwealth Youth program defines youth as individuals aged 15 to 29, while Zambia extends this range to 35. Connotatively, youth in Zambia refers to individuals who have not yet settled in life and lack a stable income. Consequently, the selection criteria prioritized self-described contributing youths over purely age-based criteria. Three participant categories were considered: high-profile youths who actively contributed to resistance and gained popularity, individuals who gained popularity on social media for unconventional reasons despite public disapproval, and ordinary individuals labeled as "top fans" by Facebook.

Among the contacted individuals, 63 expressed interests in participating, but ultimately, only 37 were available for interviews. These interviews took place starting on March 17, 2022, and averaged approximately 56 min in duration. Some participants withdrew from the study, while others were only available for less than 5 min, rendering their contributions ineligible. Many of these challenges were attributed to issues related to poor network connectivity. Additionally, some challenges arose from financial demands made by participants, which exceeded the study's budgetary constraints. Of the participants who were interviewed, 22 were categorized as high-profile participants (mostly due to their active involvement in online protests), seven were classified as Facebook/social media influencers, and 10 were categorized as top fans. Prior to the interviews, participants received five guiding questions aligned with the research objectives. The interviews were recorded, transcribed by trained coders, and subsequently stored in both spreadsheet format and NVivo software for subsequent analysis.

2.2. Data analysis

For the purpose of data analysis, all interviews underwent meticulous verbatim transcription and were subsequently uploaded to *NVivo*, a computer-assisted qualitative text analysis software tool. Two coders, who had received specialized training, engaged in a comprehensive manual coding process. This coding was primarily focused on identifying and categorizing themes that had emerged organically during the course of the interviews. Furthermore, any newly emergent themes were judiciously integrated into the existing coding framework. This rigorous process resulted in the formulation of a comprehensive list comprising five overarching themes and a total of 42 distinct codes. These themes and codes were thoughtfully organized in alignment with the research questions guiding the study.

3. Findings

The findings of this study are presented thematically, with each theme aligning with the research questions that investigate the methods employed by Zambian youth to orchestrate online communities, navigate censorship and surveillance, and outsmart structural algorithms.

The analysis identifies how various youth, from different social, educational, and economic backgrounds, use digital platforms to challenge structural inequalities and governmental controls. In each case, the roles played by the three categories of participants (activists, observers, and bystanders) within the sample population are critically examined.

3.1. Online community orchestration

The study reveals how Zambian youth orchestrate online communities of resistance by employing various locally adapted strategies that integrate both digital and offline efforts. One of the most unique and effective strategies uncovered is the use of missed calls (flash calling) as a coordination tool. This method takes advantage of the widespread use of mobile phones across Africa, where airtime and data costs are often prohibitively expensive for many. In African communities, missed calls or "flashing" are already used as a common way to communicate basic information without incurring costs. The findings indicate that youth activists in Zambia adapted this practice for the purpose of community mobilization, adding a new dimension to the concept of community orchestration.

3.2. Missed call coordination

The findings suggest that youth activists pre-arrange specific signals using missed calls to convey different messages without the need for airtime or data. According to one respondent, *"One missed call signaled readiness for an online meeting, two missed calls initiated a call to action, such as organizing a social media campaign, and three missed calls signaled an urgent issue requiring immediate attention."* The use of missed calls is both silent and discreet, making it an effective strategy for avoiding detection by authorities who monitor digital communications. Since missed calls leave no digital footprint, they reduce the risk of online surveillance. After this initial mobilization, participants transition to secure online platforms, such as WhatsApp, to coordinate more detailed actions, share content, and strategize further. This phased approach minimizes costs while providing an economical entry point into broader online activism.

3.3. Hybrid activism: the fusion of online and offline engagement

However, this strategy was also contingent on a networked relationship which was equally risky as there were no clear measures of knowing who is being recruited in the group. Therefore, while online spaces provided a platform for engagement, the bonds formed between participants were often rooted in offline relationships and shared adversities. Out of the 37 participants interviewed, four indicated that they knew each other before their involvement in activism, suggesting that their connections were not merely born in online spaces. However, it was their shared experiences of hardship that truly deepened their relationships and catalyzed their collaboration. One participant described their frustration with the job market: *"Before all this, I was moving from office to office in pursuit of a job. I had the qualifications, but there are so few opportunities, and nepotism is embedded in the system."* This narrative reflects the widespread frustrations among Zambian youth, who, despite being educated, feel excluded from the formal job market due to structural barriers like nepotism. This disillusionment with traditional systems became a recurring theme, leading many to seek online spaces as a platform for expression and action.

Another participant recounted a personal awakening after witnessing the mistreatment of Zambian employees at a Chinese-owned company: *"I saw a fellow Zambian being mistreated, and he was the same age as my father. That moment opened my eyes to the realities of economic exploitation in our country."* This experience motivated the individual to join an online group where these issues were openly discussed and protested. Such shared grievances played a critical role in fostering

solidarity, driving both personal and collective action among participants.

3.4. Strategic platform selection

The orchestration of these online communities was deliberate and strategic. Participants revealed that they carefully selected platforms based on accessibility and perceived safety from censorship. For example, WhatsApp was favored for organizing due to its encryption features, ensuring privacy and security. Facebook, on the other hand, was seen as an effective tool for mobilizing larger audiences, while Twitter was used to engage with international audiences and raise global awareness of local issues. While the internet provided a space for visibility and engagement, the real foundation of these communities was built offline. Participants often used face-to-face meetings and trusted personal networks to solidify their bonds before transitioning to online discussions. As one participant explained, *"The internet became the place where we could be visible, but the real conversations, the ones where we trusted each other, happened face to face."* This statement underscores the fact that resilient digital communities of resistance are deeply rooted in trust and shared purpose, with personal, often offline relationships forming the foundation, rather than relying solely on online interactions.

3.5. The model above is an illustration of how the youth in Zambia systematically design online communities for social justice

As depicted in the model, the initiation of online communities among Zambian youth began with unintended intentions. Their shared struggles, stemming initially from face-to-face interactions, served as the catalyst that ultimately transitioned these connections into the digital realm. While the "high-profile" youth played a pivotal role in initiating these groups, it was the "top fans" and "Facebook influencers" who assumed a more prominent role in disseminating the message, albeit at times unwittingly. As articulated by one Facebook influencer, "Personally, my focus is on amassing a substantial following. I am indifferent to the content appearing on my page or others' perceptions of me … Interestingly, I have received not threats, but only condemnations. The paradox lies in the fact that some of those who publicly criticize me, including high-profile government officials, have privately messaged me seeking sexual favors. They perceive me as a prostitute. I am a social media influencer, and through this, I provide for my family."

Many participants revealed that they faced imminent threats, particularly from political cadres, at the outset of their online activism. They attribute this initial hostility to the absence of a well-organized and systematic method for conveying their message. One participant noted, "Initially, we presented ourselves as political cadres in our messages and engaged in emotional confrontations. However, when we rephrased our messages and shifted the focus to our shared struggles, most youths, including the political cadres, softened their stance and aligned with our cause." Consequently, the return to Facebook with a clearly defined agenda, detached from overt politics, garnered overwhelming support and attracted a substantial following both within and outside the borders of Zambia. Drawing on the backing received from individuals in the diaspora (i.e., Zambians residing in the US, Canada, UK, South Africa, Australia, etc.), they extended their recruitment efforts to international communities. "During one of our meetings, we believed that such individuals enjoyed the freedom to post without fear. Thus, we encouraged some of them to share our messages on their platforms in addition to our own, thereby sharing credit for the message. This strategy minimized interactions with political zealots and cultivated a semblance of a rational and authentic public sphere." However, given the inherent connection between social justice and politics, it became evident that most youth remained subject to censorship and surveillance. Consequently, they developed a systematic approach to outsmart both corporate and government surveillance.

3.6. Outsmarting censorship and surveillance

The findings reveal that Zambian youth were not only aware of government censorship and surveillance but actively anticipated it from the very start of their online activism. As one respondent clearly stated, "We knew from the beginning that the government would use social media for surveillance and censor our content, so we were fully prepared for this." Participants reported various forms of digital censorship and surveillance, including Internet address tampering, DNS manipulation, IP blocking, website restrictions, keyword filtering, network sniffing, and limits on encryption.

For example, one participant recalled that their Facebook account was flagged and subsequently suspended for allegedly containing pornographic content, even though they had not posted any such material. This tactic of flagging accounts with false accusations of violating community standards served as an effective way for the government to silence dissenting voices. Others received notifications from Facebook indicating their posts were classified as offensive, leading to the removal of content critical of the government. Additionally, direct threats from anonymous individuals, suspected to be either political cadres or secret service agents, were a common occurrence for many youth activists. Given the severity of censorship and surveillance, the youth devised innovative, localized strategies to outmaneuver these challenges, using culturally familiar tools and methods that were often overlooked by authorities. These included things like.

3.7. Vernacular and code-switching

One of the most effective methods employed by Zambian youth activists was the strategic use of vernacular languages and code-switching, particularly through the emerging "Kopala" language. Kopala, a hybrid language that blends traditional Zambian languages like Bemba, Lamba, Chinyanja, with English and slang, became a vital tool for covert communication. Most of the surveillance technologies used by authorities were not optimized to recognize this dialect, making it harder for government censors to monitor or filter content effectively. For instance, one participant recounted how they would use Kopala to share politically charged messages or coordinate protests. "We would switch to Kopala when discussing anything sensitive because we knew the software they use couldn't catch all the nuances," one activist explained. "In fact, we highly doubted whether the authorities could understand us even if they heard us speak. We made sure that we devised a language that is only understood by those sharing the cause", they added. This strategy allowed them to continue organizing without being flagged by automated filters or keyword searches used by authorities. The youth also alternated between languages, from English to Bemba or Nyanja, which further complicated the ability of surveillance tools to track their conversations.

3.8. Social events as safe spaces

Another unique strategy employed by the youth was the use of social events such as funerals, weddings, and other cultural gatherings for covert political organizing. In Zambia, such events command a high level of respect due to cultural traditions, and authorities typically avoided intervening out of respect for these occasions. Accordingly, youth activists reported seizing these opportunities to discuss their plans and coordinate actions in a setting where government agents would least expect political discourse. One respondent recalled, "We used weddings and funerals as spaces to meet and strategize. Of course we were respectful and helped the families mourn or celebrate. Therefore, no one expected us to be discussing activism at a funeral, so we were able to talk freely without fear of being spied on." I remember one time attending a funeral of a struggling 'poor' family. We helped organize a few resources for the mourners but also took the opportunity to quietly discussed the logistics of an upcoming protest. The gathering was large enough to

allow people to mingle and hold small, discreet discussions without raising suspicion. This offline organizing was later carried into the online space, where the plans were implemented.

The youth also employed flash protest tactics, which involved gathering briefly in public spaces for rapid, short-lived demonstrations. These flash protests were organized through missed calls and covert messages, allowing protesters to assemble, demonstrate, and disperse before authorities could react. One respondent shared an instance where they organized a protest at a government building in Lusaka. Using pre-arranged signals through missed calls, participants arrived at the location, held a brief demonstration with banners calling for transparency, and dispersed within 10 min, leaving before the police arrived. This tactic made it nearly impossible for the government to suppress or arrest all participants, and the protest message still reached a wider audience through photos and videos posted online after the event.

3.9. Peer-to-peer file sharing

Another local strategy that proved crucial was the use of peer-to-peer (P2P) file sharing, especially during internet blackouts or shutdowns. During periods when the government restricted access to social media platforms or the entire internet, activists would rely on offline methods to share content. They transferred information through SD cards, Bluetooth, or even portable USB drives. These files would contain videos, articles, or instructions on how to continue resisting government actions. For example, during a prolonged internet shutdown during the country's presidential election on August 12, 2021, one activist shared how they used Bluetooth to transfer an important document outlining the next steps of their movement. "We passed the file from phone to phone, and even though we couldn't post anything online, our entire group knew what the plan was," the activist said. This form of offline networking kept the movement alive despite digital restrictions.

Anonymous content distribution was another crucial tactic used to outsmart surveillance. Activists often enlisted the help of influencers or individuals with established social media followings to post their messages, believing that the government would be less likely to target high-profile figures for fear of public backlash. One respondent explained, "We asked influencers to share our posts (which some were simply innocent images but embedded with powerful messages) because we knew they had more visibility and less likelihood of being targeted by the authorities." This tactic ensured that important messages were widely disseminated while minimizing the risk for individual activists. For instance, during a government crackdown on social media, we used a well-known local musician to post our message on their Facebook page. The message reached and engaged with tens of thousands of followers within minutes. This influencer's status made it less likely that the post would be removed quickly, giving the activists time to spread their message before authorities intervened.

3.10. Use of virtual private networks (VPNs) and diaspora support

In addition to local strategies, Zambian activists employed Virtual Private Networks (VPNs) to bypass internet restrictions and continue their activism. Many activists received assistance from the Zambian diaspora, who provided information on VPN tools and, in some cases, financial support to help the activists purchase these services. During critical moments, such as government-imposed internet shutdowns, activists were able to use VPNs to maintain access to social media platforms and continue coordinating their movements. As one participant explained, "We had friends abroad who sent us information on which VPNs to use. This was crucial during the elections when they tried to block access to the internet. Without the VPNs, we would have been completely silenced." The diaspora also played a key role in amplifying the activists' messages on international platforms like Twitter, helping to raise global awareness about local issues in Zambia. The findings also indicate that the youth carefully selected platforms based on

accessibility and safety from censorship. WhatsApp was favored due to its end-to-end encryption, allowing for secure communication among trusted groups. Facebook was used for larger audience mobilization, while Twitter helped the youth engage with international audiences and raise global awareness of local issues.

3.11. Outsmarting structured algorithms

In the context of outsmarting algorithms, the findings from this study reveal that most participants initially lacked a technical understanding of algorithms, but they demonstrated an intuitive grasp of how content is organized and shared online. When asked about "algorithms," many respondents associated the term with computer science and felt it was beyond their expertise. However, after discussing algorithms in terms of how social media platforms prioritize and display content, participants quickly understood the importance of these mechanisms. One respondent said, "If it's about how content is organized online, then I understand it, and so does every youth involved in protests and seeking justice."

To circumvent government censorship and surveillance, Zambian youth employed creative strategies using burner accounts and fake profiles, allowing them to engage with larger audiences while remaining anonymous. This strategy enabled them to speak freely without fear of being identified. As one respondent observed, "I think it was the government that feared our algorithms, not us." This sentiment indicates the power that collective digital action had in shaping online discourse. A notable strategy was their use of memes and humorous content to disseminate critical information without triggering surveillance algorithms. For example, youth activists would create memes poking fun at international figures like former U.S. President Donald Trump, but their satire was indirectly aimed at local Zambian authorities. This allowed them to subtly criticized the local political situation without attracting direct attention. Equally, memes about social injustices and government corruption were interwoven with humorous takes, making them highly shareable while still addressing serious issues.

Additionally, participants made strategic use of hashtags to increase engagement and visibility. Instead of using obvious, widely monitored hashtags, they created hyper-local hashtags such as #umunyorinyori (referring to someone who meddles), #bulongo (meaning the right candidate), and #bwetebwetete (useless chatter). These hashtags allowed them to connect with their local audience while evading detection from platforms or government censors. They also intentionally misspelled popular hashtags or words to outsmart automated content filters. For instance, instead of using "#ProtestZambia," they might use "#ProtstZambia" or other creative variations to confuse algorithms. This minor alteration was enough to keep their content visible while avoiding restrictions.

An interesting tactic they used was the deliberate overuse of certain flagged words to overwhelm algorithms. Essentially, the youth reported to have deliberately flooded social media with posts containing flagged words in non-threatening contexts. The purpose was to create noise and divert attention of the authorities. This in turn made it difficult for algorithms to accurately detect harmful content while decreasing the efficacy of automated monitoring tools. In their efforts to amplify content, youth often used strategic engagement techniques. They posted thought-provoking questions addressing local frustrations like unemployment or corruption, encouraging likes, comments, and shares. For example, they might ask, "How many times have you applied for jobs this year?" Or they would post a university graduate in their rigaria doing odd jobs that reflect the lack of employment opportunities. Such questions tapped into common grievances, prompting people to engage and share their experiences. Top supporters or fans who consistently agreed with their posts were further tagged and engaged to cultivated a loyal following.

4. Discussion

This study aimed to investigate the mundane strategies utilized by local individuals, particularly those from the Global South, when engaging with foreign technologies in the specific context of Zambia. Drawing on prior research conducted by scholars such as Nemer [24], Russell [15], Koc-Michalska et al. [25], and others, the study uncovered that the erosion of democracy cannot be solely attributed to communication content or media technologies. Instead, it is shaped by broader structural changes, cultural shifts, and institutional decay [26,27]. These multifaceted aspects were prominently evident in how Zambian youth organized online communities, circumvented government censorship and surveillance, and effectively harnessed algorithms. Crucially, the findings illuminated that these strategies did not stem from formal training but rather emerged from specific encounters with challenging circumstances.

The findings underscore the transformative potential of digital activism among Zambian youth, aligning with the perspectives of previous scholars Nemer, 2022; [15,25]. These youth effectively harnessed social media to challenge oppressive systems, mobilizing online communities and resisting censorship and surveillance. This empowerment disrupts traditional power dynamics, emphasizing social media's role as a platform for amplifying marginalized voices Nemer, 2022. Their adaptability in addressing evolving challenges, particularly in circumventing surveillance and censorship, is commendable and aligns with the resilience seen in digital activism [25]. Their strategic shifts in messaging tactics and adept use of digital tools reflect their ability to navigate adversity, providing a potential model for other marginalized communities engaging in online activism [15].

Conversely, the study illuminates the complex relationship between activists and social media platforms Nemer, 2022. While Facebook facilitated connections and support for activists, it also presented challenges, including compliance with government demands [25]. This underscores the need for a nuanced understanding of social media companies' roles in activism and their potential to both assist and hinder such movements. Moreover, the study highlights the persistent issue of surveillance faced by digital activists, aligning with concerns raised by prior research [15]. Participants often believed they were targeted for surveillance, leading to arrests and migration to evade persecution. This underscores the urgency of enhancing digital security measures and advocating against digital surveillance, particularly in oppressive regimes [25]. Nonetheless, the emphasis on collective action and teamwork among the youth demonstrates the strength derived from unity [15]. Their ability to organize and coordinate efforts locally and internationally showcases the potential for global solidarity in online activism. This collective approach can serve as a source of inspiration for activists confronting similar challenges in other regions Nemer, 2022.

4.1. Implications and future directions

However, this triumph gives rise to several noteworthy implications. Firstly, it should be noted that not all youth activists who fought for justice achieved influencer status. Only a select few garnered recognitions and attained the stature of digital influencers, while many others assumed positions within the new government. Despite claims to the contrary, historical precedent suggests that such transitions can lead to shifts in political stances. In the past, individuals who fought against oppression under one government often succumbed to the influence of party cadres and partisan politics when in power. Present indications, reflected in statements made by those who have assumed political roles, suggest that history may repeat itself.

Secondly, there remain gaps in the existing literature concerning the impact of social media influencers on a nation's politics. Although social media influencers have recently gained prominence and achieved "celebrity" status, few are considered politically astute or wise when it comes to wielding political influence. Unlike traditional celebrities who offer clear-cut endorsements of politicians or political positions, influencers come in diverse forms. Recent elections in countries like Ghana and Nigeria illustrated how politicians leveraged social media influencers to sway votes due to their substantial followings, often surpassing those of the presidential candidates themselves. Consequently, a pertinent question arises: How can we nurture a moral disposition among influencers to ensure that they genuinely exercise their power in the pursuit of social justice? This challenge extends beyond Zambia and resonates globally. In summary, this study underscores two overarching discourses: one that celebrates the innovative approaches employed by youth in engaging with and adapting to Western-designed technologies, and another that voices concerns about the potential implications of these approaches.

While it is undeniably essential to applaud the ordinary methods employed by youth to bridge digital divides and challenge oppressive regimes, it is equally crucial to subject the role of influencers to critical examination within genuine democracies. Some Zambian youth believed that Facebook was aligning with them against the government, and while this collaboration proved advantageous, it raises questions about the extent to which new technologies may either support or undermine their struggle for a true democracy. Future research should delve deeper into exploring the role of digital influencers in elections and democracy, examining their impact and ethical dimensions in greater detail.

5. Conclusion

This study contributes significantly to the understanding of digital activism among Zambian youth. The findings underscore the resilience and creativity of Zambian youth as they orchestrate online communities, navigate censorship, and outsmart surveillance and algorithms in their fight for social justice. Despite limited resources and increasing government restrictions, these youth have developed sophisticated strategies that blend local cultural knowledge with modern digital tools, thus creating a dynamic form of activism that is both deeply rooted in their lived experiences and adaptive to the challenges of the digital age.

One of the most unique strategies discovered in this study is the use of missed calls for discreet coordination. Zambian youth have found a method to mobilize without drawing attention to themselves or leaving digital footprints that could be tracked by authorities. This, combined with their use of encrypted platforms like WhatsApp for detailed planning, shows a deliberate and phased approach to activism that prioritizes both safety and cost-effectiveness. Another important theme is the integration of online and offline efforts. The relationships that form the foundation of these online communities often begin offline, grounded in shared adversities such as economic hardship, unemployment, and experiences of exploitation. These offline connections, built on trust and solidarity, strengthen the resilience of online networks. The strategic selection of platforms, such as Facebook for mass mobilization and Twitter for engaging with international audiences, highlights the deliberate and informed choices made by youth activists to maximize their impact while minimizing risk.

Moreover, the use of vernacular languages like Kopala and the practice of code-switching illustrate the importance of local cultural strategies in outsmarting both government surveillance and algorithmic censorship. By switching between languages that are not easily monitored by algorithms, youth activists can communicate sensitive information while evading detection. This creative use of language, coupled with the strategic overuse of flagged words and intentional misspelling of hashtags, further demonstrates their ingenuity in bypassing automated monitoring systems. The use of memes, humor, and hyper-local hashtags also plays a critical role in keeping audiences engaged while avoiding censorship. Zambian youth actively raise awareness of serious social and political issues by embedding political messages within seemingly innocuous or entertaining content, successfully avoiding the direct triggering of content filters. This strategy, humorously referred to

as "The No Dull Moment in Zambia," blends information with entertainment, ensuring that their messages are both accessible and impactful.

Practically, the study provides valuable ideas into the strategies employed by Zambian youth to outsmart censorship and surveillance. These strategies, such as adapting messaging, using burner accounts and APIs, and leveraging the support of the diaspora, can serve as models for activists in similar contexts. Additionally, the study underscores the importance of digital literacy and security training for activists to protect their online activities and mitigate the risks associated with digital surveillance. Based on these findings, several policy recommendations are proposed. These recommendations include: (1) providing digital literacy and security training to activists; (2) supporting grassroots digital activism; (3) developing ethical guidelines for social media influencers; (4) regulating social media platforms; and (5) conducting further research on digital activism and democracy.

Finally, the findings highlight the importance of solidarity within the digital sphere. Through coordinated efforts, peer-to-peer file sharing, and the involvement of influencers and the diaspora, Zambian youth have managed to amplify their voices and sustain their movements despite government crackdowns. The use of VPNs and support from international allies demonstrates the global reach of their activism, allowing them to continue resisting even in the face of internet shutdowns and other digital restrictions.

Acknowledgments

Data availability

Data will be made available on request.

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