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Philippine Identities and Digital Humanities

in the Age of Machines, Social Media, and Artificial Intelligence

Janice Roman-Tamesis and Frances Antoinette C. Cruz

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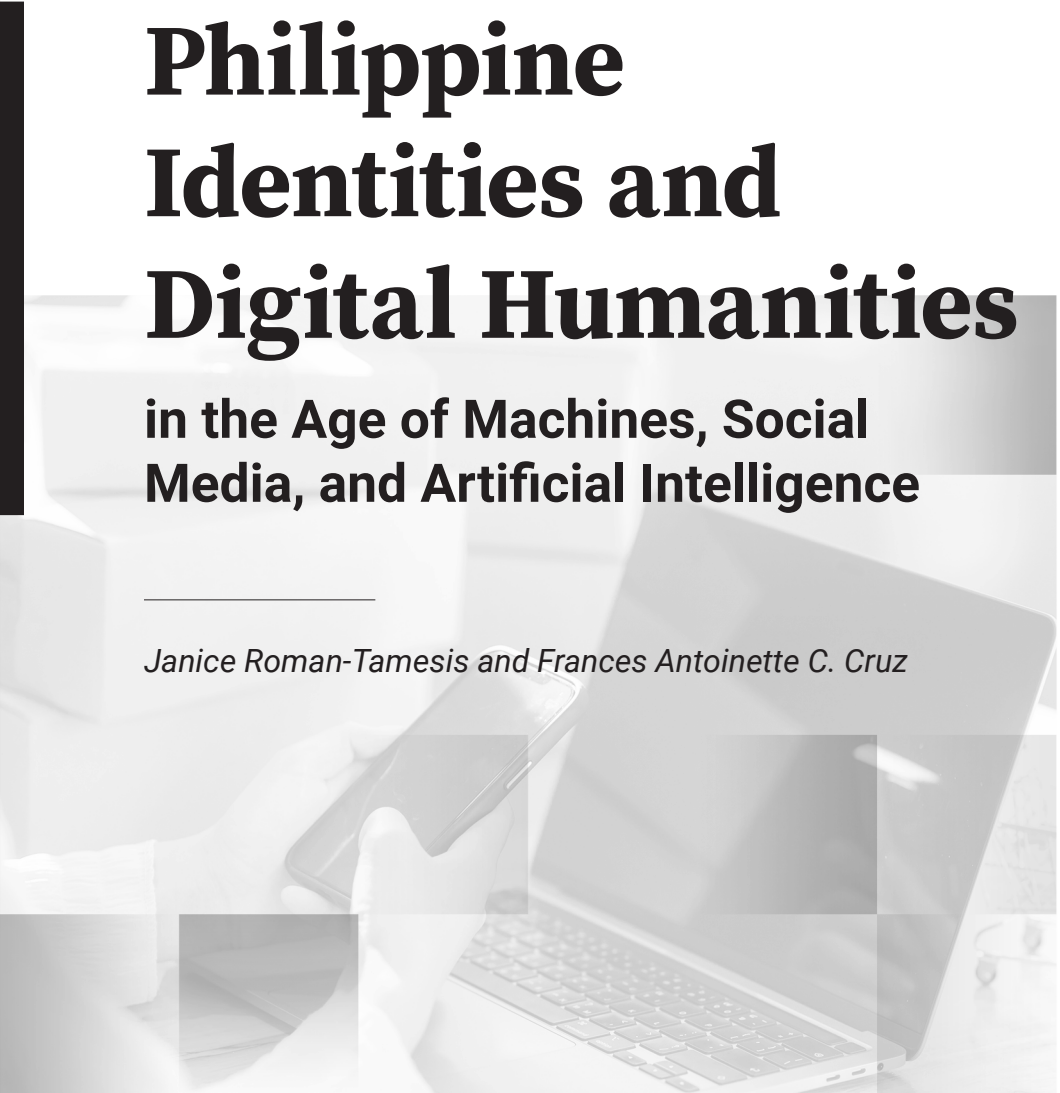Witoon, Adobe Stock, https://stock.adobe.com/images/start-sme-small-business-entrepreneurs-smes-of-freelancers-close-up-shots-of-asian-women-using-smart-phones-and-laptops-with-boxes-online-marketing-and-sme-delivery-ideas/542448213

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Introduction

By adopting digital tools, the digital humanities brings transformative change in humanities research and teaching. This field of study, which combines academic rigor with social impact, utilizes computers for calculations, data management, preservation, and dissemination of research results. It goes beyond text analysis, incorporating multimedia elements like graphics, video, and audio. It enhances our interaction with the humanities through exploring applications that involve modeling and mapping (Jenkins 2023).

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However, Frances Antoinette Cruz (2023), an Assistant Professor at the University of the Philippines Diliman College of Arts and Letters, argues that digital humanities is far from being a purely technological endeavor. This field of study thrives on interdisciplinarity, fostering collaboration between humanities scholars and computer programmers. While this collaboration brings immense value, with each discipline enriching the other, it also presents a challenge. Humanities scholars might envision analyses beyond current technological capabilities, while programmers may grapple with the intricacies of theories from the humanities.

The rise of machine learning and technology is transforming how we engage with our past, present, and future expressions of the human experience. Digitization plays a crucial role in converting texts and even media objects into machine-readable formats, unlocking a treasure trove of possibilities. AI-powered object recognition, topic modeling, and even decolonizing methodologies have become accessible, allowing us to name and organize cultural artifacts with greater sensitivity to diverse perspectives (Cruz 2023).

Bridging the gap between machines and meaning is the true essence of digital humanities. As a space, digital humanities encourages critical reflection, ignites innovative exploration, and challenges traditional research methods. By harnessing the power of technology alongside the depth of humanistic inquiry, we can unlock new ways of understanding and appreciating the human experience. Thus, this paper encapsulates the collective insights derived from the four-day "Identities and Digital Humanities Workshop" by the University of the Philippines Center for Integrative and Decolonial Studies Program (UP CIDS), which took place online on October 2–3 and 12–13, 2023.[3]

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[3] The "Identities and Digital Humanities Workshop" videos are available on YouTube: https://www.youtube.com/playlist?list=PLoCU5QRFUJYel3hvL1X6p5KJG1dngg1OG

Computational Humanities and Philippine Language(s)

Computational Humanities (CH) revolutionizes our understanding of the human experience by applying computational tools to humanities data. While a single, universally accepted definition remains elusive, its interdisciplinarity naturally leads to two broad orientations: digitized humanities and numerical humanities (Piotrowski and Fafinski 2020, 171). Digitized humanities focuses on the practical management of digital archives, facilitating data organization and preservation. In contrast, numerical humanities delves into theoretical modeling, employing mathematical tools to uncover hidden patterns and relationships in humanities data.

Elaborating on this classification, Roth (2019 cited in Piotrowski and Fafinski 2020, 171) underscores the pragmatic management of archives within digitized humanities, juxtaposing it against the theoretical modeling endeavors of numerical humanities. This varied terrain presents significant opportunities for collaboration and mutual influence, propelling the frontiers of CH and enriching our comprehension of human history and contemporary reality through the lens of technology. Cruz (2023) highlights the role of these two orientations in shaping the present and future of CH. As she notes, the evolution of CH can be traced back to its early foundations and period of expansion when digitized and numerical humanities fused into one field of study.

The application of statistics in the social sciences during the 1940s laid the groundwork for computational humanities. This was exemplified by Roberto Busa's collaboration with IBM to index Thomas Aquinas' works (Nyhan et al. 2023, 138–39) and the emergence of stylometry for authorship attribution and textual analysis (Nyhan et al. 2023, 241–42). Nevertheless, challenges like copyright constraints and ethical dilemmas in image analysis underscored the complexity of this developing field. The advent of personal computers in the 1980s revolutionized computational humanities. It empowered researchers to conduct independent analyses and prompted standardization efforts such as electronic text encoding guidelines that enhanced accessibility. This period also witnessed increased collaboration between software experts and humanities scholars through professional associations and research centers, cultivating the field's growth.

Despite the advancements, new challenges emerged in the 1990s, including multimedia integration and data availability issues. Nonetheless, innovative projects like digital recipe books and fashion data mining showed the field's potential. Persistent challenges (such as the requirement for large and diverse datasets for effective topic modeling), legal considerations, and the establishment of interdisciplinary programs in universities underscored the ongoing evolution and integration of computational humanities into academic and cultural landscapes.

Cruz (2023) provides insights into the application and challenges of computational humanities in the Philippines. As she notes, using advanced digital programs and tools like Transkribus can help us better understand and preserve our country's cultural heritage. To elaborate, she cites an intriguing project where Transkribus was used to archive and retrieve historical materials. The application was used to recognize the handwriting of Filipino historical figures like Jose Rizal and other Ilustrados,[4] which are found in various Spanish archives. Likewise, it was used to digitize their handwritten works, particularly those written in Spanish and regional languages. For years, these historic works remained unavailable to the Filipino public because they were in Spain, undigitized and handwritten. Thus, Transkribus becomes crucial in retrieving important Philippine historic materials. Additionally, Cruz (2023) remarked that the project extends to training algorithms to decipher old scripts, presenting a potential avenue for uncovering hidden gems of the Philippines' colonial history and literary heritage. However, as Cruz (2023) also underscores, there is still the need for a substantial dataset and more effective training.

Another illustration by Cruz (2023) centers on lemmatization, a crucial process in computational linguistics. The objective of lemmatization, as defined by Shaukat et al. (2023, 1), is to identify the root of a word from its inflected forms. In the context of Filipino languages like Tagalog, Cebuano, and Ilocano, developing a lemmatizer is significant due to the intricate nature of these languages, which feature various forms of verbs with numerous affixes and prefixes. Unlike English, where verb conjugations follow a more straightforward pattern, Filipino languages require meticulous consideration of affixated verbs. Through lemmatization, terms like

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[4]   *Ilustrados* pertains to the Filipino educated class during the Spanish colonial period.

ipinakain (fed) and *kumain* (ate) are reduced to their fundamental form, *kain* (eat), facilitating the identification of shared underlying meanings.

Challenges in lemmatization, such as disambiguation, where words with the exact spelling may have different meanings, are particularly pertinent in Filipino languages. In Natural Language Processing (NLP), accurately determining the meaning of *tayo* becomes challenging. NLP algorithms need to disambiguate the word based on the surrounding context, as it can represent different meanings and even different parts of speech. Here is an example of disambiguation in Filipino:

> **Meaning 1:** "tayo" as a first-person plural pronoun, meaning "we"
>
> **Example:**   *Pupunta <u>tayo</u> sa palengke mamaya.*
> (We are going to the market later.)
>
> **Meaning 2:** "tayo" as a noun, meaning "bamboo pole"
>
> **Example:**   *Pumili kami ng matibay na <u>tayo</u> para sa bahay namin.*
> (We chose a strong bamboo pole for our house.)

Despite these difficulties, computational NLP continues to process so that it can enhance the precision and effectiveness of lemmatization and disambiguation in linguistic analysis. Lemmatization benefits from various NLP applications, including Information Retrieval, Word Sense Disambiguation, Machine Translation, and Text Reuse Detection (Shaukat et al. 2023, 1–2).

The Philippines boasts a linguistic landscape comprising 175 actively spoken indigenous languages (Villasin-Young 2022). Notably, Filipino holds the status of being an official national language among this linguistic diversity. While the country once hosted two now-extinct indigenous languages (i.e., Dicamay Agta; Villaviciosa Agta) [*See Figure 1*], it currently accommodates nine nonindigenous languages, including English, which also holds official status. In the sphere of formal education, twenty-eight indigenous languages serve as mediums of instruction (Eberhard et al. 2024).
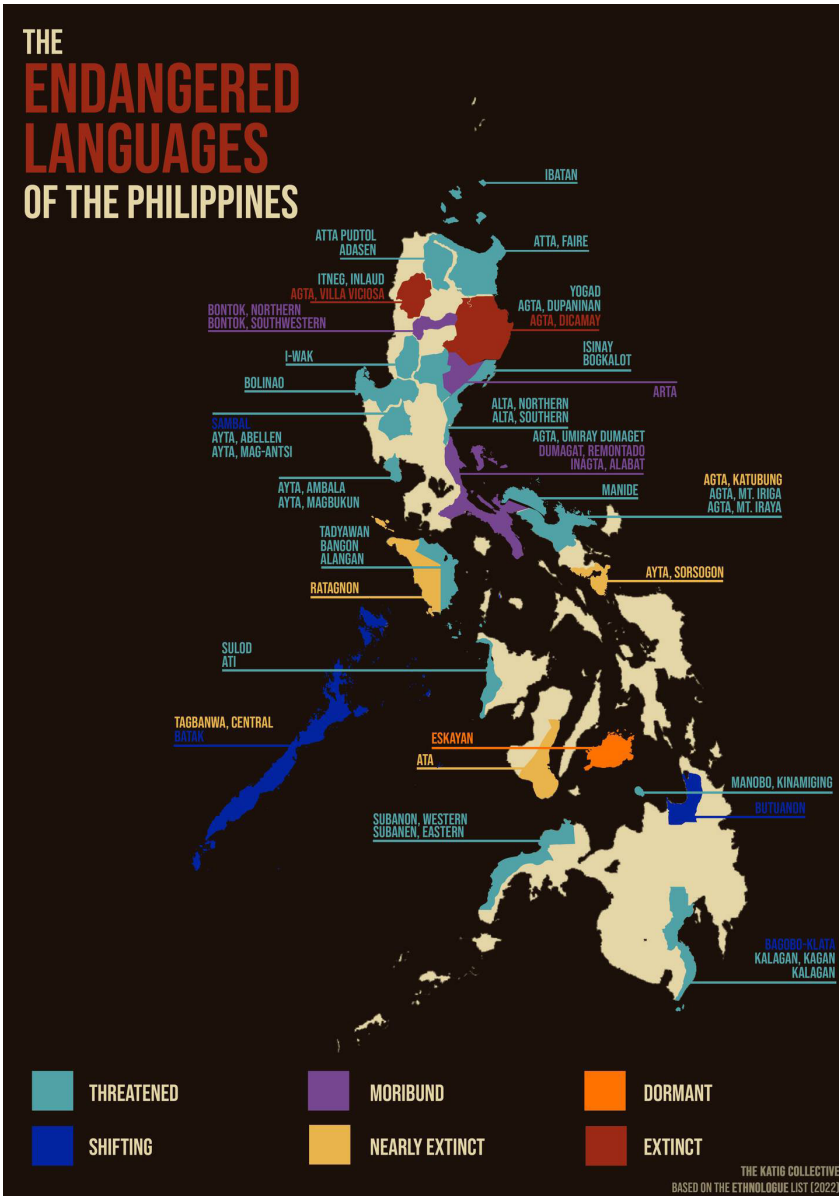
■   **Figure 1.** The Endangered Languages in the Philippines.[5]

However, as Villasin-Young (2022) emphasized, language preservation challenges in the Philippines have intensified, but initiatives are underway. For instance, there are research and documentation efforts by the Komisyon sa Wikang Filipino (KWF), as well as conferences organized by the Pambansang Kongreso sa Nanganganib na Wika (National Congress on Endangered Languages) and the 2022 Philippine Conference on Indigenous Languages.

The Ethnologue's 2022 report, cited in Villasin-Young (2022), reveals that out of the 175 indigenous languages in the Philippines, 35 are endangered, and 11 are on the brink of extinction. As preserving indigenous languages is intertwined with protecting cultural heritage, safeguarding linguistic diversity extends beyond language. The advocacy covers the very essence of a social group's identity—culture. For Villasin-Young (2022), language is, thus, a conduit for transferring knowledge and cultural practices. Its condition reflects the overall well-being of its culture bearers, more so Indigenous Peoples (IPs).

Preserving endangered indigenous languages in the Philippines poses immense challenges. These include diminishing linguistic vitality due to the dominance of nontribal groups, the preference of indigenous communities for national languages over local languages, and the urgent need for innovative methods to promote the continued use of indigenous languages (Lantaya et al. 2021, 59). The language preservation crisis is not only confined to the locals. Globally, approximately 3,000 indigenous languages also face endangerment, indicating a decline in usage (UNESCO IESALC 2022), especially among the younger generation (Villasin-Young 2022). Hence, establishing a robust connection between policy and language preservation is imperative to ensure the survival and transmission of these languages to future generations.

Recognizing the severity of the situation, Villasin-Young (2022) mentioned that The United Nations Educational, Scientific and Cultural Organization (UNESCO) launched the "International Decade of Indigenous Languages (2022–2032)." Accompanied by a Global Action Plan that advocated for collaboration, the document involves multiple stakeholders in addressing the imminent threat to indigenous languages. Protecting these languages is tied to upholding the rights of IPs, who stand among the "vulnerable and marginalized" groups in the country (Villasin-Young 2022) and in other parts of the globe.

Marilyn L. Ngales (2022, as cited in Villasin-Young 2022) stresses that imparting knowledge about indigenous culture promotes cultural heritage literacy. As a member of the Kankana-ey Igorot community, she underscores the importance of understanding IPs comprehensively and fostering sensitivity and empathy towards them. Ngales also mentions that culture-sensitive training and immersing volunteers and teachers in indigenous communities create a safer and more inclusive environment.

Government protection, educational policies, and community engagements are pivotal in language preservation efforts, especially for indigenous peoples. Government initiatives may entail enacting laws to officially recognize and support indigenous languages, allocating funds for language revitalization programs, and launching preservation initiatives (Combs and Nicholas 2012, 101–118). Educational policies can involve integrating indigenous languages into school curricula, offering language classes, and providing teacher training in indigenous languages (Blackledge and Creese 2010 cited in Link 2012, 283–86). Community participation is equally vital, involving community members in organizing language workshops and cultural events and promoting the daily use of indigenous languages within communities (Anderson 2011, 284).

Harnessing technology offers promising avenues for language preservation in the digital age. Online dictionaries, interactive tools, language learning apps, and digital archiving projects enhance accessibility to indigenous languages and promote their usage in the digital landscape (UNESCO 2024). Despite the prevalence of advanced technology, individuals undoubtedly play a paramount role in preserving endangered languages. The conservation of endangered languages not only upholds cultural diversity but also facilitates the intergenerational transmission of human knowledge and intelligence. Moreover, conservation of endangered languages fosters a profound sense of belonging and pride within communities (Crystal 2000).

To bolster language revitalization efforts, individuals can actively incorporate the endangered language into their daily interactions. They can also champion this advocacy by participating in language classes and workshops, documenting oral traditions and stories, and engaging in cultural events that celebrate the language (Grenoble and Whaley 2006). Additionally, individuals can extend their support by advocating for the integration of endangered languages into educational curricula, collaborating with linguists and language experts for

documentation and preservation initiatives, and raising awareness about the significance of preserving endangered languages within and beyond their communities (Hinton and Hale 2001).

Aside from individual and communal participation, legislation also holds an important position in language development and preservation. The 1987 Constitution of the Republic of the Philippines underscores the significance of Filipino and regional languages as mediums of instruction and communication. Apart from this, Republic Act No. 7104, which was enacted in 1991, provides a significant legal framework that gave rise to the Commission on the Filipino Language, now the Komisyon sa Wikang Filipino (KWF). This Republic Act, crafted under the legislation, mandates KWF to conduct, coordinate, and advocate for research that bolsters the development, dissemination, and conservation of Filipino as the national language of the Philippines alongside other Philippine languages. According to Senate Bill No. 2380 of 2010, a similar model can be adapted for other Philippine languages by creating dedicated commissions or programs, fostering research and documentation, and allocating resources for curriculum development, and teacher training. Building on this foundation, policies in various sectors, such as education and media, can prioritize the inclusion and usage of diverse Philippine languages in pursuit of development and preservation efforts.

Currently, existing laws and policies in the Philippines focus on recognizing the importance of Filipino and other regional languages, promoting their use as mediums of instruction and communication, and supporting initiatives for their preservation and development. However, there is minimal legal intervention in language preservation integration into broader government policies, particularly in the fields of research, technology, and education in the age of social media and artificial intelligence (AI). Amidst greater preservation opportunities offered by AI technology, artificial intelligence has posed significant risks in preservation efforts and documentation of endangered languages globally. This is due to its ability to simulate and potentially dilute the authenticity of linguistic and cultural expressions. The use of AI in language preservation brings forth challenges that necessitate careful consideration.

One significant concern is the potential overreliance on virtual digital assistants and AI-driven tools. This may inadvertently erode the nuanced and context-specific aspects of critically endangered languages. The automated nature of

AI processes might prioritize efficiency over the intricate cultural meanings embedded in language. This potentially results in a loss of the richness and diversity inherent in these linguistic traditions (Haokip 2022, 1–4). Moreover, the development of synthetic voices and language models by AI could inadvertently contribute to a homogenized representation of endangered languages and perpetrate deception. Native speakers can convey subtle nuances, emotions, and cultural contexts through language use—a complexity that may prove too challenging for AI to replicate faithfully to date. Consequently, there is a risk of perpetuating stereotypes or distorting the authentic essence of these languages when artificial intelligence is used exclusively (Noah et al. 2021, 1452).

In an article published by The Japan Times, Chandran (2023) delved into the perspectives of indigenous technology and culture experts regarding the implications of speech recognition tools such as Whisper, developed by the American tech company OpenAI. Whisper can transcribe and translate audio into English across numerous languages, including the indigenous Maori language of New Zealand. The discourse emphasizes the centrality of ethical considerations on data privacy, informed consent, plagiarism, and ethical sourcing of data. It also addresses the specter of cultural appropriation inherent in collecting linguistic data for AI applications. Amidst the quest to leverage AI for language preservation, a critical concern emerges—the potential misuse and/or mishandling of sensitive information. This raises concerns about safeguarding indigenous knowledge and cultural heritage, which is of particular importance for indigenous communities with a history of their culture being stolen and appropriated.

In exploring the decline of the Chavacano language in Zamboanga City, Philippines, Pantaleta (2023) highlights the complex cultural dynamics driving this phenomenon. Factors such as urbanization, migration, and the influx of Bisaya speakers converge to imperil the integrity of Chavacano. Anecdotal evidence of locals grappling with linguistic maintenance amidst demographic shifts underscores the pressing need for scalable language preservation endeavors like the "Cambio Chavacano: A Diachronic Linguistics Project." This initiative seeks to probe Chavacano's current state and resilience in the face of cultural and linguistic diversity.

Pantaleta (2023) also underscores the pivotal role of dictionaries as authoritative linguistic records. However, she critiques institutional responses

to Chavacano's decline, citing a scarcity of comprehensive studies on language ideologies and the motivations behind recent dictionary creation efforts. Notably, she traces the uptick in dictionary production in Zamboanga City to the tenure of former Mayor Maria Isabelle Climaco-Salazar, aligning with the Mother Tongue-Based Multilingual Education (MTB-MLE) initiative during former President Benigno "Noynoy" Aquino III's term. The submission of a Chavacano orthography to the Komisyon sa Wikang Filipino signifies a significant step toward formalizing language preservation efforts, spotlighting the indispensable role of local governance.

Furthermore, Pantaleta (2023) emphasizes the digital humanities role in Chavacano preservation and analysis. She advocates for diachronic linguistic methodologies to track the evolution of Chavacano vocabulary through historical dictionary editions. This entails mapping frequent words, creating frequency maps, identifying vocabulary outliers, considering location intelligence data via GapMaps, and constructing timelines of word usage. Additionally, she suggests cross-referencing with other linguistic corpora, exploring semantic mapping and etymology, comparing Chavacano with Tausug dictionaries, and digitizing La Antorcha, a Chavacano newspaper that operated in Zamboanga City, Philippines from the 1930s. This interdisciplinary approach, as Pantaleta contends, provides a replicable framework for informing policy discussions and recommendations on language preservation and promotion nationwide.

Digital Adoption, Digital Divide, and Technological Disparities in the Philippines

The availability of AI technologies may not be consistent across all communities, contributing to what is referred to as "the divide [between] the digital and nondigital populations" (Catriona Wallace as cited in Pew Research Center 2023, 49). Wallace emphasizes that "those who are connected and most savvy about new digital opportunities live at a disadvantage, widening the divide between the 'haves' and the 'have nots.'" This discrepancy can lead to inequalities in the capacity of various groups to effectively utilize AI and digital tools. It may also potentially exacerbate the existing digital divide and impede collaborative and inclusive language revitalization initiatives.

According to Ragnedda and Gladkova (2020, 18–20), the "digital divide in the Global South" is multilayered, manifesting in three levels with several distinct characteristics:

- **First Level**

  The "initial stage [level] of the digital divide" is characterized by disparities in accessing the internet, primarily on issues like "access to information and communication technology" (ICT). However, this level does not extensively explore the potential impact of technological imbalances on social inequalities.

- **Second Level**

  The second level of the digital divide explains the utilization or nonutilization of technologies even when access is available. Various factors include sociodemographic variables such as age, gender, and ethnicity; socioeconomic indicators like income and educational attainment; as well as the "lack of motivation or need to use the technologies" available.

- **Third Level**

  The third level of the digital divide is concerned with the "relation between the use of digital technologies and the benefits," often referred to as "'tangible outcomes'" that individuals benefit from. This level of the digital divide pertains to unequal abilities to access and engage with ICTs for attaining tangible and measurable outcomes. Ideally, this level also concentrates on observable external benefits derived from ICT use, such as improved employment opportunities, higher income, and the formation of new social connections.

As a Global South nation, the digital divide in the Philippines presents a complex and multifaceted obstacle to its development. While the initial focus was on simply gaining access to technology (first level), it has become clear that even with this access, a significant gap remains. Factors like income, education, and location hinder individuals from maximizing available technology (second level). This lack of utilization then translates into missed opportunities, forming a third-level divide, where those unable to effectively leverage technology fall behind in areas like education, employment, income, and social connections.

This further marginalizes already vulnerable populations and hinders the ability of the Philippines to compete in the digital global landscape.

With this premise, this paper contributes to the discussion of the digital divide in the Philippines by analyzing four key aspects: (1) the nation's state of digital adoption; (2) existing laws and policies for digital security; (3) the integration of digital tools across various sectors; and (4) the disparities in technology use among different industries. This comprehensive examination is especially timely considering the emergence of new technologies like AI. To enhance clarity and organization, the paper employs a thematic structure for its case studies, allowing for a cohesive and orderly reading experience.

Grasping "Liquid Texts": The Challenges of Working with Social Media

The notion of "liquid text" aptly describes the ever-shifting and dynamic nature of social media content or social media text. It presents research opportunities while simultaneously exposing gaps in legal frameworks. While social media itself is not new, the fluidity and complexity of text within these platforms, particularly prevalent in the Philippines with its massive user base, challenge us to define ethical data collection and grapple with how existing laws apply to this evolving landscape (Cruz 2023).

Cruz (2023) draws inspiration from Zygmunt Bauman's concept of liquid modernity to emphasize how social media text, like the broader internet and multimedia landscape, is a "liquid text" in several ways. Firstly, it is constantly evolving and shifting. We are no longer just dealing with written words on social media. A complex interplay of images, audio, memes, and other formats demands broader multiliteracies, such as visual literacy, digital literacy, sound literacy, and internet literacy, among others. These skills extend beyond traditional reading comprehension. This multimodality also raises crucial questions about information validity and critical evaluation, particularly in a world where virality and speaker charisma can trump historical accuracy.

Secondly, social media reflects Bauman's notion of a "fluid, flexible" modernity where individual agency is paramount (Elliott 2007, 124). Traditional societal structures are becoming less rigid, with individuals playing a more active role in shaping their lives and influencing the world (Bordoni 2016, 281). This

decentralization also extends to authorship. Gone are the days of the singular, authoritative author. Today, anonymous voices can rise to prominence, blurring the lines between sender, receiver, producer, and consumer. This disrupts established communication models and demands new ways of thinking about authorship and its implications.

Statista (2023) reports that the Philippines is often referred to as the global hub of social media, attributed to its remarkably high daily usage time, which averages around three hours per day. On a monthly basis, Filipino internet users predominantly engage with leading platforms such as Facebook, TikTok, and Instagram. Filipinos are also recognized for their early adoption of technology and their adeptness in navigating the internet. Projected figures indicate that by 2029, more than 95 million Filipinos are expected to be active on social networks. This statistic becomes particularly significant when considering the anticipated total population of approximately 119 million, underscoring the pivotal role of social media within the Filipino internet user community (Statista 2023). Hence, as Cruz (2023) reiterates, the liquid text discussion demands our attention, urging us to bridge the gap between technological advancement and legal understanding.

Prior to the widespread adoption of social media during the COVID-19 pandemic, remote work and study became commonplace to mitigate the spread of the virus. Statistics from Common Sense Media (2016) revealed that even at the age of twelve, some individuals had already created social media accounts. Notably, eighty percent of teenagers aged thirteen to eighteen possessed their own social media profiles, compared to only twenty-three percent of tweens aged eight to twelve. Despite many social media platforms enforcing strict regulations and requiring parental consent for account creation, vulnerabilities persist. This leaves juveniles susceptible to various cybercrimes such as cyberbullying and impersonation (Manahan 2022).

In response to these concerns, Laguna Representative Dan Fernandez introduced House Bill No. 543, or the Social Media Regulation and Protection Act, with the aim of implementing comprehensive measures for social media platforms (Manahan 2022). This bill underscores a commitment to safeguarding social media users. It proposes essential changes to enhance safety and well-being, including refining age requirement policies, imposing usage limitations, and ensuring strict parental consent. Key provisions of the bill, as listed in Manahan's

2022 report, include restricting social media access for account holders aged thirteen and below, limiting daily screen time to thirty minutes, and prohibiting social media companies from collecting personal information without parental consent. Moreover, the bill mandates that information regarding users aged thirteen to seventeen cannot be obtained without their explicit consent. Additionally, social media companies would be required to track user activity and time spent on their platforms, with automatic daily time limitations set at thirty minutes, although users could adjust these limits weekly. The bill also calls for a pertinent study by the Department of Health on the effects of technology and irresponsible social media usage, focusing in particular on how to address the risks of addiction and psychological issues (Manahan 2022).

House Bill No. 543 attempts to establish regulations and structure in the digital space, seeking to address regulatory gaps and promote responsible digital behavior on social media. The acknowledgment that social media is dynamic and fluid reflects Bauman's idea that in the era of "liquid modernity," structures and regulations may struggle to keep up with the rapid changes in society. The very nature of social media, being dynamic and constantly evolving, presents challenges for regulation. Bauman's concept of liquid modernity highlights the tension among attempts to establish fixed structures in a rapidly changing environment. It suggests that regulatory efforts may face continuous adaptation and modification to effectively navigate the fluid nature of digital platforms and the challenges associated with online engagement.

Understanding social media as liquid text is therefore crucial. It compels us to develop new critical literacies and adaptive regulatory frameworks, grapple with the shifting landscape of authority and authorship, and recognize the challenges of information validity in a world of dynamic, multimodal content. This is a global phenomenon that requires attention not just in specific regions like Southeast Asia, including the Philippines, but also worldwide as we navigate this increasingly fluid and interconnected digital terrain (Cruz 2023).

Social media, considered as an archive, raises concerns about individual rights, such as "the right to be forgotten," meaning the right for personal data to be erased. Even when willingly given, do private entities have the right to store personal data? How do we control and make our digital footprint untraceable? Dystopian scenarios, like AI-generated celebrity advertisements without consent, highlight the need for stricter data storage and user awareness. Global corporations often

profit from our online lives, leaving us to navigate a delicate balance between research and justification. All the while we question who truly has the right to control our digital identities in this ever-shifting landscape (Cruz 2023).

The right to be forgotten offers some recourse and raises questions about the lingering presence of corporations profiting from personal data. Michal Kosinski's Theory of Mind (ToM) warns of data's potential for monetization. The theory urges us to practice responsible data storage and be mindful of our online behavior, as the "human ability to impute unobservable mental states to others might have spontaneously emerged in large language models (LLMs)," like the models that power OpenAI and ChatGPT (Kosinski 2023).

In a deepfake video that circulated on platforms like YouTube and TikTok, Arnold Schwarzenegger was seen singing a rendition of The Little Mermaid song on a rock. Deepfakes like this showcase the unsettling possibilities of AI manipulation and raise concerns about accountability for these powerful corporations. Caught between research needs and ethical dilemmas, we face a complex landscape where privacy rights clash with corporate profit. This demands critical engagement and a reevaluation of our relationship with digital data. The issue of corporate accountability looms large, casting a long shadow over the vast amounts of personal data collected by global giants like Facebook and Twitter, now X. Unlike portraits in museums, our digital footprints are difficult to reclaim, leaving us vulnerable to exploitation and manipulation. This vulnerability is further amplified by the rise of digital doppelgangers, AI-generated copies of our likenesses and voices, as chillingly depicted in the Netflix dystopian series Black Mirror. This Black Mirror scenario is not just fiction. The Cambridge Analytica scandal is a stark reminder of how seemingly innocuous actions like taking personality quizzes or clicking on links can be exploited. Companies harvest massive datasets, enabling them to predict and influence behavior with unsettling accuracy. This microtargeting extends beyond elections. It influences what appears on your screen through algorithms that infer your desires based on your digital interactions, including those you have not explicitly expressed (Cruz 2023).

For researchers exploring the dynamic landscape of social media data, tools like Facebook's Graph API provide a window into online discourse. However, this access is accompanied by a significant challenge—the unpredictable nature of decisions made by the platform provider (i.e., platform policies, access

restrictions, API updates, data alterations or data availability, etc.). FacePager, a tool or application used for downloading data from social media like Facebook, YouTube, and X, seems like a promising solution with its capability to target specific data sets and timeframes. Yet, its viability depends entirely on social media's goodwill, creating a precarious situation for serious research endeavors. The looming possibility of a sudden shutdown, triggered by an arbitrary assessment of excessive data gathering, poses a substantial risk, potentially undermining months or even years of meticulous work (Cruz 2023).

The reliance on mining data from the same social media platforms that propagate deepfakes underscores the inherent instability of liquid data. In contrast to carefully curated archives with established access protocols, the digital expanse of social media is subject to the ever-changing currents of corporate interests and algorithms. Researchers find themselves as unwitting surfers, traversing a difficult terrain where the ground beneath them can vanish unexpectedly. Despite the undeniable convenience offered by tools like FacePager, a cautious approach is necessary due to its limitations. Researchers and general users must carefully assess the potential benefits against the inherent risks associated with platforms governed by opaque regulations and unpredictable agenda. A potential solution may be diversifying data sources and establishing robust backup systems. It also involves fostering a collaborative community of researchers and users capable of sharing knowledge and collectively navigating the ever-shifting currents of liquid data (Cruz 2023).

In a study titled "Multilinguals Write Back: Modeling Language, Politics and Identity in Philippine Social Media,"[6] Frances Antoinette Cruz and Mike Kestemont (2022) employed a triangulation approach on three distinct data sources to identify specific model identities in the Philippine social media landscape. The word count statistics from the study revealed a comprehensive scope, with 2.7 million words extracted from government speeches, 5.8 million from various newspapers, and a substantial 7.6 million from social media. The extracted data, exemplified by comma-separated values (CSV) generated from

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[6]   Cruz, Frances Antoinette, & Kestemont, Mike. "Multilinguals Write Back: Modeling Language, Politics and Identity in Philippine Social Media" [Conferece Presentation]. *Digital Humanities 2022*: *Responding to Asian Diversity,* Tokyo, Japan and Fully Online (Zoom), July 25–29, 2022. https://dh-abstracts.library.virginia.edu/works/11988

FacePager, highlights the challenges researchers face. Among these challenges is the deprecation of specific features in the Application Programming Interface (API), leading to potential data loss or disruption in the dataset's integrity. This emphasizes the hierarchical level of entries, indicating the architecture of posts, comments, and replies on Facebook.

Overcoming these challenges involves a series of data processing steps, including the use of Python for tasks like column selection, deletion of unnecessary information, handling duplicates, and merging of monthly collected files. Programming skills are essential in managing large datasets efficiently, as manual extraction would be impractical. Additionally, constructing a language identifier becomes essential due to nonstandard language usage and code-switching on social media. This classifier aids in distinguishing among languages like English, Tagalog, Filipino, Taglish (Tagalog-English), Cebuano, Bisaya, Bislish (Bisaya-English), and Bislog (Bisaya-Tagalog), among others. The subsequent word count analysis and the expansion of identifiers using FastText contribute to a more comprehensive understanding of the corpus. While technicalities like storing datasets with digital object identifiers (DOIs) and ethical clearances are mentioned, the intricacies of these processes offer valuable insights into the multifaceted nature of conducting research in the realm of liquid text (Cruz 2023).

In examining the structural dynamics of social media platforms, mainly focusing on Facebook, it becomes apparent that these platforms thrive on user engagement and disclosure.[7] The fine line between news dissemination and consumption is blurred on social media, as influencers and individual users contribute to diverse responses, ranging from insightful commentary to rude or nonsensical reactions. The subjectivity of newspaper captions has increased, with news outlets adopting a more informal approach to social media. Ethical considerations, especially in the context of the General Data Protection Regulation (GDPR), dictate the limitations on gathering protected data without proper consent. The individual responsibility for online actions is highlighted through an anecdote about a Cambridge Analytica whistleblower, prompting contemplation on user agency in the digital space (Boldyreva et al. 2018, 91-99). Methodologically, archiving social media data presents challenges due

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[7]   Marichal, José. 2012. *Facebook Democracy: The Architecture of Disclosure and the Threat to Public Life*. (1st ed.). London: Routledge. https://doi.org/10.4324/9781315581798

to the fluidity of texts, potential post deletions or edits, and the volatility of Graph API. Transparent documentation of data collection practices and ethical considerations are crucial. In studying social media, researchers must navigate a landscape marked by evolving methodologies, ethical considerations, and the multifaceted nature of online communication. These methodologies are not limited to multilingual data analysis, word embedding, collocation, topic modeling, sentiment analysis, and emotion classification.

Rapanot (2023) brings up the project called "Digital Public Pulse: 2022 Philippine General Elections" by Bunquin et al. (2022) to pivot towards the practical aspects of extracting social media data through scraping. Bunquin et al.'s (2022) study revealed how political candidates strategically infiltrate nonpolitical pages to spread their message. This sparks the question of accessibility and tools for researchers and general users.

In lieu of this, Cruz (2023) outlines the opportunities and challenges of using digital data scraping tools. She stresses that free scraping tools like FacePager and GitHub repositories offer tempting options but come with drawbacks:

■ Limited functionality.

While suitable for individuals or small groups, free scraping tools like FacePager and GitHub repositories pose a limit to corporations and research centers as some research projects often require more robust tools with advanced capabilities. This can hinder the scalability and effectiveness of data collection efforts on a larger scale.

■ Ethical considerations.

Using free scraping tools raises ethical concerns, particularly regarding archiving, and may lack the accountability associated with official tools. Individual researchers may face less scrutiny. However, the lack of ethical standards and accountability in archiving practices can lead to potential misuse of data. This can undermine the trustworthiness of the research and its ethical standing.

■ **Technical barriers.**

Many scraping tools require programming knowledge, creating a barrier for individuals unfamiliar with programming languages like Python. This technical barrier limits the accessibility of scraping tools, resulting in a less diverse pool of researchers and possibly hindering the democratization of data-driven research.

■ **Dependence on third-party providers.**

Reliance on scraping services introduces the risk of sudden data cutoffs if permission agreements with third-party providers falter. Depending on external services, data scraping increases vulnerability—as any disruptions or changes in permission agreements can lead to abrupt data cutoffs. This highlights the importance of establishing stable and reliable data sources.

■ **Data compatibility issues.**

Different scraping tools may produce incompatible output formats, requiring additional processing and funding for compatibility. Incompatibility issues can lead to additional time and financial resources being allocated to process and integrate data from various tools. This can increase the overall cost of research projects and complicate data analysis and interpretation.

Cruz (2023) acknowledges the need for a comprehensive list of accessible scraping tools, ideally with clear guidance on technical requirements and ethical considerations. The instability of data access, the first level of the digital divide, particularly with private Facebook groups, further highlights the challenges of relying on scraping methods.

In the Philippines, there is a pressing demand for accessible and ethically sound scraping tools to address the challenges posed by the first-level digital divide. This digital gap, prominently marked by unequal internet access stemming from economic disparities, presents hurdles for individuals seeking active participation in or access to exclusive online communities. Furthermore, varying levels of digital literacy exacerbate this gap, further impeding data collection efforts and yielding incomplete datasets for scraping initiatives.

Scraping data from private groups on social media platforms like Facebook faces numerous obstacles. These include data instability due to factors like user engagement, device inconsistencies, and geographical differences in internet connectivity, especially in rural or underdeveloped regions. Moreover, concerns surrounding security and privacy, influenced by differing levels of digital literacy, pose additional barriers to data collection. These concerns may result in sporadic engagement and a reluctance to share information.

Given these challenges, there is a critical need for user-friendly scraping tools that employ terminology understandability to general users and are ethically designed with transparent guidelines. Such tools must also acknowledge the complexities of the digital landscape to ensure reliable and responsible data-gathering practices.

Social Media #Hashtags: Towards a Transnational Understanding of Body Image

Hashtags have become a powerful tool for digital activism, enabling individuals to raise awareness, rally support, and build online communities around social and political issues (Dobrin 2020). These symbols, preceded by the Hashtag (#) symbol, connect users discussing similar topics, fostering communities of activists and supporters. Movements like #FreePalestine, #RefugeesWelcome, #JeSuisCharlie, #BlackLivesMatter, and #MeToo exemplify this. These examples show how hashtags empower activists to organize protests, share information, and hold individuals and institutions accountable (Dobrin 2020). However, unlocking their full potential requires a specific level of digital literacy.

Maximizing a hashtag's reach necessitates an understanding of platform algorithms. By knowing how platforms like X or Instagram prioritize and recommend content, users can craft compelling messages and strategically use trending hashtags to increase visibility (Marwick and boyd 2011, 139–56). This type of digital literacy also empowers individuals to critically evaluate information associated with hashtags. While digital ecosystems have enabled global information flow, including the use of hashtags to advance specific causes, they are also susceptible to manipulation (European Parliament, Directorate-General for Parliamentary Research Services et al. 2019).

Distinguishing credible sources from misinformation and propaganda is crucial to avoiding the amplification of harmful content or inadvertently contributing to "slacktivism," where online engagement replaces meaningful action (Chou et al. 2020, 2). Finally, digital literacy fosters responsible participation in online activism, encompassing online etiquette, respectful dialogue, and consideration of the potential consequences of online actions (Mangkhang and Kaewpanya 2021, 89–93) [*See Figure 2*]. Therefore, digital literacy is indispensable in harnessing the full potential of hashtags as tools for digital activism. It ensures that activists explore the online landscape effectively and responsibly while maximizing their impact on social and political discourse.
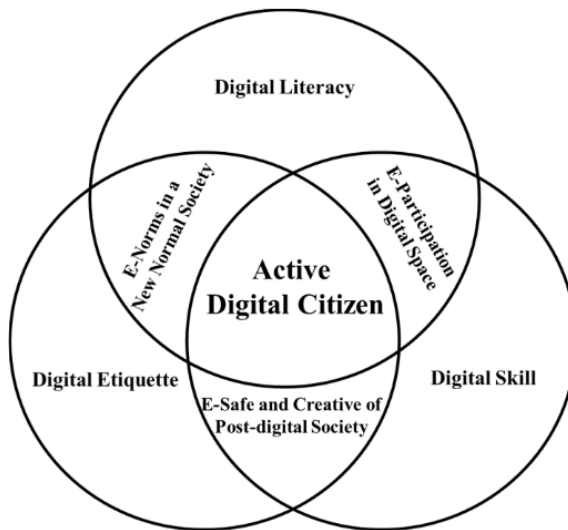
■ **Figure 2.** Features of Active Digital Citizen in New Normal Society. Adapted from Mangkhang and Kaewpanya 2021.

Focusing on hashtags in the virtual stage as a window into body image, Ballesteros (2023) emphasizes the need for a deeper understanding of body image issues, attitudes, and knowledge around larger body types and eating disorders. Ballesteros (2023) delves into the analysis of written content, specifically focusing on hashtags used on platforms like Instagram and X. Popular hashtags such as #BodyPositivity, #BodyPositive, #PlusSize, and #EffYourBeautyStandards offer valuable insights. By analyzing the co-location (the frequent association of specific hashtags) and trends within these hashtags, Ballesteros (2023) aims to map the broader global conversation surrounding body image.

Ballesteros (2023) introduces a comprehensive three-phase methodology encompassing data collection and cleaning, frequency mapping, and thematic analysis. Her research questions focus on the evolutionary trajectory of concepts, ideas, and hashtags over time, coupled with a comprehensive examination of geographic distributions at the nation-state level. Ballesteros (2023) candidly acknowledges caveats related to language-based hashtags and assumptions concerning shifts in conversations among nation-states over time. She contemplates alternative data organization by considering variables such as sex, sexual orientation, or age within identity markers.

Ballesteros (2023) also explores various approaches in terms of temporal framing, considering the past alongside significant events like the pandemic and post-pandemic periods. Moreover, Ballesteros (2023) delves into the pivotal markers and milestones within the body positivity community's discourse during this process. One recent milestone was Dove's campaign, #RealBeauty. Central to this campaign was the message that beauty transcends conventional standards, embracing diverse body types, including larger or racially diverse bodies. The influence of brands like Dove underscores their significant role in shaping and amplifying these conversations. Additionally, Ballesteros (2023) finds it crucial to acknowledge the contributions of actors and public figures to this discourse, as their voices add depth and resonance to the ongoing dialogue surrounding body positivity.

While their study is still in its early stages, Ballesteros (2023) provides a detailed enumeration of the tools they plan to employ in their study, including Excel for initial data organization, Jaffe for mapping co-locations, AntConc for identifying keywords, Apify and Instagram (IG) Scraper for data collection, and Voyant for in-depth content analysis. These tools will be used to efficiently gather, analyze, and visualize the data, providing insights into the evolution and trends of the body positivity conversation and other social issues that engage public discourse.

Hashtags play a crucial role in amplifying social and political issues by facilitating collective action and raising awareness. They act as rallying points, connect passionate individuals with similar advocacies, and foster online communities. Movements like #BlackLivesMatter and #MeToo are prime examples, demonstrating how hashtags empower people to organize, share information, and hold institutions accountable.

Maximizing the impact of these hashtags requires digital literacy. Digital literacy empowers people to engage in online activism responsibly and effectively. It equips them with the critical thinking tools necessary to navigate the complexities of online platforms and information. Necessary digital literacy skills include:

- **Understanding Platform Algorithms.**

  Knowing how platforms prioritize content allows users to maximize their reach by strategically using trending hashtags and crafting compelling messages.

- **Evaluating Information Critically.**

  Digital ecosystems are susceptible to manipulation. Distinguishing credible sources from misinformation is crucial as it helps avoid amplifying harmful content or engaging in "slacktivism."

- **Practicing Responsible Online Behavior.**

  Digital literacy fosters responsible participation, encompassing online etiquette, respectful dialogue, and considering the potential consequences of online actions.

The Intersection of Digital Humanities and Communication Research

The intersection of digital humanities and communication research offers exciting possibilities for exploring and understanding the impact of the Internet on various societal issues. This convergence allows researchers to leverage rich online data, especially social media platforms, to investigate pressing societal challenges in new and innovative ways.

With its vast user base and constant content generation, social media has emerged as a valuable resource for data mining and gathering in research. Researchers can gain valuable insights into public opinion, social movements, and cultural trends by analyzing the vast amount of texts, images, and videos shared on these platforms (boyd and Crawford 2012, 662–75). For instance, studying the use of specific hashtags regarding social justice issues can reveal

public sentiment and track the evolution of discussions over time. Additionally, analyzing the language used in online communities can inform researchers about emerging cultural narratives and societal anxieties (Vessey 2015).

It is crucial to acknowledge the ethical considerations inherent in using social media data for research. Researchers must ensure they adhere to data privacy regulations and user agreements when collecting (or data scraping) and analyzing online content. Additionally, they must be mindful of the potential biases embedded in social media data, as these platforms often reflect specific demographics and perspectives (boyd and Crawford 2012, 665–71).

Drawing on *Plaridel Journal of Communication, Media and Society*[8] (Plaridel) as an example of a reference for data-scrapping research, Rapanot (2023) demonstrates how network analysis and corpus linguistics shed light on research trends, author networks, and institutional influences. Notably, in communication research, there appears to be a predominantly US-centric network of scholars, underscoring the enduring Western influence in developing communication theory. Meanwhile, the presence of Asian scholars hints at a diversifying landscape within communication research (Rapanot 2023).

Furthermore, the examination of Rapanot (2023) spotlights the challenges and considerations inherent in the intersection of digital humanities and communication research. Institutional and structural biases, such as publication standards and peer-review processes, may inadvertently favor certain institutions and research styles, potentially skewing network analyses. Moreover, the linguistic and cultural diversity prevalent in journals like Plaridel, where Filipino is utilized, underscores the need for meticulous scrutiny of language-based biases during analysis. Additionally, political and economic factors, like

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[8] *Plaridel Journal of Communication, Media and Society*, commonly referred to as "Plaridel," was first published in 2004 as a national journal of communication and has since been released on a regular bi-annual basis, published every June and December. It has since evolved with a more inclusive regional focus and has recently begun publishing papers from other Asian countries. Papers published in Plaridel include original research in different areas of media and communication studies in the Philippines and Asia. These can be qualitative or quantitative work in media effects, industry, political economy, subcultural practices, and journalism studies, among others. Access the journal through this link: https://www.plarideljournal.org/

the limited indexing of local scholarship in databases such as the Web of Science, hinder the visibility of non-Western research among global networks.

By examining networks, corpus data, and author affiliations, researchers can delve deeper into understanding trends in research topics and methodologies within specific communities, the influence of institutions and scholars on knowledge production, as well as the role of language, culture, and politics in shaping research landscapes. As Rapanot (2023) suggests, future research on communication studies and other fields of study could expand its scope to include a broader range of journals and languages. It could also integrate qualitative methods to explore the lived experiences of researchers across diverse institutional contexts. Likewise, it could develop tools and methodologies that address biases and inequalities inherent in scholarly networks. This expansion is crucial to address the ongoing debate within the humanities regarding the role of quantitative and qualitative research methods.

Proponents of quantitative methods, often associated with positivist epistemology, emphasize the importance of numerical data in attaining objectivity and generalizability in research findings (Bryman 2016). This approach prioritizes statistically significant associations and measurements to test hypotheses and build broader theories. However, critics argue that this method can overlook the complexities and subjective experiences that are often central to inquiries within the humanities (Denzin and Lincoln 1998).

Conversely, advocates for qualitative methods highlight their ability to capture rich and detailed data through interviews, observations, and textual analysis. This approach prioritizes understanding the lived experiences of individuals and their diverse perspectives within specific contexts (Denzin and Lincoln 1998). However, critics argue that qualitative research can be subjective and can lack generalizability, making it challenging to establish transparent causal relationships (Bryman 2016).

The notion that quantitative data can upend the need for qualitative research is an oversimplification. Both methods have their strengths and weaknesses and are not mutually exclusive. In fact, a mixed-methods approach, utilizing both quantitative and qualitative data collection and analysis, can offer a more comprehensive understanding of complex phenomena (Bryman 2016). This cyclical research process can involve generating hypotheses through qualitative

exploration and then testing those hypotheses through quantitative analysis, ultimately enriching the overall research findings (Teddlie and Tashakkori 2009).

Mixed methods research offers a powerful approach to studying the role of communication in achieving Sustainable Development Goals (SDGs) in the Philippines. One example of this approach involves quantitative content analysis. Researchers can analyze media coverage or social media posts related to SDGs to quantify the extent of communication efforts within the country. Qualitative interviews or focus group discussions (FGDs) can then complement this quantitative data. By engaging with key stakeholders, researchers can gain deeper insights into how different communication strategies are perceived and implemented in the context of SDGs in the Philippines. This combination of quantitative and qualitative data allows for a richer understanding of the issue.

Furthermore, various communication research methods, as outlined by Talusan (2023, 356–60), can be employed to delve deeper into specific aspects of SDG communication:

- **Content analysis** of materials produced by companies promoting specific SDGs can reveal their communication strategies and messaging.

- **Textual analysis** of media content related to SDGs can uncover the framing and representation of these goals in the public sphere.

- **Survey reception analysis** of documentaries addressing SDGs can assess audience engagement and understanding.

- **Experiments** can measure potential shifts in attitudes towards SDGs through targeted communication campaigns.

- **Qualitative reception analysis** helps researchers understand audience perspectives and how communication resonates with them.

- **Autoethnography** allows researchers to explore their own experiences engaging with marginalized groups in the context of specific SDGs, offering valuable insights into their communication needs.

■   **Virtual ethnography** can explore how social media interactions shape communication and understanding of SDGs.

■   **Case studies** of international cooperation efforts related to SDGs can shed light on communication challenges and successes in collaborative efforts.

This multifaceted approach, employing various methodologies, equips researchers with an in-depth understanding of how communication influences the perception, understanding, and promotion of SDGs in the Philippines. This knowledge then informs the development of more effective communication strategies and policies, ultimately driving progress toward achieving these vital goals.

Digital Politics and E-Government Research in the Philippines

Research on E-Government in the Philippines has transitioned from benchmarking against international standards to promoting citizen engagement through digital inclusion (Iglesias 2010; Lallana and Soriano 2008). This shift reflects a growing emphasis on transparency, accountability, and citizen participation (Bannister and Leahy as cited in Magno 2018, 161–62; Capili 2015). The establishment of the Department of Information and Communications Technology (DICT) in 2016 further solidified the government's commitment to e-government initiatives (Commission on Information and Communications Technology 2011; Magno 2018, 153).

A key driver of this change is the rise of e-participation initiatives. Programs like the National Government Portal empower citizens with online tools to access government information, participate in policy consultations, and collaborate on public services. This fosters transparency, accountability, and citizen involvement in governance. By bridging the gap between the government and the public, e-participation leads to more informed decision-making, increased trust in institutions, and a stronger voice for citizens (Magno 2018, 161–62). Ultimately, these initiatives contribute to a more participatory and inclusive democracy.

Furthermore, the passage of a robust Freedom of Information (FOI) Bill is crucial for advancing e-government research and informed policymaking. An accessible FOI framework ensures transparency and accountability, allowing researchers

and the public to access data necessary for evaluating e-government initiatives. This transparency nurtures public trust and encourages citizens to hold public officials accountable.

Bajar (2023) delves into the realm of policy research and governance, underlining the pivotal role of research in shaping public policies. He stresses the necessity of evidence-based policymaking, emphasizing the importance of scientific data in effectively addressing societal challenges. Furthermore, Bajar (2023) highlights the significance of collaborative research efforts involving diverse stakeholders such as government agencies, industry practitioners, think tanks, civil society organizations, academia, and independent researchers to facilitate policy development and implementation.

In tracing the historical trajectory of e-government research, Bajar (2023) starts with its inception in the 1990s, coinciding with the public introduction of the Internet in 1996. He notes the initial enthusiasm for digitization in streamlining governmental processes, which gained momentum in the early 2000s (Bajar 2023). However, e-government research experienced a decline until a resurgence linked to the widespread adoption of platforms like Facebook. Bajar (2023) references scholarly observations of a common trend in the Asia-Pacific region, where e-government initiatives faced setbacks, often perceived as mere compliance measures to international standards. He echoes concerns about how dependence on external funding from international donor agencies caused many programs to stop when external support ended. This emphasizes the importance of sustainable and locally driven e-government initiatives to maintain ongoing progress and impact.

Moreover, Bajar (2023) highlights the influence of government reports and international organizations, particularly the United Nations, in shaping the landscape of e-government research. Despite some contributions from Philippine academia, he notes the limited scientific knowledge in this field, often constrained to case studies with narrow jurisdictions. The establishment of the Department of Information and Communications Technology (DICT) following the enactment of Republic Act No. 10844 (RA 10844) in 2016 marked a significant turning point, renewing attention to e-government research in the Philippines. Additionally, the COVID-19 pandemic in 2020 catalyzed a surge in the relevance of e-government, prompting extensive digitalization, digitization, and digital

transformation efforts. However, Bajar (2023) acknowledges challenges in accessing Philippine journals, which are often absent from major databases.

To overcome this obstacle, Bajar (2023) suggests manual searches on specific journal websites like the *Diliman Review* and the *Journal of Public Governance.* He also emphasizes the importance of precise filtering of search results to identify articles directly relevant to e-government. While Bajar's focus lies primarily on research methodologies, he acknowledges the critical role of digital literacy in e-government. As emphasized by UNESCO (2021), a digitally literate citizenry equipped with skills for critical online evaluation, responsible online behavior, and cybersecurity awareness is essential for fostering a healthy digital democracy. This underscores the necessity of promoting digital literacy initiatives in educational institutions, communities, and other relevant institutions.

Unpacking Human Rights Stories and Extrajudicial Killings (EJKs): A Digital Humanities Analysis of Philippine Media Narratives

As a multifaceted approach, the intersection of digital media and digital humanities offers a powerful toolset for researchers and journalists to investigate and report on extrajudicial killings (EJKs). Digital media platforms, like social media and online news outlets, serve as a continuous stream of raw data. This data encompasses texts, images, and videos that document human rights violations and EJKs. This data provides crucial firsthand accounts and perspectives often absent from traditional media channels.

Digital humanities, then, supplies researchers with the tools to analyze this vast and multifaceted data. Techniques like hashtag analysis and sentiment analysis allow them to understand how the public discusses these killings online, uncovering evolving public sentiment and identifying key narratives shaping the conversation. Additionally, textual analysis of news articles and social media posts can reveal potential biases in reporting and highlight the language used by both authorities and human rights groups, offering a more nuanced understanding of the power dynamics at play.

This synergy between digital media and digital humanities grants researchers and journalists to move beyond simple reporting on the number of killings.

They can dive deeper into the discourse, uncovering the stories of victims and their families, amplifying marginalized voices, and exposing potential biases in traditional media coverage. This data-driven approach can inform advocacy efforts and ultimately contribute to holding perpetrators accountable and to seeking justice for the victims.

Reyes (2023) focuses on monitoring extrajudicial killings (EJKs) and assassinations in the Philippines in the Pusila Project, initiated by the Institute of Nationalist Studies (INS) of the University of the Philippines Diliman in 2019. On August 21, 1983, on the tarmac of Manila International Airport, the chilling word "pusila" rang out as cameras documented the brutal assassination of former Senator Benigno "Ninoy" Aquino, Jr.—a pivotal moment in Philippine history. Reyes (2023) aptly characterizes this event as "a textbook example of a political and extrajudicial killing." Reyes (2023) shares that the historical backdrop of unjust killings reflects why several initiatives emerged to monitor former President Rodrigo Duterte's war on drugs. The Philippine Daily Inquirer led the release and update of the online list of drug-related cases. This was followed by ABS-CBN's kill list. Likewise, Rappler provided in-depth analyses and reports on the victims. VERA Files presented graphs and infographics based on the Inquirer's report, revealing that most victims were males suspected of being drug pushers killed by the police.

Meanwhile, the human rights group Karapatan focused on political and counterinsurgency-related killings under Duterte's administration, highlighting the varied nature of efforts to address the issue. Despite these efforts, there was still a gap, leading to the creation of the Pusila Project (Pusila). Pusila delved into drug-related and political or counterinsurgency killings, quarantine violations, summary executions, and other crime-related cases. This project provided a detailed list of drug-related killings, applying twenty-seven criteria to identify executions under the war on drugs (Reyes 2023).

In Pusila Phase 1, Reyes (2023) mentions that the manual process (i.e., manual search on news sites and social media using hashtags) comprised a small team of eight to ten members. Most of the members were students, researchers, and intellectuals against misinformation and disinformation. Pusila's first phase concluded before the 2022 National Elections in the Philippines, which garnered mainstream media attention for surpassing the data recorded by official sources (i.e., Philippine National Police, etc.). The report was published through an

executive summary and social media releases. Based on nationwide mapping, data showed that most of the killings violated human rights (Reyes 2023).

Additionally, during Pusila Phase 1, the team conducted a comparative analysis of past Philippine National Police (PNP) chiefs, with Guillermo Eleazar being the most recent focus. Limitations include reliance on Boolean searches brought by the lack of efficient news article-gathering tools and a shortage of translators. Moreover, there is metropolitan bias in news reports. Reporting cases can also be challenging due to political intimidation.

Despite the change in administration, the practice of killing innocent lives under the pretext of a drug war persists. This assertion contends that the shift in regimes has not curtailed such practices. In response, a subsequent investigation was conducted in Pusila Phase 2, demonstrating an improved methodology. The second phase includes a comparative analysis of media reporting on EJKs, an exploration of human rights violations-related terms, and the creation of digital maps using various tools (Reyes 2023).

Reyes (2023) outlines three key objectives within the Pusila Project to advance the plight of EJK victims, particularly those from grassroots communities:

1. **Conduct a comparative analysis using AntConc to scrutinize how various news outlets in the Philippines report on EJKs.**

   This involves examining vocabulary and narratives to uncover reporting styles, biases, and their impact on public perception. Notably, Project Pusila aims to explore differences between the reporting of the military and far-left groups.

2. **Utilize AntConc and Voyant to study the usage and context of HRV terms within textual data.**

   This objective focuses on investigating the usage of HRV-related terms within textual data. The approach includes exploring occurrence context, conducting sentiment analysis with HRV terms, and highlighting emerging trends or critical concerns. The Pusila Project draws inspiration from evolving terms like "salvage," transitioning to "EJKs," and the growing popularity of phrases like "summary executions" and "*nanlaban*," meaning "fought back."

3. **Leverage digital humanities tools like ArcGIS and Aladin to create interactive maps that show the distribution and patterns of HRVs in the country.**

    This objective leverages various digital humanities tools to develop interactive and informative digital maps, showcasing the practical distributions and patterns of HRVs in the Philippines. The goal is to visualize spatial dynamics, identify concentration hotspots, and provide a comprehensive overview of the human rights situation across regions. Project Pusila envisions performing network analysis on the HRV map to uncover patterns, clusters, and central nodes, shedding light on regions with the highest concentrations of violations. Integration of narrative analysis, case studies, and explanatory texts within the interactive map or an online database is proposed to provide background information on victims, affected communities, and relevant stakeholders. There is also an openness to the idea of establishing a network of victims and exploring the insights they might offer.

Project Pusila observed more recent limitations with digital tools, such as the use of Boolean searches and a metropolitan bias in news reports (Reyes 2023). This prompts the need for more efficient tools to overcome challenges like political intimidation. During their fieldwork in Bicol, Rappler (mentioned in Reyes 2023) reported an emerging trend during the Duterte administration: victims of the war on drugs often turned out to be human rights defenders despite being labeled as pushers by the police and other state authorities. This discrepancy underscores the need for further analysis based on factors such as gender, age, suspect type, or specific operating groups.

INS remains committed to its mission of advancing Pusila, albeit facing constraints in human resources and funding needed for sustainability. Despite these limitations, Reyes (2023) underscores the importance of the Pusila Project as a continued call for justice against EJKs, emphasizing the need to counter misinformation and disinformation, especially since these issues surround EJK narratives. Reyes invites more participants to join their cause and contribute to

its ongoing project, as they plan to publish monthly reports while maximizing data from other independent organizations like Dahas.[9]

The urgent need to comprehend and amplify the stories of victims and their families amidst the human rights crisis surrounding EJKs in the Philippines necessitates innovative approaches. Digital media and digital humanities offer a powerful and complementary combination for researchers to delve into media portrayals and public discourse on this critical issue.

Firstly, digital media platforms themselves act as treasure troves of data. A continuous stream of texts, images, and videos documenting these events flows through social media platforms like X and Facebook. This flow is also evident in online news outlets. Researchers can leverage techniques like hashtag analysis to grasp how Filipinos discuss EJKs online (Dobrin 2020). Analyzing trending hashtags like #Salvaged and #StopTheKillings can surface evolving public sentiments and pinpoint crucial narratives shaping the conversation.

Once a vast amount of data is collected, digital humanities methods can be used to conduct a deeper analysis. Sentiment analysis software can gauge the emotional undercurrent of online discourse (Puschmann and Powell 2018, 1–10), while textual analysis can uncover recurring themes and framings within media narratives. Researchers can gain a multifaceted understanding of the power dynamics at play by examining the portrayal of victims in news articles, the language used by authorities, and the counter-narratives presented by human rights groups. This approach extends beyond enriching our understanding of the human rights situation. It can potentially expose potential biases within traditional media coverage.

Moreover, researchers can analyze narratives across diverse digital platforms to identify marginalized voices and ensure that a broader range of perspectives are incorporated into the conversation. This, in turn, empowers advocates and human rights organizations with data-driven insights to inform their strategies for raising awareness and advocating for justice.

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[9]   Acess the Dahas website through this link: https://dahas.upd.edu.ph/

Quantifying Literary Landscapes: Applying Digital Humanities to Analyze Filipinos' Reading Behaviors

The Philippines' performance in the 2022 Program for International Student Assessment (PISA) remains concerning, placing the country in the bottom ten out of eighty-one countries for the second consecutive year. This follows the country's last ranking in 2018, where it ranked at the very bottom among the seventy-nine participating nations in terms of reading comprehension, mathematics, and science. While the Philippines moved slightly to the seventy-sixth position in 2022, the overall improvement was minimal (Servallos 2023).

Alarmed by the drastic low reading comprehension and functional literacy levels in the Philippines, Estella (2023) initiates a project that uses digital humanities to explore and improve Philippine reading culture, aiming to reinvigorate engagement with Filipino content. This project challenges the traditional notion of literary spaces being confined to libraries and bookstores, arguing that literary engagement happens in various locations, including online spaces. Moreover, Estella (2023) emphasizes the need to look beyond typical metrics like reading comprehension tests and leadership surveys to gain a deeper understanding of Filipino reading habits.

Countermapping challenges the notion that conventional maps are apolitical, recognizing that they often represent only one aspect of reality. In the Philippines, numerous countermapping efforts have emerged, typically aimed at countering maps of higher power, such as those used by development projects that displace communities (Estella 2023). Examples include the Save San Roque Movement and Kalipunan ng Damayang Mahihirap (Kadamay),[10] which utilize countermapping to oppose displacement due to development plans. These movements and groups extend to literary spaces, challenging the idea that they are confined to quiet locations like libraries and cafés (Estella 2023). Additionally, collaborative mapping platforms offer a space for diverse experiences and stories, illustrating the intricate nature of literary engagement beyond traditional spaces.

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[10]   "Kalipunan ng Damayang Mahihirap" translates to "Association of the Poor and Sympathizers". "Kadamay" pertains to a sympathizer, in this case, a sympathizer of the poor.

Estella (2023) mentions two guiding concepts that help collaborative, multifaceted mapping—nightlife dynamics and narrative research. Nightlife dynamics are pervasive, occurring in various settings, while narrative research, also known as narrative inquiry, concerns the stories and experiences of individuals in their literary journeys. An example of narrative research is the project "My Journey as a Reader" conducted at Antipolo National High School (Estella 2023). This initiative, featured in the journal *Under the Stage*, collected narratives and essays from students and established Filipino writers like Allan Popa and Eugene Evasco. Initially prompted by the observation that many individuals stopped reading during adolescence or young adulthood, assuming they were avid readers in their early childhood, the project sought to understand the shift in reading habits. "My Journey as a Reader" aimed to document the transition in reading habits among individuals, highlighting periods of cessation and renewal.

Building on these concepts and the overarching inquiry to measure and assess the Philippines' reading engagement besides reading comprehension tests and leadership surveys, Estella (2023) proposes the integration of digital humanities to enhance the reading culture in the Philippines by leveraging collaborative mapping and narrative research. Focused on literary experiences and interactions with texts, the initiative aims to map where and when individuals read, capturing emotional reactions, recommendations, and encounters with authors. Key elements include the utilization of HTML, Google Maps, ArcGIS, AntConc, and Voyant for comprehensive data analysis. Utilizing these elements may help seek convergence points, explore emerging forms of literary engagement, and identify themes within Filipino reading behaviors. Outputs may include a quantitative study on reading behaviors, informing tailor-made reading campaigns to engage the reading public effectively. Challenges such as anonymity, content moderation, and handling adult content are acknowledged, with a commitment to privacy policies, usage terms, and adherence to international laws like the Children's Online Privacy Protection Act (COPPA) (Estella 2023). Nonetheless, the ultimate goal is to create interventions that benefit and enrich the current reading culture in the Philippines.

Integrating digital humanities tools and methodologies into literature programs transforms how students explore and analyze literary works. This approach fosters innovative approaches that supersede traditional methods, offering students:

- **Enhanced textual interpretation.**

    Students are able to immerse in literary texts through the maximization of digital tools, uncovering nuanced meanings and stylistic choices. Text analysis software, for example, can reveal recurring themes, linguistic patterns, and word choices, leading to a richer understanding of the author's craft.

- **Greater accessibility.**

    Digital humanities enable the digitization of previously inaccessible literary texts, expanding the range of materials available for study and broadening the exposure of students to diverse voices and historical periods.

- **Enriched engagement.**

    Through text mining, data visualization, and computational analysis, students can explore patterns and connections within literary texts, fostering a deeper understanding of cultural contexts and historical influences. These methods offer unique insights into the social, political, and historical landscapes surrounding the creation of literature.

- **Collaborative learning and interdisciplinary exploration.**

    Digital humanities programs often encourage collaborative projects and interdisciplinary research. This allows students to combine their literary studies with insights from other fields like history, sociology, and technology, espousing a more comprehensive understanding of literature and its interconnectedness with other disciplines.

Digital humanities in literature programs empower students with versatile skills and perspectives, equipping them to navigate the evolving landscape of literary scholarship and analysis in the digital age. This innovative approach enriches the learning experience, nurturing critical thinking, collaboration, and a deeper appreciation for the complexities of literature within its historical and cultural context.

On Charting the Next Chapter for Digital Humanities in the Philippines

The inherent challenges within existing educational paradigms stem largely from the Industrial Revolution (IR) era, focusing on rote learning and standardization, potentially hindering creativity and critical thinking skills crucial for the twenty-first century (Cruz 2023).

Cruz (2023) then contrasts this with the transformative potential of multidisciplinary and issue-based education. She cites examples like Finland, where innovative approaches have led to impressive educational outcomes. However, she acknowledges the slow progress of similar reforms in the Philippines, attributing this to bureaucratic hurdles and entrenched power structures. Despite these challenges, Cruz remains optimistic about initiatives like the "Identities and Digital Humanities Workshop." She views it as fostering collaborative and in-depth discussions outside traditional academic frameworks, encouraging creativity and critical thought. She emphasizes the value of intimate, focused consultations over large-scale gatherings, allowing for deeper connection and exchange of ideas.

Cruz (2023) emphasizes the importance of intimate and focused interactions for fostering impactful learning. She encourages participants to move beyond the workshop format and continue exchanging ideas and collaborating on ongoing research projects and initiatives. This focus on sharing findings and fostering ongoing dialogue holds immense potential for advancing the field of digital humanities in the Philippines.

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