SEAMSA

SOUTHEAST ASIAN MEDIA STUDIES JOURNAL

VOL. 6, NO. 1, 2024

"DIGITAL COMMUNICATION AND INNOVATIVE TECHNOLOGIES"

ISSN (Online): 2718–9236

Layout Editor: Alexander J. Klemm

Publisher: Southeast Asian Media Studies Association

Downloads: https://seamsa.org/seamsjournal/

ISSN (Online): 2718–9236

SEAMSJ is a member of the Asian Journals Network (https://www.asianjournalsnetwork.net/)

EDITORIAL BOARD

ADVISORY BOARD

Table of Contents

Information

EDITORIAL
Riding the Wave of Digital Communication and Technology: New Perspectives from Southeast Asia

It has not taken humans a long time to reach the height of the new wave of technology. About two decades after the emergence of the Fourth Industrial Revolution, characterized by the prevalence of Artificial Intelligence (AI), the Internet of Things (IoTs), and machine learning, the Nobel Prizes were awarded to AI-aided studies in Physics and Chemistry in 2024, marking the year as the threshold opening to the AI era. The speed of innovation diffusion in this era is significantly faster compared to earlier epochs, such as the Stone Age, which spanned millions of years; the Bronze Age (3500 BC to 1200 BC); the Iron Age (1200 BC to the Industrial Revolution in the early 19th century); and subsequent technological waves powered by steam in the 19th century, electricity in the early to mid-20th century, and computation at the end of the 20th century. For example, technologies of this new era, such as ChatGPT and TikTok, reached 100 million users in just two and five months, respectively, whereas technologies of the previous industrial revolution, such as the mobile phone and car, needed over 15 years and 33 years, respectively, to achieve the same milestone (Ebert and Louridas 2023, 31).

Besides the rapidity of the advancement in digital communication and technology, AI causes massive disruptive changes in all aspects of life. AI-powered technologies are increasingly capable of replacing human labor and reshaping the workforce, from autonomous vehicles to robotic arms in manufacturing, and from large language model chatbots to virtual assistants. The emergence of Artificial Superintelligence (ASI)—a foreseeable future of AI where machines are more intelligent than humans—raises significant ethical and societal questions. In the media industry, AI-generated media products offer potential benefits such as mass production, cost and time reduction. On the other hand, they are the roots for public scrutiny and potential misinformation.

2024 has been a complex year for most media scholars and educators. Following the initial excitement surrounding ChatGPT in 2023, we now are haunted with fundamental questions regarding the role of AI in academic research and teaching. Should we maintain the traditional approach of academic writing with much hard work and many imperfections but where we control every single letter, or should we give the writing job entirely to AI tools? In the role of educators, we find it difficult to assess students' work that may be AI-generated. Hence, the transformative power of AI is a test for our academic integrity and the authenticity of our media work.

Scholars like us feel uneasy with the disruptive new technologies; however, we are not the odd ones out, since even the leaders of Big Tech are, to some extent, overwhelmed by the new wave. Elon Musk, the CEO of SpaceX, in his open letter from the Future of Life Institute (2023), called for

a pause in developing AI for at least six months, while Mustafa Suleyman, the CEO of Microsoft AI, introduced the concept of "AI containment" to control the advance in this new technology (2023).

How have Southeast Asian nations adopted and adapted to this new wave of technology? According to a report by the Tech Collective, ASEAN is emerging as a hub for global big tech companies (2024). Source of Asia, a business intelligence think tank based in Vietnam, recently stated that countries in the region, such as Vietnam, Singapore, and Malaysia, with their young and large populations, robust tech infrastructure, and favorable government policies, are poised to reshape the regional landscape (2024). Living in the heart of the rising global hub for digital technology and communication, we need a comprehensive, evidence-based analysis of digital communication and technology to build a strong foundation for developing relevant policies and regulations.

With these constructive intentions and purposes in mind, the Southeast Asian Media Studies Journal dedicates its issue 6.1 to feature research in Digital Communication and Technology. Most of the papers were researched by ASEAN scholars, while some were authored by scholars from Australia and Europe, demonstrating the geographical heterogeneous interest in this theme. This highlights the extended reach of our journal and the growing contribution of ASEAN media scholars and educators to global governance in digital communications and technology.

SEAMSJ issue 6.1. includes eight papers divided into three themes of research.

The first theme is Emerging Technologies in Communication, with two papers. The first paper is "Metaverse and Affordances of VR-enabled Connection" by Mark Finn, Swinburne University of Technology, Australia. It draws on the idea of "imagined affordances" to explore the intersection of technology and human agency. The author states that "These affordances arise from the interaction between actual technological artifacts and user perceptions, attitudes, and expectations, de-emphasizing the designer's intent and allowing for the exploration of unintended uses."

The second paper is "Different Platforms, Shared Imaginaries: A Comparative Analysis of Cross-Platform User Experiences" by Ngoc-Chau Pham and Lan-Chi Nguyen, Swinburne Vietnam, FPT University. This study synthesizes and analyzes research on user perceptions of algorithms (algorithmic imaginaries) across three major social media platforms: Facebook, Instagram, and TikTok.

The second theme, encompassing four papers, is Application of Digital Technology in Communication in Different Industries.

The first paper following this theme is "'Taming' Generative AI at Work: Balancing Technological Promise with Professional Values" by Martina Skrubbeltrang Mahnke from University of Roskilde, Denmark. Drawing on domestication theory, the overall aim of her study is to examine how users 'tame' generative AI (GenAI) in professional contexts.

"The Roles of Media Literacy, Emotional Intelligence, and Digital Intelligence in Predicting Psychological Well-Being" by Sarah Lynn Aliah Nor Zaidi and Nor Diana Mohd Mahudin from International Islamic University Malaysia is the second paper in this category. The study suggests that to be digitally intelligent, one must be media-literate and emotionally astute. The study is one

of the growing efforts to contribute to the literature on the role of media literacy, emotional intelligence, and digital intelligence in predicting the psychological well-being of young adults.

The third paper following the theme of Application of Digital Technology in Communication in Different Industries is "AI-Mediated Communication in Academic Organizations: Issues and Directions" by Kahrein A. Salvador from University of the Philippines Los Baños. This quantitative study surveyed 50 academic and administrative managers from various higher education institutions in Calabarzon, the Philippines. The author recommends capacity building efforts and policy implementation to manage issues identified on AI use and maximize its potential without compromising human agency.

The final paper following the given theme is "Travel Influencers as Catalysts for Fostering Open Innovation of Tourism: A Case Study in Da Lat" by Hien Duong from Vietnam National University Ho Chi Minh City—University of Social Sciences and Humanities. The research highlights the potential of travel influencers as catalysts for open innovation, emphasizing their ability to involve a broader range of actors, encourage co-creation, and facilitate knowledge sharing.

The third theme of SEAMSJ issue 6.1 is Integrity Perspectives in Digital Technology in Communication and features the final two papers of this issue.

The first paper here is "Data Ethics in the Race of Artificial Intelligence Technology Development between China and the U.S." by Reyjane Calicdan-Del Campo from Far Eastern University in Manila. This study puts China and the U.S. side by side, allowing for a critical analysis on the emerging challenges of AI adoption, particularly regarding data privacy, unwarranted surveillance, and the proliferation of synthetic media.

The second paper following the theme of Perspectives in Digital Technology in Communication—and the eighth paper of the issue altogether—is "Marcos Forever: Resistance to anti-Marcos Persuasion and anti-Disinformation Efforts" by Karl Lewis L. Cruz from University of the Philippines Diliman. The study investigates the resistance of purposively sampled Marcos apologists to representative anti-Marcos persuasion and anti-disinformation messages.

We hope the papers in this issue will help you in your academic research and build a solid foundation for further practice and policy building in the media industry in the era of new technologies. Thus, we extend our gratitude to the two dozen dedicated reviewers and editorial assistants whose contributions have played an important role in the successful completion of this journal issue. Their expertise, hard work, and commitment to excellence have contributed to the quality of the journal and the continuation of a strong academic community of media scholars in the region.

As the late scientist Stephen Hawking once said "We are all time-travellers, journeying together into the future. But let us work together to make that future a place we want to visit." SEAMSJ issue 6.1 seeks to contribute to the construction of a bright media future as it rides the wave of digital communication and technology—as seen from new perspectives from Southeast Asia.

REFERENCES

Ebert, Christoph, and Panos Louridas. 2023. "Generative AI for Software Practitioners." *IEEE Software* 40, no. 4: 30–38, Jul/Aug. 2023. https://doi.org/10.1109/MS.2023.326587.

Musk, Elon. 2023. *Pause Giant AI Experiments: An Open Letter*. Retrieved on August 27, 2024, from https://futureoflife.org/open-letter/pause-giant-ai-experiments/.

Source of Asia. 2024. *The Roles of Vietnam, Singapore, and Malaysia as technology hubs in Southeast Asia*. Retrieved on August 24, 2024, from https://www.sourceofasia.com/the-role-of-key-countries-as-technology-hubs-in-southeast-asia/.

Suleyman, Mustafa. 2023. *The Coming Wave Technology, Power, and the Twenty-first Century's Greatest Dilemma*. Bodley Head.

Tech Collective. 2024. *We take a look at Southeast Asia's rising popularity as a data centre hub*. Retrieved on August 24, 2024, from https://techcollectivesea.com/2024/08/29/southeast-asia-data-centre-hub/.

Ngo Bich Ngoc **Le Thu Mach**
Hanoi, Vietnam **Hanoi, Vietnam**
October 2024

ABOUT THE GUEST EDITORS

NGO BICH NGOC is Head of Media and Communication Department, Swinburne University of Technology, Vietnam campus. She was Deputy Editor in Chief of the Online portal of the Academy of Journalism and Communication and an editor of Journal of Journalism and Communication Theories, Vietnam. She also works as a reviewer for several journals in Vietnam. Her research areas are multimedia journalism, digital communication, strategic communication, and public relations.
Email: bngo@swin.edu.au

LE THU MACH holds a PhD in Journalism from Monash University, Australia. She is a full-time lecturer at the Ho Chi Minh National Academy of Politics, Vietnam, and a part-time lecturer at Swinburne University of Technology, Vietnam campus. Her research interests include journalism, social media, public sphere, media research ethics, and strategic communication. Since 2022, she has been serving as the External Relations Director on the Executive Board of the Southeast Asian Media Studies Association.
Email: lethumach@hcma.edu.vn

Original Call for Papers

ISSUE 6.1
DIGITAL COMMUNICATION AND INNOVATIVE TECHNOLOGIES

SEAMSJ issue 6.1 will delve into the multifaceted dimensions of digital communication and innovative technologies in the context of data science, with artificial intelligence (AI) being increasingly integrated into the production and operational cycles of media industries. The main objective of SEAMSJ 6.1 is to grasp the opportunities and challenges brought about by advancements in the novel technologies shaping and shaped by AI. The issue examines the interactions between human behavior, cognition, social motivations, and the vast amount of data generated by digital platforms and the use of algorithms and AI systems to analyze and influence information flow. This open call for contributions for SEAMSJ issue 6.1 invites full-paper submissions not only from scholars and practitioners who participated in the recently held International Conference and Media and Communication (ICMC 2023; organized and hosted by the Swinburne Vietnam Alliance Program and supported by SEAMSA in November 2023) but also from all academicians and other experts in the areas of Southeast Asian Media Studies, AI, digital communication, and innovative technologies.

AREAS OF INTEREST

Submitted articles should focus on digital communication and innovative technologies as they shape media landscapes in Southeast Asia. As such, they could touch on any of the following areas of interest:

- Futures of the media industries in Southeast Asia
- Applications of innovative AI technologies
- AI in the realms of professional development and media research
- Knowledge production and dissemination
- Fake news, misinformation, disinformation, alternative expertise
- AI and social, political, economic, and cultural issues
- Data analysis and audience insights
- Changing roles in journalism, fact-seeking and checking
- Integration of AI in journalism and media training curricula
- AI in relation to Media and Information Literacy (MIL)
- Interdisciplinary collaboration in a future shaped by AI
- Algorithmic decision-making in media business
- Surveillance and privacy concerns

Submitted research articles adhering to these and related themes and to the SEAMSJ's aims and scope will be considered for publication. All submitted articles undergo a primary quality check by the SEAMSJ editorial team and a secondary quality check through a double-blind peer-review according to quality standards found here: https://bitly.ws/32PvE

PAPER GUIDELINES

- Length: 4,000 to 5,000 words (excluding abstract and references)
- Title: 5 to 12 words
- Abstract: 150 to 200 words
- Keywords: 4 to 5
- References: 20 to 40 (80% from 2018 to 2023)
- Short bio: 150 words (separate on final page)
- Font: Arial, size 11, 1.5 line spacing
- Paragraphs: One empty line between paragraphs; no indentation of paragraphs
- Pagination: Page numbers in lower right corner
- Style: Chicago Manual of Style. Follow this guide for in-text citations and the list of references:
  https://www.chicagomanualofstyle.org/tools_citationguide/citation-guide-1.html
  https://www.chicagomanualofstyle.org/tools_citationguide/citation-guide-2.html
- Figures: A maximum of 3 graphic images (figures) of excellent quality
- Tables: A maximum of 3 tables of excellent quality
- Language: British English preferred (American English accepted)
- File: MS Word file (no PDFs)
- Samples: See published SEAMSJ issues here: https://seamsa.org/seamsjournal/

IMPORTANT DATES

- 1 February 2024: Final deadline for full paper submission
- 1 April 2024: Double-blind peer review and feedback
- 1 June 2024: Submission of revised paper
- 1 August 2024: Target publication date

SUBMISSION AND INQUIRIES

Submit full paper (MS Word file) and signed ethics commitment form (PDF file; ethics commitment form) and direct all inquiries to ICMC email at swinmediacomm@fe.edu.vn with CC to SEAMSJ editor-in-chief, Dr. Alexander J. Klemm at eic.seamsj@gmail.com, and Dr. Ngo Bich Ngoc at bngo@swin.edu.au. Put "[SEAMSJ 6.1]" in the email subject line.

GUEST EDITORS

Ngo Bich Ngoc, PhD
Media and Communication Department
Swinburne University of Technology, Vietnam
Bngo@swin.edu.au

Le Thu Mach, PhD
Institute of Science Information
Ho Chi Minh National Academy of Politics, Vietnam
lethumach@hcma.edu.vn

Social Networking in the Metaverse: Affordances of VR-enabled Connection

MARK FINN
Swinburne University of Technology

ABSTRACT
The rebranding of Facebook to Meta and Apple's announcement of an AR/VR product in 2023 have sparked renewed interest in virtual worlds. These worlds are seen as the next phase in human interaction, extending beyond today's social media apps to offer a more immersive experience. However, questions remain about the adoption of this technology and its resonance with users accustomed to existing social media forms. This paper draws on Nagy and Neff's idea of "imagined affordances" to explore these questions, focusing on the intersection of technology and human agency. These affordances arise from the interaction between actual technological artifacts and user perceptions, attitudes, and expectations, de-emphasizing the designer's intent and allowing for the exploration of unintended uses. This approach is crucial for investigating emerging technologies like the metaverse, which are likely to yield novel and unexpected practices.

Keywords: affordances, metaverse, social networking, technology adoption, Virtual Reality (VR)

INTRODUCTION

Mark Zuckerberg's decision to rebrand Facebook to Meta reinvigorated interest in the potential of the metaverse, an interest that was accelerated even more with Apple's 2023 announcement of its own AR/VR product. While not all visions of the metaverse are based on VR, it has become one of the most prominent technologies associated with the concept and has been showcased by a number of commercial enterprises in relation to their metaverse activities. VR has already been used to play games, increase workplace efficiency, aid in training and education and, most frequently, enhance social connection through its ability to simulate presence. However, while many metaverse advocates have taken the technology's ability to enhance human connection for granted, few have sought to explain the actual mechanisms by which this might occur.

This paper seeks to address this issue by using an affordances framework to unpack how the interactions enabled by today's social networking services might evolve in the VR-enabled environment of the metaverse. Affordance has been chosen here for its ability to explore the interaction between people and technology without ascribing an overly deterministic role to either. By carefully mapping out the recognized affordances of both social media and virtual reality and then identifying the points of intersection between them, this paper aims to explore how the social and technical practices embedded in contemporary social media might evolve in the transition to the VR-enabled, 3D environment of the metaverse.

AN AFFORDANCES APPROACH

To explore how social networking might work in a VR-enabled metaverse it is important to understand the socio-technical dynamics that underpin both existing and emerging platforms, and in this respect the idea of affordances offers a useful framework. Affordance theory was first popularized by James J. Gibson in his book *The Ecological Approach to Visual Perception* in 1979. Arising from the field of cognitive psychology, the concept refers to the opportunities for action that an object or environment presents to an organism. Importantly, Gibson argued that affordances are properties of the environment that are directly perceived by the organism, rather than being inferred through the processing of sensory information. Affordances of an environment ultimately enable the behaviours of an agent operating within it: a flat surface presents the affordance of walking, while a steep slope presents the affordance of climbing. It is this relationship that explains the way in which agents and environment become inextricably enmeshed (Scarlett and Zeilinger 2019).

As Hafezieh and Eshraghian (2017) note, Gibson's formulation of affordances cuts across the subject/object dichotomy, meaning that the premise can easily be applied outside the natural environment. This prompted researchers from a wide range of fields to utilize the concept in their work, with Human-Computer Interaction (HCI) and Information Systems (IS) being perhaps the most prolific areas. This is because the concept bridges the gap between technological determinism and social constructivism (Volkoff and Strong 2017), assigning neither people nor machines a dominant role, but instead arguing that it is the interaction between the two that is the source of an affordance.

While Gibson's work is often seen as the origin of affordance theory, it is Donald Norman's conceptualization that is most commonly drawn on in practical research. Norman developed the idea of affordances further to include the role of the user's understanding and knowledge of the object. He argued that an object's affordances are not always immediately obvious, and that the user's understanding of the object's function and operation is an important factor in determining possible action. Most critically, whereas Gibson's concept of affordances emphasized the direct perception of the environment, Norman's emphasized the role of cognitive processes in interpreting the environment. This allowed Norman to distinguish between 'perceived' and 'real' affordances (Costa 2018), with the former focusing on how the physical appearance of an object provides the user with clues about its function, while the latter refers to the physical characteristics of an object that make a function possible.

Nagy and Neff (2015) expanded on this idea and also redefined the concept of affordances by returning to its origins in environmental psychology. They argued that the way that affordances had come to be used in fields like design has actually limited its usefulness for areas like communications studies by "failing to capture the complexity of the interactive production of the stuff of communication" (1). In response, the authors proposed what they term "imagined affordances," which they describe as emerging "between users' perceptions, attitudes, and expectations; between the materiality and functionality of technologies; and between the intentions and perceptions of designers" (5). Key here is the idea that affordances do not have to be tied to intention on the part of the designer or the user, and that uses and actions can arise from misunderstandings and/or misinterpretations of an object's affordances. For these authors, the concept of imagined affordances allows for an examination of key attributes of modern communication technologies, including mediation, interactivity, and affect.

For the purposes of this paper, I will be focusing primarily on Nagy and Neff's idea of imagined affordances, because, as the authors state, "the technological affordances of new versions of communication technologies, then, may become constituted partly by the perceptual and affective states of previous versions' users" (7). While the metaverse has been positioned as a new development, it is also the result of the integration of a number of existing technologies and attendant social practices. This is especially true of VR, which while still in its infancy has already become an established part of media practice in activities such as computer gaming. By exploring the imagined affordances of both social networking and VR, it is possible to identify points of intersection between them, thereby revealing some of the new affordances offered by the emerging metaverse. Firstly, however, it is necessary to briefly explore the origins of the metaverse concept and clarify what is meant by the term in contemporary usage.

METAVERSE EVOLUTION

Although the recent surge of interest in the metaverse was prompted by Facebook's transformation, the term itself can be traced back to Neal Stephenson's 1992 novel *Snow Crash* (Dwivedi et al. 2022). In the novel, the central protagonist switches between a dystopian vision of future Los Angeles and a virtual world called the Metaverse, with each location depicted as being as real as the other from the characters' perspective. The novel has since become one of the key

influences on the cyberpunk movement and has been directly referenced or alluded to in countless books, comics, films, television series, and video games.

The popularity of Stephenson's work can be at least partially attributed to the resonance of the idea of a virtual world that reflects and refracts lived reality. Parallel worlds—either virtual or extra-terrestrial—have long been a staple of science fiction storytelling, and thus it is no surprise that people have been trying to create working versions of a metaverse for as long as the technology was capable of doing so. Some of the earliest versions of this were Multi-User Dungeons (MUDs) of the late 1980s—text-based imaginative universes that were often based on pen-and-paper role-playing games. These subsequently transformed into MUD, Object-Oriented (MOOs), which increased the versatility of the platforms while still remaining largely text-based.

As technology progressed, increasingly sophisticated virtual worlds have been produced, some directly seeking to imitate the environment described in *Snow Crash.* Early examples included *Habbo Hotel*, *Second Life* and *PlayStation Home*, all of which encouraged users to engage in a range of activities including shopping, entertainment, education, and socializing through the use of virtual avatars. More recent attempts have tended to come from the games industry, often focusing more on younger users. Of these *Roblox* represents the most notable example, having accumulated 47 million daily active users by 2022 (Hollensen, Kotler, and Opresnik 2022). In many ways *Roblox* is a simplified version of Sony's PlayStation *Home* platform, with less realistic avatars and environments and a more cartoonish graphics style in keeping with the younger audience it targets. As with *Second Life* before it, one of the main attractions of *Roblox* is the ability for users to create their own content. With more than two million developers creating content for the platform, they earn a 50% cut of the revenue for their efforts (Khahif 2020). Like *Second Life*, brands have begun to explore the platform, drawn by its large and predominantly young user base. By 2022, several major companies had experimented with the *Roblox* space, with clothing brands such as American Eagle and PacSun among the first to establish a presence in the virtual world (Wheless 2022).

All these virtual environments represent attempts at creating a metaverse like that imagined by Stephenson in his 1992 novel, albeit with their own distinct characteristics based on their social or commercial objectives and the technology available at the time of their creation. This is reflected in the academic literature on the subject, with a significant amount of work devoted to defining the concept. Park and Kim (2022), for example, identified 54 distinct variants of the metaverse from a survey of more than 260 published papers on the topic. While there are a variety of perspectives embodied by these definitions, there is also a significant overlap, suggesting that there are several key elements thought to comprise the metaverse idea.

Firstly, many definitions of the metaverse focus on the potential it has to replicate or extend common activities. For example, Connolly, Stansfield, and Hainey (2011) use the example of *Second Life* and other Augmented Reality Games (ARGs) to explore how virtual worlds can be used in education, suggesting that this form of technology will become increasingly important when dealing with what are often termed "digital natives" (1389). Grings, Trein, and Oliveira (2009) also discuss the metaverse in terms of its capacity to enhance education, noting that the defining feature of this technology is its ability to create telepresence. Whereas other forms of media position the user as an observer, virtual worlds explicitly position them as a participant: "Being

present is no longer limited to physical presence as determined by the limits of the physical body, since our new technologized, digital-virtual bodies can be here and there at the same time, permit us to construct and explore fresh realities, experiences and feelings" (28). This idea is operationalized by Papagiannidis and Bourlakis (2010), who see the metaverse as the obvious next step for retailing. According to the authors, traditional retailing has been product orientated, while electronic retailing shifted the emphasis to customer service. Metaverse retailing, they argue, shifts the focus to the experience itself, noting that the use of avatars in virtual worlds can lead to a unique "retail theatre experience" (425).

Many of the recent corporate attempts at defining the metaverse also focus on this capacity to extend real-world activities into the virtual realm with Mark Zuckerberg, for example, focusing his definition on the idea that the metaverse is connected to the real world but could extend our capabilities beyond it. In his announcement at the Connect 2021 event, Zuckerberg described the metaverse as "a set of interconnected digital spaces that lets you do things you can't do in the physical world. Importantly, it'll be characterized by social presence, the feeling that you're right there with another person, no matter where in the world you happen to be" (Meta 2021). The announcement went on to describe the various activities that would be impacted by the metaverse, focusing on entertainment, work, fitness and social interaction, and highlighting the technologies that would be at the center of the metaverse's evolution. Unsurprisingly, virtual reality was given the most prominent position through the company's existing and planned head-mounted displays (HMDs), but the announcement also focused heavily on Augmented Reality and the partnerships it was developing to explore this technology.

A second common element across most definitions of the metaverse is the potential for enhancing human interaction. Dionisio, Burns, and Gilbert (2013), for example, suggest that it might be defined as "a fully immersive three-dimensional digital environment in contrast to the more inclusive concept of cyberspace that reflects the totality of shared online space across all dimensions of representation" (7). The potential to build community is also the focus of Forte et al. (2010), who define a metaverse as "a virtual place where a cyber community of individuals can share social interactions without the restrictions of the physical world" (80). Community is also at the central focus for Kim, Lee, and Kang (2012), who argue that the key to understanding virtual communities is the interaction between the real user and their online avatar representation. This point is reiterated by Schroeder, Huxor, and Smith (2001), whose study of the *Activeworlds* virtual environment highlights the way different avatars are used to define social roles.

Human interaction is also the focus of Microsoft's position on the metaverse, with CEO Satya Nadella outlining his vision for his company's involvement in the metaverse at the Microsoft Ignite 2021 event: "As the digital and physical worlds come together, we are creating an entirely new platform layer, which is the metaverse. We're bringing people, places and things together with the digital world in both the consumer space as well as in the enterprise" (Takle 2021). Finally, the vast majority of metaverse definitions suggest that the environment must be three-dimensional, with Wright et al. (2008), for example, defining the metaverse as "an extensive 3D networked virtual world capable of supporting a large number of people simultaneously for social interaction" (263). Similarly, Messinger et al. (2009) define the concept as "Virtual worlds, where thousands of people

can interact simultaneously within the same simulated three-dimensional space" (204), going on to identify a number of virtual environments that were already in operation at the time of writing.

Commercial visions of the metaverse also focus on the three-dimensional nature of the environment, with graphics giant Nvidia describing it as the next generation of connectivity experienced in 3D, though they take exception with the way the metaverse is often described. According to the head of Nividia Omniverse research team, Richard Kerris:

> People are misinterpreting metaverse as a destination, a virtual world, a this or that. The metaverse is not a place, it's the network for the next version of the Web… In much the same way the Web unified so many things, the next generation of that Web, the core underlying principles of that will be 3D, and with that comes the challenge of making that ubiquitous between virtual worlds. (Ray 2022).

Since the interaction in the metaverse will occur in 3D, many visions of the metaverse suggest that virtual reality hardware will be a key facilitator. Both Microsoft and Meta have their own VR hardware that they promote in discussions of the metaverse, with Meta in particular being aggressive in selling its Quest 2 and 3 VR headsets. VR fundamentally changes the way people engage with a platform, and research suggests that it will play a key in many metaverse activities such as shopping (Han, Bergs, and Moorhouse 2022), education (Hedrick et al. 2022), sports (Demir, Argan, and Halime 2023), health care (Bhugaonkar, Bhugaonkar, and Masne 2022) and especially social interaction (Rospigliosi 2022; Jiaxin and Gongjing 2022; Liang et al. 2023). From this brief review we can see that many of the most prominent visions of the metaverse portray it as an immersive, three-dimensional virtual environment which large numbers of individuals can simultaneously inhabit.

In the following section I will focus on the social interaction element in particular, exploring how the transition into a three-dimensional space accessed via VR might affect the practice of social networking as we know it today. To do this, I will outline some of the key affordances of both social networking and virtual reality, and then explore the potential intersections between them.

AFFORDANCES OF SOCIAL NETWORKING AND VIRTUAL REALITY

Social media, and social networking more broadly, has been extensively discussed from an affordance perspective. As Fox and McEwan (2017) note, this approach allows researchers to identify similarities and differences across platforms and time periods. Over the past decade a significant body of research has emerged which attempts to identify the key affordances of social networking and map their existence across different platforms. Across this body of literature there is considerable variance in both the number of affordances identified and their descriptions, but it is possible to identify three major themes that tend to be consistent across most studies.

The first of these is what could be termed "profile building" and refers to the ability of users to construct online identities to use on specific platforms. Profile building is identified by O'Riordan, Feller, and Nagle (2016) as one of the key affordances of social networking, with different platforms offering slightly different tools for creating one's online persona. As the authors note, the amount

of detail a user can add to their profile on Facebook is considerably more than is possible with Twitter or YouTube (251), pointing to the idea that promoting the user's online identity is one of the key objectives of that platform. A similar idea is expressed by Chen and Peng (2022), who draw on the work of O'Riordan et al. but combine some of their affordances, arguing that the self-profile also encompasses affordances such as privacy and anonymity. A version of profile building also features prominently in the work of Treem and Leonardi (2013) under the banner of "visibility," with the authors noting that one of the key features of present social networking platforms is their ability to make the behaviors, preferences, and activities of individuals visible to others with in their network (150), thereby allowing for the creation of a very nuanced self-profile.

Related to profile-building, the second affordance commonly associated with social networking is social presence, which Fox and McEwan (2017) define as "the feeling that interactants are near and sharing the same experience together" (302). This idea is also discussed by Rice et al. (2017) as "visibility" and Lüders, Dinkelberg, and Quayle (2022) as "encapsulating shared emotions." This affordance is also related to social connectivity, which O'Riordan, Feller, and Nagle (2016) describe as the "linking of individuals in a system, through both commonly held information (resource connectivity) and social contacts" (347). Social presence also features in the work Chen and Peng (2022) where it is discussed as "communicating with others" and Treem and Leonardi (2013) where it is referred to as "association." Leidner, Gonzalez, and Koch (2020) also identify similar concepts in their study of the use of social media in an organization context, though in their study they label them as "networking" and "organizational visibility" which work to collapse profile building and social presence to some extent.

The third common social networking affordance in the literature is "persistence," which Treem and Leonardi (2013) describe as content that retains its form on the communication platform over time. Fox and McEwan (2017) offer a slightly different perspective, suggesting that persistence is a function of the ability to easily capture, save, and replicate digital information. Boyd (2010) extends this point by arguing that persistence in social networking refers to "online expressions [being] automatically recorded and archived" (46). For Rice et al. (2017) persistence has two connected but distinct dimensions: the ability to maintain relations with others regardless of activity or location and the continued availability of information or messages after they have been posted. This description of persistence is also offered by Manata and Spottswood (2022) whose work represents an updating of, and extension to, Rice et al.'s earlier work.

Turning to virtual reality, the literature pertaining to the affordances of VR is also quite diverse, but again it is possible to identify a number of affordances that feature across multiple studies. The most prominent by far is the affordance of "embodiment," which Dincelli and Yayla (2022) define as users perceiving "the virtual body they control as their own biological body and its social and physical actions in the virtual environment as their own actions in real-life" (3). Embodiment also features heavily in the work of Shin (2017, 2022), Zheng, Xie, and Liu (2018), and Raz (2019), who argue that this affordance in particular moves the user's experience beyond other forms of mediation such as cinema or gaming.

Another affordance of VR that features prominently in the literature is "presence," which Shin (2017) describes as "the extent to which two people interacting via VR feel as if they are together

(1830). In some ways presence is an extension of embodiment in that the feeling that one is inhabiting their avatar (as opposed to merely controlling it) increases the sense of connection the user has to the virtual world and those they interact with inside it. As Coelho et al. (2006) note, presence in virtual reality is often connected to the sophistication of the simulation, with higher fidelity in the environment making the user feel that the experience is less mediated. This leads Raz (2019) to suggest that the affordance of presence in VR can greatly enhance the emotional response users have to an experience, far greater than is the case with traditional media like cinema. This was also noted by Shin (2022) in their experimental research, which found that the greater the visual fidelity of a virtual space, the greater the feeling of presence experienced by the user.

Finally, "immersion" is identified as a key affordance across several studies, often in combination with embodiment and presence. Shin (2017) suggests that users of VR systems frequently use terms such as "absorption" and "engrossment" to describe their experiences, but these are really proxies for immersion, which the author defines as "deep engagement with the medium." Steffen et al. (2019) expand on this, suggesting that one of the key features of virtual reality is its ability to immerse users in a simulation to such a degree that they forget that they are engaged in a mediated experience, mentally removing themselves from their physical environment. Lee et al. (2018) argue that, similar to presence, the visual fidelity of the virtual world plays a key role in enabling the affordance of immersion, with accurate representations of events, people, and places being more likely to lead to an immersive experience. For Zheng et al. (2018), the affordance of immersion is what makes virtuality reality a great tool for education, as the ability to deeply engage users with an experience works to remove distractions and maintain focus on the prescribed task.

SOCIAL NETWORKING IN THE VR METAVERSE: AFFORDANCES AS MODIFIERS

In the preceding section I outlined a number of commonly identified affordances in the literature pertaining to social networking, as well as some of the most common affordances associated with virtual reality. In this section I will look at the potential interaction between these affordances, as this will help illuminate some of the issues we might encounter as social networking transitions to the VR metaverse. In this respect, Nagy and Neff's (2015) notion of imagined affordances is especially useful, as it recognizes that affordances "can include the expectations and beliefs of users, whether or not they are "true" or "right" (4). Users will approach social networking in the metaverse with the imagined affordances of social networking from their experience of current platforms, combined with imagined affordances of what the new platforms might enable. The actual experience of users will likely be a combination of both, with the affordances of social networking being modified by the affordances of VR.

The affordance of profile building represents one of the clearest examples of this, as all current visions of the metaverse have the creation of personal profiles as the first step to engaging in the virtual world. However, unlike traditional social platforms, profile building in the metaverse is likely to be focused around creating persistent 3D avatars as the affordance intersects with the VR affordance of embodiment. With some rare exceptions, a user's social identity is not transferable between social networking platforms; one's identity on Instagram is usually different from one's

identity on TikTok, which is again different from one's identity on Snapchat. In the VR metaverse, avatars will likely persist across different worlds and platforms, enabling users to project a unified identity wherever they go online.

This is due to the fact that VR experiences encourage users to embody their avatars to a level that exceeds traditional platforms. Character creation in video games has already demonstrated that players will often spend many hours crafting their in-game personas, requiring far more time and effort than the simple 2D pictures that represent users in current social networks. This alone suggests that users will be less likely to have multiple avatars representing them in metaverse spaces, especially given that the interoperable nature of the platform means that avatars can move between virtual spaces. This practical consideration is reinforced by how users psychologically engage with their avatars in VR, for as Raz (2019) suggests, in VR the user and avatar can be brought into "an unprecedented perceptual proximity" (1005). There is already an extensive body of video game research that demonstrates the powerful connection players form with their in-game characters (Ferchaud et al. 2020; Li, Liau, and Khoo 2013; Banks and Bowman 2021; Fraser, Slattery, and Yakovenko 2023), and it is reasonable to assume that similar attachments will form between users and their metaverse avatars.

The practical and psychological incentives to limit the number of virtual identities one has in the metaverse is likely to be compounded by economic factors. Just like video game characters, metaverse avatars will be highly customizable. However, as Joy et al. (2022) explain, this customization is likely to come at a cost as brands seek to expand their presence into virtual spaces—a practice that, as noted earlier, was already established in virtual worlds like *Habbo Hotel* and *Second Life*. Brands such as McDonalds, Ray Ban, Nike, Adidas, and Vans have already established metaverse strategies and have begun their first tentative forays into the space through experiments on platforms like Roblox (Spajić et al. 2022). One of the more interesting examples of this is the fashion retailer Zara, whose Lime Glam line of digital apparel provides a clear illustration of how the commercialization of profile building might work (Fakhry and Nasr 2023). While users may be able to share branded items between a number of avatars, the effort required to customize and re-customize their online persona for each virtual space they enter might work to discourage frequent changes.

A similar interaction between affordances is likely to occur with social presence, which unsurprisingly intersects with the VR affordances of presence and immersion. Whereas much of the interaction on contemporary social networking sites tends to occur in an asynchronous manner, many visions of the metaverse leverage the affordance of presence and emphasize the synchronous nature of interactions in VR spaces. Such interactions are already available in experiences like *Horizon Worlds* and *VRChat* and are actually implicit in the way interaction is described: a user interacts with their network 'on' Facebook while they interact with their network 'in' *Horizon Worlds*.

The shift in terminology also demonstrates how the move to VR collapses the affordances of social presence and immersion. As noted earlier, immersion involves engaging with a medium to such an extent that the outside world fades away, and it is likely that the immersive qualities of VR will enhance feelings of social presence among users. Indeed, the creation of virtual spaces such as

those available in *VRChat* allows for specific types of social connection based on the space itself. For example, users of VRChat can already visit spaces where they can engage in virtual cooking classes (*Kitchen Cooks!*), play mini golf (*Putt Put Quest*), or interact with virtual puppies (*Happy Hill Dog Park*), with each of these experiences incorporating and extending the affordances offered by existing social media platforms.

Research across multiple fields suggests that virtual reality can greatly enhance social connection. A study by Freeman and Acena (2021), for example, found that engaging in activities such as those described above proved to be an excellent way of fostering strong interpersonal relationships. This finding was also shared by Deighan et al. (2023) who found that *VRChat* could be used as a tool to alleviate loneliness and promote better mental health, to such an extent that some study participants wished they could carry over features from the platform to their offline lives. Similarly, Maloney et al. (2020) found that participants in their study actually felt greater social connection than in many offline encounters, with physical gestures seeming to feel more intimate in the virtual environment, despite the lack of haptic feedback.

VRChat actually offers a fine example of Nagy and Neff's assertion that imagined affordances opens up a space for novel and often unexpected applications of technology. *VRChat* was designed as a way of enhancing traditional text-based chat services by having users interact through three-dimensional avatars. While many users engaged with the platform in the way designers intended, others quickly discovered that the avatars could be used to simulate sexual activity and other adult-orientated actions. This has raised many concerns over the safety of *VRChat* for minors and the need to create regulation appropriate for this emerging platform for social interaction (Trauthig and Woolley 2023). In this instance we are seeing users taking the imagined affordances offered by VR and using them to create new forms of social interaction. The fact that participants were inclined to engage in sexual activity using their VR avatars also points to the extent to which they felt they were embodying their online personas.

Finally, the social networking affordance of persistence is also likely to be modified by VR, but in more complex ways than was the case with profile building or social presence. In traditional social networks, persistence facilitates greater connection between users because content that is posted online tends to stay online, thereby creating a continuity of engagement. This is especially true of platforms like Facebook and Instagram, where posted content can be engaged with by other users almost indefinitely. Every interaction leaves a trace: a comment is replied to and the reply itself elicits a response, or a meme is re-edited and reposted While most platforms offer options for synchronous interaction, their default modality is asynchronous. In this respect, social interaction in the metaverse is likely to be both more persistent and more ephemeral than what we see with contemporary social media platforms.

Persistence is also a feature of VR environments, with rooms and other virtual spaces persisting from one instance to the next. A virtual object might occasionally be moved, but a user leaving and returning to a virtual space will find it almost exactly as they left it. While the accidental or deliberate deletion of content might inconvenience users of current platforms, the removal of elements of a virtual environment that users inhabit potentially destabilizes the environment itself and destroys the VR affordance of immersion; a user will expect the environment they inhabit to persist from

one visit to the next, and for other users in the same virtual space to experience it in much the same way they do. Thus, a chair placed in a virtual room must be rendered the to the same dimensions and in the same location for all users simultaneously inhabiting that space, and many core elements such as the location of different areas should also be persistent from visit to visit. We can already see this in operation in early metaverse test environments like *Horizon Worlds* and in earlier non-3D worlds such as *Second Life.*

As noted above, the affordance of embodiment means that the avatars will also be persistent, with the open and interoperable nature of the metaverse allowing the same avatar to be used across a range of different platforms and spaces. However, the experience of any one virtual space will be a constant stream of avatars appearing and disappearing as users connect and disconnect. Most importantly these users will often leave no trace of their existence: in contrast to current social networking platforms, the synchronous VR environment will wipe evidence of their engagement once they disconnect. In the metaverse users will persist across spaces, and the spaces themselves will persist from visit to visit, but interaction between users will be fleeting. It would be like a Facebook page that records no posts, or a Linkedin profile that deletes all messages once a user logs off.

CONCLUSION

Compared to its period of peak-hype in the years 2021 and 2022, the term "metaverse" has almost disappeared into irrelevance; Google trend data shows that searches for the term reached their peak in January 2022 before slowly declining over the following two years. However, while the term has faded from prominence, the idea that the future of social interaction will involve three-dimensional worlds has not and is being shaped by as much by corporate posturing as by technological advancement. A plethora of companies such as Meta, Microsoft, Nvidia, Epic, Unity and Roblox are continuing to work on developing the platforms that enable the creation of increasingly sophisticated digital worlds, though most today are reluctant to associate them with the metaverse.

At this point in time it is impossible to say exactly what the shape of this new virtual world will be. However, the way we engage with any technology is shaped by its affordances, which encompass both the uses developers imagined and the experiences users have had with analogous technologies. This allows us to use the affordances of existing technologies to predict, to some extent, how we might engage with emerging platforms.

This paper has discussed how the affordances of social networking platforms might intersect with the affordances of virtual reality in the VR-enabled 3D environment of the metaverse. In doing so it has shown that social networking in the metaverse is likely to be a very different experience to what we are currently familiar with; it will be more embodied and more immersive than our current platforms, but at the same time more ephemeral. Our avatars will be able traverse the digital landscape in ways that are not possible in our current environment of siloed platforms, but at the same time will flicker in and out of existence leaving little or no trace behind.

There is still much work to be done in this area. This paper only explored a limited number of affordances of social networking and VR technologies, and even then only touched upon some of

the complex interactions between them. Future work will need to investigate the affordances of both entities more fully, and also incorporate other aspects of the metaverse that have not been discussed here. While virtual reality is currently positioned as a prominent feature of the future metaverse, it is yet to be seen how mainstream this technology will become. The emergent metaverse may be focused on other technologies which will have their own affordances that will also need to be explored.

It is also important to note that the very nature of affordances means that it is impossible to accurately predict how a technology might evolve due to the sheer number of factors involved in its evolution. As Nagy and Neff (2015) explain, the idea of imagined affordance "helps to identify the space between users' perception and the reception of technologies" (7), but this is a space that is constantly in flux. At best, this paper has provided a framework for exploring how the current affordances of social networking and virtual reality might interact, but it is and must always be seen as a work-in-progress.

REFERENCES

Banks, Jaime, and Nicholas David Bowman. 2021. "Some assembly required: Player mental models of videogame avatars." *Frontiers in Psychology* 12: 701965.

Bhugaonkar, Kunal, Roshan Bhugaonkar, and Neha Masne. 2022. "The trend of metaverse and augmented & virtual reality extending to the healthcare system." *Cureus* 14, no. 9. https://doi.org/10.7759/cureus.29071.

Boyd, Danah. 2010. "Social network sites as networked publics: Affordances, dynamics, and implications." In *A networked self*, edited by Zizi Papacharissi, 47–66. Routledge.

Chen, Meng, and Altman Yuzhu Peng. 2022. "Why Do People Choose Different Social Media Platforms? Linking Use Motives With Social Media Affordances and Personalities." *Social science computer review* 41, no. 2: 339–352. https://doi.org/10.1177/08944393211049120.

Coelho, Carlos, Jennifer Tichon, Trevor J Hine, Guy Wallis, and Giuseppe Riva. 2006. "Media presence and inner presence: the sense of presence in virtual reality technologies." *From communication to presence: Cognition, emotions and culture towards the ultimate communicative experience* 11: 25–45. https://psycnet.apa.org/record/2009-20644-002.

Connolly, Thomas M, Mark Stansfield, and Thomas Hainey. 2011. "An alternate reality game for language learning: ARGuing for multilingual motivation." *Computers & Education* 57, no. 1: 1389–1415.

Costa, Elisabetta. 2018. "Affordances-in-practice: An ethnographic critique of social media logic and context collapse." *New Media & Society* 20, no. 10: 3641–3656. https://doi.org/10.1177/1461444818756290.

Deighan, Mairi Therese, Amid Ayobi, and Aisling Ann O'Kane. 2023. "Social Virtual Reality as a Mental Health Tool: How People Use VRChat to Support Social Connectedness and Wellbeing." *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*, Hamburg, Germany. https://doi.org/10.1145/3544548.3581103.

Demir, Gülsüm, Metin Argan, and DİNÇ Halime. 2023. "The Age Beyond Sports: User Experience in the World of Metaverse." *Journal of Metaverse* 3, no. 1: 19–27.

Dincelli, Ersin, and Alper Yayla. 2022. "Immersive virtual reality in the age of the Metaverse: A hybrid-narrative review based on the technology affordance perspective." *The Journal of Strategic Information Systems* 31, no. 2: 1–22. https://doi.org/https://doi.org/10.1016/j.jsis.2022.101717.

Dionisio, John David N., William G. Burns III, and Richard Gilbert. 2013. "3D Virtual worlds and the metaverse: Current status and future possibilities." *ACM computing surveys* 45, no. 3: 1–38. https://doi.org/10.1145/2480741.2480751.

Dwivedi, Yogesh K., Laurie Hughes, Abdullah M. Baabdullah, Samuel Ribeiro-Navarrete, Mihalis Giannakis, Mutaz M. Al-Debei, Denis Dennehy, et al. 2022. "Metaverse beyond the Hype: Multidisciplinary Perspectives on Emerging Challenges, Opportunities, and Agenda for Research, Practice, and Policy." *International Journal of Information Management* 66: 1–55. https://doi.org/https://doi.org/10.1016/j.ijinfomgt.2022.102542.

Fakhry, Nancy Abdalla Mohmed, and Mona Sayed Nasr. 2023. "Metaverse and Brand Experience in Fashion Digital Marketing." *International Design Journal* 13, no. 3: 331–344.

Ferchaud, Arienne, Jonmichael Seibert, Nicholas Sellers, and Nivia Escobar Salazar. 2020. "Reducing mental health stigma through identification with video game avatars with mental illness." *Frontiers in psychology* 11, no. 2240: 1–10.

Forte, M., N. Lercari, F. Galeazzi, and D. Borra. 2010. "Metaverse Communities and Archaeology: The Case of Teramo." *Euro Med*, November, 2010.

Fox, Jesse, and Bree McEwan. 2017. "Distinguishing technologies for social interaction: The perceived social affordances of communication channels scale." *Communication Monographs* 84, no. 3: 298–318.

Fraser, Rosalynd, Jan Slattery, and Igor Yakovenko. 2023. "Escaping through video games: Using your avatar to find meaning in life." *Computers in Human Behavior* 144: 1–9.

Freeman, Guo, and Dane Acena. 2021. "Hugging from a distance: Building interpersonal relationships in social virtual reality." *ACM international conference on interactive media experiences*.

Grings, Eliane Schlemmer, Diana Trein, and Cristofer Oliveira. 2009. "The Metaverse: Telepresence in 3D Avatar-Driven Digital-Virtual Worlds." *@ tic. revista d'innovació educativa* 2: 26–32.

Hafezieh, Najmeh, and Farjam Eshraghian. 2017. "Affordance theory in social media research: systematic review and synthesis of the literature." *25th European Conference on Information Systems (ECIS 2017)*.

Han, Dai-In Danny, Yoy Bergs, and Natasha Moorhouse. 2022. "Virtual reality consumer experience escapes: preparing for the metaverse." *Virtual Reality* 26, no. 4: 1443–1458.

Hedrick, Emily, Michael Harper, Eric Oliver, and Daniel Hatch. 2022. "Teaching & learning in virtual reality: Metaverse classroom exploration." 2022 Intermountain Engineering, Technology and Computing (IETC).

Hollensen, Svend, Philip Kotler, and Marc Oliver Opresnik. 2022. "Metaverse—the new marketing universe." *Journal of Business Strategy* 44, no. 3: 119–125. https://doi.org/10.1108/jbs-01-2022-0014.

Jiaxin, Li, and Gao Gongjing. 2022. "Socializing in the metaverse: The innovation and challenge of interpersonal communication." *8th International Conference on Humanities and Social Science Research (ICHSSR 2022)*.

Joy, Annamma, Ying Zhu, Camilo Peña, and Myriam Brouard. 2022. "Digital future of luxury brands: Metaverse, digital fashion, and non-fungible tokens." *Strategic change* 31, no. 3: 337–343.

Khahif, Olga. 2020. "Kids Flock To Roblox For Parties And Playdates During Lockdown." *News India-times* 51, no. 17: 5.

Kim, Changsoo, Sang-Gun Lee, and Minchoel Kang. 2012. "I became an attractive person in the virtual world: Users' identification with virtual communities and avatars." *Computers in Human Behavior* 28, no. 5: 1663–1669.

Lee, Jumin, Jounghae Bang, and Hyunju Suh. 2018. "Identifying Affordance Features in Virtual Reality: How Do Virtual Reality Games Reinforce User Experience?" *Augmented Cognition: Intelligent Technologies*, 383–394.

Leidner, Dorothy E, Ester Gonzalez, and Hope Koch. 2020. "An affordance perspective of enterprise social media and organizational socialization." *Strategic Information Management* 27, no. 2: 117–138.

Li, Dong Dong, Albert Kien Liau, and Angeline Khoo. 2013. "Player—Avatar Identification in video gaming: Concept and measurement." *Computers in human behavior* 29, no. 1: 257–263.

Liang, Hui, Jiupeng Li, Yi Wang, Junjun Pan, Yazhou Zhang, and Xiaohang Dong. 2023. "Metaverse virtual social center for the elderly communication during the social distancing." *Virtual Reality & Intelligent Hardware* 5, no. 1: 68–80.

Lüders, Adrian, Alejandro Dinkelberg, and Michael Quayle. 2022. "Becoming "us" in digital spaces: How online users creatively and strategically exploit social media affordances to build up social identity." *Acta psychologica* 228: 103643–103643. https://doi.org/10.1016/j.actpsy.2022.103643.

Maloney, Divine, Guo Freeman, and Donghee Yvette Wohn. 2020. "'Talking without a Voice' Understanding Non-verbal Communication in Social Virtual Reality." *Proceedings of the ACM on Human-Computer Interaction* 4, no. CSCW2: 1–25.

Manata, Brian, and Erin Spottswood. 2022. "Extending Rice et al.(2017): the measurement of social media affordances." *Behaviour & Information Technology* 41, no. 6: 1323–1336.

Messinger, Paul R., Eleni Stroulia, Kelly Lyons, Michael Bone, Run H. Niu, Kristen Smirnov, and Stephen Perelgut. 2009. "Virtual worlds—past, present, and future: New directions in social computing." *Decision Support Systems* 47, no. 3: 204–228. https://doi.org/10.1016/j.dss.2009.02.014.

Meta. 2021. "Connect 2021: Our vision for the metaverse." Meta Reality Labs. Accessed October 1, 2023. https://tech.facebook.com/reality-labs/2021/10/connect-2021-our-vision-for-the-metaverse/.

Nagy, Peter, and Gina Neff. 2015. "Imagined affordance: Reconstructing a keyword for communication theory." *Social Media+ Society* 1, no. 2: 1–9.

O'Riordan, Sheila, Joseph Feller, and Tadhg Nagle. 2016. "A categorisation framework for a feature-level analysis of social network sites." *Journal of decision systems.* 25, no. 3: 244–262. https://doi.org/10.1080/12460125.2016.1187548.

Papagiannidis, Savvas, and Michael A Bourlakis. 2010. "Staging the New Retail Drama: at a Metaverse near you!" *Journal of Virtual Worlds Research* 2, no. 5: 425–446.

Park, Sang-Min, and Young-Gab Kim. 2022. "A Metaverse: Taxonomy, Components, Applications, and Open Challenges." *IEEE Access* 10: 4209–4251. https://doi.org/10.1109/access.2021.3140175.

Ray, Tierman. 2022. "Nvidia's Omniverse: The metaverse is a network not a destination." *zdnet*, July 26, 2022.

Raz, Gal. 2019. "Virtual reality as an emerging art medium and its immersive affordances." *The Palgrave Handbook of the Philosophy of Film and Motion Pictures*: 995–1014.

Rice, Ronald E., Sandra K. Evans, Katy E. Pearce, Anu Sivunen, Jessica Vitak, and Jeffrey W. Treem. 2017. "Organizational media affordances: Operationalization and associations with media use." *Journal of Communication* 67, no. 1: 106–130.

Rospigliosi, Pericles. 2022. "Metaverse or Simulacra? Roblox, Minecraft, Meta and the turn to virtual reality for education, socialisation and work." *Interactive Learning Environments* 30, no. 1: 1–3.

Scarlett, Ashley, and Martin Zeilinger. 2019. "Rethinking affordance." *Media Theory* 3, no. 1: 1–48.

Schroeder, Ralph, Avon Huxor, and Andy Smith. 2001. "Activeworlds: geography and social interaction in virtual reality." *Futures* 33, no. 7: 569–587.

Shin, Dong-Hee. 2017. "The role of affordance in the experience of virtual reality learning: Technological and affective affordances in virtual reality." *Telematics and Informatics* 34, no. 8: 1826-1836. https://doi.org/https://doi.org/10.1016/j.tele.2017.05.013.

Shin, Donghee. 2022. "The actualization of meta affordances: Conceptualizing affordance actualization in the metaverse games." *Computers in human behavior* 133: 1–13.

Spajić, Jelena, Ksenija Mitrović, Danijela Lalić, Bojana Milić, and Dunja Bošković. 2022. "Personalized brand experience in metaverse." *10th International Conference on Mass Customization and Personalization–Community of Europe (MCP-CE 2022)*.

Steffen, Jacob H., James E. Gaskin, Thomas O. Meservy, Jeffrey L. Jenkins, and Iopa Wolman. 2019. "Framework of Affordances for Virtual Reality and Augmented Reality." *Journal of Management Information Systems* 36, no. 3: 683–729. https://doi.org/10.1080/07421222.2019.1628877.

Takle, Steve. 2021. Microsoft's Vision For The Metaverse, According To CEO Satya Nadella. *Beyond Games.biz*.

Trauthig, Inga, and Samuel Woolley. 2023. "Addressing Hateful and Misleading Content in the Metaverse." *Journal of Online Trust and Safety* 1, no. 5: 1–20.

Treem, Jeffrey W., and Paul M. Leonardi. 2013. "Social Media Use in Organizations: Exploring the Affordances of Visibility, Editability, Persistence, and Association." *Annals of the International*

Communication Association 36, no. 1: 143–189. https://doi.org/10.1080/23808985.2013.11679130.

Volkoff, Olga, and Diane M Strong. 2017. "Affordance theory and how to use it in IS research." *The Routledge companion to management information systems*, 232-245. Routledge.

Wheless, Erika. 2022. 11 execs connecting gaming to marketing; A look at brand and agency leaders diving into Roblox, mobile games and esports. *Advertising Age* 93, no. 13: 1. Accessed December 9, 2023. https://adage.com/article/digital-marketing-ad-tech-news/11-execs-connecting-gaming-marketing/2441366.

Wright, Mark, Henrik Ekeus, Richard Coyne, James Stewart, Penny Travlou, and Robin Williams. 2008. "Augmented duality: overlapping a metaverse with the real world." *Proceedings of the 2008 International Conference on Advances in Computer Entertainment Technology.*

Zheng, Ling, Tao Xie, and Geping Liu. 2018. "Affordances of virtual reality for collaborative learning." *2018 international joint conference on information, media and engineering (ICIME).*

ABOUT THE AUTHOR

MARK FINN is a Senior Lecturer in Media and Communications at the Swinburne University of Technology. He received a PhD in Media and Communications from the Queensland University of Technology and has subsequently published widely on various aspects of media evolution, including the historical development of electronic commerce and the social implications of mobile computing technologies. He has developed particular expertise in the growth and implications of computer games and has provided expert advice to industry and government agencies. His current work focuses on affordance theory and explores the deepening impact media is having on a number of key industries and institutions.

Email: mfinn@swin.edu.au

Different Platforms, Shared Imaginaries: A Comparative Analysis of Cross-Platform User Experiences

NGOC-CHAU PHAM
Swinburne Vietnam, FPT University

LAN-CHI NGUYEN
Swinburne Vietnam, FPT University

ABSTRACT

Algorithmic imaginary—a term postulated by Bucher (2017)—conceptualizes how social media users perceive platforms' algorithms and the corresponding effects on their feelings and interactions with the platforms. The concept has evolved to adapt to the increasing intricacies of research on platforms' algorithms and their effects on users' emotions. This study synthesizes and analyzes research on user perceptions of algorithms (algorithmic imaginaries) across three major social media platforms: Facebook, Instagram, and TikTok. Employing a comprehensive literature review methodology, the study examines how these imaginaries shape user emotions and behaviors. Findings reveal common themes across platforms: algorithms are perceived as opaque, manipulative, and potentially restrictive, leading to negative emotional responses. Users adopt various strategies to regain control and seek transparency. The paper underscores the need for a more inclusive approach to algorithmic literacy, involving both users and platform designers, to foster a more positive and empowering social media experience.

Keywords: algorithmic imaginary, algorithmic literacy, emotions, social media, user experience

INTRODUCTION

Earlier social media platforms such as MySpace and Friendster used to feature their users' posts in a chronological order (Hamin 2023). This changed in 2009 when Facebook pioneered the use of algorithms to personalize content feeds, prioritizing relevance over recency. Facebook claimed this enhanced the visibility of meaningful data for users, a trend quickly adopted by platforms like Twitter and Instagram (Hutchinson 2016). As algorithms learned user behavior, they became integral to shaping the user experience. The omnipresence of algorithms demonstrates their growing social power (Olhede & Wolfe 2018), and simultaneously, raises the need to research the affective grip that they seem to have on users; especially users' emotions and feelings drive their behaviors on the sites. Bucher (2017) coined the term "algorithmic imaginaries" to describe how users perceive and are affected by platform algorithms, sparking research into this phenomenon across various digital platforms, including social media, OTT services, and news bots (Schulz 2023).

To delve deeper into the question of algorithmic influence on user experience, this study synthesizes findings on algorithmic imaginaries across three prominent social media platforms: Facebook, Instagram, and TikTok. The study examines how these imaginaries affect users' moods, sensations, and ultimately, their platform usage. These platforms were chosen due to their popularity, large user bases, and the abundance of relevant research available. To provide a solid foundation for this analysis, the theoretical underpinnings that inform the understanding of algorithmic imaginaries are first explored. The paper begins with *Theoretical Foundations for the Review*, discussing key frameworks from communication and social media studies that offer valuable perspectives on the interplay between users, platforms, and algorithms. These frameworks provide a conceptual lens through which one can examine the historical evolution of the term "algorithmic imaginaries" and the empirical findings across different platforms. The paper presents the synthesized findings, highlighting common themes and divergences, and conclude by discussing the implications for algorithmic literacy and user empowerment in the digital age.

THE THEORETICAL FOUNDATIONS FOR THE REVIEW

The exploration of algorithmic imaginaries and their impact on user experiences necessitates a robust theoretical foundation that can illuminate the complex interplay between users, platforms, and algorithms. The theory of Technological Determinism serves as an initial perspective, positing that technology shapes society and human behavior (McLuhan 1964). In the context of social media, this theory suggests that the design and functionalities of algorithms significantly influence user experiences and their subsequent actions. The black box nature of algorithms, where their inner workings remain largely hidden from users, can create a sense of technological determinism, where users feel their online experiences are controlled by forces beyond their comprehension (Bucher 2019). The constant updates and modifications to these algorithms further reinforce this perception, as users are perpetually adapting to technological changes they have little control over. In contrast, the uses and gratifications theory emphasizes the agency of users in selecting and interacting with media platforms to satisfy their needs and desires (Katz, Blumler, & Gurevitch 1973). It highlights the active role users play in navigating the algorithmic environment, employing

strategies to control their experiences, curate content, or manipulate interactions to fulfill specific needs and gratifications.

Critical theory and political economy of communication offers a critical lens to analyze the power dynamics between platform designers and users (Mosco 2009). The lack of transparency surrounding algorithmic operations can be seen as a manifestation of power imbalance, where users are subjected to algorithmic decisions without full understanding or control. This perspective also raises concerns about the potential for algorithmic bias and the marginalization of certain communities (Noble 2019).

The concepts of participatory culture and produsage further emphasize the active role of users in shaping their online experiences (Jenkins 2007; Bruns 2008). They challenge traditional notions of passive media consumption, framing user strategies as forms of participation and resistance within the platform's constraints. These actions demonstrate users' attempts to reclaim agency and negotiate their position within the algorithmic environment.

Finally, media literacy and digital literacy theories underscore the importance of critical understanding and skills to navigate the complex media landscape (Livingstone 2004). The concept of algorithmic literacy emerges as a crucial component of digital literacy, emphasizing the need for users to develop skills to understand, critically analyze, and effectively engage with algorithms (Shin, Rasul, & Fotiadis 2022). Algorithmic literacy empowers users to make informed choices about their online interactions and navigate the potential challenges and opportunities presented by algorithmic systems.

These theoretical frameworks, while distinct in their focus, collectively offer a comprehensive understanding of the complex relationship between users, platforms, and algorithms. They provide a foundation for analyzing the emergence and impact of algorithmic imaginaries, as well as the diverse strategies users employ to navigate their algorithmic experiences. Through these frameworks, we can gain deeper insights into the dynamics of user agency, power relations and the evolving nature of digital literacy in the age of algorithms.

ALGORITHMIC IMAGINARIES

The concept of "algorithmic imaginaries" emerged from early studies examining user perceptions and assumptions about Facebook's algorithms. Grimmelmann (2009) discussed how early Facebook algorithms analyzed connections and shared information within user networks, laying the groundwork for personalized content feeds. Bucher (2012) explored the notion of users making assumptions about how Facebook's algorithms structured visibility by ranking, sorting, and classifying users' interaction activities on the platform (1177), highlighting the potential disconnect between actual algorithmic functions and user perceptions. The term algorithmic imaginary itself was formally introduced by Bucher (2017), emphasizing the role of emotions and feelings in shaping users' perceptions of and interactions with algorithms. This marked a shift towards recognizing the subjective and affective dimensions of the user-algorithm relationship.

Subsequent research expanded the concept beyond individual perceptions to encompass the collective and social aspects of algorithmic imaginaries. The notion of "algorithmic gossip" (Bishop 2019, 2589) captures how users share and circulate strategies for manipulating algorithms,

contributing to a shared understanding of their perceived power and influence. This social dimension of algorithmic imaginaries highlights the role of communication and collective sense-making in shaping user experiences.

More recent scholarship has drawn upon broader theoretical frameworks to deepen our understanding of algorithmic imaginaries. The concept has been connected to Castoriadis' theory of the social imaginary, which emphasizes the dynamic and evolving nature of user perceptions in relation to algorithms (Schulz 2023). This perspective underscores the reciprocal relationship between users and algorithms, highlighting that both users' perceptions of algorithms and designers' assumptions about user behavior shape the online experience. Developing knowledge of this process has long been a challenge since platforms' algorithms are often opaque and not readily accessible to the public (Brevini & Pasquale 2020; Swart 2021; Zeng & Kaye 2022).

RATIONALE AND REVIEW METHOD

In the following sections, this paper undertakes a comprehensive review of the literature on platform users' emotions, provoked by their interactions with platform algorithms and their perceptions of algorithmic functions. This review employs the Comprehensive Literature Review (CLR) model outlined by Frels (2016). The following research questions guide the review: 1. How do users perceive algorithms on different social media platforms—Facebook, Instagram, and TikTok? 2. What emotional responses do users experience in relation to algorithmic imaginaries? 3. How do users adapt their behaviors in response to these emotions and perceptions?

The review process began with a Google Scholar search using the key term "algorithmic imaginary," focusing on publications since Bucher's (2017) work. Titles, abstracts, and keywords (e.g., platforms, emotions, behaviors, strategies) were scrutinized for relevance. The "cited by" function on Google Scholar was utilized, particularly for Bucher's paper, to identify subsequent research that examined the concept of algorithmic imaginary across various contexts, such as social media platforms and their users.

In addition to exploring these contexts, the search was broadened to track the evolution of algorithmic imaginary research since 2017. This involved examining key publications, shifts in theoretical frameworks, and emerging methodological approaches in the field. The aim was to ensure a more accurate and comprehensive understanding in the fast-changing era of social media, acknowledging how both platform algorithms and user perceptions have evolved over time. The collected data was analyzed manually to identify key themes and patterns.

The selected papers were then meticulously examined and categorized based on their relevance to the target platforms, namely Facebook, Instagram, and TikTok. These platforms were chosen due to their widespread popularity, diverse user demographics, and distinct algorithmic features, providing a representative sample of social media experiences. The review then analyzed reported imaginaries and their associated emotional responses across these platforms. The focus on emotions is justified as they have substantial influence on human cognitive processes and behaviors (Dolan 2002; Cherry 2019).

In the context of social media research, platform users' emotions, triggered by interactions with platform algorithms, have been shown to shape their behaviors on these platforms, including

actions such as hiding content, following or unfollowing friends or pages, discontinuing usage, or even sharing their peculiar experience with the algorithms of one platform and the entailed emotions on another platform (Bucher 2017). Accordingly, this review examines the prevalence and intensity of users' positive and negative emotions, aiming to identify platform-specific trends and potential cross-platform similarities or differences in user assumptions, emotional responses, and adaptive behaviors.

USER IMAGINARIES, EMOTIONS AND RESPONDING BEHAVIORS ACROSS PLATFORMS

Facebook

As an early pioneer of Web 2.0's participatory ethos, allowing user-generated content and interactive usability, Facebook quickly became a subject of academic interest regarding its algorithmic influence on end-users. People first came to this platform for their needs of belonging and self-representing (Nadkarni & Hofmann 2012) which are satisfied through meaningful interactions with the contents, namely posts, shares, comments, and 'likes' from their connections and themselves on the platform. In this context, most of the reviewed Facebook-specific literature on algorithmic imaginary focused on investigating how ordinary users make sense of the Facebook algorithms' involvement in their socializing interactions. These studies explored how users' negative emotions were provoked when they encountered the algorithmic involvement in the curation of their news feed that they found 'creepy' and 'weird' (Eslami et al. 2016; Bucher 2017).

How Facebook's news feed algorithms make users feel had been well-studied prior to Bucher's (2017) seminal work. Users had expressed annoyance upon realizing that the News Feed prioritized posts from friends they interacted with most (Eslami et al. 2015). They believed that the news feed was generated based on their likes and comments, fueling worries about data privacy (Schwartz & Mahnke 2021). Bucher's (2017) research revealed a range of negative emotions among Facebook users regarding the platform's algorithms. Confusion was evident in expressions like "feel wrong" (Bucher 2017, 34), "at odd" (Bucher 2017, 38), "super frustrating" (Bucher 2017, 36), "generalized anxiety" (Bucher 2017, 37), and "the oddness of the machines intercepting emotions" (Bucher 2017, 38) Disappointment was reflected in phrases like "did a poor job" (Bucher 2017, 36), "the connections that Facebook makes are simply wrong" (Bucher 2017, 34), and "incorrectly assessing social network desires" (Bucher 2017, 35). Annoyance and anger surfaced through terms like "annoyed" (Bucher 2017, 35), "agitated" (Bucher 2017, 36), "Facebook ads are slightly offensive, making assumptions about users" (Bucher 2017, 34), and "making decisions on my behalf" (Bucher 2017, 39)

Since Bucher (2017), research on algorithmic imaginaries continues to highlight Facebook users' emotional responses. Swart (2021) reported users' feelings of oddness when the platform failed to display posts from friends and family. Surprise has been noted when Facebook ads don't align with user preferences, and even shock when recommendations appear to be based on private conversations (Büchi et al. 2023). Jacobsen (2022) documented an extreme case of poignancy, where a user's 'Year in Review' included a montage of his deceased daughter, highlighting the emotional impact of algorithmic curation.

Facebook users have also expressed mixed feelings when encountering algorithmically curated content on their news feeds. While enjoying it as a relief from information overload, they simultaneously felt a loss of control by letting algorithms decide for them (Bucher 2017). This highlights a tension between convenience and autonomy. In addition to sharing emotions on social media or being influenced by emotionally contagious content—which is often algorithmically amplified—Facebook users also experience emotions shaped by their perceptions of how algorithms work (Yeo et al. 2020; Chawla & Mehrotra 2021), adding another layer of complexity to the emotional landscape of social media. There were instances of Facebook users reporting adjustment of the news feed settings or interactions with their connections on the platform to manipulate the display of content in their news feed (Bucher 2017).

Instagram

Instagram users frequently report a variety of negative emotions in response to their experiences with the platform's algorithms. These emotions encompass confusion, frustration, uncertainty, disappointment, and dissatisfaction (Cotter 2019; O'Meara 2019; Arriagada & Ibáñez 2020). Content creators, in particular, express distress when their efforts to conform to perceived algorithmic rules do not yield the expected visibility, using language that evokes feelings of anxiety and powerlessness (O'Meara 2019; Cotter 2021; Duffy & Hund 2021). The 2016-shift from a chronological to an algorithmically curated feed amplified these negative emotions. Users reported feeling frustrated and uncertain due to the inexplicable relationship between content quality and engagement metrics (O'Meara 2019). The perception of constant, unpredictable algorithm changes fostered feelings of being manipulated and a lack of control (Cotter 2019; O'Meara 2019).

Cotter (2021) introduced the concept of "black box gaslighting" (1227) to describe the power imbalance between users and the platform. This phenomenon, exemplified by shadow banning practices, creates confusion, anxiety, and self-doubt among users, particularly among content creators who feel subject to algorithmic control. The resulting lack of transparency and perceived loss of control over their "labor process" exacerbates these negative emotions and fosters a sense of pressure to constantly adapt to the platform's demands (Cotter 2019; O'Meara 2019, 4).

These negative emotions drive content creators to adapt their strategies in response to the perceived algorithmic control. Research on algorithmic imaginaries among Instagram users has focused on how Key Opinion Leaders (KOLs) and influencers try to make sense of and manipulate the platform's algorithm to maintain visibility (Cotter 2019; Arriagada & Ibáñez 2020; Duffy & Hund 2021). They invest significant effort in creating content and experimenting with engagement tactics, often forming "engagement pods" or utilizing bots to boost visibility (O'Meara 2019, 6). However, these efforts can backfire, as the platform may penalize perceived manipulation through shadow banning (Cotter 2019; Cotter 2021). This constant struggle to appease the algorithm can lead to burnout and frustration among content creators, highlighting the emotional toll of navigating the platform's opaque and ever-changing rules.

Tiktok

TikTok, while sharing similarities with other platforms, distinguishes itself through its algorithm-centric design, prioritizing human-platform interaction over traditional social networking (Herrman 2019). This unique approach, exemplified by the For You algorithm's highly personalized content curation, has contributed to the app's rapid rise in popularity (Statista Research Department 2023).

However, this emphasis on algorithmic curation also shapes user experiences and concerns in distinct ways. Research reveals a dichotomy in user experiences on TikTok (Bellan 2021) due to the platform's algorithmic personalization, which yields a certain level of ambivalence amongst users' feelings as they interact with the app, with positive sentiments (enjoyment, a sense of comfort, pleasure, interest, awe) rooted mainly in the algorithms' ability to suggest relevant content and cluster users in a way that encourage the formation of communities, and negative emotions (dissatisfaction, annoyance, a sense of unease) often revolving around privacy issues and the algorithms' formation of user identities, based on which it suggests relevant content (Schellewald 2022).

TikTok users also felt ignorant about how exactly TikTok could process their preferences and deliver matching content with such pinpoint accuracy, especially when "there are no hashtags or anything" (Schellewald 2022, 5). They also confessed feeling uncertain regarding how the algorithms work, and thus, find it difficult to "get out of" the suggested stream of content (Bhandari & Bimo 2022, 6; Schellewald 2022). This uncertainty, however, is more pronounced among ordinary users than content creators, who often feel more comfortable with the algorithm due to their increased understanding of its mechanics (Eslami et al. 2018; Simpson & Semaan 2021).

Furthermore, TikTok users, particularly those from marginalized communities, experience a unique mix of feelings. While the algorithm can foster a sense of community and validation by connecting users with similar interests and identities, it can also lead to feelings of being boxed in by limiting exposure to diverse content and perspectives (Devito 2022). This highlights the potential for algorithmic personalization to both empower and restrict users simultaneously, depending on their individual experiences and needs.

While ordinary users often struggle to understand the intricacies of the algorithm, expressing concerns about surveillance and feeling overwhelmed by its accuracy (Bhandari & Bimo 2022; Schellewald 2022), content creators demonstrate a greater sense of agency. They actively engage with the algorithm, leveraging their understanding of its mechanics to enhance visibility and cultivate communities (Eslami et al. 2018; Simpson & Semaan 2021). However, even content creators express frustration with the algorithm's tendency to prioritize singular identities, potentially limiting the reach and impact of diverse voices and activism movements (Simpson & Semaan 2021; Devito 2022).

Interestingly, this heightened algorithmic awareness has led some TikTok users to develop a form of "algorithmic literacy" (Shin, Rasul & Fotiadis 2022, 1215). They create and share content that reflects their understanding of the algorithm's workings, demonstrating a level of agency and engagement that goes beyond passive consumption. This phenomenon highlights the dynamic and evolving relationship between users and algorithms on TikTok, where both sides are constantly adapting and responding to each other.

COMMONALITIES ACROSS PLATFORMS

The review highlights that users of Facebook, Instagram, and TikTok perceived the platforms' algorithms as an opaque and unpredictable system (Bucher 2017; Bhandari & Bimo 2022; Schellewald 2022) due to their limited understanding of how the algorithms curate and display what contents are available on their newsfeeds. They also perceived the algorithms as a manipulative and controlling system (Cotter 2019; O'Meara 2019; Cotter 2021) since they felt the algorithms' oppression of their online presence. More seriously, they thought that platform algorithms are a personalized but potentially restrictive system (Devito 2022) because users recognized the algorithms' attempt to provide them with a few similar content categories recurrently, probably based on their previous engagement, instead of the totality of available contents. As a result of these common imaginaries, users on the three social media platforms similarly experienced negative emotions such as confusion and uncertainty about how algorithms work, frustration and annoyance with content visibility and perceived manipulation, anxiety and powerlessness from lack of transparency and control, and privacy concerns regarding data collection and usage.

The emergence of these common imaginaries has prompted users across platforms to adopt various strategies to navigate their algorithmic experiences. They try to adjust settings, curate content strategically, and even participate in "engagement pods" to influence algorithmic visibility (Cotter 2019; Arriagada & Ibáñez 2020, O'Meara 2019, 6). Some users also made attempts to confront algorithmic control and privacy issues via online discussions and by adjusting their interactions with the platforms (Bucher 2017; Swart 2021). Through these user behaviors, folk theories about how algorithms work were developed and discussed not only within the platform where user imaginaries come to life but also across multiple platforms where these stories can be further nourished by the digital communities (Bishop 2019; Schellewald 2022). These commonalities across the three platforms underscore the need for a more user-centric approach to algorithmic design that prioritizes transparency, control, and privacy protection, ultimately leading to a more positive and empowering social media experience. This shall be further discussed in the next section.

DISCUSSION

The literature reviewed reveals a consistent pattern of negative emotional responses among Facebook, Instagram, and TikTok users when encountering and attempting to understand platform algorithms. This aligns with previous research documenting the contagious nature of negative feelings on social media and the potential for social media browsing to induce negative moods (Fardouly & Vartanian 2015; Yeo et al. 2020; Chawla & Mehrotra 2021; Steinert & Dennis 2022). The opacity of algorithmic mechanisms can create a double-negative experience of feeling, where users grapple not only with the emotional impact of content but also with anxieties stemming from the hidden processes behind its curation and delivery. The intensity and specific types of emotions, however, can vary among individuals, influenced by personal factors and experiences (Schellewald 2022; Valkenburg 2022). For instance, content creators, whose livelihoods depend heavily on algorithmic visibility may experience heightened anxiety and frustration compared to casual users.

This aligns with the uses and gratifications theory, which posits that users' emotional responses and behaviors are driven by their individual needs and goals within the platform's context.

The commonalities in user strategies across platforms, despite variations in specific algorithms, highlight the interplay between algorithmic imaginaries and algorithmic literacy (Shin, Rasul, & Fotiadis 2022). The adaptation of user behaviors in response to negative emotions can be seen as an attempt to regain a sense of control and agency within a technologically determined environment. The opaque nature of algorithms can foster a sense of powerlessness, as users perceive their experiences as being shaped by forces beyond their comprehension, aligning with the notion of technological determinism (McLuhan 1964). Users' efforts to adjust settings, curate content strategically, or participate in engagement pods can be interpreted as attempts to fulfill their needs and desires within the constraints of the algorithmic system, reflecting the principles of uses and gratifications theory.

The dynamic nature of platform algorithms further complicates the issue of algorithmic literacy. Even as users strive to become more informed, platforms continuously update and refine their algorithms, often without transparent communication. This constant evolution can lead to frustration and a perceived loss of control, reinforcing the power imbalance between platform designers and users, a key concern within critical theory and the political economy of communication (Mosco 2009). The black box nature of algorithms can perpetuate this power asymmetry, potentially leading to algorithmic bias and the marginalization of certain communities (Noble 2019).

Despite these challenges, users demonstrate agency by actively engaging with algorithms through various strategies. Sharing folk theories, adjusting interactions, and participating in online discussions can be seen as forms of participation and resistance within the platform's ecosystem, echoing the principles of participatory culture and produsage (Jenkins 2007; Bruns 2008). These actions highlight users' efforts to reclaim agency and shape their online experiences, even within the constraints of algorithmic systems.

The collective efforts to promote algorithmic literacy among the public underscore the importance of critical understanding and skills to navigate the digital landscape, aligning with media literacy and digital literacy theories (Livingstone 2004). However, as Schulz (2023) argues, algorithmic literacy for users alone may not be sufficient as there exists a reciprocal learning process between the algorithms and the users. In this process, while the designers can easily develop, test, and modify their algorithms from the data inputs from users' interactions on the platforms, the users' theorization of the algorithmic processes are never confirmed by any of the social platforms. Therefore, true empowerment requires not only user education but also greater transparency and control over the algorithms that shape their experiences. This calls for a shift in the power dynamics between platforms and users, advocating for more open and participatory algorithmic design processes. In the likelihood that the influence of an algorithm might not soon be made explicitly visible to users, they will inevitably continue adapting their behaviors to correspond with their algorithmic imaginaries, to accomplish their goals for using the system.

CONCLUSION

The study of algorithmic imaginaries on Facebook, Instagram, and TikTok reveals a shared perception among users of these systems as being opaque and unpredictable, manipulative and controlling, and personalized but potentially restrictive. Such algorithmic imaginaries often lead to negative emotional responses and prompts users to adopt various strategies in an attempt to reclaim agency over their digital interactions. The emphasis on negative feelings, while crucial, leaves a notable gap in understanding the potential positive effects of these imaginaries. As Bucher (2018) notes, algorithms can evoke a range of emotions, and neglecting the positive aspects limits our comprehension of their full impact. Positive emotions like joy, excitement, and contentment may play a pivotal role in user engagement and well-being on social media platforms. Research into how algorithms foster these positive emotions can offer valuable insights for platform developers and researchers alike. For instance, Kearns and Roth (2021) accentuate that understanding the impact of algorithmic design on user emotions could inform the development of more user-centric and enjoyable experiences. This points to future research directions that should place more emphasis on users' positive emotional responses, consider a wider range of users, and examine the intersectionality of user identities—including race, gender, and socioeconomic status—to understand how these aspects influence users' experiences and interpretations of algorithms.

Furthermore, understanding positive algorithmic imaginaries has broader social implications such as elucidating discussions on the ethical and responsible use of algorithms in shaping online experiences, and leading to innovative applications in fields like mental health and education (Head, Fister, & MacMillan 2020). Therefore, future research could explore the following questions: 1. How do positive emotional responses to algorithmic imaginaries influence user engagement and well-being on social media platforms? 2. To what extent do algorithmic literacy interventions empower users to navigate and manage their algorithmic experiences effectively? 3. How do the intersections of race, gender, and class shape users' algorithmic imaginaries and experiences on social media?

Besides the prevalent trend of negative emotions experienced by users, this study also identifies a distinct focus amongst the reviewed literature on different user types specific to each target platform: ordinary users on Facebook, content creators on Instagram, and activists on TikTok. This discrepancy may be attributed to platform-specific features and research biases. However, before drawing definitive conclusions, it is crucial to conduct further research that examines a wider range of users across all platforms in order to provide a more comprehensive understanding of how algorithmic imaginaries are shaped by diverse user experiences and motivations, rather than solely by platform characteristics or researcher interests.

Overall, the findings underscore the need for a more nuanced approach to fostering algorithmic literacy, one that extends beyond user education to include the designers and other parties involved in the backend. This means not only educating users but also advocating for greater transparency and user control in the design and operation of these algorithms. It is apparent that for users to truly navigate their online environments effectively, a collaborative effort is needed to demystify the algorithms at play.

REFERENCES

Arriagada, Arturo, & Francisco Ibáñez. 2020. "'You Need At Least One Picture Daily, If Not, You're Dead': Content Creators and Platform Evolution in the Social Media Ecology." *Social Media and Society* 6, no. 3: 1–12 https://doi.org/10.1177/2056305120944624.

Bellan, Rebecca. 2021. "Study Reveals Instagram Reels Better For Brands, TikTok Better For Influencers." *Forbes*, February 22, 2021. https://www.forbes.com/sites/rebeccabellan/2021/02/22/study-reveals-instagram-reels-better-for-brands-tiktok-better-for-influencers/?sh=7151d7106c08.

Bhandari, Aparajita, & Sara Bimo. 2022. "Why's Everyone on TikTok Now? The Algorithmized Self and the Future of Self-Making on Social Media." *Social Media and Society* 8, no. 1: 1–11. https://doi.org/10.1177/20563051221086241.

Bishop, Sophie. 2019. "Managing Visibility on YouTube through Algorithmic Gossip." *New Media and Society* 21, no: 11–12: 2589-2606. https://doi.org/10.1177/1461444819854731.

Brevini, Benedetta, & Frank Pasquale. 2020. "Revisiting the Black Box Society by Rethinking the Political Economy of Big Data." *Big Data and Society* 7, no. 2: 1–4. https://doi.org/10.1177/2053951720935146.

Bruns, Axel. 2008. *Blogs, Wikipedia, Second Life, and beyond: From production to produsage.* New York: Peter Lang.

Bucher, Taina. 2012. "Want to Be on the Top? Algorithmic Power and the Threat of Invisibility on Facebook." *New Media and Society* 14, no. 7: 1164–1180. https://doi.org/10.1177/1461444812440159.

Bucher, Tania. 2017. "The Algorithmic Imaginary: Exploring the Ordinary Affects of Facebook Algorithms." *Information Communication and Society* 20, no. 1: 30–44. https://doi.org/10.1080/1369118X.2016.1154086.

Bucher, Tania. 2019. "If...Then: Algorithmic Power and Politics". *Journal of Communication* 69, no. 3: E4–E6. https://doi.org/10.1093/oso/9780190493028.001.0001.

Büchi, Moritz, Eduard Fosch-Villaronga, Christoph Lutz, Aurelia Tamò-Larrieux & Shruthi Velidi. 2023. "Making Sense of Algorithmic Profiling: User Perceptions on Facebook." *Information Communication and Society* 26, no. 4: 809–825. https://doi.org/10.1080/1369118X.2021.1989011.

Chawla, Shivangi, & Monica Mehrotra. 2021. "Impact of Emotions in Social Media Content Diffusion." *Informatica (Slovenia)* 45, no. 6: 11–28. https://doi.org/10.31449/INF.V45I6.3575.

Cherry, Kendra. 2019. "The 6 Types of Basic Emotions and Their Effect on Human Behavior." *VeryWellMind*. https://www.verywellmind.com/an-overview-of-the-types-of-emotions-4163976.

Cotter, Kelley. 2019. "Playing the Visibility Game: How Digital Influencers and Algorithms Negotiate Influence on Instagram." *New Media and Society* 21, no. 4: 895–913. https://doi.org/10.1177/1461444818815684.

Cotter, Kelley. 2021. "'Shadowbanning Is Not a Thing': Black Box Gaslighting and the Power to Independently Know and Credibly Critique Algorithms." *Information Communication and Society*. https://doi.org/10.1080/1369118X.2021.1994624.

Devito, Michael Ann. 2022. "How Transfeminine TikTok Creators Navigate the Algorithmic Trap of Visibility Via Folk Theorization." *Proceedings of the ACM on Human-Computer Interaction* 6, no. CSCW2: 1–31. https://doi.org/10.1145/3555105.

Dolan, Raymond. 2002. "Emotion, Cognition, and Behavior." *Science* 298, no. 5596: 1191–1194. https://doi.org/10.1126/science.1076358.

Duffy, Brooke Erin, & Emily Hund. 2021. "Gendered Visibility on Social Media: Navigating Instagram's Authenticity Bind." In *Social Media & the Self: An Open Reader*. https://doi.org/10.32376/3f8575cb.3f03db0e.

Eslami, Motahhare, Karrie Karahalios, Christian Sandvig, Kristen Vaccaro, Aimee Rickman, Kevin Hamilton, & Alex Kirlik. 2016. "First I 'like' It, Then I Hide It: Folk Theories of Social Feeds." In *Conference on Human Factors in Computing Systems – Proceedings*. 2371–2382. https://doi.org/10.1145/2858036.2858494.

Eslami, Motahhare, Sneha R. Krishna Kumaran, Christian Sandvig, & Karrie Karahalios. 2018. "Communicating Algorithmic Process in Online Behavioral Advertising." In *Conference on Human Factors in Computing Systems – Proceedings*. 1–13. https://doi.org/10.1145/3173574.3174006.

Eslami, Motahhare, Aimee Rickman, Kristen Vaccaro, Amirhossein Aleyasen, Andy Vuong, Karrie Karahalios, Kevin Hamilton, & Christian Sandvig. 2015. "I Always Assumed That I Wasn't Really That Close to [Her]: Reasoning about Invisible Algorithms in News Feeds." In *Conference on Human Factors in Computing Systems – Proceedings*. 153–162. https://doi.org/10.1145/2702123.2702556.

Fardouly, Jasmine, & Lenny R. Vartanian. 2015. "Negative Comparisons about One's Appearance Mediate the Relationship between Facebook Usage and Body Image Concerns." *Body Image* 12 no. 1: 82–88. https://doi.org/10.1016/j.bodyim.2014.10.004.

Frels, Anthony J. Onwuegbuzie & Rebecca Frels. 2016. *7 Steps to a Comprehensive Literature Review: A Multimodal & Cultural Approach*. *SAGE Publications Ltd*.

Grimmelmann, James. 2009. "Saving Facebook." *Iowa Law Review*.

Hamin, Mehdi. 2023. "The Evolution of Social Media Algorithms: From Simplicity to Sophistication." LinkedIn. October 14, 2023. https://www.linkedin.com/pulse/evolution-social-media-algorithms-from-simplicity-mehdi-hasan/.

Head, Alison J, Barbara Fister, & Margy MacMillan. 2020. "Information Literacy in the Age of Algorithms: Student Experiences with News and Information, and the Need for Change." *Project Information Literacy*.

Herrman, John. 2019. "How TikTok Is Rewriting the World." *The New York Times*, March 10, 2019. https://www.nytimes.com/2019/03/10/style/what-is-tik-tok.html.

Hutchinson, Andrew. 2016. "Algorithm-Fuelled Timeline to Uncover Best Content." SocialMediaToday. March 15, 2016. https://www.socialmediatoday.com/social-networks/instagram-switching-algorithm-fuelled-timeline-uncover-best-

content#:~:text=Facebook%2C%20the%20leader%20of%20the,of%20EdgeRank%20back%20in%202009.

Jacobsen, Benjamin N. 2022. "Algorithms and the Narration of Past Selves." *Information Communication and Society* 25, no. 8: 1082–1097. https://doi.org/10.1080/1369118X.2020.1834603.

Jenkins, Henry. 2007. "Confronting the Challenges of Participatory Culture—Media Education for the 21st Century (Part Two)." *Nordic Journal of Digital Literacy* 2, no. 2: 97–113. https://doi.org/10.18261/issn1891-943x-2007-02-04.

Katz, Elihu, Jay G. Blumler, & Michael Gurevitch. 1973. "Uses and Gratifications Research." *Public Opinion Quarterly* 37, no. 4: 509–523. https://doi.org/10.1086/268109.

Kearns, Michael, & Aaron Roth. 2021. "The Ethical Algorithm: The Science of Socially Aware Algorithm Design." *Perspectives on Science and Christian Faith* 73, no. 1: 55–56. https://doi.org/10.56315/pscf3-21kearns.

Livingstone, Sonia. 2004. "Media Literacy and the Challenge of New Information and Communication Technologies." *Communication Review* 7, no. 1: 3–14. https://doi.org/10.1080/10714420490280152.

McLuhan, Marshall. 1964. *The Extensions Of Man. Understanding Media.*

Mosco, Vincent. 2009. "The Political Economy of Communication: A Living Tradition." *Media Asia* 36, no. 3: 146–155. https://doi.org/10.1080/23776277.2009.12224389.

Nadkarni, Ashwini, & Stefan G. Hofmann. 2012. "Why Do People Use Facebook?" *Personality and Individual Differences* 52, no. 3: 243–249. https://doi.org/10.1016/j.paid.2011.11.007.

Noble, Safiya Umoja. 2019. *Algorithms of Oppression. Algorithms of Oppression.* https://doi.org/10.2307/j.ctt1pwt9w5.

Olhede, Sofia, & Wolfe Patrick. 2018. "The Growing Ubiquity of Algorithms in Society: Implications, Impacts and Innovations." *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 376, no. 2128: 1–16. https://doi.org/10.1098/rsta.2017.0364.

O'Meara, Victoria. 2019. "Weapons of the Chic: Instagram Influencer Engagement Pods as Practices of Resistance to Instagram Platform Labor." *Social Media and Society* 5, no. 4: 1–11. https://doi.org/10.1177/2056305119879671.

Petre, Caitlin, Brooke Erin Duffy, & Emily Hund. 2019. "'Gaming the System': Platform Paternalism and the Politics of Algorithmic Visibility." *Social Media and Society* 5, no. 4: 1–12. https://doi.org/10.1177/2056305119879995.

Schellewald, Andreas. 2022. "Theorizing 'Stories About Algorithms' as a Mechanism in the Formation and Maintenance of Algorithmic Imaginaries." *Social Media and Society* 8, no. 1: 1–10. https://doi.org/10.1177/20563051221077025.

Schulz, Christian. 2023. "A New Algorithmic Imaginary." *Media, Culture and Society* 45, no. 3: 646–655. https://doi.org/10.1177/01634437221136014.

Schwartz, Sander Andreas, & Martina Skrubbeltrang Mahnke. 2021. "Facebook Use as a Communicative Relation: Exploring the Relation between Facebook Users and the

Algorithmic News Feed." *Information Communication and Society* 24, no. 7: 1041–1056. https://doi.org/10.1080/1369118X.2020.1718179.

Shin, Donghee, Azmat Rasul, & Anestis Fotiadis. 2022. "Why Am I Seeing This? Deconstructing Algorithm Literacy through the Lens of Users." *Internet Research* 32, no. 4: 1214–1234. https://doi.org/10.1108/INTR-02-2021-0087.

Simpson, Ellen, & Bryan Semaan. 2021. "For You, or For"You"?: Everyday LGBTQ+ Encounters with TikTok." *Proceedings of the ACM on Human-Computer Interaction* 4, no. CSCW3: 1–34. https://doi.org/10.1145/3432951.

Statista Research Department. 2023. "Most Popular Social Networks Worldwide as of October 2023, Ranked by Number of Monthly Active Users." *Statista*. https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/.

Steinert, Steffen, & Matthew James Dennis. 2022. "Emotions and Digital Well-Being: On Social Media's Emotional Affordances." *Philosophy and Technology* 35, no. 2: 1–21. https://doi.org/10.1007/s13347-022-00530-6.

Swart, Joëlle. 2021. "Experiencing Algorithms: How Young People Understand, Feel About, and Engage With Algorithmic News Selection on Social Media." *Social Media and Society* 7, no. 2: 1–11. https://doi.org/10.1177/20563051211008828.

Valkenburg, Patti M. 2022. "Theoretical Foundations of Social Media Uses and Effects." In *Handbook of Adolescent Digital Media Use and Mental Health*. 39–60. https://doi.org/10.1017/9781108976237.004.

Yeo, Su Lin, Augustine Pang, Michelle Cheong, & Jerome Quincy Yeo. 2020. "Emotions in Social Media: An Analysis of Tweet Responses to MH370 Search Suspension Announcement." *International Journal of Business Communication* 57, no. 2: 194–211. https://doi.org/10.1177/2329488419882755.

Zeng, Jing, & D. Bondy Valdovinos Kaye. 2022. "From Content Moderation to Visibility Moderation: A Case Study of Platform Governance on TikTok." *Policy and Internet* 14, no. 1: 79–95. https://doi.org/10.1002/poi3.287.

ABOUT THE AUTHORS

NGOC-CHAU PHAM is a full-time lecturer of the Department of Media and Communication at Swinburne Vietnam, an Alliance Program with FPT Education. He holds an MA in Communication Arts from Bangkok University, Thailand and an MA in TESOL from The University of Melbourne, Australia. His research interests include curriculum development, quality assurance, identities and representations on social media, algorithmic imaginary and algorithmic literacy.
Email: cnpham@swin.edu.au

LAN-CHI NGUYEN is a full-time lecturer in the Department of Media and Communication at Swinburne Vietnam, an Alliance Program with FPT Education. She graduated from RMIT University with a BA in Professional Communication, and later pursued her MA degree in Media Arts Cultures at IMC University of Applied Sciences in Krems (Austria), Aalborg University (Denmark), and University of Lodz (Poland) under the Erasmus+ program. Her research interest lies in audience experience, specifically with social media platforms, pop culture, and new media art forms in Vietnam.
Email: lanchinguyen@swin.edu.au

‘Taming’ Generative AI at Work: Balancing Technological Promise with Professional Values

MARTINA SKRUBBELTRANG MAHNKE
University of Roskilde, Denmark

ABSTRACT
Drawing on domestication theory, the overall aim of this study is to examine how users ‘tame’ generative AI (GenAI) in professional contexts. Domestication theory perceives ‘new’ technologies, such as GenAI, as comparatively wild, unpredictable, perplexing, or somewhat troublesome. Consequently, it is not just a matter of how these technologies are employed in the most effective way but, more importantly, how users tame them for their specific needs and purposes. The analysis focuses specifically on the ambiguities, negotiations, and contradictions that shape the multifaceted processes of adopting GenAI in professional contexts. The empirical material, consisting of a survey, qualitative interviews, and notes from on-site visits, was gathered in Southeast Asia in close collaboration with a non-profit organization operating in the Mekong Delta. The thematic analysis illustrates how employees carefully balance technological promise with professional values when ‘taming’ GenAI for professional purposes. In essence, the study discusses the potential implications of GenAI for organizations and advocates for the development of employee-centered guidelines that align with the organization’s mission and accommodate diverse user practices.

Keywords: domestication theory, generative AI, intelligent technologies, professional contexts, technology adoption, thematic analysis

INTRODUCTION

Generative AI (GenAI) is growing in popularity, and professionals have started to 'tame' this 'wild' technology for professional purposes. At its core, GenAI combines models of machine learning, natural language processing, and artificial intelligence, offering users an intelligent platform that can facilitate human-like communication processes. Allowing users to communicate *with* the platform is what distinguishes GenAI from other digital applications. 'Taming GenAI' then refers to a multifaceted process shaped by this user-GenAI communication, where users need to navigate the GenAI's intricate socio-technical complexities and entanglements. Examining GenAI through the lens of domestication theory allows for an exploration of the ambiguous, often contradicting dynamics and dilemmas that affect the adoption and utilization of GenAI in professional workflows and practices.

The development of intelligent chatbots, such as ChatGPT, has started to challenge the dominant anthropocentric paradigm within communication studies and has prompted a variety of theoretical, conceptual, and philosophical discussions (Guzman & Lewis 2020; Bailey and Barley 2020; Lindgren 2023). Central to these discussions are explorations of the blurring boundaries between humans and machines (Gill 2016; Gunkel 2017; Dignum 2022) as well as their ethical and societal implications (Ananny 2016; Hagerty & Rubinov 2019; Campolo & Crawford 2020; Hagendorff 2020; Crawford 2021). In organizational contexts, empirical studies have started to examine the role of AI in relation to arising strategic opportunities and challenges (Zerfass et al. 2020; Sestino & De Mauro 2022) as well as AI's impact on business communication (Getchell et al. 2022). Scholarly discussions surrounding AI in general and GenAI more specifically are primarily theoretical in nature, and little attention has been paid to communication and AI practices in organizational contexts (Gulbrandsen & Just 2023).

The aim of this study is, therefore, to contribute to the academic discourse on the topic at hand with a nuanced empirical examination of the following research question: *How do employees adopt GenAI for professional purposes?* The process of data collection took place in a non-profit organization (NGO) operating in a Southeast Asian context, more specifically in the city of Chiang Mai (the second largest city in Thailand), and the Mekong Delta. The region's distinct blend of traditions and languages, combined with an easily accessible digital infrastructure, creates a socio-economically attractive environment for organizations and thus makes it a valuable research environment. Overall, the study aims to make research-based recommendations to organizational management on how to integrate GenAI tools meaningfully in a professional context. In conclusion, the study advocates for the development of employee-centered guidelines that align with the organization's mission and accommodate diverse user practices.

FROM ELIZA TO CHATGPT: AI RESEARCH AND PRACTICE

In recent years, AI applications have become ubiquitous, and lately, a variety of GenAI applications have started to penetrate the market. To systematize the field, AI applications have been defined along the lines of narrow or weak, generative, and general AI (ISO, n.d.). In contrast to previous AI applications, generative AI focuses on the generation of new content rather than solely evaluating existing data. The currently most well-known GenAI application is ChatGPT; however, others are

equally used, e.g., Gemini (Google), Copilot (Microsoft), Grammarly, and Quillbot. One of the earliest applications to be able to 'communicate' was ELIZA, a natural language processing computer program that was designed to respond like a Rogerian psychotherapist. Computer scientist Joseph Weizenbaum developed the application at MIT in the late 1960s, and it marked a significant step towards creating programs that allowed for conversations between humans and machines (Weizenbaum 1966). Prior to ELIZA, Alan Turing's famous imitation game, also known as the Turing test, laid the theoretical groundwork for human-machine communication (Turing 1950). His thought experiment led to a shift of focus from the question *"can machines think?"* towards the conditions under which machines are able to exhibit intelligent behavior in the form of communicating with humans.

With the emergence of GenAI, questions regarding machine intelligence have gained new relevance, especially in the social sciences and humanities, where societal and ethical implications are critically scrutinized (Gill 2016). Almost three decades of critical research on discriminatory and unintended outcomes have led social scientists and humanities scholars to reject the idea of technology as being neutral. Instead, focus is put on the inherent biases, assumptions, and values that are embedded in technology (Friedman & Nissenbaum 1996; Nissenbaum 2001; boyd & Crawford 2012; Crawford & Calo 2016; Crawford 2021; Lindgren 2023) as well as questions of infrastructural power (Van Dijck et al. 2018).

Following the extensive research on the structural properties of intelligent communication technologies, empirical research has started to focus on the substantial role and agency of the user (Mathieu & Pruulmann-Vengerfeldt; 2020 Pruulmann-Vengerfeldt and zu Hörste 2020). Especially research in the field of audience and user studies has started to examine the multiple forms of user agency with regards to how users decode (Swart 2021), make sense of (Bucher & Helmond 2018), and avoid and/or resist algorithms and AI-driven platforms (Bonini and Treré 2024). These studies have brought attention to the user's active role in adopting intelligent technologies. Further, they have shown how users' reflective engagement with technology shapes and reshapes technological structure(s) as well as professional practices (Mathieu et al. 2022). AI is thus not only shaped by its underlying models and technical infrastructure but also by the interpretations and practices of its users.

GENAI AS A "COMMUNICATIVE OTHER"

The young research field of human-machine communication (HMC) has argued that the human-centric communication paradigm is being challenged by the widespread adoption of intelligent technologies (Guzman 2018). Already a decade ago, Gunkel (2012) put forward the notion of an intelligent machine as a "communicative other" (22). This notion moves away from the traditional understanding of communication technologies as means of transmitting or mediating information and moves towards the idea of intelligent technology as an interlocutor that is designed to participate in human communication. Following this, GenAI, in the scope of this study, is conceptualized as a communicative agent, taking part in shaping and redefining communicative processes. In the process of human-GenAI communication, users are generally viewed as agentic, that is, capable of refining and customizing outcomes to align with their specific needs. Analyzing

GenAI as a communicative other from a user's perspective provides insights into the evolving socio-technical dynamics emerging and thus shaping organizational contexts.

DOMESTICATING GENAI AT WORK

Domestication theory provides a valuable theoretical lens through which to examine GenAI in professional contexts, as it allows for a focus on the user while simultaneously highlighting socio-technical and contextual factors. In the social studies of technology, the theory of domestication holds significant importance, even though its application and interpretations differ. The starting point for domestication theory is the exploration of processes regarding the 'taming' of new technologies, which are often perceived as wild, unpredictable, perplexing, or somewhat troublesome. New technology is, hence, not solely a tool to be used efficiently but something that needs to be actively appropriated by the user. In other words, users need to adopt the technology and, furthermore, integrate it into their daily routines, which is a complex process. Today, for example, we might perceive the electrical toothbrush as normal and common. However, when it first was introduced, this very technology needed to be tamed by its users in order to become an accepted and integrated part of daily oral hygiene routines (Carter, Green, & Thorogood 2013).

Domestication theory's central concepts of appropriation, objectification, incorporation, and conversion were originally formulated in a household context (Silverstone & Hirsch 1992); since then, however, they have been used and transformed in a variety of ways (Haddon 2006). The concept of appropriation refers to the process where a technology is selected and starts to be incorporated into everyday practices. This involves making choices about how to use the technology, for what purpose, and how to tweak and tune it for personal needs. In the objectification stage, the technology is being integrated and normalized through habitual use. This is followed by an incorporation phase, where the technology becomes embedded in the cultural and social context. The final stage of conversion refers to the overall transformational impact of the specific technology in a broader societal context. It is important to note that technology appropriation is not a linear but a complex and intertwined process (Silverstone et al. 1992).

In this study, the focus lies especially on the initial stage of appropriation, that is, how users 'tame' the 'wild' technology of GenAI for professional purposes. A specific interest lies in empirically carving out the ambiguities and contradictions users need to negotiate when aiming to adopt the technology. GenAI can be described as 'wild' because of its unique capacity to generate human-like communication, thus challenging communication processes in professional workflows and organizational routines. Even though the study takes place in a professional environment, it is important to acknowledge that professional and personal contexts are inextricably linked (Haddon 2006). Adopting a domestication perspective allows, hence, a nuanced understanding of the processes by which GenAI is appropriated from an employee's point of view.

To summarize, the notion of taming GenAI refers to a multifaceted socio-technical process shaped by human-machine communication. Users may exert control and mastery over the technology, thus shaping, tweaking, and tuning GenAI to fit their specific needs and preferences. This may involve customizing prompts or adapting workflows to optimize GenAI utilization in a specific context. Additionally, GenAI adoption processes are likely to be influenced by users' prior

experiences, expectations, and cultural norms surrounding artificial intelligence and automation in the workplace (Ashri 2019).

METHODS

The empirical analysis is based on data collected in spring and summer 2023, including a survey, fourteen semi-structured interviews, and notes from informal on- and off-site meetings. The analysis draws on data collected as part of a broader research project on the use of generative AI in a professional context. Portions of the data material, including selected quotes and examples, are also analyzed in Mahnke and Bagger (2024). The data was collected in close collaboration with a non-profit organization headquartered in Chiang Mai, Thailand. The organization works primarily in the Mekong Delta. They chose to build their main offices in Chiang Mai because of its centrality and reputation as a digital hub in the ASEAN region. Thailand is known for its robust digital infrastructure combined with relatively low living costs, which creates an attractive environment for a diverse range of international organizations. The organization was chosen as a research site because of its diverse international setting, reflected in the workforce of more than seventy individuals representing various cultural backgrounds and a variety of projects based in Southeast Asia, while also maintaining strong connections to Europe.

The different methods for data collection were chosen to allow for a comprehensive understanding of GenAI taming processes. At first, a survey with twelve questions asking for overall user practices and experiences was distributed amongst the seventy professionals working in the organization. Sixty employees returned the completed survey, yielding an 86 percent response rate. Descriptive statistics were used to analyze the closed questions, and the open-ended questions were analyzed thematically. The survey results were then used to sample interview participants. The sampling procedure followed a deliberate sampling strategy, as described by Cresswell and Poth (2017). The following factors were used to choose interview participants: 1) work tasks; 2) seniority; and 3) experience with GenAI. The criterion "experience" was divided into five categories, ranging from "extremely familiar" to "not familiar at all". "Seniority" comprised shorter work contracts (less than a year), middle-range work contracts (between one and three years), and long-term work contracts (more than five years of employment). The "work tasks" criterion concentrated on the daily work tasks. Aside from the survey and interviews, informal on- and off-site meetings were carried out. The primary purpose of those meetings was to talk informally, build closer relationships, and create a better understanding of the context and everyday work conditions.

A total of fourteen qualitative interviews were conducted. The semi-structured interview guidelines included a range of topics, from daily user practices to the implications for professional tasks. Domestication theory views non-use as a deliberate decision, and therefore, two interviews with non-users were conducted as well. These allowed insights into the reasons why GenAI was either rejected or not used. The duration of the interviews ranged from twenty minutes to one hour. All of them were recorded, made anonymous, transcribed, and edited for readability. Each interview was coded thematically (Brinkmann & Kvale 2014) in several iterative steps until data saturation was archived (Alvesson & Kärreman 2007; Brinkmann 2014).

Because GenAI is at the core of this study, an experiment with ChatGPT for interview coding was conducted in addition to the manual (human) coding. Following the instructions from a YouTube tutorial (Kriukow, 2023), different prompts were developed for ChatGPT-4 to provide codes and theme suggestions for parts of the interview material. The interview material that was used in ChatGPT-4 was carefully selected to ensure compliance with ethical research standards and to avoid compromising interview participant data. At the end of the experiment, it was concluded that the output was too generic and unsuitable for the analysis. Therefore, no AI-generated codes were included in the analysis. Nevertheless, the experiment contributed to a deeper and more nuanced understanding of the material because it allowed for comparing and questioning ChatGPT's output and the human analysis.

EMPIRICAL ANALYSIS: TECHNOLOGICAL PROMISE AND PROFESSIONAL VALUES

The following analysis delves deeper into professionals' adoption processes of GenAI for professional purposes. The thematic analysis focuses specifically on the ambiguities, contradictions, and negotiation processes that occur in relation to the adoption process. As a conclusion to the analysis, it can be stated that professionals need to carefully balance technological promise with professional values. In the organizational context, GenAI applications were generally welcomed and approached optimistically. However, sooner than later professionals find themselves in a conundrum where it becomes their task to tame GenAI, that is, to balance the potential offered by the technology with their professional values and beliefs. Especially in an organizational context where guidelines and regulations are yet to be implemented, a heightened sense of responsibility is put on the individual employee, calling for careful strategies and appropriate responses.

In the following section, the empirical analysis is presented, starting with a description of the survey results. They serve as a backdrop for the subsequent thematic analysis, which delves deeper into the interview data by outlining the three major themes that arose during the coding process.

Opportunities and challenges

The use of GenAI is widespread in the examined organization; almost all employees (90%) have interacted with GenAI to at least some degree. Eleven percent of the respondents stated that they were very familiar with GenAI, 25% said that they were somewhat familiar, 28.3% said they had played around with it, and 35% said that they had heard about it. 35% of the respondents said they have tried GenAI but found its use of no particular value. When considering specific tools, Grammarly and ChatGPT are the most popular ones, followed by Quillbot and Google's Bard (now Gemini). When asked about the effectiveness of these tools, 51.7% stated that they enhance their work to a certain degree. Most employees are generally optimistic about the impact GenAI can have on the organization. Several employees stated that GenAI could serve as an asset in enhancing translations and report writing. However, there was also a clear consensus amongst the employees that GenAI requires clear guidelines. Despite the evident enthusiasm, some respondents expressed feelings of resistance, pressure, or even fear. One stated, "I think we should be careful with blindly using AI tools (...) would be a pity if we lost the skills writing our own reports". Another concern is

the authenticity and reliability of the information. While most respondents see GenAI as a valuable tool for suggestions and ideas, it is acknowledged that "not all the AI suggestions will be relevant". In conclusion, the results of the survey show that GenAI is widely used within the organization and, further, that employees are aware of its opportunities and challenges. Against this backdrop, the qualitative thematic analysis is presented below, starting with the first identified theme, which is termed *finding comfort and professional confidence*.

Finding comfort and professional confidence

As the survey data shows, GenAI is adopted for various purposes, and the following qualitative analysis will nuance and detail the results further. Some of the most prevalent applications are the use of GenAI as a language assistant, a content producer, and an idea generator. Current research has also outlined this as the main benefits of GenAI (Farrokhnia et al. 2024). Most of the informants use GenAI to refine their English, from simple text corrections to the creation of more sophisticated texts and reports. There was a consensus amongst the respondents that GenAI helps to produce texts and often serves as a good starting point, especially when tasks are repetitive. For example, when forms need to be filled out or standard reports need to be written.

One of the informants, June, a young woman overseeing different projects, uses GenAI primarily for writing emails, informal or formal ones, and as an assistant for creating texts for different purposes. She is especially excited about how promptly she receives answers and feels that GenAI makes written communication much easier and faster. Throughout the interview material, the use of GenAI as a language assistant is dominant. This may be less surprising, because English is the organization's corporate language but not the native language of many of the employees. What is perhaps more surprising is the level of comfort and self-assurance that some employees gain from using GenAI. Several informants mentioned that using GenAI increases their professional confidence significantly. June, the young woman mentioned above, states:

> I am not fully confident after I write something. And when I want to have a sentence like for example, that is what I try to, I copy and paste into AI and ask them, ask AI to write in the most like formal way or familiar way and things like that. And the I see and compare with my original writing and their [AIs] writing and then, yeah, and then I finalize things. (June)

For many of the interviewees, it is very important to portray English at a high level, and GenAI appears to be the ideal tool for achieving this. Differences in language proficiency are inevitable due to the organization's international and culturally diverse background. Especially employees with lower English proficiency reported using GenAI as a professional translation and text creation tool. In relation to this, it is important to mention that AI-generated text is rarely copied and pasted the way it is. Typically, it is tweaked and tuned several times.

When asked about the difference GenAI makes when used for communication purposes, most interviewees reported that they felt that using GenAI led to a better understanding between the different partners involved in the communication processes. Another young female employee,

Flora, talks about her lack of educational background in English as a second language and how she has been using GenAI to train her English skills. She uses her technical background to get useful results from GenAI, constantly crosschecking, tweaking, and revising her prompts to receive the best possible output.

More than just a tool

The second theme becoming evident in the analysis is termed *more than just a tool.* It relates primarily to employees' sense-making processes and conceptualizations of GenAI. Even though employees may start by utilizing GenAI as a tool for simpler text tasks, the analysis shows that, over time, GenAI becomes more than just a tool. Many describe GenAI as "simple" in the sense that it is a simple tool to use. Furthermore, it is "helpful" and "for free", meaning the employees do not have to pay for using it. Interviewees also describe GenAI in more metaphorical and philosophical terms, such as "magic", "amazing", and "a conversation partner". June, introduced above, values the fact that GenAI offers suggestions, encouragement, and positive energy. While she also likes to talk to her friends and colleagues, she describes the advantage of GenAI as "I can use it when I want to use it."

Another informant, Peter, who is primarily working at the intersection of finance and communication, describes GenAI as a "knowable assistant". Peter's tasks include answering all financial supporters and donors with a personal letter. While he generally enjoys this task, he also felt like he was reaching personal limits. Sometimes he felt his writing lacked empathy, and other times he felt like it was too repetitive, especially when he was communicating with the same donor over longer periods of time. After hearing about the new technology from a colleague, he tried it for himself:

> After trying it out, I realized it's particularly useful for our emails to donors. It provides good input, offers inspiration, and serves as a template for what to write. Eventually, I run out of ideas too. I tend to get stuck in my patterns of speech and thought, often writing the same things or variations of them. Especially when communicating frequently with donors, it's been a great option. (Peter)

In the beginning, he used GenAI primarily for translations, and later, he started to use it for creating text templates, which also shows the progression in the 'taming' process. In general, he feels a certain relief from getting new and diverse inputs from GenAI as a creator and idea-giver. Peter's description of GenAI mirrors several other employees' experiences with the technology. Many of them talk about how they turn to GenAI when they want to improve their work but cannot find the capacity within the organization.

Negotiating uncertainty and risks

The third theme, which is termed *negotiating uncertainty and risks,* points to the intricate dilemmas, concerns, and challenges arising through GenAI use in professional contexts. All employees acknowledged inherent risks and tried to find ways of negotiating them in order to generate the

best possible outcomes. Some spent time cross-checking and tweaking the outcome; others, like Flora, whom we introduced above, point towards the significance of precise and detailed input. Due to her technical background, she is aware of the risk that imprecise prompts may potentially lead to ambiguous outputs with low quality:

> And you would say that maybe there is some of the risk that the input isn't precise enough, isn't good enough in a way, ok? But it is the input that is not clear. The command of the things that you want to do is not clear. Also the output cannot be, I mean, it can be a risk to just like copy and paste and then I send it. Is this the real meaning? Like is this the real message that I want to get or maybe I want to change some words because I have the output. And then I say ok, this makes sense. So maybe I will use another word. It's not only like copy and paste. In each stage at each step, you need to be very critical to reduce this kind of risks. (Flora)

During the interviews, employees often go back and forth between the machine's output and their own (human) interpretations. At the receiving end, some interviewees have thus begun to question whether certain pieces of communication were generated by GenAI or not. Another employee states critically: "People use it [GenAI] too much. I think we don't use our own idea and our own thoughts and our, we couldn't afford our, how should I say ... just like we use everything from AI and ChatGPT" (Chang).

During the analysis, a nuanced interplay between cultural backgrounds and the adoption of GenAI emerged. While all participants had engaged with GenAI in one way or another, their experiences and openness varied significantly. While some employees refused to use GenAI because they anticipated a high risk of compromising personal data, others were extremely enthusiastic about the technology. They were quick to integrate the technology into their everyday work. This shows not only the intricate negotiations that organizational employees engage in while integrating GenAI into their work practices, but it also reflects the cultural and personal nuances that influence these negotiations.

DISCUSSION: GENAI AND HUMAN AGENCY

The analysis shows how GenAI is being adopted for contemporary work routines and practices. As mentioned in the theoretical section, adoption processes are complex, prompting employees to tame GenAI—that is, making the technology work for their needs and purposes. The analysis shows that GenAI has been adopted in various ways, ranging from using it as a basic text tool to a conversation partner. The wide-ranging adoption of GenAI in professional contexts raises questions of human and technological agency as well as how organizational contexts are shaped and reshaped through employees' adoption of GenAI.

Human agency refers to the capacity of individuals to act and reflect upon their use (de Certeau 1984; Giddens 1984). The adoption of GenAI is challenging users' prior conceptualizations of what technology is capable of and useful for. Employees using GenAI to produce texts might start relying on it to an extent where they feel like losing their own voice. Particularly in the context of this study

in Southeast Asia, the correlation between limited English proficiency and increased reliance on these tools has become evident. This highlights a critical tension: while GenAI enhances employees' work, it also impacts their sense of ownership regarding the very same work. The integration of GenAI tools into everyday work processes thus calls for a deeper evaluation of the organizational contexts and frameworks in which these tools are adopted. This further underscores the importance of considering the broader socio-cultural context in which GenAI adoption occurs, as well as the ethical questions involved. Issues such as transparency, accountability, and the potential for bias in AI-generated content become increasingly relevant as GenAI becomes more deeply embedded in daily work practices. Organizations need to openly address these challenges to ensure that the adoption of GenAI technologies does not diminish human communication processes and, thus, human agency.

While the agency of GenAI is not to be equated with that of human actors, it becomes clear that the sophisticated output generated through GenAI compels, or, as Gunkel (2012) puts it, "calls upon" employees and "requires an appropriate response" (21). Employees are called upon to adopt GenAI in ways that go beyond traditional technology-as-a-tool conceptualizations, and by doing so, professional practices and routines gradually change. New norms are introduced incrementally through the employee's mundane, everyday use. A way to study this further is, as Lomborg, Kaun, and Scott Hansen (2023) suggest, to "highlight ground up experiences and practices relating to technologies while taking into account the specific context within which they emerge" (12). This is especially valuable as GenAI is not exclusively used for professional purposes but also spans across the personal sphere. The examination of employees' ground-up experiences can contribute towards a better understanding of the nuanced ways in which GenAI influences both work and personal life. Furthermore, it allows us to study the subtle shift in norms and practices that occur as employees not only start to adopt GenAI but appropriate them over time.

CONCLUSION

This study examined professionals' taming processes of GenAI. It focused especially on contradictions, ambiguities, and negotiating processes. A significant empirical observation is that GenAI has become an integral part of professionals' everyday work routines and practices. However, the empirical analysis also showed that the adoption of GenAI is still in a trial-and-error phase: employees are currently exploring opportunities and potential challenges. The ubiquitous use of GenAI in organizational contexts signifies a transformational phase in organizational processes. Based on the theoretical discussion and empirical analysis, it can be concluded that GenAI influences and modifies the work practices of employees incrementally and, consequently, has an impact on the organizational context as well as the organization itself. The long-term impact of GenAI adoption on organizations remains to be seen and needs further research.

At present, it is recommendable for organizations to formulate explicit, transparent, and meaningful guidelines regarding the use of GenAI to preserve the organization's mission. Meaningful policies will allow employees to use GenAI with ease, which, in turn, will improve trust, productivity, and legal compliance. According to the study's findings, most employees see GenAI as having the potential to enhance productivity, which is one of the primary reasons they began to

adopt it. Understanding the strategies used can provide organizations with a strategic advantage, as employees' firsthand experiences can illuminate benefits and challenges.

Taking this a step further, this study advocates that organizations start to generate user-centered guidelines. That is, guidelines that prioritize the needs and experiences of the employees, ensuring that the utilization of GenAI aligns closely with the organization's mission and serves employees' expectations and requirements. By embracing a user-centric approach, organizations can provide a framework that empowers employees, enabling them to use GenAI meaningfully and to the advantage of the organization.

ACKNOWLEDGEMENTS

The author would like to express gratitude to the employees of the NGO for their openness and responsiveness. A sincere appreciation goes further to the NGO's management team for their willingness to participate in this study.

FUNDING

This study was funded by THE VELUX FOUNDATION, Grant No. 38916.

REFERENCES

Alvesson, Mats, and Dan Kärreman. 2007. "Constructing Mystery: Empirical Matters in Theory Development." *Academy of Management Review* 32, no. 4: 1265–1281. https://doi.org/10.5465/amr.2007.26586822.

Ananny, Mike. 2016. "Toward an Ethics of Algorithms: Convening, Observation, Probability, and Timeliness." *Science, Technology & Human Values* 41, no. 1: 93–117. https://doi.org/10.1177/0162243915606523.

Ashri, Ronald. 2019. *The AI-Powered Workplace: How Artificial Intelligence, Data, and Messaging Platforms Are Defining the Future of Work*. Apress.

Bailey, Diane E., and Stephen R. Barley. 2020. "Beyond Design and Use: How Scholars Should Study Intelligent Technologies." *Information and Organization* 30, no. 2: 100286. https://doi.org/10.1016/j.infoandorg.2019.100286.

Bonini, Tiziano, and Emiliano Treré. 2024. *Algorithms of Resistance*. Cambridge, MA: MIT Press. https://mitpress.mit.edu/9780262547420/algorithms-of-resistance/.

boyd, danah, and Kate Crawford. 2012. "Critical Questions for Big Data: Provocations for a Cultural, Technological, and Scholarly Phenomenon." *Information, Communication & Society* 15, no. 5: 662–79. https://doi.org/10.1080/1369118X.2012.678878.

Brinkmann, Sven, and Steinar Kvale. 2014. *InterViews. Learning the Craft of Qualitative Research Interviewing*. 3rd ed. SAGE Publications. https://us.sagepub.com/en-us/nam/interviews/book239402.

Brinkmann, Svend. 2014. "Doing Without Data." *Qualitative Inquiry* 20, no. 6: 720–725. https://doi.org/10.1177/1077800414530254.

Bucher, Taina, and Anne Helmond. 2018. "The Affordances of Social Media Platforms." In *The SAGE Handbook of Social Media*, edited by Jean Burgess, A. Marwick, and T. Poell, 233–253. SAGE Publications. https://doi.org/10.4135/9781473984066.

Campolo, Alexander, and Kate Crawford. 2020. "Enchanted Determinism: Power without Responsibility in Artificial Intelligence." *Engaging Science, Technology, and Society* 6 (January):1–19. https://doi.org/10.17351/ests2020.277.

Carter, Simon, Judith Green, and Nicki Thorogood. 2013. "The Domestication of an Everyday Health Technology: A Case Study of Electric Toothbrushes." *Social Theory & Health : STH* 11 (November): 344–67. https://doi.org/10.1057/sth.2013.15.

Crawford, Kate. 2021. *Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence*. New Haven: Yale University Press.

Crawford, Kate, and Ryan Calo. 2016. "There Is a Blind Spot in AI Research." *Nature* 538 (7625): 311–13. https://doi.org/10.1038/538311a.

Cresswell, J. W., and Cheryl N. Poth. 2017. *Qualitative Inquiry and Research Design. Choosing Among Five Approaches*. 4th ed. SAGE Publications. https://us.sagepub.com/en-us/nam/qualitative-inquiry-and-research-design/book246896.

de Certeau, Michel. 1984. *The Practice of Everyday Life*. Berkeley: University of California Press.

Dignum, Virginia. 2022. "Relational Artificial Intelligence." arXiv. https://doi.org/10.48550/arXiv.2202.07446.

Farrokhnia, Mohammadreza, Seyyed Kazem Banihashem, Omid Noroozi, and Arjen Wals. 2024. "A SWOT Analysis of ChatGPT: Implications for Educational Practice and Research." *Innovations in Education and Teaching International* 61, no. 3: 460–474. https://doi.org/10.1080/14703297.2023.2195846.

Flensburg, S., and Lomborg, S. (2023). Datafication research: Mapping the field for a future agenda. *New Media & Society*, *25* (6), 1451–1469. https://doi.org/10.1177/14614448211046616.

Friedman, Batya, and Helen Nissenbaum. 1996. "Bias in Computer Systems." *ACM Transactions on Information Systems (TOIS)* 14, no. 3: 330–347.

Getchell, Kristen M., Stephen Carradini, Peter W. Cardon, Carolin Fleischmann, Haibing Ma, Jolanta Aritz, and James Stapp. 2022. "Artificial Intelligence in Business Communication: The Changing Landscape of Research and Teaching." *Business and Professional Communication Quarterly* 85, no. 1: 7–33. https://doi.org/10.1177/23294906221074311.

Giddens, Anthony. 1984. *The Constitution of Society: Outline of the Theory of Structuration*. Cambridge [Cambridgeshire]: Polity Press.

Gill, Karamjit S. 2016. "Artificial Super Intelligence: Beyond Rhetoric." *AI & SOCIETY* 31, no. 2: 137–143. https://doi.org/10.1007/s00146-016-0651-x.

Gulbrandsen, Ib T, and Sine N. Just. 2023. "Artificial Intelligence in Organizational Communication: Challenges, Opportunities, and Implications." In *Organizational Communication in the Digital Era*. edited by Martin N. Ndlela, 51–78. Palgrave Macmillan.

Gunkel, David J. 2012. "Communication and Artificial Intelligence: Opportunities and Challenges for the 21st Century." https://doi.org/10.7275/R5QJ7F7R.

Gunkel, David J. 2012. *The Machine Question. Critical Perspectives on AI, Robots, and Ethics.* Cambridge, MA: MIT Press. https://mitpress.mit.edu/9780262534635/the-machine-question/.

Guzman, Andrea L. (ed.). 2018. *Human-Machine Communication: Rethinking Communication, Technology and Ourselves*. Digital Formations. New York: Peter Lang.

Guzman, Andrea L, and Seth C Lewis. 2020. "Artificial Intelligence and Communication: A Human–Machine Communication Research Agenda." *New Media & Society* 22, no. 1: 70–86. https://doi.org/10.1177/1461444819858691.

Haddon, Leslie. 2006. "The Contribution of Domestication Research to In-Home Computing and Media Consumption." *The Information Society* 22, no. 4: 195–203. https://doi.org/10.1080/01972240600791325.

Hagendorff, Thilo. 2020. "The Ethics of AI Ethics: An Evaluation of Guidelines." *Minds and Machines* 30, no. 1: 99–120. https://doi.org/10.1007/s11023-020-09517-8.

Hagerty, Alexa, and Igor Rubinov. 2019. "Global AI Ethics: A Review of the Social Impacts and Ethical Implications of Artificial Intelligence." arXiv. https://doi.org/10.48550/arXiv.1907.07892.

ISO. n.d. "What Is Artificial Intelligence (AI)?" ISO. Accessed July 5, 2024. https://www.iso.org/cms/render/live/en/sites/isoorg/contents/news/insights/AI/what-is-ai-all-you-need-to-know.evergreen.html.

Lindgren, Simon. 2023. "Introducing Critical Studies of Artificial Intelligence." In *Handbook of Critical Studies of Artificial Intelligence*, edited by Simon Lindgren, 1–19. Edward Elgar Publishing. https://www.e-elgar.com/shop/gbp/handbook-of-critical-studies-of-artificial-intelligence-9781803928555.html.

Lomborg, Stine, Anne Kaun, and Sne Scott Hansen. 2023. "Automated Decision-Making: Toward a People-Centred Approach." *Sociology Compass* 17, no. 8: e13097, 1–15. https://doi.org/10.1111/soc4.13097.

Mahnke, M. S., & Bagger, C. (2024). Navigating platformized generative AI: Examining early adopters' experiences through the lens of data reflectivity. *Convergence*, (online first). https://doi.org/10.1177/13548565241300857.

Mathieu, David, Niklas Alexander Chimirri, Jelena Kleut, and Pille Pruulmann-Vengerfeldt. 2022. "Questioning the Business-Humanities Divide in Media Studies: A Reformulation of the Administrative-Critical Distinction in Stakeholder Collaboration." In *Business Meets the Humanities*. Routledge.

Mathieu, David, and Pille Pruulmann-Vengerfeldt. 2020. "The Data Loop of Media and Audience: How Audiences and Media Actors Make Datafication Work." *MedieKultur: Journal of Media and Communication Research* 36, no. 69: 116–138. https://doi.org/10.7146/mediekultur.v36i69.121178.

Nissenbaum, Helen. 2001. "How Computer Systems Embody Values." *Computer* 34, no. 3: 65–67 something wrong with the page numbers.

Pruulmann-Vengerfeldt, Pille, and Hanna Meyer zu Hörste. 2020. "Reimagining Audiences in the Age of Datafication." In *Reimagining Communication: Experience*, 179–94. London: Routledge.

https://www.taylorfrancis.com/chapters/edit/10.4324/9781351015356-11/reimagining-audiences-age-datafication-pille-pruulmann-vengerfeldt-hanna-meyer-zu-h%C3%B6rste.

Sestino, Andrea, and Andrea De Mauro. 2022. "Leveraging Artificial Intelligence in Business: Implications, Applications and Methods." *Technology Analysis & Strategic Management* 34, no. 1: 16–29. https://doi.org/10.1080/09537325.2021.1883583.

Silverstone, Roger, and Eric Hirsch (eds.). 1992. *Consuming Technologies: Media and Information in Domestic Spaces*. London: Routledge. https://doi.org/10.4324/9780203401491.

Silverstone, Roger, Eric Hirsch, and David Morley. 1992. "Information and Communication Technologies and the Moral Economy of the Household." In *Consuming Technologies*, 15–31. London: Routledge.

Swart, Joëlle. 2021. "Experiencing Algorithms: How Young People Understand, Feel About, and Engage With Algorithmic News Selection on Social Media." *Social Media + Society* 7, no. 2: 1. 205630512110088. https://doi.org/10.1177/20563051211008828.

Turing, Alan Mathison. 1950. "I.—Computing Machinery and Intelligence." *Mind* 59, no. 236: 433–460. https://doi.org/10.1093/mind/LIX.236.433.

Van Dijck, José, Thomas Poell, and Martijn de Waal. 2018. *The Platform Society: Public Values in a Connective World*. Oxford University Press.

Weizenbaum, Joseph. 1966. "ELIZA—a Computer Program for the Study of Natural Language Communication between Man and Machine." *Communications of the ACM* 9, no. 1: 36–45. https://doi.org/10.1145/365153.365168.

Zerfass, Ansgar, Jens Hagelstein, and Ralph Tench. 2020. "Artificial Intelligence in Communication Management: A Cross-National Study on Adoption and Knowledge, Impact, Challenges and Risks." *Journal of Communication Management* ahead-of-print (ahead-of-print). https://doi.org/10.1108/JCOM-10-2019-0137.

ABOUT THE AUTHOR

MARTINA SKRUBBELTRANG MAHNKE serves as an Associate Professor at the Faculty of Communication and Arts at Roskilde University, Denmark, and as a visiting associate professor at the School of Public Policy, Chiang Mai University, Thailand (2023–2024). Her research focuses on how developers and users (co-)create intelligent technologies and the implications for contemporary societies and the planet. Adopting a communication perspective, she has primarily written about the multifaceted socio-technical relationships on social media and eHealth platforms, and more recently, about the utilization of generative AI in a Southeast Asian context.
Email: mahnke@ruc.dk

The Roles of Media Literacy, Emotional Intelligence, and Digital Intelligence in Predicting Psychological Well-Being

SARAH LYNN ALIAH NOR ZAIDI
International Islamic University Malaysia

NOR DIANA MOHD MAHUDIN
International Islamic University Malaysia

ABSTRACT

As 21st-century lifestyles become more hyperconnected, digital intelligence will become critical to the success and well-being of people. However, most people may not adequately understand what digital intelligence really is or how it relates to media literacy, emotional intelligence, and psychological well-being. Furthermore, research on these variables is scarce in the Malaysian context despite the growing digital threats experienced by users. With a focus on young adults, the present study collected data from 168 participants who actively consume various types of digital media. Data were analysed using correlation and regression methods. Findings reveal that participants reported high media literacy, emotional intelligence, and digital intelligence but a moderate level of psychological well-being. Both media literacy and emotional intelligence are found to predict digital intelligence, suggesting that to be digitally intelligent, one must be media-literate and emotionally astute. Finally, the results show that emotional intelligence is the sole predictor of psychological well-being. The study is one of the growing efforts to contribute to the literature on the role of media literacy, emotional intelligence, and digital intelligence in predicting the psychological well-being of young adults. Overall, this study highlights that to improve psychological well-being, it is necessary to provide intervention programmes that can strengthen emotional intelligence without neglecting the importance of media literacy and digital intelligence education.

Keywords: digital intelligence, emotional intelligence, media literacy, psychological well-being

INTRODUCTION

Digital technology, well-being, and Malaysian students

Ever since digital technology was first introduced, it has been revolutionary as it aids our lives in more ways than one. However, despite its usefulness and diverse applications, this technology comes with its own set of risks, particularly those related to the four Cs, i.e., conduct, content, contact, and cyberscams (El Asam & Katz 2018, 281). Conduct risk involves high-risk acts such as online gambling, while content risk refers to exposure to harmful websites or media, including pornographic and manipulative contents. Contact risk involves predatory online relationships, such as blackmailing, whereas cyberscams involve threats to personal data, including identity fraud and the illegal use of digital information.

As people juggle the risks and benefits of digital technology, it is crucial that digital citizens be more aware of and take greater responsibility for what they consume online. One established approach to address this aspect calls for responsible digital behaviour and greater media literacy, such as making critically informed decisions and not taking information at face value, which, in turn, can prevent the consumption of harmful information (Bahramian et al. 2018, 1–2). Similarly, elements such as emotional intelligence (Audrin & Audrin 2023, 1–3) and digital intelligence (Na-Nan, Roopleam, & Wongsuwan 2019, 1466) are essential to cultivate safe online practices. These elements could pose as tools that people can utilise while actively using digital media and technology to help ensure their safety and well-being.

Well-being has been extensively studied due to its interchangeability with mental health (Liu et al. 2021, 2). Described as a positive and sustainable state that allows individuals, groups, and nations to thrive and flourish (Huppert, Bayliss, & Keverne 2004, 1331), well-being can include one's state of health (i.e., physical or physiological), state of happiness (i.e., mental or psychological), social elements (e.g., vitality and rewarding social relationships), and resilience (Huppert, Bayliss, and Keverne 2004, 1331; Alkire 2015, 7–13). In recent years, countries all over the world have placed more importance on citizens' well-being, as evident from the United Nation's Sustainable Development Goals, particularly the third goal that aims for good health and well-being of the citizens of the world (United Nations Sustainable Development Goals 2020).

Responding to the United Nation's call, the 12th Malaysia Plan from 2021 to 2025 emphasises Malaysians' well-being by listing it as one of the themes and an area of concern. The initiatives promised by the Malaysian government include a better healthcare system, an improvement of the housing situation among the low-income group, and the promotion of a healthy lifestyle (Malaysia Economic Planning Unit 2021). On the digital front, the country is undertaking strategic measures to counter cyber threats and increase cyber security awareness (Malaysia Cyber Security Strategy 2020). Since these plans are still in progress, their effectiveness cannot be ascertained as yet. However, the prospect seems fraught with ambiguities as the overall quality of well-being experienced by Malaysian citizens tends to vary from year to year. For example, the performance of the Malaysian Well-being Index (MyWI) showed a pattern of decline from 120.8 points in 2019 to 117.7 points in 2020, followed by a recovery with an increase from 118.3 points in 2021 to 121.2 points in 2022 (Department of Statistics Malaysia 2021, 2022[a]).

Concerns for citizens' well-being are justified, as reflected in a study by Kok and Low (2019, 102), where the researchers discovered that the well-being and mental health of Malaysian high school and university students, who will be the future citizens, leaders, and workers, are constantly at risk, with several factors coming into play. For instance, academic stress, relationships, and social, economic, or cultural changes have been found to be risk factors affecting Malaysian students' mental health and well-being (Kok & Low 2019, 106–108). Another risk factor for Malaysian students' well-being is Internet addiction, which is well on its way to being recognised as a public health issue due to the prevalence of cases it presents yearly (Omar et al. 2020, 201–203). Particularly alarming is the growing evidence of Internet overdependence as well as social media and Internet addiction among children, students, and young adults. In their review, Nik Jaafar et al. (2021) found that the prevalence rates of Internet overdependence range from 7.8 to 60.7% among youths from Malaysian universities, and factors such as age, gender, ethnicity, depression, anxiety, stress, and loneliness are associated with it (2).

Recent studies by Cheah et al. (2022, 15–17), Lee et al. (2023, 4–8), and Zakaria et al. (2023, 4–6) also show a high prevalence of social media and Internet addiction among students, and this addiction is associated with higher reports of depression, anxiety, and stress. Such addictions have become so pervasive to the point that students are showing serious signs like sleeping late due to using smartphones and getting angry when they are not allowed to use the gadgets (The Resource and Educational Technology Division of the Malaysia Education Ministry and CyberSecurity Malaysia 2022). All these studies and reports indicate that real threats are brewing in terms of Malaysian youths' well-being due to digital technology, social media, and Internet use.

Media literacy, emotional intelligence, and digital intelligence

Büchi (2024) suggested that online and digital practices could either cause harm or avail benefits, which, in turn, could either decrease or increase an individual's well-being (174–176). The question of which of these consequences is likely to occur is dependent on three personal variables: media literacy, emotional intelligence, and digital intelligence. Media literacy is a skill that allows users to navigate through various media contents and make critical appraisals between beneficial and harmful information to produce their own opinions and points of view (Pandian, Baboo, & Yi 2020, 351). It is often associated with fake news, digital fraud, and other digital threats, as researchers believe that possessing media literacy skills could help users to effectively appraise fake information and be responsible digital citizens (Bulger & Davison 2018, 7–15). Students and young adults are found to be more vulnerable to the risk factors posed by digital technology and the Internet, as they make up most media and Internet users (Dienlin & Johannes 2022, 137–138). It follows that increased media usage leads to increased exposure to digital threats. Hence, considering that excessive media use leads to lower levels of well-being, these digital threats to students and young adults should not be taken lightly.

Extant research has suggested that teaching and modelling media literacy should be paired with emotional intelligence so that people are able to connect, understand, and empathise with each other online. Emotional intelligence, defined as the ability to observe, label, distinguish, and correctly assess other people's as well as one's own emotions, and utilise these emotions to form

appropriate thoughts and behaviour (Srivastava 2013, 97), has been at the forefront of studies on well-being. It has been identified as a protective factor against mental health problems such as stress, anxiety, and depression, which directly affect the well-being of young people, especially those who may be more vulnerable to mental health risks (De la Barrera et al. 2023, 1–3). High emotional intelligence is also associated with increased positive affects (Loi et al. 2021, 94), lower perceived stress (Enns et al. 2018, 226), and better coping strategies (Morales-Rodriguez & Perez-Marmol 2019, 5–7).

Both media literacy and emotional intelligence are essential to digital intelligence. However, compared to the former variables, digital intelligence is a relatively new construct that was first introduced in 2004 (Stiakakis, Liapis, & Vlachopoulou 2019, 1–2). The IEEE 3527.1™ Standard for Digital Intelligence (DQ) released in 2021 defined it as the cumulation of technical, cognitive, meta-cognitive, and socio-emotional competencies grounded in universal moral values, which enable people to navigate and adapt to the ever-changing digital world. Inherent in this definition is that it involves both computational and methodical thinking, as well as digital practices and behaviour. Digital intelligence or digital quotient is often associated with other digital competence constructs, such as digital literacy, digital citizenship, and digital emotional intelligence (Stiakakis, Liapis, & Vlachopoulou 2019, 2–4; Na-Nan, Roopleam, & Wongsuwan 2019, 1466–1468). Yang (2022) suggested that media literacy and information literacy are related to digital intelligence in the workplace setting (30). Positive relationships between emotional intelligence and digital intelligence were also reported (Bak 2020, 44; Yeke 2023, 396–399). Hence, it is not surprising that Stiakakis, Liapis, and Vlachopoulou (2019) argued that digital intelligence is equally crucial as the regular intelligence quotient, especially in countries where the overload of information in the digital sphere is more overwhelming than what the population can deal with (2–4; 12), which then may have adverse effects on one's well-being.

It is therefore evident that media literacy, emotional intelligence, and digital intelligence may act as the three axes of defence that enable digital citizens to engage critically and responsibly online. Following this argument, the present study hypothesises that media literacy and emotional intelligence predict digital intelligence.

PSYCHOLOGICAL WELL-BEING

High media literacy has been linked to improved well-being as it steers users away from misinformation, fake news, and harmful digital information. For example, Bahramian et al. (2018) reported that high media literacy is associated with high well-being and better media consumption among adolescents (1–2). O'Rourke and Miller (2022) also found that media literacy is necessary for allowing consumers to make critically informed decisions regarding the information presented to them (96–97). These findings indicate that good media literacy leads to positive media consumption, allowing individuals to analyse online information critically, and subsequently, attain positive well-being. A study by Zulkarnain et al. (2022) reported that Malaysian youths believed that misinformation and fake news could be combated by having media literacy skills, particularly when verifying news (51–53). This skill set makes youths feel self-assured and confident, suggesting that it can promote online safety and digital well-being (Pandian, Baboo, & Yi 2020, 356–358).

In contrast to media literacy, emotional intelligence is not a widely taught skill set in Malaysia. In their study on rural Malaysian school students, Rathakrishnan et al. (2019) found that emotional intelligence and psychological well-being are unfamiliar concepts, as the majority reported having moderate to low levels of emotional intelligence and well-being (69–70). The study, however, found a significant relationship between the predictive nature of emotional intelligence and the well-being of those students. Given that technology plays a significant role in current day-to-day life, it is only logical to investigate how technology or media comes into play in the relationship between emotional intelligence and well-being. Previous studies such as those by Balluerka et al. (2016, 1) and Shaheen and Shaheen (2016, 209–211) have reported positive correlations between emotional intelligence and psychological well-being. As such, Mascia et al. (2020) suggested that the association between digital technology and emotional intelligence and well-being merits further exploration (4–6).

In the Malaysian context, research on digital intelligence and well-being is still scant. A review of digital citizenship skills in Malaysia by Susanty et al. (2019) has revealed that digital intelligence is among the digital education courses that should be taught to Malaysian schoolchildren to promote well-being and protect them from the harmful elements prevalent in the digital world. Therefore, studying digital intelligence as a tool for promoting well-being among users could help overcome or lessen the adverse effects of digital exposure (819).

Considering that media literacy, emotional intelligence, and digital intelligence each play a significant role in ensuring critical consumption of media, preventing harmful media practices, and combating digital threats and online misconduct, the present study aims to examine these variables in association with the well-being of Malaysian youth. Drawing on Büchi's (2024) digital well-being theory that focuses on individual digital practices, their co-occurring harm and benefits, and how they affect users' well-being (173–180), the present study hypothesises that media literacy, emotional intelligence, and digital intelligence predict psychological well-being. The hypothesised links are illustrated in Figure 1.

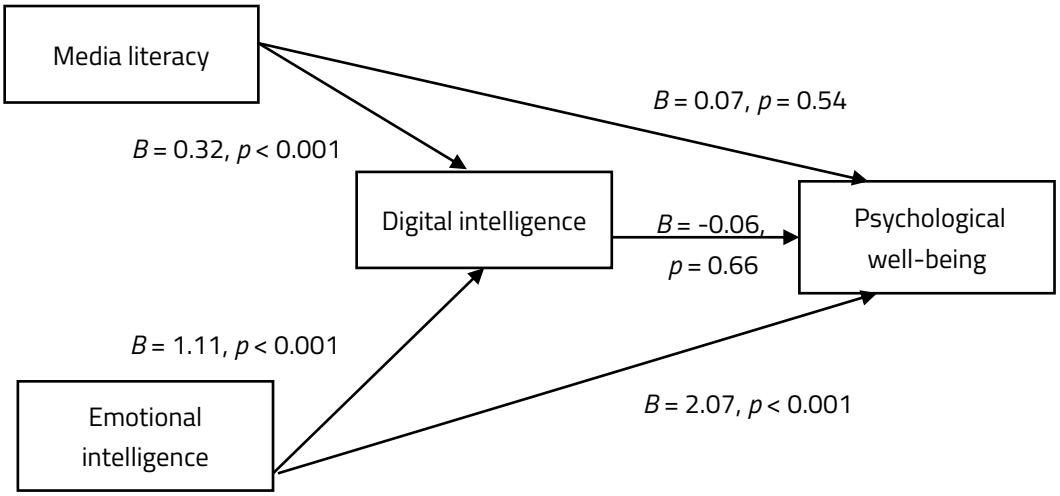


Figure 1: Relationships among media literacy, emotional intelligence, digital intelligence, and psychological well-being. Source: authors.

(Note: See Table 2 for an overview of the statistical symbols depicted in Figure 1.)

METHODOLOGY

Sample and procedure

A cross-sectional, online research was conducted on a sample of Malaysian students and young adults aged 18 to 25 years with Internet access and a smartphone ownership. Prior to collecting the data, ethical approval and permission to use the research instruments were obtained. Then, an online Google Form containing survey items was created and pilot-tested with 16 participants who met the criteria required for the study to determine the survey's feasibility and practicality. The survey's Google form used for this study is available at https://forms.gle/as5WtxNkNzndyzHR7. The pilot participants reported that the items were easy to understand; hence, no major amendments were made to the survey, and the finalised version was used for the main study.

Following the pilot study, the link to the main study was distributed through media platforms such as WhatsApp, Telegram, Instagram, Twitter, and TikTok. Voluntary participation, anonymity, and confidentiality of data were ensured by including an informed consent agreement in the first section of the survey form. Participants were only allowed to continue the study once they agreed to the informed consent agreement. They were also allowed to withdraw from the study at their request. The survey link was released and promoted every day for two weeks and eventually received 168 responses.

Item	Frequency	Percentage (%)	Mean (*M*) and Std Deviation (*SD*)
Gender			
Male	46	27.4	
Female	122	72.6	
Age			
18	1	0.6	*M* = 22.68;
19	4	2.4	*SD* = 1.29
20	7	4.2	
21	17	10.1	
22	18	10.7	
23	91	54.2	
24	20	11.9	
25	10	6.0	
Ethnicity			
Malay	161	95.8	
Indian	2	1.2	
Others	5	3.0	
Education level			
SPM	2	1.2	
Matriculation/Foundation	11	6.5	
Diploma	24	14.3	
Undergraduate	130	77.4	
Postgraduate	1	0.6	

Employment status		
Working full-time	27	16.1
Working part-time	7	4.2
Studying	118	70.2
Waiting for a job/study offer	14	8.3
Neither working nor studying	2	1.2
State		
Selangor	89	53.0
Wilayah Persekutuan Kuala Lumpur	17	10.1
Johor	10	6.0
Kelantan	9	5.4
Pahang	8	4.8
Perak	7	4.2
Negeri Sembilan	6	3.6
Pulau Pinang	5	3.0
Wilayah Persekutuan Putrajaya	5	3.0
Kedah	4	2.4
Terengganu	3	1.8
Sarawak	2	1.2
Melaka	1	0.6
Perlis	1	0.6
Sabah	1	0.6
Most frequently used applications or websites*		
Instagram	115	68.5
Twitter	100	59.5
TikTok	83	49.4
WhatsApp	29	17.3
YouTube	23	13.7
Snapchat	12	7.1
Facebook	10	6.0
Reddit	5	3.0
Pinterest	6	3.6
Telegram	3	1.8
LinkedIn	2	1.2
Google	2	1.2
Discord	1	0.6
Tumblr	1	0.6
Twitch	1	0.6
Wattpad	1	0.6

* Participants were allowed to select more than one application or digital media.

Table 1: Demographic characteristics of participants (*n* = 168). Source: authors.

The majority of participants were Malay (95.8%), female (72.6%), and full-time students (70.2%), with a mean age of 22.68 (*SD* = 1.29). Participants came from various educational backgrounds,

with the vast majority being undergraduate degree holders (77.4%), followed by diploma students (14.3%), matriculation or foundation students (6.5%), Malaysian Certificate of Education (SPM) holders (1.2%), and postgraduate degree students (0.6%). The participants came from various states of Malaysia, with the top three being Selangor (53.0%), Wilayah Persekutuan Kuala Lumpur (10.1%), and Johor (6.0%). As a part of the demographic questions, participants were asked to list their most frequently used applications or digital media websites. We found that the most used application was Instagram (115 users), followed by Twitter (100 users) and TikTok (83 users). The least used applications were Discord, Tumblr, Twitch, and Wattpad, with only one user for each application. Table 1 presents the demographic characteristics of the participants.

Variables and measures

Demographic questions (i.e., gender, age, education level, state, employment status, and frequently used media applications) were asked in the survey, together with the following scales. The New Media Literacy Scale developed by Koc and Barut (2016) was used to measure media literacy. The scale has 35 items on a five-point Likert scale, ranging from *1* = *Strongly Disagree* to *5* = *Strongly Agree*. Total scores for all items were calculated, with scores of 35 to 81 considered low, 82 to 128 moderate, and 129 to 175 high media literacy (841–842). In this study, the scale obtained a Cronbach's alpha value of 0.96.

The Brief Emotional Intelligence Scale, a shortened version of the Emotional Intelligence Scale developed by Davies et al. (2010), was used to measure emotional intelligence. The scale consists of 10 items measured on a five-point Likert scale, ranging from *1* = *Strongly Disagree* to *5* = *Strongly Agree*. It was scored based on the total score of the items, where scores of 10 to 23, 24 to 37, and 38 to 51 are classified as low, moderate, and high levels of emotional intelligence, respectively (204–206). This scale obtained a Cronbach's alpha value of 0.82.

Digital intelligence was measured by the Digital Intelligence Quotient Questionnaire, a 33-item scale developed by Na-Nan, Roopleam, and Wongsuwan (2019) on a five-point Likert scale, ranging from *5* = *Strongly Agree* to *1* = *Strongly Disagree* (1469–1472). The total score of all items was computed, with scores of 33 to 77 were categorised as low, while scores of 78 to 122 and 123 to 167 were categorised as moderate and high, respectively. This scale showed high internal consistency in the present study (Cronbach's alpha = 0.89).

The study used the Psychological Well-Being scale developed by Ryff and Keyes (1995) to measure psychological well-being (720–721). The scale consists of 42 items measured on a six-point Likert scale, ranging from *1* = *Strongly Disagree* to *6* = *Strongly Agree*. Items 3, 5, 8, 10, 13, 14, 15, 16, 17, 18, 19, 23, 26, 27, 30, 31, 32, 34, 36, 39, and 41 were reverse-scored, which means that for these items on the scale of 1 to 6, 1 = Strongly Agree and 6 = Strongly Disagree, accordingly. All items were then calculated, with higher scores representing a higher state of psychological well-being. Scores below the 25th percentile, between the 25th and 75th percentile, and above the 75th percentile are interpreted to mean low, moderate, and high well-being. In this study, the scale also obtained a high internal consistency, with Cronbach's alpha = 0.89.

Data analysis

Data were computed and analysed using IBM SPSS Version 26. Preliminary assumption testing was completed prior to any further analysis to confirm that the data met the assumptions of independence of residuals, homogeneity of variance, and no concerns around multicollinearity. Descriptive statistical analyses were performed to assess patterns and distribution of the data, where means and standard deviations were computed for all predictor and outcome variables. A series of Pearson correlational analyses were then used to determine the intercorrelations among the variables. Finally, two hierarchical multiple regression analyses were conducted using digital intelligence and psychological well-being as the outcome variables to test the last hypothesis. Table 2 provides an overview of the statistical terms and symbols used in this study.

Symbol	Name	Description
n	Sample size	Number of samples or cases.
M	Mean	Sample mean.
SD	Standard deviation	Sample standard deviation.
α	Cronbach's alpha	A measure of the reliability of a scale.
r	Pearson's *r*	Pearson's correlation coefficient value.
p	Probability (*p*) value	Probability of the sample exhibiting the observed difference under the assumption that there is, in fact, no difference in the population.
R^2	*R*-squared	The proportion of variance in the outcome variable that is shared by the predictor variable.
F	*F*-ratio	A statistic to test the overall fit of the model in simple regression and multiple regression.
B	Unstandardised regression coefficients	The strength of the relationship between a predictor and the outcome variable.
β	Standardised regression coefficient	The strength of relationship between a predictor and an outcome in a standardised form.
SE	Standard error	The standard deviation of the sampling distribution of a statistic.
CI	Confidence intervals	A range computed using sample statistics to estimate an unknown value of a parameter with a stated level of confidence.
t	*t*-statistic	In the linear model, a statistic that is used to test whether an unstandardised regression coefficients value is significantly different from zero.

Table 2: Overview of statistical terms and symbols used in this study. Source: authors.

RESULTS

No deviations from normality in the histograms and the normal probability plots (P-P plots) were found for media literacy, emotional intelligence, digital intelligence, and psychological well-being. Inspection of the assumption of homoscedasticity found that the data were normally distributed, with no obvious pattern found for all variables. Upon examination of the multicollinearity

assumption, the tolerance values (range: 0.525 to 0.681), and variance inflation factor (VIF) values ranging from 1.469 to 1.904 indicated that the multicollinearity assumption is met (Field 2018, 534).

Descriptive statistics results in Table 3 show that, on average, participants' media literacy scores are within the high range (i.e., 129 to 175), with a mean score of 144.00 (*SD* = 19.08). They also have a mean score of 41.44 (*SD* = 5.28) for emotional intelligence, with 76.2% having high emotional intelligence and 23.8% having moderate emotional intelligence levels. The results for digital intelligence also follow a similar pattern (*M* = 129.82, *SD* = 15.39), with 66.7% obtaining high and 33.3% obtaining moderate digital intelligence scores. No low category scores were recorded for all three variables. For psychological well-being, with a mean score of 157.76 (*SD* = 23.73), the results show that 27.4%, 46.4%, and 26.2% of participants reported high, moderate, and low scores, respectively.

Variable		*n* (%)	Mean (*M*)	Std. Deviation (*SD*)	α	1	2	3	4
1	**Media literacy**		144.00	19.08	0.96	-	0.57**	0.61**	0.29**
	• Low	0 (0)							
	• Moderate	41 (24.4)							
	• High	127 (75.6)							
2	**Emotional intelligence**		41.44	5.28	0.82		-	0.61**	0.47**
	• Low	0 (0)							
	• Moderate	40 (23.8)							
	• High	128 (76.2)							
3	**Digital intelligence**		129.82	15.39	0.89			-	0.27**
	• Low	0 (0)							
	• Moderate	56 (33.3)							
	• High	112 (66.7)							
4	**Psychological well-being**		157.76	23.73	0.89				-
	• Low	44 (26.2)							
	• Moderate	78 (46.4)							
	• High	46 (27.4)							

**Correlation is significant at the 0.01 level (two-tailed).

Table 3: Descriptive statistics and intercorrelations among the variables (*n* = 168). Source: authors.

The Pearson correlations results in Table 3 show that media literacy is positively and significantly correlated with emotional intelligence ($r = 0.57$, $p < 0.01$), digital intelligence ($r = 0.61$, $p < 0.01$), and psychological well-being ($r = 0.29$, $p < 0.01$). There are moderate, positive relationships between emotional intelligence and digital intelligence, $r = 0.61$, $p < 0.01$, and between emotional intelligence

and psychological well-being, $r = 0.47$, $p < 0.01$. The results also indicate that digital intelligence is significantly and positively associated with psychological well-being, $r = 0.27$, $p < 0.01$.

With digital intelligence as the outcome variable and media literacy and emotional intelligence as the predictors, the regression results yield a statistically significant model, $R^2 = 0.48$, $F(2, 165) = 74.58$, $p = < 0.001$. Both media literacy ($B = 0.32$, $\beta = 0.40$, $p = < 0.001$) and emotional intelligence ($B = 1.11$, $\beta = 0.38$, $p = < 0.001$) significantly predict digital intelligence. In the second analysis, when psychological well-being was regressed onto media literacy, emotional intelligence, and digital intelligence ($R^2 = 0.22$, $F(3, 164) = 15.51$, $p = < 0.001$), we found that only emotional intelligence predicts well-being ($B = 2.07$, $\beta = 0.46$, $p = < 0.001$). See these results in Table 4 and Figure 1.

Variable		*B*	*SE*	95% CI		*β*	*t*	*p*
				Lower	Upper			
Outcome: Digital intelligence								
Predictor	Media literacy	0.32	0.06	0.21	0.43	0.40	5.84	< 0.001
	Emotional intelligence	1.11	0.19	0.71	1.49	0.38	5.55	< 0.001
$R^2 = 0.48$, $F(2, 165) = 74.58$, $p = < 0.001$								
Outcome: Psychological well-being								
Predictor	Media literacy	0.07	0.11	-0.16	0.29	0.06	0.62	0.54
	Emotional intelligence	2.07	0.41	1.27	2.88	0.46	5.07	< 0.001
	Digital intelligence	-0.06	0.15	-0.35	0.23	-0.04	-0.44	0.66
$R^2 = 0.22$, $F(3, 164) = 15.51$, $p = < 0.001$								

Table 4: Regression coefficients for predicting digital intelligence and psychological well-being. Source: authors.

DISCUSSION

The results of this study are discussed in the context of existing research on the relationships among media literacy, emotional intelligence, digital intelligence, and well-being in young adults. Based on the findings, participants in this study generally have high media literacy, emotional intelligence, and digital intelligence. This is a slight departure from Chin and Zanuddin's (2019) study that found young adults have a moderate level of media literacy (471–472). Nevertheless, irrespective of the high/moderate categories, it is safe to conclude that Malaysian students and young adults are comfortable consuming, creating, and using technological devices and digital contents competently without the aid of other people. These findings are reasonable given that students and young adults constitute the highest Internet penetration group in the country, with computer usage among those aged 15 years and above increasing from 80.0% in 2020 to 83.5% in 2021, and Internet usage that significantly rose to 96.8% in 2021 compared to 89.6% in 2020 (Department of Statistics Malaysia, 2022[b]).

Perhaps the most interesting result of this study is the participants' moderate level of psychological well-being, with another 26.2% experiencing low well-being. A substantial amount of

research (e.g., Dickson et al. 2018; Benvenuti et al. 2023) has highlighted concerns with screen time and the adverse effects of technology on the mental health, education, and well-being of children and youths. As such, their potential health risks should not be ignored, because it is evident that excessive, unsafe, or irresponsible usage can adversely affect this specific populace. More efforts should be taken accordingly to bring them to the level of thriving, i.e., positive human development and healthy functioning.

It was also found that both media literacy and emotional intelligence predict digital intelligence. This result suggests that to be digitally intelligent, one must, for the most part, be media literate and emotionally astute. When people encounter negative experiences online (e.g., hateful speech, violent comments, misinformation, or incivilities), they tend to regress into negative coping mechanisms such as retaliating, trolling, or doxing. An emotionally intelligent and media-literate person, however, would recognise the issue at hand and assess the situation rather than reacting hastily or emotively. The emotionally astute and media-literate person would then be free to deal with the issue more constructively.

Finally, only emotional intelligence is predictive of psychological well-being among youths in Malaysia, which is consistent with the direction reported in the literature. For example, Moeller et al.'s (2020), study on trait emotional intelligence has found that students with higher emotional intelligence reported a higher psychological well-being score (6–8). In particular, they found that students with higher emotional intelligence felt a strong sense of "belongingness" which decreases the risk of stress and loneliness and, subsequently, leads to a better state of well-being, implying a moderating effect of belongingness on the emotional intelligence-well-being relationship. This moderating role of belongingness could be attributed to why the present study found a significant association between emotional intelligence and psychological well-being. Digital media, particularly positive social media interactions, could provide a sense of belongingness among young adults, allowing them to develop their sense of empathy, as well as their ability to understand and express feelings, which then can increase their well-being.

In contrast to previous research (e.g., Bahramian et al. 2018; O'Rourke and Miller 2022), the results of the present study show that media literacy does not predict psychological well-being. It is possible that media literacy does not play as big a role as previously thought in determining the level of youths' well-being in terms of digital or online practices. Young adults nowadays have grown alongside digital media, thus possibly making media literacy inherent or a built-in skill that these young adults possess, making them more media literate than the generations that preceded them. Evidence of this phenomenon can be seen in De Leyn et al.'s (2022) study on teenagers' perception of media literacy, in that this media-saturated population is self-aware of the risks and detrimental effects of media consumption (228–234). The researchers also revealed that concerns with teenagers' media literacy come from a protective perspective of adults and policymakers who do not necessarily consider that these primary media users (i.e., teenagers and young adults) are already confident of their media literacy skills. Looking only from this perspective, too, may limit the understanding of how the youths really perceive media contents.

The results of this study also reveal that digital intelligence does not significantly predict psychological well-being. It is likely that the lack of awareness of the significance that both media

literacy and digital intelligence have on well-being may have contributed to this result. As argued by Stiakakis, Liapis, and Vlachopoulou (2019), many countries are often faced with the influx of digital information and struggle to develop measures or policies to catch up with the deluge of this information (2–4; 12). Thus, it is possible that in Malaysia, a country that faces similar issues, digital citizens are still on their way to catching up with the wealth of knowledge on digital media. This, in turn, accounts for their lack of media consciousness on the ways and steps of navigating through the knowledge, possibly leading them to overlook the importance of digital competency skills such as media literacy and digital intelligence.

CONCLUSION

The present study began with the hypotheses that media literacy and emotional intelligence would predict digital intelligence and that media literacy, emotional intelligence, and digital intelligence would predict psychological well-being. Analyses of the data fully supported the former and partially supported the latter. More specifically, the results confirmed that digital intelligence is significantly predicted by media literacy and emotional intelligence. In contrast, while emotional intelligence significantly predicted psychological well-being, media literacy and digital intelligence did not.

In line with the rapid growth of technology and its great benefits that ease our lives, we cannot ignore that digital media and technology are also harmful agents that bring forth 21st-century threats. To unsuspecting users, these threats could pose significant harm as they could alter one's opinions and perceptions, and they are at risk of serious digital crimes such as fraud, blackmailing, and information theft. Therefore, society, should place more importance on the tools and skills needed for media users to successfully combat these threats while simultaneously playing their role as responsible digital citizens. Efforts must be made to rectify and address digital threats for the safety of digital citizens, especially the younger generation, who will continuously face the influx of technological advances and the wealth of readily accessible online information.

The findings of this study contribute to the growing literature on the predictive role of media literacy, emotional intelligence, and digital intelligence and its relationship with the well-being of Malaysian young adults. Drawing from previous research, it is clear that media literacy, emotional intelligence, and digital intelligence each have a hand in ensuring media users' well-being. Thus, the present study provides some directions for future researchers interested in studying the importance of these variables in maintaining and promoting well-being, particularly for active digital users in the Malaysian context.

This study also offers practical implications for educational institutions and policymakers in that it provides a groundwork for improving media education for Malaysian youth. Although the Malaysian government passed the Anti-Fake News Act in 2018, the threat of fake news and misinformation is still rampant in the digital sphere (Fernandez 2019, 178–180). Based on the findings of this study, universities and educational institutions could design a course to instil media literacy, emotional intelligence, and digital intelligence skills that can be used as tools against the dangers of negative digital media use. Through such a course, students could learn to critically consume media and better shield themselves from the threats that they may encounter in the digital realm.

It is necessary to interpret the results of this study with caution because its correlational nature does not suggest causation between media literacy, emotional intelligence, digital intelligence, and well-being. Therefore, although this study reports a significant relationship between emotional intelligence and well-being, it does not indicate that high emotional intelligence increases psychological well-being. Studies with experimental and longitudinal designs would be more appropriate to further delineate the relationships among these variables. Future research should also be conducted with increased sample size and representation from all the states of Malaysia. Although the present study did receive participants from 15 out of 16 states/federal territories in the country, the number of representatives for each state/federal territory remained low. The moderate sample size could also be increased to ensure a better interpretation and generalisability of the results.

The association between digital intelligence and well-being is relatively new, as demonstrated by the scarcity of literature on the topic. However, as highlighted by Na-Nan, Roopleam, and Wongsuwan (2019), digital intelligence is a much-needed tool for users to combat digital threats (1466). As previously discussed, digital threats could inflict harm on users' well-being. Therefore, further research is recommended to provide more insights into the relationship between these two variables, perhaps spanning a broader scope.

Finally, a more in-depth study could be conducted that considers potential factors like belongingness that could influence the relationships among media literacy, emotional intelligence, digital intelligence, and well-being. Equally important is to closely examine the predisposed media literacy and media awareness among adolescents and young adults as this could provide a deeper understanding of the importance of media awareness and media competency skills for well-being, as well as uncover whether these media users are better equipped with tools against digital threats than previously thought.

ACKNOWLEDGEMENTS

The authors thank all participants for the time they dedicated to participating in this research. For permission to use their scales, the authors are grateful to Prof. Dr. Mustafa Koc (Suleyman Demirel University, Turkey), Prof. Dr. Tracey Devonport (University of Wolverhampton, UK), Prof. Dr. Khahan Na-Nan (Rajamangala University of Technology Thanyaburi, Thailand), and Prof. Dr. Carol Ryff (University of Wisconsin-Madison, USA).

ETHICAL APPROVAL

Ethical approval for this study was obtained from the Department of Psychology, International Islamic University Malaysia (Reference Number: S3/-2-2022-003).

REFERENCES

Alkire, Sabina. 2015. *Well-Being, Happiness, and Public Policy*. Bhutan: The Centre for Bhutan Studies and GNH Research. https://doi.org/10.11588/xarep.00003659.

Audrin, Catherine, and Bertrand Audrin. 2023. "More Than Just Emotional Intelligence Online: Introducing Digital Emotional Intelligence." *Frontiers in Psychology* 14, no. 1154355: 1–12. https://doi.org/10.3389/fpsyg.2023.1154355.

Bahramian, Esmat, Maryam Amidi Mazaheri, and Akbar Hasanzadeh. 2018. "The Relationship Between Media Literacy and Psychological Well-Being in Adolescent Girls in Semirom City." *Journal of Education and Health Promotion* 7, no. 148: 1–5. https://doi.org/10.4103/jehp.jehp_41_18.

Bak, Gerda. 2020. "Az Érzelmi Intelligencia És A Digitális Intelligencia Kapcsolata." In E. Korcsmáros (Ed.) 12th International Conference of J. Selye University. Economics Section Conference Proceedings: 39–48. https://doi.org/10.36007/3754.2020.39.

Balluerka, Nekane, Arantxa Gorostiaga, Itziar Alonso-Arbiol, and Aitor Aritzeta. 2016. "Peer Attachment and Class Emotional Intelligence as Predictors of Adolescents' Psychological Well-Being: A Multilevel Approach." *Journal of Adolescence* 53: 1–9. https://doi.org/10.1016/j.adolescence.2016.08.009.

Benvenuti, Martina, Michelle Wright, John Naslund, and Anne C. Miers. 2023. "How Cognitive Development." *Current Psychology* 42: 16466–16469. https://doi.org/10.1007/s12144-023-04254-4.

Büchi, Moritz. 2024. "Digital Well-Being Theory and Research." *New Media and Society* 26, no. 1: 172–189. https://doi.org/10.1177/1461444821105.

Bulger, Monica, and Patrick Davison. 2018. "The Promises, Challenges, and Futures of Media Literacy." *Journal of Media Literacy Education* 10, no. 1: 1–21. https://doi.org/10.23860/JMLE-2018-10-1-1.

Cheah, Whye Lian, Myat Su Bo, Lai Hui Yee, Atiqah Safawati Idris, Brianna Jaswinta Anak Bia, Kimberly Claire Deser, and Han Yong Lim. 2022. "Internet Addiction in Preuniversity Students in East Malaysia: Prevalence and Its Association with Stress and Depression." *Malaysian Journal of Psychiatry* 31, no. 1: 13–18. https://doi.org/10.4103/mjp.mjp_4_22.

Chin, Ying Shin, and Hasmah Zanuddin. 2019. "New Media Literacy and Media Use Among University Students in Malaysia." *International Journal of Engineering and Advanced Technology* 8, no. 5C: 469–474. https://doi.org/10.35940/ijeat.E1066.0585C19.

Davies, Kevin A., Andrew M. Lane, Tracey J. Devonport, and Jamie A. Scott. 2010. "Validity and Reliability of a Brief Emotional Intelligence Scale (BEIS-10)." *Journal of Individual Differences* 31, no. 4: 198–208. https://doi.org/10.1027/1614-0001/a000028.

De la Barrera, Usue, Konstanze Schoeps, Estefanía Mónaco, José Antonio Gil-Gómez, and Inmaculada Montoya-Castilla. 2023. "Analysing Protective Factors for Adolescents' Mental Health During COVID-19 Pandemic in Spain: A Longitudinal Study." *European Review of Applied Psychology* 73: 100847. https://doi.org/10.1016/j.erap.2022.100847.

De Leyn, Tom, Cato Waeterloos, Ralf De Wolf, Bart Vanhaelewyn, Koen Ponnet, and Lieven De Marez. 2022. "Teenagers' Reflections on Media Literacy Initiatives at School and Everyday

Media Literacy Discourses." *Journal of Children and Media* 16, no. 2: 221–239. https://doi.org/10.1080/17482798.2021.1952463.

Department of Statistics Malaysia. 2021. "Malaysian Well-Being Index (MyWI) 2021." Malaysia. https://newss.statistics.gov.my/newss-portalx/ep/epFreeDownloadContentSearch.seam?cid=807054.

Department of Statistics Malaysia. 2022[a]. "Malaysian Well-Being Index (MyWI) 2022." Malaysia. https://newss.statistics.gov.my/newss-portalx/ep/epFreeDownloadContentSearch.seam?cid=806515.

Department of Statistics Malaysia. 2022[b]. "ICT Use and Access by Individuals and Households Survey Report, Malaysia, 2021." Malaysia. https://www.dosm.gov.my/portal-main/release-content/ict-use-and-access-by-individuals-and-households-survey-report-malaysia-2021.

Dickson, Kelly, Michelle Richardson, Irene Kwan, Wendy MacDowall, Helen Burchett, Claire Stansfield, Ginny Brunton, Katy Sutcliffe, and James Thomas. 2018. "Screen-Based Activities and Children and Young People's Mental Health and Psychosocial Wellbeing: A Systematic Map of Reviews." London: EPPI-Centre, Social Science Research Unit, UCL Institute of Education, University College London. https://eppi.ioe.ac.uk/cms/Default.aspx?tabid=3748.

Dienlin, Tobias, and Niklas Johannes. 2022. "The Impact of Digital Technology Use on Adolescent Well-Being." *Dialogues in Clinical Neuroscience* 22, no. 2: 135–142. https://doi.org/10.31887/DCNS.2020.22.2/tdienlin.

El Asam, Aiman, and Adrienne Katz. 2018. "Vulnerable Young People and Their Experience of Online Risks." *Human–Computer Interaction* 33 no. 4: 281–304. https://doi.org/10.1080/07370024.2018.1437544.

Enns, Aganeta, Gloria D. Eldridge, Cynthia Montgomery, and Vivian M. Gonzalez. 2018. "Perceived Stress, Coping Strategies, and Emotional Intelligence: A Cross-Sectional Study of University Students in Helping Disciplines." *Nurse Education Today* 68: 226–231. https://doi.org/10.1016/j.nedt.2018.06.012.

Fernandez, Joseph. M. 2019. "Malaysia's Anti-Fake News Act: A Cog in an Arsenal of Anti-Free Speech Laws and a Bold Promise of Reforms." *Pacific Journalism* Review 25, no. 1 & 2: 173–192. https://search.informit.org/doi/10.3316/informit.530318699796216.

Field, Andy. 2018. *Discovering Statistics Using IBM SPSS Statistics*, 5th Edition. London: SAGE Publication.

Huppert, Felicia A., Nick Baylis, and Barry Keverne. 2004. "Introduction: Why Do We Need a Science of Well–Being?" *Philosophical Transactions of the Royal Society of London. Series B: Biological* Sciences 359, no. 1449: 1331–1332. https://doi.org/10.1098/rstb.2004.1519.

Koc, Mustafa, and Esra Barut. 2016. "Development and Validation of New Media Literacy Scale (NMLS) for University Students." *Computers in Human Behaviour* 63: 834–843. https://doi.org/10.1016/j.chb.2016.06.035.

Kok, Jin Kuan, and Sew Kim Low. 2019. "Risk Factors Contributing to Vulnerability of Mental Health Disorders and the Protective Factors Among Malaysian Youth." *International Journal of School*

and Educational Psychology 7, no. 2: 102–112. https://doi.org/10.1080/21683603.2018.1499573.

Lee, Michelle Hui Lim, Manveen Kaur, Vinorra Shaker, Anne Yee, Rohana Sham, and Ching Sin Siau. 2023. "Cyberbullying, Social Media Addiction and Associations with Depression, Anxiety, and Stress Among Medical Students in Malaysia." *International Journal of Environmental Research and Public Health* 20, no. 4: 3136. https://doi.org/10.3390/ijerph20043136.

Liu, Chang, Melinda McCabe, Andrew Dawson, Chad Cyrzon, Shruthi Shankar, Nardin Gerges, Sebastian Kellett-Renzella, Yann Chye, and Kim Cornish. 2021. "Identifying Predictors of University Students' Wellbeing During the COVID-19 Pandemic: A Data-Driven Approach." *International Journal of Environmental Research and Public Health* 18, no. 13: 6730. https://doi.org/10.3390/ijerph18136730.

Loi, Natasha, Carey Golledge, and Nicola Schutte. 2021. "Negative Affect as a Mediator of the Relationship Between Emotional Intelligence and Uncivil Workplace Behaviour Among Managers." *Journal of Management Development* 40, no. 1: 94–103. https://doi.org/10.1108/JMD-12-2018-0370.

Malaysia Cyber Security Strategy. 2020. "Malaysia Cyber Security Strategy (MCSS) 2020–2024." Malaysia. https://asset.mkn.gov.my/wp-content/uploads/2020/10/MalaysiaCyberSecurityStrategy2020–2024.pdf.

Malaysia Economic Planning Unit. 2021. "Twelfth Malaysia Plan (2021–2025): A Prosperous, Inclusive, Sustainable Malaysia." Malaysia. https://pulse.icdm.com.my/wp-content/uploads/2021/09/Twelfth-Plan-Document_com pressed-1.pdf.

Mascia, Maria Lidia, Mirian Agus, and Maria Pietronilla Penna. 2020. "Emotional Intelligence, Self-Regulation, Smartphone Addiction: Which Relationship with Student Well-Being and Quality of Life?" *Frontiers in Psychology* 11, no. 375: 1–7. https://doi.org/10.3389/fpsyg.2020.00375.

Moeller, Robert W., Martin Seehuus, and Virginia Peisch. 2020. "Emotional Intelligence, Belongingness, and Mental Health in College Students." *Frontiers in Psychology* 11, no. 93: 1–10. https://doi.org/10.3389/fpsyg.2020.00093.

Morales-Rodríguez, Francisco Manuel, and José Manuel Pérez-Mármol. 2019. "The Role of Anxiety, Coping Strategies, and Emotional Intelligence on General Perceived Self-Efficacy in University Students." *Frontiers in Psychology* 10, no. 1689: 1–9. https://doi.org/10.3389/fpsyg.2019.01689.

Na-Nan, Khahan, Theerawat Roopleam, and Natthaya Wongsuwan. 2019. "Validation of a Digital Intelligence Quotient Questionnaire for Employee of Small and Medium-Sized Thai Enterprises Using Exploratory and Confirmatory Factor Analysis." *Kybernetes* 49, no. 5: 1465–1483. https://doi.org/10.1108/K-01-2019-0053.

Nik Jaafar, Nik Ruzyanei, Norharlina Bahar, Normala Ibrahim, Azlin Baharudin, Wan Salwina Wan Ismail, Su Tein Sim, Melisa Abdul Aziz, and Kit-Aun Tan. 2021. "Are Malaysian Youths Overdependent on the Internet?: A Narrative Review." *Frontiers in Psychiatry* 12, no. 710790: 1–7. https://doi.org/10.3389/fpsyt.2021.710790.

Omar, Siti Zobidah, Zeinab Zaremohzzabieh, Asnarulkhadi Abu Samah, Jusang Bolong, and Hayrol Azril Mohamed Shaffril. 2020. "Influence of Different Facets of Internet Addiction on Subjective Well-Being in Malaysia: A Comparison Across Ethnic Groups." *Jurnal Komunikasi: Malaysian Journal of Communication* 36, no. 2: 196–211. https://doi.org/10.17576/JKMJC-2020-3602-12.

O'Rourke, Vicky, and Sarah Miller. 2022. "Improving Children's Well-Being Through Media Literacy Education: An Irish Study." *Journal of Media Literacy Education* 14, no. 1: 94–107. https://doi.org/10.23860/JMLE-2022-14-1-7.

Pandian, Ambigapathy, Shanthi Balraj Baboo, and Lim Jing Yi. 2020. "Reading the 21st-Century World: Self-Assessment of Digital Media Literacy Among Secondary School Students in Malaysia." *International Journal of Asian Social Science* 10, no. 7: 350–359. https://doi.org/10.18488/journal.1.2020.107.350.359.

Rathakrishnan, Balan, Melissa Edora Sanu, Azizi Yahaya, Soon Singh Bikar Singh, and Mohammad Rahim Kamaluddin. 2019. "Emotional Intelligence and Psychological Well-Being of Rural Poor School Students in Sabah, Malaysia." *Psympathic: Jurnal Ilmiah Psikologi* 6, no. 1: 65–72. https://journal.uinsgd.ac.id/index.php/psy/article/view/4082.

Ryff, Carol D., and Corey Lee M. Keyes. 1995. "The Structure of Psychological Well-Being Revisited." *Journal of Personality and Social Psychology* 69, no. 4: 719–727. https://doi.org/10.1037/0022-3514.69.4.719.

Shaheen, Sayeeda, and Hameeda Shaheen. 2016. "Emotional Intelligence in Relation to Psychological Well-Being Among Students." *The International Journal of Indian Psychology* 3, no. 4: 206–213. https://doi.org/10.25215/0304.115.

Srivastava, Kalpana. 2013. "Emotional Intelligence and Organizational Effectiveness." *Industrial Psychiatry Journal* 22, no. 2: 97–99. https://doi.org/10.4103/0972-6748.132912.

Stiakakis, Emmanouil, Yiorgos Liapis, and Maro Vlachopoulou. 2019. "Developing an Understanding of Digital Intelligence as a Prerequisite of Digital Competence." Mediterranean Conference on Information Systems (MCIS) 2019 Proceedings 27. https://aisel.aisnet.org/mcis2019/27.

Susanty, Ramona, Zahri Yunos, Mustaffa Ahmad, and Norrizan Razali. 2019. "Instilling Digital Citizenship Skills Through Education: A Malaysian Perspective." In European Conference on Cyber Warfare and Security: 819–827. Academic Conferences International Limited. https://www.proquest.com/conference-papers-proceedings/instilling-digital-citizenship-skills-through/docview/2261026988/se-2.

The IEEE 3527.1™ Standard for Digital Intelligence. 2021. "IEEE Standard for Digital Intelligence (DQ)—Framework for Digital Literacy, Skills, and Readiness." https://standards.ieee.org/ieee/3527.1/7589.

The Resource and Educational Technology Division of the Malaysia Education Ministry and CyberSecurity Malaysia. 2022. "The Executive Report of the Findings of the Cyber Security Awareness Study Among School Students and Parents 2021/2022 (Laporan Eksekutif Dapatan Kajian Tanda Aras Tahap Kesedaran Keselamatan Siber Dalam Kalangan Murid Sekolah dan Ibu Bapa 2021/2022)." Malaysia.

https://www.cybersafe.my/en/download/Laporan%20Eksekutif%20Dapatan%20Kajian%20Tanda%20Aras%20Tahap%20Kesedaran%20Keselamatan%20Siber%20Dalam%20Kalangan%20Murid%20Sekolah%20dan%20Ibu%20Bapa%202021_2022.pdf.

United Nations Sustainable Development Goals. 2020. "Take Action for the Sustainable Development Goals (SDGs)." https://www.un.org/sustainabledevelopment/sustainable-development-goals.

Yang, Ya Chu. 2022. "How Seasoned Human Resource Managers Make Sense of Digital Intelligence in Today's Workplace: An Interpretative Phenomenological Study of Their Experiences in Multinational High-Tech Companies." PhD diss., Northeastern University.

Yeke, Selcuk. 2023. "Digital Intelligence as a Partner of Emotional Intelligence in Business Administration." *Asia Pacific Management Review* 28, no. 4: 390–400. https://doi.org/10.1016/j.apmrv.2023.01.001.

Zakaria, Hazli, Imran Hussain, Nor Sa'adah Zulkifli, Norazimah Ibrahim, Nuri Jailina Noriza, Michelle Wong, Nik Ruzyanei Nik Jaafar, Hajar Mohd. Salleh Sahimi, and Muhammad Hanif Abd Latif. 2023. "Internet Addiction and Its Relationship with Attention Deficit Hyperactivity Disorder (ADHD) Symptoms, Anxiety, and Stress among University Students in Malaysia." *PloS One* 18, no. 7: e0283862. https://doi.org/10.1371/journal.pone.0283862.

Zulkarnain, Abu Bakar, Ireena Nasiha Ibnu, and Nurul Hidayah Mat. 2022. "'We Cannot Trust Everything on Social Media'—Personal Experiences and Social Media Literacy Skills in Fighting Fake News During COVID-19." *SEARCH Journal of Media and Communication Research (SEARCH)*: 43–55. https://fslmjournals.taylors.edu.my/icoms-2021-special-issue.

ABOUT THE AUTHORS

SARAH LYNN ALIAH NOR ZAIDI is a graduate of the Department of Psychology at International Islamic University Malaysia. Formerly a behavioural therapist for children with autism and developmental needs, she is enrolled in a postgraduate program in Clinical Psychology at Universiti Putra Malaysia.

Email: sarahlynn.nzaidi@outlook.com

NOR DIANA MOHD MAHUDIN is an Associate Professor at the Department of Psychology at International Islamic University Malaysia. She holds a PhD in Applied Psychology from University of Nottingham, United Kingdom. Her research focuses on ergonomics and safety, commuting and crowd behaviours, work and women's well-being, as well as the development and evaluation of interventions. In current projects, she investigates new technologies and artificial intelligence (AI), particularly digital citizenship, AI ergonomics, and digital literacy.

Email: nordianamm@iium.edu.my

AI-Mediated Communication in Academic Organizations: Issues and Directions

KAHREIN A. SALVADOR
University of the Philippines Los Baños

ABSTRACT

Central to successful organizational relations and operations among academic organizations is effective communication, recently being reshaped by Artificial Intelligence (AI). While proven advantages of the technology are widely documented in the fields of business, information technology, engineering, and medicine, its potentials within academic environments, where strong critical thinking and human connection are hallmarks of organizational success, remains understudied. Aiming to analyze AI for communications among academic organizations, this quantitative study surveyed 50 academic and administrative managers from various colleges and universities in Calabarzon, the Philippines' most populous region as of 2020 (Balita 2023), situated in the southern section of its largest island. It was found that respondents use communication channels, specifically collaboration and productivity software and products with built-in AI features. Informed by the General Systems Theory, the Organizational Information Theory (von Bertalanffy 1986; Weick 1993 in West and Turner 2012, 294), and Hancock, Naaman, and Levy's (2020) AI-mediated communication (AI-MC) framework, the study concludes that AI use among academic organizations is assistive in nature and expedites communication management, specifically message creation and distribution. While deemed promising, AI use in examined organizations poses ethical and functional issues such as inaccessibility and user inexperience, content bias and inaccuracy, constrained capacity to nurture human connection, and data privacy risks. Respondents recommend capacity building efforts and policy implementation to manage said issues and maximize AI use without compromising human agency.

Keywords: academic organizations, AI-mediated communication (AI-MC), artificial intelligence (AI), communication management, organizational communication

INTRODUCTION

Artificial Intelligence (AI), initially just a "thought" among philosophers, scientists, and mathematicians was first coined in the 1950s (Smith 2006, 4) and began to flourish in the 1970s with the so-called "expert systems," a technology designed to "mimic human expertise in specific domains" (Filimowicz 2023). Such advancement began with computers being able to store larger amounts of data to its now more popular capacity—the ability to perform tasks and solve highly complex problems that used to necessitate human intelligence (Anyoha 2017). Designed to simulate human thinking, albeit powered by non-organic networks and algorithmic systems, AI has recently been able to perform more sophisticated functions such as reading, writing, speaking, interpreting, and creating, among others. Such capacities enable AI to gain traction among various markets and groups—among which are academic organizations.

AI use within academic environments is met with both optimism and concern. On the one hand, its ability to revolutionize communication and research and enhance productivity proves useful in today's knowledge economy (Esplugas 2024, 819); on the other hand, overdependence on it raises concern, especially among academic environments, with fear that it may curtail criticality, creativity, and integrity (Fontanilla et al., 2023, 29). This paper explores this dichotomous nature of AI as it examines how the technology is used for communication among academic organizations.

At the core of successful organizations is effective communication. The Oxford dictionary (2023) defines communication as the activity or process of expressing and conveying ideas and feelings. Communication ensures proper transfer and management of information between and among internal and external audiences, thus enhancing engagement and connection. It helps clarify and reinforce an organization's mission and vision along with strategies placed to achieve them, ultimately motivating employees to effect organizational success (Juneja 2015).

One of the lenses through which organizational communication can be investigated is from a systems perspective, which posits organizations as a whole that is made up of systems. This perspective supports the existence of complex patterns of interactions among subsystems and claims that in order to understand the entire system and propel it to realize its purpose, such interactions should be understood. Thus, sharp focus is given on explicitly knowing and addressing problems of relationships, structure, and connections among organizational subsystems. Managing communications facilitates this as it reduces structural ambiguities, binding organizational subsystems together, enabling order, internal stability, and optimum performance (Almaney 1974; West and Turner 2021, 294). Such knowledge has given rise to a need for implementing well-designed communication management strategies, recently being reshaped by AI.

In essence, communication management pertains to the special attention given to identifying channels of communication within or among organizations to reach outcomes. Such channels are strategically selected depending on the nature of information or knowledge to be shared and with whom. Carefully planning, managing, and monitoring the flow of communication keep members of an organization informed and engaged in team decisions and efforts towards achieving short-term and long-term goals (Ditlevsen and Johansen 2019, 6). Revolutionizing communication channels

that used to be limited to interpersonal and traditional modes is AI—its potential for improving, disrupting, or obstructing organizational communication systems merits investigation.

AI-mediated communication (AI-MC), in its capacity to modify, augment, or generate messages (Hancock, Naaman, & Levy 2020, 89) offers convenience; history suggests that technology has largely benefited mankind. However, overreliance on automation (and everything that is yet to become of AI) significantly places the future of human agency in question. Modern AI's proven benefits are widely documented in the fields of engineering, information technology, medicine, and business; little is said, however, about its application in communications, specifically within academic environments, where critical thinking and human connection remain hallmarks of organizational success.

This study investigates the nature and functions of AI as a tool for communication among academic organizations. It centers on the overarching research question "How is AI used for communication among Calabarzon higher education institutions (HEIs)?" Specifically, it answered the following questions:

1. What communicative functions utilize AI among Calabarzon higher education institutions (HEIs)?
2. What are Calabarzon HEI managers' general view of AI-mediated communication (AI-MC) and organizational performance?
3. What AI-MC related issues are observed by Calabarzon HEI managers?
4. How do managers of Calabarzon HEIs suggest resolving these issues?

Consequently, it seeks to reach the following research objectives:

1. Determine communicative functions that utilize AI among Calabarzon higher education institutions (HEIs);
2. Discuss general view of AI-mediated communication (AI-MC) and organizational performance among Calabarzon HEIs;
3. Enumerate issues on AI-mediated communication (AI-MC) observed by Calabarzon HEI managers; and
4. Chart how managers of Calabarzon HEIs suggest resolving these issues.

LITERATURE REVIEW

Communication in Organizations

Organizations, Miller (2012) writes, are entities possessing five critical features—the "existence of a social collectivity, organizational and individual goals, coordinating activity, organizational structure, and the embedding of the organization within an environment of other organizations" (11–12). Organizations create and provide products and services to satisfy human needs, driving socio-economic growth. Driving efficient work systems towards achieving organizational goals is

effective communication. Wrench, Carter, and Ward (2015) outline central ideas on how communication propels organizational success:

1. Effective communication enables the classification of information or knowledge to be shared and which channels should be used for optimum results.
2. It establishes an organization's identity and maps out ways it can be effectively practiced.
3. It reinforces an organization's mission and vision, keeping employees and key stakeholders informed and involved in various strategies put in place to achieve these.
4. It outlines an organization's priorities, guiding managers on expediting resources.
5. It clarifies functions expected of employees, helping them gauge whether these are met.
6. It influences employee behaviors towards themselves, their colleagues, their stakeholders, and the organization itself, helping them align commitment and performance with expected outcomes.
7. It provides critical information used for organizational decision-making and streamlining processes.
8. It identifies internal and external risks and threats, informing organizations on how best to cope.
9. It fosters human connection, thereby strengthening members' sense of teamwork, shared ownership, and accountability.
10. It allows organizations to monitor and evaluate current practices and processes properly, ultimately effecting better outcomes.

Communication, Millller (2012) continues to write, goes beyond simply transmitting messages from senders to receivers; it also concerns itself with the many ways information must flow and foster meaning within the environment it is situated in. Communication, with the help of technologies, allow for the construction of intricate networks that enable organizations to connect with others and reach its goals (12). Organizations should therefore pay close attention to their strategies of creating, distribution, monitoring, and evaluation of information.

Organizational Communication Theories

Several communication theories can be observed among organizations. The interest of this study is specifically on the General Systems Theory and the Organizational Information Theory (von Bertalanffy (1986) and Weick (1993) in West and Turner (2012, 294). Viewing organizations as systems entails an assemblage of processes integrated to form a unified, organized whole. Harmonizing the systems subsumed within this whole, as suggested by Weick, is situating organizations within information environments. This means understanding organizations within the broader landscape of data, information networks and flows, and knowledge management (Miller 2012, 68–70).

Such a perspective likewise opines effective communication management practices to decrease equivocality or uncertainties among subsystems, thus enhancing productivity. Attention is focused

on the interconnected nature of organizational systems and organizational sensemaking, which in part involves utilizing technologies.

Communication Management

Good managers focus on implementing effective communication management strategies in place (Goudar 2010, 2). This ensures efficient systems for storing, distributing, and controlling information, which allows for strategic positioning among organizations, leveraging the power of information and responding effectively to equivocality or change. Using technology and a systems perspective enables efficient generation of data and insights that inform managers of the impact of communication across networks in the organization. Communication management is organized into three broad categories: planning and design; distribution and storage; and monitoring and evaluation (Cote 2023; Knowledgehut Solutions, Ltd., 2023).

Planning and Design are concerned with identifying information that an organization needs to share, with whom, and with what channels. They involve analyzing stakeholder needs and preferences and accordingly designing organizational messages in alignment with these. Message receivers may be internal or external stakeholders. Understanding stakeholder background offers insight on how best to package or design information.

Distribution and Storage covers modes of message sharing and documentation using various communication channels. Upon learning stakeholders' needs, preferences, and behaviors, an organization should then decide on how information should reach them. Critical is outlining strategic outcomes, to determine which channels would work best to achieve these. Depending on the nature of the information to be shared, organizations may explore various channels. For internal audiences, communication may be relayed through the following formats: digital or printed newsletters, magazines, or brochures; online/offline, formal/ informal, individual/group meetings with employees; and SMS messaging. For external audiences, communication may be facilitated through press/media releases; social media postings (social media posters, audio cards, videos, etc.); websites; and online/offline, formal/ informal, individual/group meetings with external stakeholders.

Monitoring and Evaluation involve collecting information on stakeholder behaviors on communication strategies in place (feedback mechanisms, engagement surveys, and the like). Feedback informs organizations on areas for improving systems and processes, allowing managers control towards more efficiently achieving their goals.

Technology in Organizations

When crafting plans, designing projects, and charting future directions for their organizations, managers often rely on facts and knowledge deduced from analyzing them. This process is often driven by communication in some form. Technology, especially digital technologies, significantly expedite communications among organizations at reduced costs (Ramey 2013).

Sarokin (2020), Henderson (2020), and Harris-Briggs (2023) raise some of the core benefits of using technology in organizational communications. First of these is automation and other workflow standardization processes that involve technology in expediting the completion of tasks

at shorter cycles. Another is remote work, which utilizes digital technologies that enable real-time conversations, file sharing, and task management regardless of physical space. Such examples of streamlining technology to automate tasks and enhance productivity and collaboration can lead to reduced costs. Moreover, sources write how technology enables real-time connection with various stakeholders, thus enhancing external relations and engagement. Such strategic approach can help expand organizations' reach, creating enormous opportunity and inspiring stronger brand recall and support.

AI and AI Models

AI use among academic organizations holds much potential as they position themselves within information environments. Leveraged strategically, the different types of AI and their unique features and capabilities help drive organizational success. Ang et al. (2023) forward three broad categories for artificial intelligence in terms of capability: narrow, general, and superintelligence (219–220).

Narrow intelligence, also called weak AI, is referred to as an AI system designed and trained for a narrow or single specific task (i.e., content generation, grammar and writing, email management, chatbot assistance, data and sentiment analysis, among others). Most AI tools and applications known today are classified under this category. General AI, also termed strong or deep AI, mimics human cognition and intelligence, thus (theoretically) possessing an ability to apply this intelligence in solving an array of problems. General AI is currently not yet fully realized. Meanwhile, superintelligence, purely theoretical as of this writing, is described as a software-based AI system that has "self-awareness," thus having an ability to surpass human intelligence (Mucci & Stryker 2023).

In addition, Smolic (2024) cites the six main subsets of AI: machine learning, deep learning, natural language processing, neural networks, robotics, and genetic algorithms. In terms of functionality, Garza-Ullowa (2024) offers two main categories, generative AI and predictive AI. Generative AI operates on computer algorithms to create or generate new content (text, photo, video, and other file formats). Predictive AI, on the other hand, uses smart computer algorithms that enable the prediction of future outcomes based on historical data (i.e., data forecasting, customer relationship management, etc.) (491–493).

AI-Mediated Communication (AI-MC)

Hancock, Naaman, & Levy (2020, building on Russell and Norvig 2010) define AI-mediated communication (AI-MC) as "[technology] mediated interpersonal communication in which an intelligent agent operates on behalf of a communicator by modifying, augmenting, or generating messages to accomplish communication goals" (90). This definition assumes AI as "computational systems that involve algorithms, machine learning methods, natural language processing, and other techniques that operate on behalf of an individual to improve a communication outcome" (90). As such, the authors characterize AI-MC as having the following dimensions:

1. *Magnitude* or the extent of changes AI enacts on messages (i.e., grammar or spelling check vs. full text generation);
2. *Media type* or the media (text, audio, video) in which AI operates (i.e., suggestive text vs. appearance modification in photo or video);
3. *Optimization goal* or the purpose for which AI is optimizing messages (i.e., to sound/appear professional, warm, authoritative, among others);
4. *Autonomy* or the extent of a sender's involvement or supervision on AI's message optimization (i.e., sender chooses from AI-suggested email responses vs. AI actually engaging in conversation with minimal input from the sender); and
5. *Role orientation* or the role AI operates on behalf of (i.e. the sender offering messages to enhance efficiency vs. receiver assessing a message's truthfulness or reliability).

While AI-mediated communication offers vast opportunities within academic environments, it also challenges the current dynamics of organizational communication with its capacity to augment and modify messaging, thus influencing individual or organizational presentation and public perception (Hancock, Naaman, & Levy (2020, 94).

METHODOLOGY

Research Design. The study is quantitative in nature, given its overarching goal of describing AI use for communication management among higher education institutions in the Calabarzon region. Quantitative measurements emphasize objective measurements and the mathematical or statistical analysis of data derived from structured research instruments—in this case, a survey questionnaire (Babbie 2013, 187, 198, 272). The generation of numerical data to arrive at a generalized explanation for a particular phenomenon is captured using this approach (Chonody 2023).

Respondents of the Study. Tasked to oversee communications and operations among organizations, respondents for the study are managers and coordinators from HEIs in Calabarzon, the most populous region in the Philippines as of 2020 (Balita 2023). A total of 50 respondents selected through network sampling were surveyed. Network sampling is a type of non-probability sampling where a researcher taps his/her/their network for possible respondents. New respondents are sought from one or a few units, forming a sample (Aransiola 2023). Sample size is set to 50, considered sufficient for the Central Limit Theorem (CLT) to hold. CLT posits that the distribution of sample means approximates a normal distribution as the sample size is increased, regardless of the population's distribution. It considers sufficient a sample size of 30–50 to accurately describe or predict population characteristics (Ganti 2023).

Research Instrument. To collect data from the respondents, the study utilized a survey questionnaire consisting of four-point Likert-scale statements and open-ended questions. The Likert-scale is specifically useful for measuring respondent attitudes and beliefs. The questionnaire comprised sections that collected information on the respondents' profiles; their use of AI tools for managing communications; and issues encountered regarding AI use. The instrument was validated by experts in communication, statistics, and information technology.

Data Gathering Procedure. Upon harmonizing details of the research topic (focus, objectives, frameworks, scope, and significance), a survey questionnaire was designed by the researcher. Formal request letters were sent out to the researcher's professional network. Contacted were managers (directors, deans, chairs, and coordinators) from HEIs representatives of Calabarzon.

The formula used was:

$$\textit{Weighted mean} = \frac{\sum wx}{\sum w}$$

$$\textit{Weighted mean} = \frac{w(4)+w(3)+w(2)+w(1)}{\sum w}$$

$$\textit{Weighted mean} = \frac{\textit{Total weighted mean}}{\textit{Total number of respondents}}$$

Where:

Σ = *Sum*

W = *Weight*

X = *Value*

The weighted mean was interpreted using the verbal Likert scale below:

Weight/Scale	Mean Range	Verbal Interpretation
1	1.00 – 1.74	Strongly Agree
2	1.75 – 2.49	Agree
3	2.50 – 3.24	Disagree
4	3.25 – 4.00	Strongly Disagree

Pursuant to the Philippines's Data Privacy Act of 2012, managers who expressed willingness to participate as study respondents were presented with a consent form stipulating respondent confidentiality. Upon agreement, they were then asked to proceed with answering the study questionnaire.

Data Analysis. Information on the respondents' profiles were summarized using frequency counts and percentages. Collected data pertaining to AI use for communication among respondents' respective HEIs was analyzed by calculating the weighted mean of responses for each Likert-scale statement in the questionnaire.

RESULTS AND DISCUSSION

Respondents' Profiles and Use of AI for Organizational Communication

Almost half (45%) of the respondents are from the age group 31–40, while the other half is distributed along the 21–30 and 41–50 age groups. People Management (2021) describes the 30s

as the average age of first-time managers. Thinking and performative skills characteristic of management and leadership (i.e., focus, information management, and multitasking, among others) also typically peak around a person's 30s (The University of California 2023). While openness to learning and mastering new technologies are more strongly linked with younger employees in organizations (Sundstrup et al. 2022, 1), keeping abreast with the latest technological trends to achieve organizational outcomes is expected of managers regardless of age (Laker 2023). Respondents' use of AI for communication within their organizations are summarized below:

Statement	Weighted Mean	Verbal Interpretation
Our college/university uses AI for content creation (i.e., creating messages and templates for employee newsletters, social media content, etc.) and distribution (i.e., email, messaging, social media posting, among others).	2.46	Agree
Our college/university uses AI for conversation intelligence (i.e., email auto-draft, real-time meeting transcriptions or summaries, etc.).	2.7	Disagree
I personally use AI (i.e., AI features on SMS, email, social media, etc.) in communicating information with my superiors and subordinates.	2.2	Agree
Our college/university uses AI for streamlining processes (i.e., scheduling meetings, quality assurance scoring, faculty/employee evaluation, etc.).	2.75	Disagree
Our college/university uses AI that measure employee performance in perfect precision.	2.9	Disagree
Our college/university uses AI for improving customer service (i.e., support chatbots, feedback mechanisms, engagement surveys, etc.).	2.78	Disagree

Table 1. Communicative functions that utilize AI among Calabarzon higher education organizations (HEIs). Source: author.

Table 1 confirms respondents' personal use of AI for communicating with colleagues (2.2) and organizational use of AI for content creation and distribution (2.46). AI and built-in AI features of known collaboration and productivity software and products are claimed to be used in managing communications in their organizations. Meanwhile, they disagree with AI use for conversation intelligence (2.7) and streamlining processes (2.75), especially for quality assurance scoring and faculty/employee evaluation (2.9). This reflects low confidence in AI's capacity to measure employee performance in perfect precision. Disagreement (2.78) is likewise expressed by the majority in terms of using chatbots for customer service and engagement.

In composing messages or generating texts, respondents utilize built-in AI features of email and smart messaging: *smart compose* (a hybrid language generation model that offers wording suggestions when composing emails; and *smart reply* (similar with smart compose but presents short email responses as clickable options) (Chen et al. 2019, 1; Wenker 2023, 1). Fourteen (14) respondents also claim use of AI-powered applications Grammarly and Turnitin. Both apps are designed for writing assistance, able to check for originality and grammatical and mechanical errors in writing. Turnitin specifically estimates a work's similarity with existing online sources.

Moreover, nine (9) respondents claim personal—not institutional—use of the app ChatGPT (AI designed to process huge amounts of data and generate text). With its capacity for providing conversation-like responses to almost any query, the app ChatGPT has gained popularity among various users. The University of Central Arkansas (2023) lists ChatGPT's popular functionalities: the ability to answer questions in a variety of formats with precise stipulations, solve mathematical equations, process big data, translate between languages, debug and fix codes, write literary pieces, and even design marketing strategies. These very same functionalities, however, make the app's use questionable within academic environments, where the premium is placed on nurturing cognition, novelty, and criticality. Originality is specifically an area of concern since generative AI draws on existing data to create "new" content. Respondents, particularly managers for academics and research, are also keen on this issue, stating that while AI apps prove helpful for quick queries, generated content should still be verified to ensure message accuracy and appropriateness with intended outcomes.

In addition, social media platforms' built in AI features, specifically Facebook's text analysis and targeted advertising (powered by deep text and deep learning) are also explored by some respondents for communicating/content sharing and distribution with external audiences. Production of traditional and digital media publicity materials are enhanced by AI features of image generation applications and software. However, respondents claim cautious use of said platforms, since how they generate images and designs may be subject to issues on copyright and licensing.

Respondents also acknowledge AI's assistance in analyzing browser behavior and other data points, enabling it to offer suggestions on creating content and advertisements that strategically tap into their organizations' stakeholders' needs and interests. This, in turn, could spark potential areas for collaboration and enable increased visibility and favorable outcomes (van der Wilt 2023).

As for communications monitoring and evaluation, respondents share how data, normally in the form of results and feedback from engagement surveys, inform them of how best to strategize communication plans and strategies to achieve their targets. However, disagreement is expressed on the use of chatbots for stakeholder engagement. This may be attributed with what Zhou et al. (2023) write, that while chatbots are being utilized by some companies for their efficiency and cost-effectiveness, they often fail to foster empathy, negatively influencing customer experience.

In terms of Hancock, Naaman, and Levy's (2020) AI-MC framework, respondents' AI use for communication, while open and active, is limited to an assistive function. Proof of this is how respondents express disagreement on AI reliance for full-text automation in crafting emails and automated conversation analysis. Another is their disagreement with AI use for employee performance and evaluation (89). This aligns with Pletcher's (2023) writing, which highlights how, despite AI's capacity for processing quantitative data, it may still fail to capture granular data, and therefore, fail to effectively gauge ancillary attributes that make employees valuable. Ancillary attributes are non-quantifiable characteristics indicative of excellent employee performance (i.e., helping colleagues, or having good problem-solving skills, among others).

In sum, this section reflects respondents' adoption of AI (specifically narrow AI) for assistive functions in managing communication among their academic organizations. Adoption is particularly evident in email assistance and management (smart compose and smart reply), writing assistance

(grammar and proofreading suggestions, plagiarism detection), and targeted communication (text analysis, browser behavior analysis, targeted advertising, and engagement feedback). Autonomy, however, remains with human managers as reflected by the respondents' disagreement with full reliance on AI for conversation intelligence, streamlining processes, stakeholder engagement, and employee related decision-making. It is also worth noting that most of the academic organizations the respondents represent do not have strict policies on AI use as of writing. This entails, among other issues, inconsistent use and adoption among organization members, which could limit their exploration of the technology's advantages on boosting performance.

RESPONDENTS' VIEW OF AI-MC AND ORGANIZATIONAL PERFORMANCE

As discussed in the Literature Review, technology improves organizational communication and overall performance by enabling routine task automation, remote work, cost reduction, and brand visibility and expansion (Sarokin 2020; Henderson 2020; and Harris-Briggs 2023). The following Table summarizes how HEI managers view AI-mediated communication (AI-MC)'s influence on organizational performance.

Respondents agree that the technology carries good potential (2.09); that it improves communication management (2.01); and that it enables effective interpersonal communication (2.09). Moreover, respondents agree that AI allows for fast (1.98) and timely (2.06) delivery of generally correct information (2.16) within their organizations. They even agree (2.18) that AI use can help their HEIs fulfill their mission and vision.

Statement	Weighted Mean	Verbal Interpretation
AI use carries good potential for academic environments.	2.09	Agree
Using AI improves our college/university's communication management.	2.01	Agree
AI tools help members of our college/university effectively communicate with each other.	2.09	Agree
AI tools allow faster communication among employees of our college/university.	1.98	Agree
AI tools enable timely communication among members of our college/university.	2.06	Agree
AI generates content that is generally correct, making communication effective.	2.16	Agree
AI tools help our college/university achieve its goals and fulfill its mission.	2.18	Agree

Table 2. Respondents' View of AI-Mediated Communication and Organizational Performance. Source: author.

This openness to embrace technological strides at an organizational level, Kaczmarek-Śliwińska (2019) writes, is considered a competitive advantage in a knowledge economy. She furthers, by citing the Global Industry Vision, that the world's largest international companies intend to implement AI-based solutions come 2025 (62–63). This aligns well with Gilli, Lettner, and Guettel's

(2023) position that with digitalization potentially effecting social distances among organizations, leaders should actively manage social processes and shape change processes. Such capacities are dependent on strong communication and digitization skills.

Among characteristics of AI that, respondents agree, make it a useful tool for effective communication are speed, timeliness, and general correctness. From a matter of information and computation, AI has distinct advantages over human intelligence—among these are speed, connectivity, and accuracy. Korteling et al. (2021) stress that AI operates on digital systems that propagate at almost the speed of light, accounting for its ability to quickly provide information or generate and process huge amounts of data the human brain physically cannot (1–5). AI's digital nature also allows it to connect through integrated algorithms, making it easy to reconfigure functionalities as necessary. This allows it to generate and analyze data with accuracy rates ranging from 80–95% (Pacchiega 2021).

The respondents' positive view of these characteristics suggests optimism towards AI's capabilities and functionalities. This aligns with the systems perspective, which views critical the networks of information and interaction in maintaining organizational equilibrium, thus enhancing productivity and overall performance. AI can be viewed as an agent that interfaces with both human and technologies in facilitating effective information and knowledge creation, sharing, and application, helping advance communication among academic organizations (Jarrahi et al. 2023, 87–90).

AI-MEDIATED COMMUNICATION—ISSUES AND DIRECTIONS

While open to AI use for communication within academic organizations and environments, respondents raise critical issues and outline recommendations as summarized in the following table and discussion.

Statement	Weighted Mean	Verbal Interpretation
AI tools are accessible only to a few members of our college/university.	2.43	Agree
Use of AI tools poses ethical issues (i.e., content bias and inaccuracy).	1.91	Agree
Accuracy and consistency of information exchanged is maintained when using AI tools for communication.	2.56	Disagree
AI tools are just as effective as face-to-face contact when communicating with or managing colleagues.	2.63	Disagree
AI tools help members of our college/university nurture human engagement.	2.5	Disagree
Using AI poses data privacy risks.	1.93	Agree

Table 3. Issues Encountered on Using AI for Communication and Organizational Performance in Calabarzon HEIs. Source: author.

Table 3 shows that respondents experience issues with AI use for communicating in their respective HEIs. Specifically, respondents believe that while AI is already acknowledged in their institutions, not all employees can access them (2.43). Disagreement is expressed in AI's capacity

to maintain accuracy and consistency of information (2.56); in its ability to foster effective communication the way face-to-face interactions can (2.63); and its potential to nurture human engagement (2.5). Also, respondents agree that AI poses both privacy risks (1.93) and ethical issues (1.91).

Respondents claim that AI's potential for enhancing productivity is limited to accessibility and user ability. As Božić (2023, 96–97) writes, effective AI systems necessitate computing power, infrastructure, resources, and specialized skills, which not everyone has access to. Moreover, with AI's structure and functionalities that involve deep text, machine learning, or reinforcement learning, among others, users, particularly those who are not very comfortable with advanced technology, tend to shy away from them and stick to AI's analogue or manual counterparts (Sasaki 2023). This may result in slower operations with results vulnerable to human error.

Disagreement is also expressed in terms of the respondents' view of AI as able to generate content that is accurate and bias-free. Studies warn about inaccuracies in AI-generated content. Jensen (2023), for instance, stresses how generative AI "learns" and bases its responses only on the data it is fed. This means that AI may also consider outdated, plagiarized, or biased datasets. The author also explains that AI might also be insensitive to what humans would consider original or unoriginal thought, because they merely reintegrate data given to them. As an effect, generated content may be subject to copyright infringement. AI-generated content may likewise be based on biased data that are reflective of social or historical inequalities. While automation certainly has its advantages, these cases highlight how AI computation still necessitates thorough human analysis and review.

Another ethical dilemma, according to Hancock, Naaman, and Levy (2020), is misrepresentation and manipulation. Aside from convenience, a reason why users employ AI is to create or establish a specific impression. However, some techniques utilized by the technology seem to go beyond representation and veer into misrepresentation, shifting from persuasion to manipulation (96–97). Manipulation through AI and associated digital technologies, according to Ienca (2023), is intentionally designed to bypass reason and exploit a subject's cognitive defenses. This lays bare a challenge for policymakers to have communicative intentions clearly defined, so as to avoid misrepresentation and manipulation.

Moreover, respondents raise AI's constrained capacity to nurture human connection, claiming it is not as effective as in-person communication. Christian (2023) writes that when faced with important or complex situations, people prefer empathy, understanding, and personalized touch, which are reduced or altogether absent in AI-MC. Such preference reinforces a constant need to invest in face-to-face human interactions.

Lastly, AI use poses issues with data privacy. As discussed by The Economic Times (2023), with the continuous evolution of AI comes greater involvement of personal information, since its systems depend on vast amounts of data to train algorithms and enhance performance. Over time, this increases risks of data breach, given that how data processing—how data is used and who has access to it—is not fully disclosed.

To address these issues, the respondents recommend inclusive capacity building efforts to orient organization members on AI technologies that are available and allowed for utilization.

Capacity building initiatives should enable organizations to acknowledge and harness AI's potential for strategic alignment and enhanced collaboration. Policies should also be implemented to counter the lack of formalized regulatory measures surrounding AI use for organizational communication and overall performance. In crafting policies, Nagelhout (2023) challenges academic organizations to focus attention on how AI use impinges on academic policies; how AI use in a scholarly work should be stated (should it be allowed); how to manage possible bias or inaccuracy on AI-generated content; how AI use stands given copyright or licensing laws and protocols; and how AI use may violate data privacy.

CONCLUSION

Artificial Intelligence (AI) has revolutionized various areas of life. Its potential is strongly explored and documented in different fields of expertise, but is understudied within academic environments, where strong critical thinking and human connection are hallmarks of organizational success. This quantitative study was conducted to add knowledge to this research area.

Surveying 50 academic and administrative managers from various colleges and universities in the Philippines' Calabarzon region and hinging on the General Systems Theory, the Organizational Information Theory (von Bertalanffy 1986; Weick 1993 in West and Turner 2012, 294), and Hancock, Naaman, and Levy's (2020) AI-MC framework, the present study described AI use for communication among Calabarzon higher education institutions (HEIs) by: 1) determining the communicative functions that utilize AI among Calabarzon higher education institutions (HEIs); 2) discussing the respondents' general view of AI-mediated communication (AI-MC) and organizational performance; 3) enumerating issues on AI-mediated communication (AI-MC) observed by the respondents; and 4) outlining means by which respondents suggest resolving these issues.

Findings conclude that AI use within academic environments is assistive in nature and expedites communication management, specifically message creation and distribution. Autonomy remains with human managers, who express disagreement with overreliance on automation, especially on matters concerning organizational processes and decision-making. While deemed promising, AI use in examined organizations poses ethical and functional issues such as: inaccessibility and user inexperience; content bias and inaccuracy; constrained capacity to nurture human connection; and data privacy risks. Respondents recommend capacity building efforts and policy implementation to manage said issues and maximize AI use without compromising human agency.

REFERENCES

Almaney, Adnan. "Communication and the Systems Theory of Organization." *The Journal of Business Communication* 12, no. 1, 35–43. https://doi.org/10.1177/002194367401200106.

Ang, Tiing Leong, et al. 2023. "The rise of artificial intelligence: addressing the impact of large language models such as ChatGPT on scientific publications." *Singapore Medical Journal* 64, no. 4: 219–220. https://doi:10.4103/singaporemedj.SMJ-2023-055.

Anyoha, Rockwell. 2017. "The History of Artificial Intelligence." *Harvard University Graduate School of Arts and Sciences*. https://sitn.hms.harvard.edu/flash/2017/history-artificial-intelligence/.

Aransiola, Olayemi Jemimah. 2023. "What is Network Sampling in Surveys?" *Formplus.* https://www.formpl.us/blog/what-is-network-sampling-in-surveys.

Babbie, Earl. 2013. *The Practice of Social Research, 13th Ed.* Belmont, CA: Wadsworth Cengage.

Balita, Christy. 2023. "Population, Philippines 2020, by region." *Statista.* https://www.statista.com/statistics/1173624/philippines-population-by-region/.

Božić, Velibor. 2023. "Artificial Intelligence as the Reason and the Solution of Digital Divide." *Language, Education, and Technology* 3, no. 1. 96–97. http://www.langedutech.com/letjournal/index.php/let/article/view/53.

Chen, Mia Xu, et al. 2023. "Gmail Smart Compose: Real-Time Assisted Writing." Paper presented at *The 25th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. Anchorage, AK, August 4–8, 2019*. https://dl.acm.org/action/showFmPdf?doi=10.1145%2F3292500.

Chonody, Jill. 2023. "What is Quantitative Research?" *Social Work Research. Indiana University Northwest*. https://libguides.iun.edu/S371socialworkresearch/quantitative.

Christian, Kwame. 2023. "The Future of Communication in the Age of Artificial Intelligence." *Forbes*.. https://www.forbes.com/sites/kwamechristian/2023/05/04/the-future-of-communication-in-the-age-of-artificial-intelligence/?sh=542f5665469c.

Cote, Catherine. 2023. "Communicating Direction to Your Organization: 5 Dimensions to Consider." *Harvard Business School Online*. https://online.hbs.edu/blog/post/organizational-communication.

Ditlevsen, Marianne Grove and Johansen, Trine Susane. "Communication Management Under the Spotlight—a Literature Review." *Communication and Language at Work* 6, no. 2, 1–14.

Espulgas, Mireia. 2023. "The use of artificial intelligence (AI) to enhance academic communication, education and research: a balanced approach." *The Journal of hand surgery, European Volume* 48, no. 8: 18. https://doi:10.1177/17531934231185746.

Filimowicz, Michael. 2023. "10 Historical Milestones in the Development of AI Systems." *Medium.* https://medium.com/higher-neurons/10-historical-milestones-in-the-development-of-ai-systems-b99f21a606a9.

Fontanilla, John Bernard, et al. 2023. "Educators' Perspectives on the Impact of Artificial Intelligence on Writing Competence," *International Journal of Multidisciplinary Research and Publications (IJMRAP)* 6, no. 6: 29.

Ganti, Akhilesh. 2023. "Central Limit Theorem (CLT): Definition and Key Characteristics." *Investopedia - Dotdash Meredith Publishing*. https://www.investopedia.com/terms/c/central_limit_theorem.asp.

Garza-Ulloa, Jorge. 2024. "Artificial Intelligence: Predictive vs Generative vs New Mixing AI." *ResearchGate; American Journal of Biomedical Research* 22, no. 3: 491–493. https://www.researchgate.net/publication/380540247_Artificial_Intelligence_generative_vs_predictive_vs_mixing_AI_by_Jorge_Garza_Ulloa.

Gilli, Katharina, Nicole Lettner, and Wolfgang Guettel. 2023. "The Future of Leadership: New Digital Skills or Old Analog Virtues?" In the *Journal of Business Strategy*. https://www.emerald.com/insight/content/doi/10.1108/JBS-06-2022-0093/full/html.

Goudar, Jyothi. 2010. "Effective Communication Management." *Project Perfect*. http://www.projectperfect.com.au/downloads/Info/white-paper-effective-project-communication-management.pdf.

Hancock, Jeffrey, Mor Naaman, and Karen Levy. 2020. "AI-mediated Communication: Definition, Research Agenda, and Ethical Considerations." *Journal of Computer-Mediated Communication* 25, no. 1: 89, 90, 94; 96–97.

Harris-Briggs, Natalie. 2018. "7 Advantages of Technology in Business Communication." *Avocor.* https://www.avocor.com/blog/7-advantages-of-technology-in-business-communication/.

Henderson, KJ. 2023. "The Advantages of Technology in Business Communication." *Chron*. https://smallbusiness.chron.com/advantages-technology-business-communication-2824.html.

Ienca, Marcelo. 2023. "On artificial intelligence and manipulation." *Topoi, 42*: 833–842. https://doi.org/10.1007/s11245-023-09940-3.

Jarrahi, Mohammad Hossein, et al. 2023. "Artificial intelligence and knowledge management: A partnership between human and AI." *Elsevier B. V.; Business Horizons* 66: 87–90. https://www.sciencedirect.com/science/article/pii/S0007681322000222.

Jensen, Thor. 2023. "Yes, Machines Make Mistakes: the 10 Biggest Flaws in Generative AI." *PC Mag*. https://www.pcmag.com/news/yes-machines-make-mistakes-the-10-biggest-flaws-in-generative-ai.

Juneja, Prachi. 2015. "Importance of Communication in an Organization." *Management Study Guide*. https://managementstudyguide.com/importance-of-communication.htm.

Kaczmarek-Śliwińska, Monika. 2019. "Organizational Communication in the Age of Artificial Intelligence Development. Opportunities and Threats." *Sciendo Social Communication* 2: 62–65. https://intapi.sciendo.com/pdf/10.2478/sc-2019-0010.

Knowledgehut Solutions, Ltd. 2023. "Communication Management." *Knowledgehut Project Management Tutorials*. https://www.knowledgehut.com/tutorials/project-management/communication-management.

Kortelling, John Egbert., et al. 2021. "Human vs Artificial Intelligence." *Frontiers in Artificial Intelligence* 4, 1–5. https://www.readcube.com/articles/10.3389/frai.2021.622364.

Laker, Benjamin. 2023. "Leadership in the Age of AI: Harnessing Data for Informed Choices." *Forbes*. https://www.forbes.com/sites/benjaminlaker/2023/09/14/leadership-in-the-age-of-ai-harnessing-data-for-informed-choices/.

Miller, Katherine. 2012. *Organizational Communication: Approaches and Processes, 6th Ed.* Boston, MA: WADSWORTH Cengage Learning.

Mucci, Tim and Stryker, Cole. 2023. "What is Artificial Superintelligence?" *IBM.* https://www.ibm.com/topics/artificial-superintelligence.

Nagelhout, Ryan. 2023. "Academic Resilience in a World of Artificial Intelligence." *Harvard Graduate School of Education*. Written August 24, 2023.

https://www.gse.harvard.edu/ideas/usable-knowledge/23/08/academic-resilience-world-artificial-intelligence.

Oxford Online Dictionary. 2023. "Communication." https://www.oxfordlearnersdictionaries.com/us/definition/american_english/communication/.

Pacchiega, Claudio. 2021. "How can Education Use Artificial Intelligence? A Brief History of AI, Its Usages, Successes, and Its Problems when Applied to Education." *IGI Global*. https://www.igi-global.com/chapter/how-can-education-use-artificial-intelligence/273043.

People Management. 2021. "How to be a Leader and Not a Manager." *People Management.* https://www.peoplemanagement.co.uk/.

Pletcher, Scott Nicholas. 2023. "Practical and Ethical Perspectives on AI-Based Employee Performance Evaluation." *Purdue Polytechnic Institute*. https://osf.io/29yej.

Ramey, Karehka. 2013. "Use of Communication Technology for Organizational Communication." *Use of Technology*, *Techucation*. https://useoftechnology.com/communication-technology-organizational-communication/.

Sasaki, Sage. 2023. "Is Artificial Intelligence Inaccessible to the Average Person?" *Medium*. https://medium.com/@sage.sasaki/is-artificial-intelligence-inaccessible-to-the-average-person-14430c095848.

Sarokin, David. 2023. "How Globalization and Technology Change Business." *Chron*. https://smallbusiness.chron.com/advantages-technology-business-communication-2824.html.

Smith, Chris. 2006. "Introduction, Artificial Intelligence," in *History of Artificial Intelligence.* University of Washington, 4. https://courses.cs.washington.edu/courses/csep590/06au/projects/history-ai.pdf.

Smolic, Hrvoje. 2024. "A Comprehensive Guide to the Six Main Subsets of AI: Exploring Machine Learning, NLP, and Beyond." *Graphite Note.* https://graphite-note.com/a-comprehensive-guide-to-the-six-main-subsets-of-ai-exploring-machine-learning-nlp-and-beyond/.

Sundstrup, Emil. et al. 2022. "New Technology and Loss of Paid Employment among Older Workers: Prospective Cohort Study." *International Journal of Environmental Research and Public Health* 19, no. 12: 1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9222591/.

The Economic Times. 2023. "AI and Privacy: The privacy concerns surrounding AI, its potential impact on personal data." *The Economic Times.* https://m.economictimes.com/how-to/ai-and-privacy-the-privacy-concerns-surrounding-ai-its-potential-impact-on-personal-data/articleshow/99738234.cms.

The University of California. 2023. *Healthy Aging*. https://memory.ucsf.edu/.

The University of Central Arkansas. 2023. "ChatGPT: What Is It?" *University of Central Arkansas Center for Excellence in Teaching and Academic Leadership.* https://uca.edu/cetal/chat-gpt/.

Van der Wilt, Jacques. 2023. "12 Strategies to Personalize Targeted Advertising with AI." *DataFeedWatch*. https://www.datafeedwatch.com/blog/targeted-advertising-with-ai.

Wenker, Kilian. 2023. "Who wrote this? How smart replies impact language and agency in the workplace." *Elsevier B. V; Telematics and Informatics Reports* 10: 1. pdf.sciencedirectassets.com.

West, Richard and Turner, Lynn. 2021. *Introducing Communication Theory—Analysis and Application.* NY: McGraw Hill.

Wrench, Jason, Narissra Carter, and Mark Ward. 2015. *Organizational Communication: Theory, Research, and Practice.* Flat World Knowledge, Inc.

Zhou, Qi, et al. 2023. "Talking to a bot or a wall? How chatbots vs. human agents affect anticipated communication quality" *Computers in Human Behavior,* 143. https://www.sciencedirect.com/science/article/abs/pii/S0747563223000250.

ABOUT THE AUTHOR

KAHREIN A. SALVADOR is a Communication professor from the Philippines. She earned her degrees Bachelor of Science in Development Communication and Master of Arts in Communication Arts from the University of the Philippines Los Baños. Currently, she is a PhD candidate of the Doctor of Communication program of the University of the Philippines Open University (UPOU). Her research interests include visual communication, digital rhetoric, and media studies. She authors communication textbooks for one of the Philippines' leading names in academic publishing and does content and design consultancy work for various local and international development organizations.

Email: kasalvador@up.edu.ph

Travel Influencers as Catalysts for Fostering Open Innovation of Tourism: A Case Study in Da Lat

HIEN DUONG
Vietnam National University Ho Chi Minh City—
University of Social Sciences and Humanities

ABSTRACT
The travel industry has witnessed a paradigm shift in recent years with the emergence of travel influencers and the power of social media. This study explores the role of travel influencers as catalysts for open innovation within the tourism sector, challenging the traditional closed innovation model. By examining their impact on destination awareness, travel inspiration, and the creation of innovative tourism experiences, this study aims to uncover the dynamic interplay between travel influencers and the future of tourism. Drawing upon quantitative data collected through a structured survey of 157 young visitors aged 18-29, who were not followers of selected travel influencers (namely Ly Thanh Co, Bong Tim, Le Ha Truc, and Khoai Lang Thang), as well as an analysis of online reviews from engaged followers, this research delves into the extent to which travel influencers foster open innovation in the tourism industry. Additionally, a case study in Da Lat, Vietnam, provides insights into the specific activities and effects of travel influencers within the Vietnamese context. The findings of this study contribute to the existing knowledge on travel influencers and their impact on the tourism sector. The research highlights the potential of travel influencers as catalysts for open innovation, emphasizing their ability to involve a broader range of actors, encourage co-creation, and facilitate knowledge sharing. These insights can guide tourism stakeholders, policymakers, and destination marketers in leveraging the influence of travel influencers to shape the future of tourism in Vietnam and beyond.

Keywords: destination awareness, innovative tourism experiences, open innovation, tourism digital ecosystems, travel influencers

INTRODUCTION

The contemporary landscape of the travel industry has undergone a discernible paradigm shift in recent years, primarily propelled by the ascendance of social media platforms and the concurrent rise of individuals who wield considerable influence within the domain—namely, travel influencers. Manifesting through their distinctive online presence and the presentation of captivating content, these influencers have assumed a pivotal role in exerting substantial sway over the decision-making processes and experiential aspects of contemporary travel (Gretzel and Yoo 2008). This study endeavors to systematically scrutinize the complex role of travel influencers as catalyzing agents for open innovation within the tourism sector, thereby challenging the conventional framework of closed innovation. Through an exploration of their impact on fostering destination awareness, imparting travel inspiration, and engendering the inception of innovative tourism experiences, this scholarly inquiry endeavors to elucidate the dynamic interplay between travel influencers and the evolving trajectory of the tourism industry.

In the traditional tourism industry, innovation has been predominantly driven by closed processes, wherein organizations develop innovations internally or through collaborations within limited stakeholder networks (Chesbrough 2017). However, the advent of travel influencers has ushered in a new era of open innovation. Open innovation entails integrating external ideas, resources, and fostering collaboration among diverse stakeholders to drive innovation and create value (Chesbrough 2017). Travel influencers, with their extensive networks and digital platforms, are breaking down the barriers of closed innovation by involving a broader range of actors and encouraging co-creation and knowledge sharing (Gretzel and Yoo 2008; Sesar, Hunjet, and Kozina 2021)

In terms of open innovation, travel influencers have the potential to facilitate collaboration, co-creation, and knowledge sharing among various stakeholders in the tourism industry. Their social media platforms act as a medium for engaging with diverse audiences, including tourists, local communities, and businesses. Travel influencers encourage dialogue, interaction, and the exchange of ideas, leading to the generation of innovative tourism experiences (Ye, Zhang, and Law 2009; Jaya and Prianthara 2020)

Furthermore, travel influencers play a crucial role in bridging the gap between tourists and destinations. By showcasing unique and lesser-known locations, they encourage travelers to venture beyond traditional tourist hotspots, thus promoting the discovery of new destinations and experiences (Yuniati, Hardi, and Primasari 2021; Gholamhosseinzadeh, Chapuis, and Lehu 2023). This exposure to alternative travel options fosters open innovation by diversifying the range of tourism offerings and encouraging collaboration between different regions and stakeholders (Jaya and Prianthara 2020).

However, it is important to recognize that the extent to which travel influencers foster open innovation in tourism is not without limitations and challenges. While they facilitate knowledge sharing and co-creation, issues of authenticity, ethics, and sustainability arise (Gholamhosseinzadeh, Chapuis, and Lehu 2023). The commercial nature of influencer collaborations and the potential for biased or manipulated content may raise concerns regarding transparency and trust (Ye, Zhang, and Law 2009). Additionally, the popularity of certain

destinations promoted by influencers can lead to issues such as overtourism and the strain on local resources and communities (Wengel et al. 2022).

Within the context of Vietnam's tourism industry, the activities of travel influencers have gained significant traction. Travel influencers in Vietnam, including the city of Da Lat in Lam Dong province, have harnessed the power of social media platforms to captivate audiences and shape travel behaviors. Da Lat, located in the central highlands of Vietnam, is a charming city known for its natural beauty, temperature climate, and unique cultural heritage. As one of the most popular tourist destinations in Vietnam, Da Lat offers a diverse range of attractions, making it a haven for nature enthusiasts, adventure seekers, and those seeking a tranquil retreat (Dalat City 2024). Tourism is recognized as the driving force of Da Lat's economy. The "Strategy on Viet Nam's tourism development until 2020, vision to 2030" approved by Prime Minister in Decision 2473/QĐ-TTg dated December 30th, 2011, identified Da Lat as one of the major ecological and leisure tourism centers in the country. It is a key point in the vibrant tourism triangle: Ho Chi Minh City – Da Lat – Nha Trang; Nha Trang – Ninh Chu – Da Lat (Dung 2011).

The travel influencers' contents, ranging from destination recommendations to immersive experiences, have played a pivotal role in influencing travelers' perceptions, emotions, and travel motivations (Duong et al. 2022). However, while the impact of travel influencers on tourism experiences and consumer behavior has been studied to some extent, their role as catalysts for open innovation within the industry remains relatively unexplored.

To what extent do travel influencers foster open innovation in tourism in the future? This is the research question that guides the inquiry for this study. By investigating the degree to which travel influencers contribute to open innovation, this research aims to gain insights into their potential influence on the future of tourism. Additionally, through a case study in Da Lat, Lam Dong, the specific activities and effects of travel influencers within the Vietnamese context will be examined, shedding light on the role they play in fostering open innovation in the tourism industry.

By addressing these research objectives, this study seeks to contribute to the existing body of knowledge on travel influencers and their impacts on the tourism sector. The findings will provide valuable insights for tourism stakeholders, policymakers, and destination marketers, enabling them to leverage the potential of travel influencers as catalysts for open innovation in order to shape the future of tourism in Vietnam and beyond.

METHODOLOGY

Facebook, TikTok, Instagram, and YouTube are considered as the four most tourism-inspired social networking platforms for Vietnamese users (Thuy 2024). These platforms are also the primary sources for the dissemination of the four major types of content: text, audio, images, and videos (Duong et al. 2022). Based on these popular social media platforms, the study established a filter according to the following criteria: (1) travel influencers in Vietnam, yielding 76 results; (2) travel influencers specifically focusing on Da Lat, resulting in 37 findings; and (3) travel influencers who produce content relating to Da Lat with the highest number of followers across the four platforms, namely, Ly Thanh Co, Bong Tim, Le Ha Truc, and Khoai Lang Thang (see Figures 1 to 4).

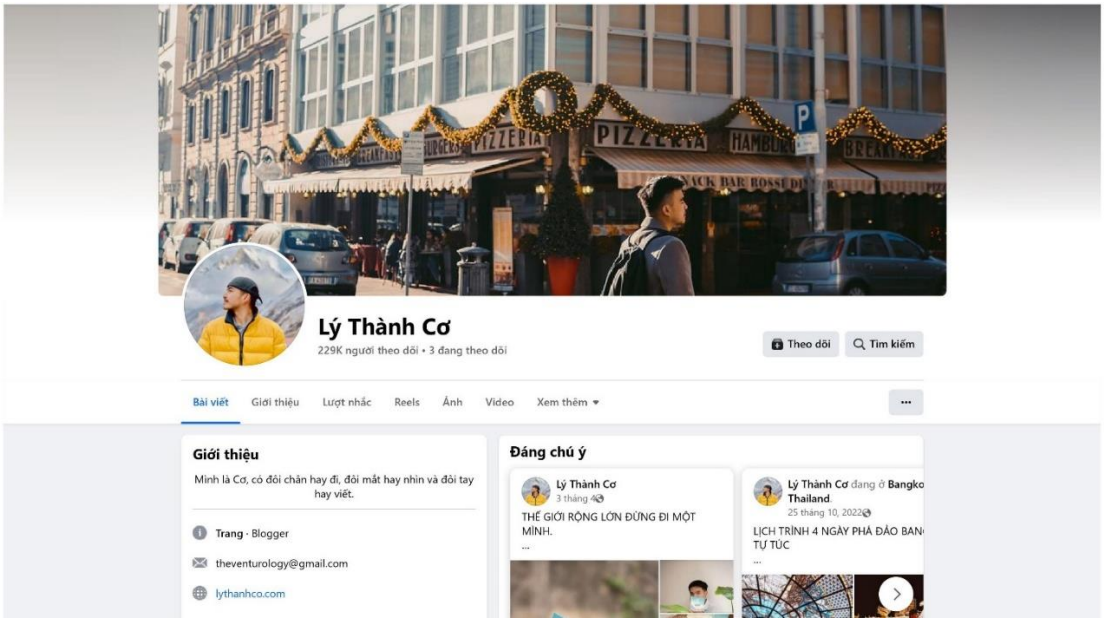


Figure 1. Ly Thanh Co's fanpage on Facebook platform. Source: screenshot on August 22, 2024.

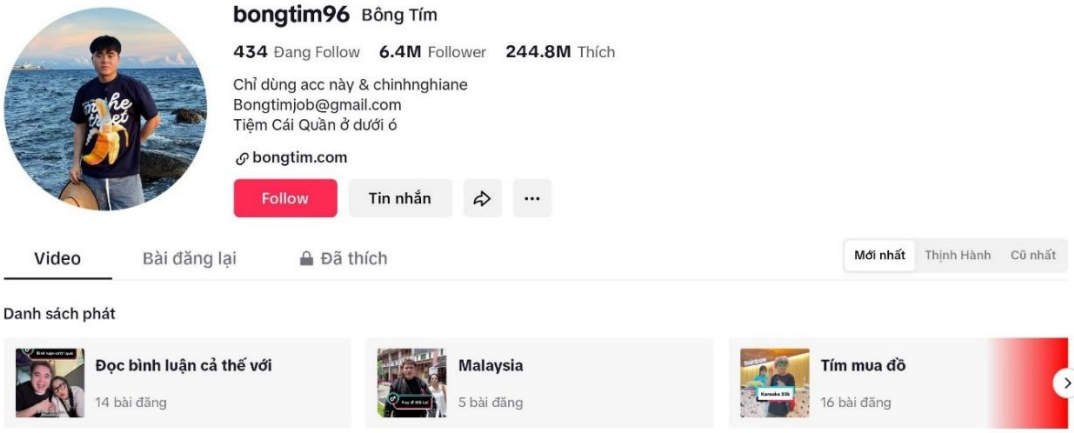


Figure 2. Bong Tim's fanpage on Tiktok platform. Source: screenshot on August 22, 2024.

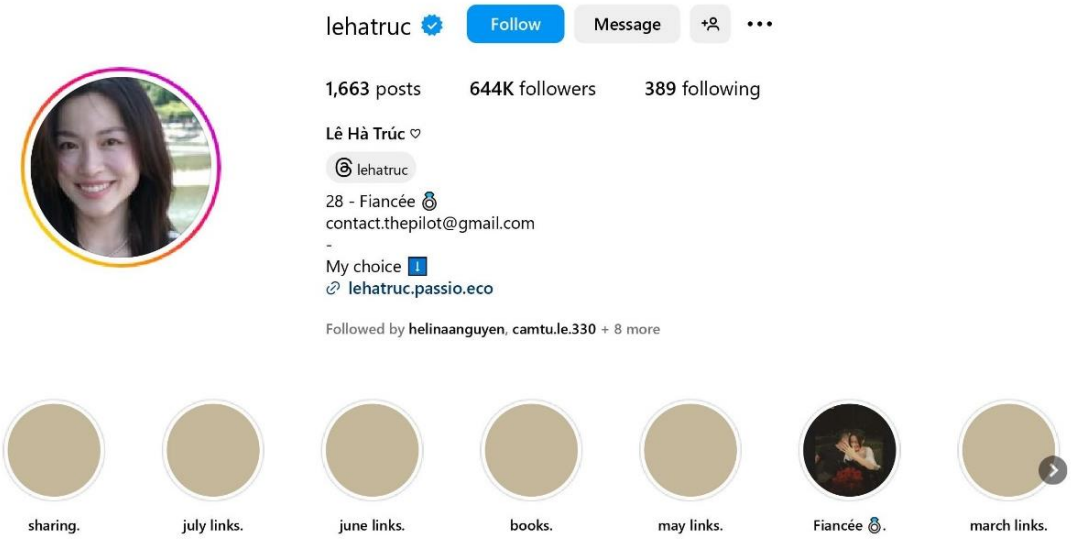


Figure 3. Le Ha Truc's fanpage on Instagram platform. Source: screenshot on August 22, 2024.

Figure 4. Khoai Lang Thang's channel on YouTube platform. Source: screenshot on August 22, 2024.

Then, the content analysis method was conducted between 2015 and 2022 to analyze posts and videos created by four selected travel influencers. The research focused on examining the usage of hashtags by the influencers within three categories: (1) Travel influencer brand name, (2) travel-related, and (3) trend-related hashtags. By analyzing the content and categorizing the hashtags, this method provides insights into the patterns and trends in the influencers' messaging and content creation over time. The longitudinal nature of the study allowed for the identification of changes and evolutions in the usage of hashtags, providing valuable information on the influencers' strategies and the impact of their content on open innovation in tourism.

The online reviews analysis was conducted between 2015 and 2022 to analyze reviews on various platforms, including Facebook, TikTok, Instagram, and YouTube. The research focused on reviews from followers who actively engaged with the content of selected travel influencers. Due to the large number of comments (13,051), processing all of them within a limited time frame would have been an overwhelming task. Therefore, the sample sized was limited to a symbolic 5%. A sample size of 653 reviews was analyzed. By examining these reviews, the study aimed to gain insights into the followers' perceptions, experiences, and feedback related to the travel influencers' content. This method provides a comprehensive understanding of the impact and effectiveness of their content in influencing travel decisions and fostering open innovation in the tourism industry.

The questionnaire method was employed in April 2022 to gather data from a sample of 157 young visitors aged 18–29 who were not followers of four selected travel influencers. The method involved administering a structured survey to collect information on the respondents' perceptions and behaviors related to travel influencers and their impacts on tourism innovation. The sample size of 157 provides a substantial dataset for analysis, allowing for meaningful insights into the research questions. The questionnaire method offers a systematic approach to gather quantitative data and provides an efficient way to measure the extent of travel influencers' impact on open innovation in the tourism industry.

The in-depth interview method was expected to gather opinions from four (4) travel influencers; however, due to personal schedules, three of them were unable to arrange time to participate in the interviews. The interview with travel influencer Ly Thanh Co was conducted on April 24th, 2022. The purpose of the interview was to gather insights and opinions from the influencer regarding the attractiveness of Da Lat as a destination and the promotion of this location through shared content.

The method involved asking targeted questions to elicit detailed and comprehensive responses from the interviewee, allowing for a deeper understanding of their perspectives, experiences, and recommendations. By conducting this in-depth interview, the study gained valuable firsthand information from the travel influencer, providing unique insights into the destination's appeal and the role of shared content in its promotion.

This mixed-method approach was chosen to provide a comprehensive analysis of the impact of Travel influencers on open innovation in the tourism industry in the context of Vietnam. The combination of quantitative data from surveys and online reviews, along with qualitative insights from content analysis and in-depth interviews, offers a holistic understanding of the research topic. By employing these methods, the study ensured the collection of reliable and diverse data, enabling comprehensive analysis and meaningful conclusions.

FINDINGS

The latest bibliometric analysis on open innovation in hospitality and tourism services by Robayo-Acuña and Chams-Anturi (2023) indicates that there is a recent and growing interest among academics, especially since 2017. Additionally, four key research areas have emerged: overtourism and sustainability, value co-creation, open innovation and competitive advantage and their effects on hotel industry organizations, as well as the relationship between external knowledge and internal resources in innovation management and open innovation performance.

Open innovation through travel influencers has become a significant aspect of marketing strategies for tourism boards, hospitality businesses, and destination marketing organizations worldwide. Several influencer marketing campaigns in travel and tourism have achieved notable success by effectively leveraging the reach and influence of content creators. Taking Airbnb's #LiveThere campaign as an example. Being launched in 2016, the campaign focused on encouraging travelers to experience destinations like a local rather than a tourist. The campaign partnered with various travel influencers who shared their unique experiences staying in Airbnb accommodations around the world (Kolsquare 2022). The initiative successfully engaged 2.5 billion potential participants, resulting in a 32% boost in travel interest registered through the campaign. Bookings surged by 27% via the Airbnb platform following the campaign's launch (Khan 2023). In Vietnam, #HelloVietnam is one of the tourism promotion campaigns that has garnered a lot of attention, initiated by TikTok for the first time in 2019 after receiving approval and sponsorship from the National Administration of Tourism. Within the framework of the campaign, TikTok implemented the experiential tour activity #HelloVietnam with a scale of 60 prominent content creators from around the world embarking on a journey to four provinces and cities. During the campaign, there were over 300 high-quality videos uploaded by content creators about experiential tours, attracting more than 100 million views and positive feedback from the community, with #HelloVietnam itself achieving an impressive figure of over 1.5 billion views (TikTok 2024). This demonstrates the enormous influence of TikTokers and travel influencers in the era of digital technology on user communities.

Overview of the Da Lat theme by travel influencers

The approach and activities of travel influencers in Da Lat have not been extensively addressed in scientific literature (Duong et al. 2022). However, in general, their activities are closely linked to the development of social media platforms. Although the development of these platforms cannot be surveyed in a defined sequence because their emergence and prevalence overlap with each other, there are periods when travel influencers tend to favor using certain prominent or newly emerged platforms that attract a large number of users.

The overview of travel influencers in Da Lat provides a comprehensive look at the evolution of their activities across various stages, reflecting the dynamic landscape of social media platforms. There are periods when travel influencers tend to prefer using certain social media platforms (often prominent social media platforms, newly emerged, or attracting a large number of users) that predominantly utilize one or more forms of information dissemination. Therefore, to gain a general understanding of the current state of activities of travel influencers in Da Lat, said activities can be divided into three research stages:

Stage 1 represents the formation and development of blogs. Due to their simple operational methods, blogs have gained prominence in conveying information mainly through written text. The activities of travel influencers in Da Lat were primarily self-driven and not strongly connected with Destination Marketing Organizations (DMOs). The travel influencers in this stage could be considered as "daring pioneers." Some notable travel influencers such as Nhi Dang, Tam Bui, Vinh Gau, Huyen Chip, Rosie Nguyen, Dinh Hang, and Nguyen Phuong Mai can be mentioned.

Stage 2 witnesses the development of Facebook, Instagram, and similar social media platforms. This stage combines written text with images to provide shared experiences for followers. In addition to continuing to share content about natural attractions in Da Lat, many travel influencers expanded into local food, cozy homestays, and interesting entertainment. Simultaneously, the quality of images and content improved, attracting a large number of followers due to global coverage. Many travel bloggers are still active at this stage, shifting their focus from personal blogs to Facebook due to their pre-existing following. Additionally, there are quite a few travel influencers who have emerged and established themselves through Facebook, such as Ly Thanh Co, Le Ha Truc, Khoai Lang Thang, and Fahoka Xe Dich. This stage demonstrated the maturity of travel influencers. Travel bloggers who initially viewed their writing on social media platforms as a personal hobby began to recognize travel influencing as a genuine profession, leading to the specialization of their careers.

Stage 3 corresponds to the development of platforms such as YouTube and TikTok. Content marketing is diversified, combining written text, images, and sound to create new genres, with video clips being the most representative. This stage demonstrates the remarkable success of the travel influencer community making content about Da Lat, both in terms of quality and quantity. It witnesses the proliferation of travel influencers across various social media platforms. Building upon and leveraging the achievement of previous stages, the destination marketed by travel influencers are becoming increasingly diverse and abundant. Some travel influencers at this stage include Khoai Lang Thang, Bong Tim, Huy Hay Di, Khoa Pug, Mike Nhan Phan, Win Di, and Le Hoang Nam.

At each stage, alongside the prominence of certain social media platforms, there are notable travel influencers who emerge and contribute significantly. They may lay the foundation for the stage, pioneer the establishment of personal brands, or inspire other travel influencers. Furthermore, each stage also experiences changes in the interaction among stakeholders, tourists, and third parties.

Travel influencers' impact on their followers

Da Lat's travel influencers have evolved in sync with the development of social media platforms. Each stage brought about changes in content, engagement, and recognition. The investigation on individual influencers highlights their focus areas, follower counts, and audience feedback, providing insights into their impact and popularity within their respective platforms

Social media	Travel Influencer	Followers (January 31, 2024)	Contents related to Da Lat (until October 2022)	Percentage (%) of positive reactions
Facebook	Ly Thanh Co	204,862	**66 posts** Topic: lodging and check-in sites	88.24
TikTok	Bong Tim	6,400,000	**27 short videos** Topic: street food, lodging, traveling and check-in sites	54.09
Instagram	Le Ha Truc	522,000	**11 posts** Topic: lodging and check-in sites	66.67
YouTube	Khoai Lang Thang	2,330,000	**11 videos** Topic: street food, lodging, experiences	83.96

Table 1. Rate of positive comments about Da Lat from followers of four travel influencers. Source: author.

On Facebook, Ly Thanh Co has accumulated a follower count of 204,862. With a focus on lodging and check-in sites, Ly Thanh Co has shared 66 posts, receiving a considerable 88.24% positive feedback. This indicates that Ly Thanh Co's content in the lodging and check-in sites category resonates strongly with the Facebook followers.

Bong Tim, a TikTok influencer, commands a sizeable follower count of 6,400,000. Bong Tim's content comprises 27 short videos covering various topics such as street food, lodging, traveling, and check-in sites. The positive feedback percentage for Bong Tim's content stands at 54.09%. While Bong Tim has amassed a significant following, the positive feedback percentage is comparatively lower than the other travel influencers, suggesting potential variations in audience response.

Le Ha Truc, on Instagram, boasts a substantial follower count of 522,000. With a total of 11 posts centered around lodging and check-in sites, Le Ha Truc has garnered a positive feedback percentage of 66.67%. This suggests that Le Ha Truc's posts in the lodging and check-in sites category have been well-received by the Instagram followers.

Lastly, on YouTube, Khoai Lang Thang has garnered a fair follower count of 2,330,000. With 11 videos focusing on street food, lodging, and experiences, Khoai Lang Thang has achieved a moderate positive feedback percentage of 83.96%. This indicates that Khoai Lang Thang's videos, particularly those related to street food, lodging, and experiences, have resonated well with the YouTube audience.

Table 1 reveals that the travel influencers have received positive feedback from their followers across different social media platforms. Content topics such as lodging, check-in sites, street food, and travel experiences have proven to be popular among the followers, albeit with varying degrees of positive feedback percentages across the travel influencers and platforms.

These influencers not only contribute significantly to promoting Da Lat but also play pivotal roles in shaping travel trends, preferences, and interactions among stakeholders. The positive feedback percentages suggest a generally favorable reception, with each influencer carving out a niche within their chosen platform (Cholprasertsuk, Lawanwisut, and Thongrin 2020). As Da Lat continues to evolve as a major tourism hub, the role of these influencers becomes increasingly crucial in shaping perceptions and attracting a diverse range of visitors.

Travel influencers' impact of their non-followers on Da Lat

Figure 5 visually illustrates the impact of four travel influencers on the perceptual framework of non-followers regarding the image of Da Lat. The data, quantified in percentages, is systematically classified into three distinct categories: “Better,” “Unchanged,” and “Worse.”

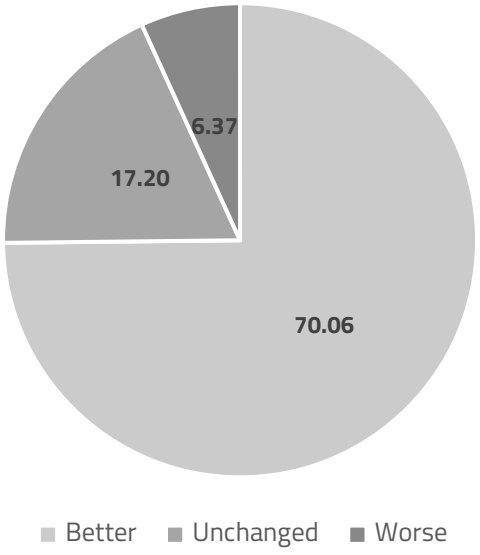


Figure 5. The extent of travel influencer's influence on non-followers' perception about Da Lat’s image (%). Source: author.

The findings reveal that a predominant majority of non-followers, encompassing 70.06%, articulated an improved perception of Da Lat subsequent to the influence exerted by travel influencers. This underscores the efficacy of the influencers' content, presumably featuring positive experiences and highlighting key aspects of the destination, in augmenting the positive perception of Da Lat among individuals who do not actively follow these influencers. Conversely, a lesser segment of non-followers, constituting 17.2%, reported an unaltered perception of Da Lat post-influence, suggesting that the content disseminated by travel influencers may not have substantially influenced their pre-existing perceptions of the destination. A minority subset of non-followers, representing 6.37%, communicated a deteriorated perception of Da Lat subsequent to exposure to travel influencer content. This suggests that, in specific instances, the content produced by travel influencers may have engendered a negative impact on the perception of the destination among their non-followers, potentially attributable to unfavorable experiences or portrayals.

Similarly, Figure 6 delineates the impact of a travel influencer's sway on the emotional responses of non-followers concerning the portrayal of Da Lat. The presented data, conveyed in percentage terms, classifies emotions into three distinct categories: 'Satisfied," "Unsatisfied," and "Don't know."

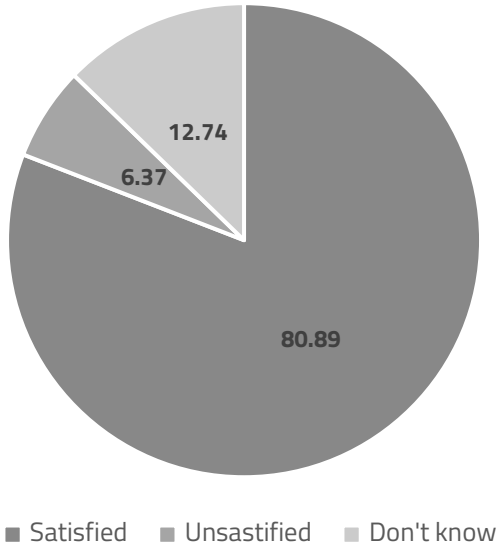


Figure 6. The extent of travel influencer's influence on non-followers' emotion about Da Lat's image (%). Source: author.

Analysis of the data discloses that a substantial majority of non-followers, constituting 80.89%, conveyed a sense of satisfaction with the depiction of Da Lat influenced by the travel influencers. This discernment implies that the content disseminated by the travel influencers, likely accentuating favorable facets of the destination, has proficiently elicited a positive emotional reaction among non-followers, instigating sentiments of contentment and gratification regarding their perception of Da Lat. A nominal fraction of non-followers, approximately 6.37%, articulated feelings of dissatisfaction with the travel influencers' impact on the portrayal of Da Lat. This

observation suggests that certain individuals may have encountered adverse experiences or formulated negative perceptions associated with the destination, conceivably stemming from unfavorable depictions or information propagated by the travel influencers. A segment of non-followers, comprising 12.74%, communicated a state of uncertainty or an absence of a distinct emotional response ("Don't know") towards the portrayal of Da Lat influenced by four travel influencers. This indication implies that the content disseminated by them may not have exerted a profound influence on the emotions or perspectives of these individuals, or they may necessitate additional information or exposure to formulate a definitive emotional response.

Eventually, Figure 7 illustrates the impact of travel influencers on the travel motivation of non-followers intending to visit Da Lat. The data, presented in percentage form, is systematically classified into three distinct groups: “Favorably influenced,” “Not influenced,” and “Don't know.”

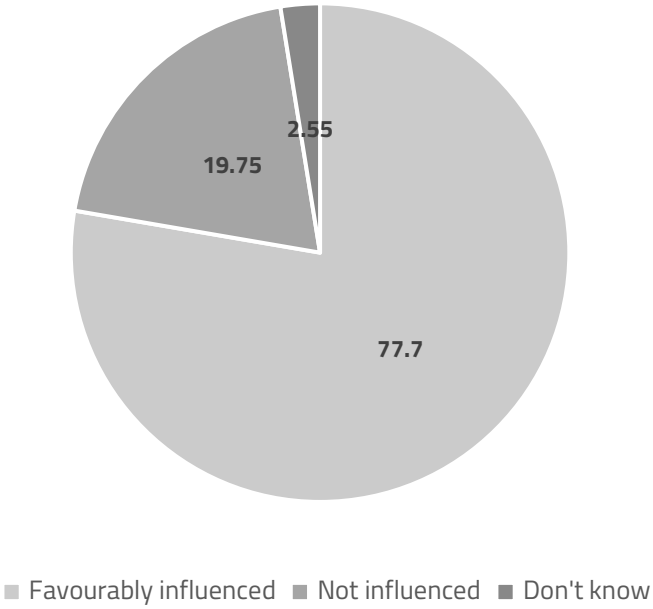


Figure 7. The extent of travel influencer's influence on non-followers' travel motivation to Da Lat (%). Source: author.

After the data analysis, it was discerned that a substantial majority of non-followers, encompassing 77.7%, affirm being positively influenced by the travel influencer's content, thereby enhancing their travel motivation to explore Da Lat. This discernible trend underscores the efficacy of the travel influencer's content in inspiring and motivating individuals who are not part of their follower base, effectively positioning Da Lat as an appealing travel destination replete with distinctive attractions and experiences. Conversely, a noteworthy segment of non-followers, constituting approximately 19.75%, asserts no discernible influence from the travel influencer's content on their travel motivation to visit Da Lat. This observation suggests that the content disseminated by the travel influencer may not have resonated with or captured the interest of this demographic, or alternatively, these non-followers may possess pre-existing travel motivations that remain unaffected by the influencer's recommendations. In a minority subset, comprising 2.55% of non-followers, an inclination towards uncertainty is observed, as they responded with

"Don't know" concerning the extent of the travel influencer's impact on their travel motivation towards Da Lat. This response implies a lack of clarity or uncertainty in their perception regarding the influence exerted by the travel influencer on their decision-making process related to travel.

Generally speaking, travel influencers have demonstrated significant potential in fostering open innovation in the tourism sector. Their influence on perceptions, emotions, and travel motivations, coupled with their role as catalysts of collaboration and knowledge sharing, positions them as key players in shaping the future of the industry. However, to maximize the benefits of travel influencers in promoting open innovation in tourism, careful consideration must be given to the subjectivity of their opinions, the importance of cooperation with Destination Marketing Organizations, and the emerging trend of influencer marketing in the post-pandemic era.

DISCUSSION AND IMPLICATIONS

Catalysts for open innovation of tourism on diverse social media platforms

The investigation into the impact of travel influencers on both their followers and non-followers in the context of Da Lat provides a nuanced understanding of their role in fostering open innovation within the tourism sector. The complex analysis is discerningly organized into two distinct sections, each addressing the influence of travel influencers on these divergent groups.

In evaluating the impact on followers, the presented data on four prominent influencers across various social media platforms delineates their follower counts, focus areas, and positive reaction percentages. This information, encapsulated in Table 1, underscores the substantial engagement and resonance these influencers elicit from their respective audiences. Notably, their contributions extend beyond mere promotional activities, as they play pivotal roles in shaping travel trends, preferences, and stakeholder interactions. The varying positive feedback percentages indicate nuanced responses to content themes such as lodging, check-in sites, street food, and travel experiences. These influencers are instrumental in not only promoting Da Lat but also in cultivating a positive perception among their followers, elucidating the influencers' potential to function as conduits for open innovation within the tourism sector.

The subsequent analysis shifts focus to non-followers, offering insights into the perceptual framework and emotional responses of individuals not actively engaged with the influencers.

Figure 5 illustrates the impact on the perceptual framework of non-followers, revealing that a substantial majority experienced an improved perception of Da Lat post-influence. This suggests the efficacy of travel influencer content in positively shaping the destination's image among individuals not following them. Conversely, a minority subset reported a deteriorated perception, emphasizing the need for influencers to exercise caution in their content creation to avoid potential negative ramifications. The emotional response analysis in Figure 6 further corroborates these findings, with a significant majority expressing satisfaction, albeit with a nominal fraction conveying dissatisfaction. These emotional responses offer valuable insights into the influencers' ability to evoke positive sentiments and, conversely, the potential risks associated with disseminating content that may elicit negative emotional reactions.

The examination of travel motivation among non-followers in Figure 7 portrays a significant positive influence on a substantial majority, emphasizing the influencers' pivotal role in inspiring travel intentions. However, a noteworthy segment reports no discernible influence, underlining the diverse nature of responses within this demographic. The "Don't know" category suggests a level of uncertainty among non-followers, highlighting the need for nuanced strategies in addressing the varied motivational triggers inherent in this cohort.

In essence, the comprehensive analysis of travel influencers' impact on both followers and non-followers elucidates their potential as catalysts for open innovation within the tourism sector. By examining the intricacies of perception, emotional response, and travel motivation, this study contributes to the evolving discourse on the transformative role of travel influencers in shaping the future landscape of tourism.

Catalysts in the tourism digital ecosystem amid fluctuations in travel behaviors

The empirical evidence delineates the pivotal role played by travel influencers in the contemporary tourism digital ecosystem, particularly amidst the multifarious fluctuations in travel behavior (Bolici et al. 2020). These influencers wield considerable influence through their curated content, which accentuates destinations, experiences, and attractions, thereby fostering positive associations and augmenting the overall image of destinations. The consequential outcome of this influence is the generation of heightened interest and a discernible impact on the travel motivations of prospective travelers (Jang et al. 2021). The expansive reach of travel influencers, coupled with their ability to engage diverse stakeholders, including local businesses and tourism organizations, positions them as indispensable catalysts driving open innovation within the tourism industry. Their role extends beyond promotional activities, contributing to the collaborative development of innovative tourism experiences and products through facilitation of knowledge sharing and collaborative initiatives.

Operating autonomously, travel influencers leverage their creativity and expertise to generate content that promotes the distinctive image of destinations (Vlahov and Vlahov 2021). This self-sufficiency enables them to present unique perspectives and authentic experiences, resonating effectively with their audience and stimulating innovative thinking. However, it is imperative to acknowledge the subjective nature of travel influencers' opinions, which may inadvertently influence the perceptions of their viewers. While these influencers strive for authenticity and value in their recommendations, the potential for personal biases and preferences shaping the opinions of their followers necessitates careful consideration when evaluating their influence on open innovation within the tourism industry.

In the context of post-pandemic recovery, influencer marketing campaigns have demonstrated success across various industries, yet the application of such strategies specifically for tourist destinations remains underexplored in Vietnam. There exists untapped potential for further exploration and utilization of influencer marketing as a potent tool for fostering open innovation and promoting destinations within the Vietnamese tourism industry. Recognizing the transformative potential of travel influencers, Destination Marketing Organizations should align their strategies accordingly. Collaborating with travel influencers allows DMOs to present authentic and diverse perspectives, thereby enhancing destination attractiveness and competitiveness

(Campbell and Farrell 2020). Especially pertinent in the post-pandemic landscape, where travel behavior has undergone significant changes emphasizing safety and trust, DMOs can strategically engage with travel influencers to showcase lesser-known destinations and unique local experiences, leveraging the influencers' reach and influence to generate interest among potential travelers.

In light of the growing influence of travel influencers, policymakers in Vietnam are urged to develop a comprehensive legal framework to safeguard the rights and interests of stakeholders engaged in influencer marketing. This framework should address key issues such as transparency, disclosure of sponsored content, and consumer protection, ensuring ethical practices and preserving trust in the industry (Radziwon et al. 2022; Cooke et al. 2022). By implementing regulations that promote transparency and authenticity in influencer marketing partnerships, policymakers can uphold the interests of consumers and safeguard the reputation of the tourism industry in Vietnam.

For travel companies operating in Vietnam, the maximization of profits lies in the effective execution of electronic Word-of-Mouth (eWOM) campaigns facilitated by travel influencers (Marasco et al. 2018). Acknowledging the substantial influence of travel influencers in shaping consumer behavior, travel companies can strategically engage with these influencers to generate positive recommendations and reviews, thereby fostering increased customer engagement and loyalty (Nazare 2019). Through collaboration with travel influencers, travel companies can leverage their extensive networks and credibility to reach wider audiences and enhance their brand reputation.

Finally, the increased research and interest in this topic also encourage travel influencers themselves to pay more attention to every posts. Ly Thanh Co shared in this study that he started creating content about Da Lat mainly because he was interested in and loved this destination. Da Lat is one of the two favorite destinations where he creates content, alongside Japan. Speaking about his perspective when collaborating with service-providing businesses, Ly Thanh Co said: "Now, when reviewing, it will help me generate income. Sometimes I receive advertising posts from restaurants and accommodations, and of course, I have to write information about those places. I really feel that the place is suitable, so I post about it, but there are many jobs that I refuse because the place is very bad, not meeting my needs, then I will not review it." Travel influencers have evolved from merely creating content as a hobby to recognizing their role as integral components of the tourism digital ecosystem. They not only shape trends but also guide their follower communities toward meticulously selected travel destinations. Aware of the symbiotic relationship they share with their audience within an open innovation framework, these influencers understand that influence is not unilateral; rather, their followers actively contribute valuable ideas and suggestions for content creation. It is evident that travel influencers are becoming increasingly deliberate in cultivating their personal brand while fostering strong connections with their communities, enabling them to adapt effectively to shifts in audience behavior.

CONCLUSION

In summation, the findings underscore the imperative for stakeholders in Vietnam's tourism industry, encompassing DMOs, policymakers, and travel companies, to acknowledge and harness the potential of travel influencers as catalysts for open innovation. Through proactive engagement, the implementation of appropriate regulations, and leveraging the power of eWOM, stakeholders can effectively harness the influence of travel influencers to not only enhance destination image but also ensure stakeholder welfare and drive profitability in the digital era of tourism. Recognizing travel influencers as valuable partners is essential for shaping the future trajectory of the tourism industry in Vietnam.

While the research provides valuable insights into the role of travel influencers in shaping the tourism landscape, several limitations need to be acknowledged. The study primarily focuses on the context of Da Lat, Vietnam, and may not be universally applicable to other destinations. The unique characteristics and dynamics of Da Lat might limit the generalizability of findings to a broader tourism context. The evaluation of influencers' impact involves subjective elements, such as perceived satisfaction and motivation. The subjectivity inherent in qualitative analysis may introduce biases in interpreting the influencers' contributions to open innovation. Recognizing these limitations is crucial for refining future research endeavors in the realm of travel influence and open innovation within the tourism sector. Addressing these limitations can enhance the robustness and applicability of insights derived from such studies.

REFERENCES

Bolici, Francesco, Chiara Acciarini, Lucia Marchegiani, and Luca Pirolo. 2020. "Innovation diffusion in tourism: how information about blockchain is exchanged and characterized on twitter." *The TQM Journal*. https://doi.org/10.1108/TQM-01-2020-0016.

Campbell, Colin, and Justine Rapp Farrell. 2020. "More than meets the eye: The functional components underlying influencer marketing." *Business Horizons* 63, no. 4: 469–479. https://doi.org/10.1016/j.bushor.2020.03.003.

Chesbrough, Henry. 2017. "The Future of Open Innovation." *Research-Technology Management* 60 (1): 35-38. https://doi.org/10.1080/08956308.2017.1255054.

Cholprasertsuk, Apichai, Chanathip Lawanwisut, and Saneh Thongrin. 2020. "Social media influencers and Thai tourism industry: Tourists' behavior, travel motivation, and influencing factors." *Journal of Liberal Arts, Thammasat University* 20, no. 2: 234–263. https://doi.org/10.14456/lartstu.2020.21.

Cooke, Philip, Sergio Nunes, Stefania Oliva, and Luciana Lazzeretti. 2022. "Open innovation, soft branding and green influencers: critiquing 'Fast Fashion'and 'Overtourism'." *Journal of Open Innovation: Technology, Market, and Complexity* 8, no. 1: 52. https://doi.org/10.3390/joitmc8010052.

Dalat City. 2024. Thông tin. Accessed May 10th, 2024. https://dalat.vn/vi/introduction.

Dung, Nguyen Tan. 2011. *Strategy on Viet Nam's tourism development until 2020, vision to 2030*. Ha Noi. Accessed May 10, 2024. https://vietnam.gov.vn/.

Duong, Hien, et al. 2022. "Influencer marketing for tourism destinations." *VNUHCM Journal of Social Sciences and Humanities* 6, no 3: 1711–1721. https://doi.org/10.32508/stdjssh.v6i3.773.

Gholamhosseinzadeh, Mohammad Sadegh, Jean-Michel Chapuis, and Jean-Marc Lehu. 2023. "Tourism netnography: How travel bloggers influence destination image." *Tourism Recreation Research* 48, no. 2: 188–204. https://doi.org/10.1080/02508281.2021.1911274.

Gretzel, Ulrike, and Kyung Hyan Yoo. 2008. "Use and Impact of Online Travel Reviews." Information and Communication Technologies in Tourism 2008, Vienna.

Jang, Wonseok, Jihoon Kim, Soojin Kim, and Jung Won Chun. 2021. "The role of engagement in travel influencer marketing: The perspectives of dual process theory and the source credibility model." *Current Issues in Tourism* 24, no. 17: 2416–2420. https://doi.org/10.1080/13683500.2020.1845126.

Jaya, I Putu Gede Iwan Trisna, and Ida Bagus Teddy Prianthara. 2020. "Role of social media influencers in tourism destination image: How does digital marketing affect purchase intention?" 3rd International Conference on Vocational Higher Education (ICVHE 2018).

Khan, Fatima. 2023. "Uncovering Lessons from Airbnb's 'Don't Go There, Live There' Campaign." January 18, 2023. https://www.linkedin.com/pulse/uncovering-lessons-from-airbnbs-dont-go-live-campaign-fatima-khan/.

Kolsquare. 2022. "Travel industry: 5 successful Influencer Marketing campaigns." Influencer strategy Kolsquare. Accessed May 10th. https://www.kolsquare.com/en/blog/travel-industry-5-successful-influencer-marketing-campaigns.

Marasco, Alessandra, Marcella De Martino, Fabio Magnotti, and Alfonso Morvillo. 2018. "Collaborative innovation in tourism and hospitality: A systematic review of the literature." *International Journal of Contemporary Hospitality Management* 30, no. 6: 2364–2395. https://doi.org/10.1108/IJCHM-01-2018-0043.

Nazare, Kaloti Domingos Luango Gunza Dala. 2019. "Development of a Social Media Marketing Strategy for Wine Tour Travel Agencies with a Focus on Influencer Marketing." Master, University of Porto

Radziwon, Agnieszka, et al. 2022. "Ecosystem effectuation: creating new value through open innovation during a pandemic." *R & D Management* 52, no 2: 376–390. https://doi.org/10.1111/radm.12512.

Robayo-Acuña, Paula Viviana, and Odette Chams-Anturi. 2023. "Open innovation in hospitality and tourism services: a bibliometric analysis." *International Journal of Innovation Science*. https://doi.org/10.1108/IJIS-07-2023-0157.

Sesar, Vesna, Anica Hunjet, and Goran Kozina. 2021. "Influencer marketing in travel and tourism: literature review." 73rd International Scientific Conference on Economic and Social Development Development—"Sustainable Tourism in Post-pandemic World," Dubrovnik.

Thuy, Thanh. 2024. "Mạng xã hội truyền cảm hứng phát triển du lịch Việt Nam." https://vneconomy.vn/.

Tiktok. 2024. "Tái khởi động chiến dịch #HelloVietnam, TikTok cùng 60 nhà sáng tạo nội dung trên thế giới đẩy mạnh quảng bá du lịch Việt Nam." Tiktok. Accessed May 10th. https://newsroom.tiktok.com/vi-vn/hellovietnam.

Vlahov, Magdalena Mustapić, and Antonio Vlahov. 2021. "Travel influencers as a new strategic partners in tourism." Proceedings of FEB Zagreb International Odyssey Conference on Economics and Business.

Wengel, Yana, Ling Ma, Yixiao Ma, Michal Apollo, Kamil Maciuk, and Ann Suwaree Ashton. 2022. "The TikTok effect on destination development: Famous overnight, now what?" *Journal of Outdoor Recreation and Tourism* 37: 100458. https://doi.org/10.1016/j.jort.2021.100458.

Ye, Qiang, Ziqiong Zhang, and Rob Law. 2009. "Sentiment classification of online reviews to travel destinations by supervised machine learning approaches." *Expert systems with applications* 36 (3): 6527-6535. https://doi.org/10.1016/j.eswa.2008.07.035.

Yuniati, Ulfa, Nora Meilinda Hardi, and Intan Primasari. 2021. "Viral Marketing Strategies through Social Media of Interesting Visitor (Case Study Cafes Instagramable in Bandung)." *Journal of Physics: Conference Series* 1764, no. 1: 012055. https://doi.org/10.1016/j.jort.2021.100458.

ABOUT THE AUTHOR

HIEN DUONG is an MA holder who is currently a lecturer at the Faculty of Tourism, Vietnam National University Ho Chi Minh City—University of Social Sciences and Humanities, and former Director of the Tourism Research Centre. She has experience in the industry for a decade ranging from tour operator, international tour guide to hospitality-majored lecturer. Her expertise in tourism and hospitality management concentrates on hospitality offerings development and tourism product models.

Email: huuhien@hcmussh.edu.vn

Data Ethics in the Race of Artificial Intelligence Technology Development between China and the U.S.

REYJANE CALICDAN-DEL CAMPO
Far Eastern University Manila

ABSTRACT
In the dawn of the age of Artificial Intelligence (AI), there are several concerns on human welfare through individual agency and cultural spheres. AI technology continuously evolves, hence criticality on the checks and balances of ethical AI adoption should be taken into action. In imagining a normalized AI world, one cannot help but to consider its positive and negative implications as it impacts human beings and life. This comparative analysis of AI cases in China and the U.S. looked at the AI genesis and waves and their impact on the data ethics and agency of individuals. This paper examined the AI landscape in China and in the U.S. who are the leaders in AI technology. AI as an evolving integral communication system in the global community was evaluated through Rogers' Diffusion of Innovation Theory (1983). Putting China and the U.S. side by side allowed for a critical analysis on the emerging challenges of AI adoption, particularly regarding data privacy, unwarranted surveillance, and the proliferation of synthetic media. Dissemination of AI adoption should be regarded in terms of innovation, communication channels, duration, and social systems.

Keywords: Artificial Intelligence (AI), China vs. USA, data ethics, diffusion of AI innovation

INTRODUCTION: UNDERSTANDING THE GENESIS AND WAVES OF ARTIFICIAL INTELLIGENCE

Tracing the genesis of artificial intelligence (AI) is tied through its applications as an automated opponent in chess match, Jeopardy, and Go games (Martinez 2019). Automated and so-called intelligent machines made their way through invention and use of industrial robots, responsive Siri and Alexa, and even self-driving cars. The first wave of developed AI contact on a global scale occurred through social media and its profiling system and algorithms. Social media platforms have presented themselves with positive slogans of expression and connecting humans. Unknowingly, social media users and their data have been used as the product for harvest and analysis for the benefit of propagandistic schemes, which targets communication systems through trend control on local context and even global scale (Prier 2017). Digital consumers have been captives of social media addiction, disinformation and mal-information, impacted mental health, and fueled polarization (Amer & Noujaim 2019). Social media as platform capitalists (Srnicek 2017) are powered by first generation AI, or more known as algorithms, permeating various aspects of life, notably in politics, economy, national security, media and journalism, social engagement, and cultural progression.

AI emergence and surge are expected to be exponential (Center for Humane Technology 2023). Tristan Harris, a former Google ethicist and lead founder of the Center for Humane Technology, underscores the exponential growth of AI as of the year 2023. He highlighted essential considerations, including the revelation of new responsibilities with each technological innovation, the initiation of a competitive race when technology imparts power, and the potential for tragic consequences without coordination. Generative Large Language Model (GoLLeM) class AI entities, such as OpenAI's ChatGPT, Google's PaLM and Bard, Meta's LLaMA, and others, should prioritize transparency in their data collection, processing, and release. Media and technology ethicists must persist in advocating for transparency with the deployment of extensive language models, particularly regarding data harvesting, processing, and utility.

Despite the exponential innovation and implementations of AI developments, there are heedful warnings on the possible catastrophic outcomes of unethical use and lack of coordination among global characters such as the People's Republic of China and the United States of America competing for AI leadership. AI key players and stakeholders still inadequately define what AI is; because AI is not just a technology—it is evolving. The lack of universal AI definition (Wang 2019) still remains a pending crucial task that needs to be addressed. In an attempt to do so, AI is described as: "a machine-based system that is capable of influencing the environment by producing an output (predictions, recommendations or decisions) ... It uses machine and/or human based data and inputs… to formulate options for outcomes designed to operate with varying levels of autonomy" (Jochheim 2021, 2). According to Martinez, autonomy is crucial in AI technology to act and think humanely and to act and think rationally (2019). In order to do this, machine learning through data input is a vital step in AI development and autonomy. In the context of the U.S., according to the National Artificial Intelligence Act of 2020, AI is defined as "a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations or decisions influencing real or virtual environments" (U.S. Department of State n.d., 3).

As humanity shifts towards the AI epoch, it is important to examine not just the speed of AI technology roll out but the ethicality of generative AI proliferation and integration into human life. Data as the fundamental fuel block for human interaction and automated machine learning computation through generative AI models must be managed properly and organized conscientiously. Data ethics is the moral obligation of data management agencies in collecting, processing, and protecting the rights of data sources and their personally identifiable information (PII)—in this case, human data subjects (Cote 2021, 12). Data ethics should be the paramount concern in AI adoption as it cuts across various social domains and global spheres.

The global AI market is estimated to be 207 billion U.S. dollars (Thormundsson 2023). World data reveal that over the past two decades, AI has exponentially increased its performance in domains such as reading comprehension, image recognition, and language understanding; to a point better than human capabilities (Giattino et al. 2023). With the emerging AI development comes the imminent competition among nation superpowers such as China and the U.S. on who will lead the AI race. Hence, it is vital to examine the direction and trajectories to which these countries are heading towards the AI age.

The main objective of this paper is to explore and explain the technological phenomenon of generative AI race between the People's Republic of China and the United States of America as nuanced in upholding ethics in data privacy, surveillance, and data authenticity. In particular, the paper seeks to describe the development, use, and deployment of AI technologies in both China and the U.S., while identifying key ethical issues in communication systems during the AI era, particularly in relation to data privacy, surveillance, and authenticity. Additionally, the paper aims to analyze these comparative cases through the theoretical framework of Everett Rogers' Diffusion of Innovations (1983).

This paper centers on data ethics particularly privacy, surveillance, and authenticity. Data is everywhere particularly in the digital age and space. An individual emits, transmits, and consumes big data through the daily use of smartphones and the internet (Canaria 2023, 3–8). One's personal and sensitive personal data through digital footprints are readily available in the digital world. Data is the underlying sustenance for generative AI models. There should be an immense emphasis and pressure on data privacy and processing particularly on the aspects of collecting and processing sensitive personal information, consent explanation and even translation for inclusivity, and raising consciousness on data privacy in the dawn of the AI epoch. Rigorous checks and balances in digital spaces should be afforded for users when it comes to content authenticity and of media content and its provenance.

DIFFUSION OF AI INNOVATION

Through the lens of Rogers' Diffusion of Innovation Theory (1983), AI as a technological innovation in the cases of Chinese and American context are conceptualized and analyzed. Rogers (1983) stated that not all innovations are successfully adopted. It should be noted that the inherent benefits of an innovation will not automatically sell itself to diffuse and be adapted by the public. Culture plays a crucial role in the failure or success of the diffusion of an innovation. "An important factor affecting the adoption rate of any innovation is its compatibility with the values, beliefs, and

past experiences of the social system" (4). Hence, safe, secure, and trustworthy AI adoption in the U.S., China, and other countries should consider context and culture as crucial factors of data ethics in AI adoption. Conceptualization of AI adoption in China and the U.S. through the lens of Rogers' Diffusion of Innovation Theory has four elements which are: (1) innovation, (2) communication channel, (3) time, and (4) social system.

AI as a technological innovation has its hardware aspect which is its semiconductor chips while its software aspect consists of the algorithmic coding that enables automated machine learning and output generation. The versions of innovation may be forwarded through re-invention. Information about the innovation and its reach to the possible adopters and stakeholders is crucial in the decision making of innovation adoption. The U.S. is keener in applying AI innovation evaluation through information dissemination to its stakeholders than of China, in which AI adoption seems to be more of a mandatory adoption than of natural adoption as observed in a democratic process.

Innovations have five characteristics, which are: (1) relative advantage, (2) compatibility, (3) complexity, (4) triability, (5) observability. Zoning in on the characteristic of compatibility—context and culture is a vital component in compatibility. Hence, through the analysis of this comparative case study, the paper proposes a non-binary view of the AI adoption cases in China and the U.S. One can not fully say that AI adoption is better than the other for AI diffusion is culture bound. In terms of complexity, inclusive AI innovation information dissemination should be accounted for through considering adopters' characteristics such as: demographics in terms of culture, age, gender; technological adeptness; and even digital accent (Prensky 2001, 2). In terms of triability characteristic of an innovation, AI trial deployments should be ethical as with data privacy, surveillance, and authenticity.

The second element of diffusion of AI innovation reinforces the goal of shared understanding about AI innovation. In achieving such understanding, interpersonal communication channels through face-to-face information exchange is perceived to be better when it comes to persuading innovation adoption. According to Rogers (1983), "one of the most distinctive problems in the communication of innovations is that the participants are usually quite heterophilous" (19). How can the ideal safe, secure, and trustworthy AI adoption mantra as articulated by the U.S. AI plans be applied in China, and vice versa, given the distinct natures of the two countries and their socio-cultural contexts.

Rogers pointed out that time is a crucial element in the diffusion of an innovation process (1983). Adopters may be categorized as innovators, early adopters, early majority, late majority, and laggards. However, despite the importance of time, this is the element that is mostly ignored or overlooked due to the criticality of time and duration dimensions. Dimensions of understanding the time variable in the innovation decision process are: knowledge, persuasion, decision, implementation, and confirmation. In leading the AI race, being the first does not guarantee success—quality of AI adoption through the aspect of data ethics must be accounted for as well. The temporal aspect of AI diffusion both in China and the U.S. is an unfolding aspect that can serve as an extension of this paper. An identified research gap in utilizing Rogers' Diffusion of Innovation Theory is the clockwork of AI innovation diffusion as a possible thrust for extensive discussion.

Another element in the diffusion of an innovation is the structure of the social systems. China and the U.S. have different social structures as observed through political, economic, and socio-political aspects. Social system norms are vital factors in the adoption or rejection of an innovation. High and low context cultural differences (Hall 1981, 105–16) should be considered in AI adoption evaluation of different countries such as China and the U.S.. It is notable that socio-cultural norms are not easily altered. Despite the foreseen possible repulsiveness due to established homophily cultural norms, AI adoption in China and the U.S. are considered to be authority innovation-decisions, in which, the greater public and stakeholders are pushed to converge with the AI adoption. Though similarities between China and the U.S. in terms of social system and structure of AI adoption, collective consensus and individual innovation adoption decisions are more afforded to American systems. This is indicated in the AI Blueprint of AI Bill of Rights and the eight guiding principles indicated in the Executive order on the safe, secure, and trustworthy development and use of Artificial Intelligence, which advocates for responsible and healthy innovation competition as nuanced to social equity and civil rights of its citizens. In the case of China, based on the details of China's AIDP 2030 goals, there is a robust and forceful development and implementation of AI integration in key social aspects as part of its national strategic plan in terms of economic development and international competition (Webster et al. 2017).

Consequences of AI innovation should be accounted for in terms of: desirable and undesirable; direct and indirect; and anticipated and unanticipated consequences. As Hasselbach (2019) emphasized, data ethics protection and policy making corresponding to it should recognize the context and culture in making legal reforms, in particular policy makers and involved stakeholders should "recognize these initiatives as open-ended spaces of negotiation and cultural positioning" (13).

THE AI RACE BETWEEN CHINA AND THE U.S.

When China released its Artificial Intelligence Development Plan (AIDP) in 2017, it was outlined to attain the national strategy of positioning the country in three temporal milestones. First was in 2020, which is to catch up with the West; second will be in 2025, which is to overtake the West; and third is to become the lead in the AI race in 2030 (Fischer 2018, 2). AI technology based on the AIDP 2025 and 2030 milestones situates China in an advantageous position in terms of AI development and application. AI is considered to be China's leapfrog technology in advancing against the US in the so-called AI race or as Roberts et al. labeled it as China's trump-card (2021, 62–63).

Meanwhile in the U.S., AI plans were paused during President Trump's period (2016–2020). There was a decrease in tech personnel in vital government offices, China poaching U.S. AI talents, lack of AI strategy, and restrictive migration policy (Fischer 2018, 4). The recruitment of AI talent occurs through the Qiming program which is formerly called the Thousand Talents Program (TTP). Qiming intends to entice foreign AI talents from prestigious U.S. universities such as Massachusetts Institute of Technology, Harvard, and Stanford (Kaur 2023; Zhu et al. 2023). Through these observations, the U.S. lagged behind its projected AI development and growth as compared to its possible AI plan timeline. This made China's AI leap apparent compared to the U.S. in the AI race.

Center for Humane Technology discussed the exponential growth of AI technology calls for ethical consideration in terms of responsible use, ethical wielding and use of AI *power*, and coordinated race (2023).

China as the AI dragon

In advocating the idea of de-westernizing and reframing the lens on who is the dominant nation, China President Xi Jinping emphasized the crucial role of AI technology in geopolitics, in which he emphasized that "advanced technology is the sharp weapon of the modern state. An important reason that Western countries were able to hold sway over the world in modern times was that they help the advanced technology" (Jochheim 2021, 3). China's focus on AI is part of the call to pivot the hegemonic narratives that the West is better and bigger than of the East (Roberts et al. 2021, 63). With the bold movement towards enhancing and leading in terms of AI technology, the succeeding discussion will highlight the development, policies, milestones, and key players of the AI movement in China. The national rebranding of China would be made possible with their foreseen success of forging AI into its advanced national tool.

The Artificial Intelligence Development Plan (AIDP) is set forth from 2017 up to the year 2030. The conceptualization started as early as 2013 (Jochheim 2021). Initially, AI is just one of the aspects for technology growth in China, however, upon the release of AIDP in 2017, it became a huge focus for China. There are periodic targets in AIDP; these are 2020, 2025, and 2030 (Roberts et al. 2021, 61). AI applications in China include the focus in nine various aspects, which are: (1) core AI technologies; (2) public information service platforms; (3) smart homes; (4) smart vehicles; (5) smart unmanned transportation applications; (6) smart security; (7) AI-enabled end user applications; (8) smart wearable devices; and (9) smart robots (He 2017, 10–11).

China took a holistic approach by tapping on the various government and private entities in fulfilling the AIDP 2030 aspiration. This includes private technology company giants, PLA-People's Liberation Army, medical team and professionals, and even research institutes and universities. China established the linkage between military and education through the MCF, which is known as the Military-Civil Fusion. Huge players in China's leap towards AI 2030 aspiration include the involvement of technology companies and startups, which are dubbed as 'unicorns'. The economic jargon of 'unicorn' is defined as a privately owned start up with valuation of one billion dollars or more (Bock and Hackober 2020; Poon, Wu, and Liu 2023). China's three leading unicorns are Baidu in Beijing, Tencent in Shenzhen, and Alibaba in Hangzhou (Johansson 2022, 27–30). Aside from the three leading unicorns, China also tapped on other 12 unicorn companies and assigned respective AI development aspects that they should work on. There are incentives in being part of the AI national team, this include: preferential contract bidding, access to finance, and market share protection (Roberts et al. 2021, 61). According to analysis, China's AIDP goal of leading AI globally may come with hurdles such as lack of originality and creativity in terms brought by lack of domestic AI talent.

The U.S. as the soaring AI eagle

The U.S. remains as the leading country in the AI arms race. Silicon Valley as the primary hub for AI research, development, strategy, and investments brings the U.S. the edge over other competing nations (Keary 2023; Soni 2023; InvestGlass 2023; and Ortiz, 2023). The U.S. retains its leadership in AI in terms of the AI pillars of implementation, innovation, and investment. AI implementation covers talent acquisition, infrastructure for AI, and operating environment. AI innovation includes research and development and AI investment looks at both commercial and government strategy (Cesareo and White 2023).

Despite its competitive advantage, the U.S. strides carefully towards the AI global leadership path. The Executive Order of the U.S. President Joseph Robinette Biden Jr. advances eight principles and priorities for AI development, use, and deployment in America (The White House 2023, 1–4). There should be a developed resource guide such as AI Risk Management Framework that will guide AI developers in ensuring safe and reliable AI development, use, and deployment. This will be done through consultations with AI experts, laboratories, academia, and third-party model evaluators. The resource guide will also facilitate the evaluation of AI models and capabilities through 'red teams'; this action can be referred to as 'red teaming'.

The U.S. government adheres to safeguarding the privacy of its citizens. The development and fostering of Privacy Enhancing Technologies (PETS) intend to "mitigate privacy risks potentially exacerbated by AI—including by AI's facilitation of the collection or use of information about individuals, or the making of inferences about individuals" (The White House 2023, 40). The differentiation of private data from commercially available information is paramount in upholding data privacy of American citizens except for situations when national security is at stake.

Also, the Blueprint for an AI Bill of Rights as released by the White house underscores five principles in making AI automated systems work for Americans. These foundation concepts are (1) safe and effective systems, (2) algorithmic discrimination protections, (3) data privacy, (4) notice and explanation, and (5) human alternatives, consideration, and fall back (The White House n.d., 5–7).

The U.S. government assures its citizens an equitable AI adoption and safekeeping from algorithmic discrimination, ethics, privacy, and accountability concerns (Bundy 2017). AI automated systems and models have tendencies to be biased against certain people and communities. In fact, algorithmic discrimination manifestations were detected in AI programs in the judicial system, hiring process, and even face recognition through non detection of faces of different color. Another example, searchers for keywords of girls of different races such as 'black girls', 'Asian girls', or 'Latina girls' return predominantly sexualized content. In the documentary *Coded Bias* (Kantayya 2020), it was forwarded that AI and its algorithms must be improved; AI such as facial recognition is biased particularly on minorities—people of color and different races. Hence, the U.S. government necessitates protecting individuals from algorithmic discrimination.

Moreover, the U.S. government assures its citizens protection from abusive data (mal)practices through built-in safeguard nets and promotion of an individual's data privacy agency. This principle will be carried out through giving premium to consent requests and data access limits, particularly for commercial use and or unnecessary contexts and undisclosed misleading purposes. Consent

requests are generally lengthy and are taunting human limitations. One good example of this is the pervasiveness of lengthy terms and conditions compounded with complex and too technical language and terminologies. Citizen's data and consent approval process should be protected by ethical review and use prohibitions. Also, Americans are promised to be protected from unchecked surveillance technologies that pose possibilities of limiting their rights, opportunities, and access.

O'Neil in her book entitled *Weapons of Math Destruction* elaborated the various models utilized in machine deep learning that enables AI automated decisions to have possibilities for false positives and inaccurate verdicts. This can lead to algorithm bias of AI models that will affect job and insurance applications, credit scoring, jurisprudence of crime, and other aspects of civic life (2017). The U.S. government assures its citizens with transparency and knowledge that an automated system is used and may possibly impact them. The notice should be presented in up-to-date and comprehensible explanations bringing about awareness to American citizens that they are being subjected to AI functions.

In general, Americans are more positive with AI applications such as facial recognition technology in deterring crimes and social media companies finding false information. However, AI applications such as driverless cars and human enhancements such as robotic exoskeletons, editing baby's genes to reduce health risks, and enhancing cognitive function using computer chip implants in the brain are uncertain and unwelcome thoughts. Zoning in on social media companies' use of AI in detecting false information, Americans are more positive on this with a narrow margin of 7%. With the difference of 718 US adults, the divide brings forth uncertainty on Americans' perception on integrating AI in one's daily life. In fact, 45% of the American-participants shared that they are equally concerned and excited with the increased use of AI in daily life (The Pew Research Center 2022, 5–16).

Looking at the negative perception towards AI, there are possibilities of unwarranted surveillance, which manifests the loss of data privacy, and lack of human connection through the proliferation of synthetic data that may lead to false information and possibly fragmented societal realities. With these inherent risks, there should be a balancing act of identifying and mitigating effects of synthetic data, dis and mal information and hampering freedom of information and speech. Three key groups play vital roles in setting standards for use of algorithms to find false information. These are the social media companies, users, and federal government agencies.

EMERGING CHALLENGES ON DATA ETHICS

Big data availability and unconsented use of data subjects reveal privacy breaches of various tech players in the US such as Google, Facebook, and Apple (Chen and Quan-Haase 2018; Richards and King 2014; Varley-Winter and Shah 2016). There is the looming concern of unwarranted government surveillance as a tradeoff for public service and security endowed to its citizens (Richterich 2018). The massive availability of media content calls for media literacy criticality among online media content producers and consumers. In Asia, particularly the Southeast region, AI development is looked at in various aspects such as creation and management of robust data ecosystems (Chitturu et al. 2017), urban mobility (Chong 2022), smart tourism (Ho 2022), and even robotics (Mongkol 2023) among many other aspects of AI development and application. In fact,

China turns to Southeast Asia in forging economic geopolitical alliances and syncing AI ecosystems within the region (Zhang and Khanal 2024). With this, there should be stronger observance and implementation of the ASEAN framework on personal data protection among its member nations and partners (ASEAN 2020). This analysis highlights the possible emerging ethical consequences of AI adoption in China and the US context particularly on the aspect of data privacy, surveillance, and authenticity.

Data Privacy Issues

AI works with large language computing systems fueled by data and metadata. In harnessing data, there are cases and possibilities that AI models as managed by tech giant companies may violate data privacy of sources and stakeholders such as Chinese and American citizens. In AI adoption and mass integration, proper data collection, use, access, transfer, and disposal should be observed and respected. Only necessary data should be collected. It is vital to utterly ask and respect the consent of data subjects. Consent requests should be comprehensive; should not taunt on human limitations; and should have inclusive considerations of the data subjects' background.

China lacks clear privacy regulation given that data footprints of Chinese citizens in a highly digitized society are easily accessible (Wu et al. 2011; Zhao & Dong 2017). Through Foucault's concept of 'Panopticon' in redefining power through discipline mechanisms of having knowledge about the observed and governed. Unwittingly without consent, the AI adoption through face-recognition and data collection incentivizes and pushes Chinese citizens to forsake their data privacy and be subjected to the panoptic eye and control of the Big Brother and friends, which are the Chinese government and its AI team. In example, mobile phone applications containing the so-called 'BadBazaar', which is an identified Chinese spyware tracking Uyghur citizens is an illustration of coercive data breach and inhumane treatment by disregarding respect for data privacy (Stefanko 2023; Al Jazeera 2019; Wakefield 2021). Details on data protection and hidden caveats on what particular data should be protected were unaddressed concerns in the AIDP 2017 release. Citizens' data privacy and protection should weigh in in the development and implementation of national policies such as the AI use without the tradeoff notions of economic affiliations and consumerism (Yao-Huai 2005; Calzada 2022).

In the U.S., spywares, data breaches, ransomware, and cyber-attacks are also reported to have an increased trajectory from 2013 up until 2024 (Chin 2024; Petrosyan 2024). Two of the biggest data breaches recorded were from the Discord social platform through 'Spy.pet' in April 2024 and AT&T Mobile in March 2024 which compromised users' sensitive personal information such as full names, date of birth, and e-mail addresses (Seddon 2024). There is an appeal in protecting the data rights as part of human rights on the U.S. soil.

Another example of privacy issues in Chinese AI implementation are the medical records of Chinese citizens. Tencent's program of 'WeDoctor' collects health data from Chinese rural citizens in the guise of charity work (Hawkins 2019). Accounting China's perspective on this, AI application in the health care platform will be beneficial to support health services of its citizens and can be extended in Hong Kong (Li and Benitez 2018). Despite the foreseen benefits of AI in the healthcare area, this raises concern on the value of Chinese citizens' participation and particularly data

consent. Health data includes blood pressure, electrocardiogram (ECG), urine and blood tests. The AI program claims to use medical data for analytics in epidemic prevention and control. The data collection through the form of free medical aid is a data privacy and trustworthy governance concern. The inherent idea is that the government—any trustworthy government—should provide medical care for its citizens without any conditions such as data breach and leak. This may lead to a possibility of state control through medical data of citizens.

In relation to data privacy is Chinese government transparency. There are transparency issues in social governance concern in terms of AI development and implementation in China is the lack of transparency in military defense and expenditure (Jochheim 2021, 9); "the absence of an effective accountability review of local government spending creates problems within this system" (Roberts et al. 2021, 62).

Unwarranted surveillance

Also, Chinese society may be deemed as an AI petri dish. There are big AI experiments in China wherein, Chinese society is considered as a "gigantic test bed for AI applications" (Fischer 2018, 3). China has implemented their face recognition AI programs for surveillance through the application of the Social Credit Score System. Chinese citizens will be graded, ranked, rewarded, and punished based on the score they will receive. The Sesame Credit under Alibaba's Alipay system is one of the companies that manages the score which ranges from 350 to 950. Alipay serves as the source and web of big data that fuels AI, this is possible through mobile payment of e-commerce or commonly termed as online shopping. The key propellant for AI machine learning and automation is the over 1 billion Chinese users that merits an aggregated big data (Campbell 2019).

There are benefits of having high social credit such as special waiting rooms in transportation services like airports and rail stations, prioritization in hospitals, and even improved foreign exchange rates. One maintains a high social credit score through social good deeds and continued Alipay use and investment. Also, 'unlawful' behavior will diminish social credit, these bad deeds may include but not limited to financial misdeeds, quarreling with neighbors, and insincere apology. Individuals with low credit scores are marked as blacklisted individuals or considered as untrustworthy persons. When someone calls a blacklisted person, one will hear a message saying "Warning, this person is on the blacklist. Be careful and urge them to repay their debts" (Campbell 2019, 11). Publicly shaming blacklisted citizens is one of the ethical concerns in the social credit system (Roberts et al. 2021, 67–68).

Western views on the social credit system are deemed draconian. Others, particularly emic-Chinese, perceive the system as an improvement and solution with Chinese moral decline, however, there might be possibilities of censorship and chilling effect to various stakeholders. This is related to Chomsky's media filter and propaganda push of China's focus on AI that may hinder citizens' freedom of speech and media's watchdog function. Another concern is the decentralized Social Credit System through the lack of uniformity with the level of measurement in social crediting counters its standard validity. Having information on China's social credit scoring and putting oneself in the shoes of a Chinese citizen, it would be hard to become a divergent in Chinese society. This leads to the possibility of a spiral of silence and groupthink. In a governing level, CCP's

draconian administration through the implementation of the social credit score system may limit its competence and credibility through the absence of opposing critical views and muting of checks and balances mechanisms through society's authentic voice.

Synthetic media

Another impending concern in the AI focus is job displacement for human workers. Almost half of the labor jobs can be possibly displaced, in fact, in the U.S., 47 percent of jobs are at risk for automation and human displacement (He 2017, 15). Low and medium skilled jobs will be immediately affected by smart automation through the help of AI. On the other hand, high-skilled technical roles will be in demand (Roberts et al. 2021, 64–65). China as an industry-focused nation may replace a huge part of its labor force with machinery and the job market will be steep with the implementation of automation in industrial manufacturing. Chinese media personnel and practitioners are no exception to this AI concern. AI in China are shifting to computer-generated endorsers, weather newscasters, and even concert performers due to practical reasons, such as easier management, less potential for involvement in scandals, flexibility, and the ageless capability (Al Jazeera English 2023). In the U.S., synthetic icons and influencers such as 'Lilmiquela' who is an AI robot living in Los Angeles, California, have amassed 2.6 million followers on Instagram. The U.S. emphasizes the importance of guarding the safety of users and stakeholders through reliable AI use. In particular, there is a call for authenticating content and tracing its provenance so that human users will be aware that they are being subjected to AI generated content exposure.

On a surficial level, synthetic media forwards various benefits such as internet creativity, efficiency in mundane tasks and enriching experiences through virtual reality, gaming, and websites. However, with the lack of transparency and deliberate manipulation, synthetic media poses several concerns such as false implications, propagation of false information, and trust concern on the quality of humane-ness that may lead to trust collapse (Riparbelli 2023). Inherently, the internet as a digital space is a complicated web to navigate, with the inception of AI generated synthetic media, human data and synthetic data leads to a more perplexing task of asking which is true and which is actually human (Traylor 2023).

ONE SWORD WITH TWO PERSPECTIVES: EVALUATING THE AI RACE PLAYERS

Looking at the comparison between China and the U.S. in terms of AI development, use, and deployment, the U.S. AI deployment policies are ideal compared to China, however, could there be discrepancy with vision and its implementation. Through the juxtaposition discussions in the preceding paragraphs, one may say that the priority for China is surpassing the U.S., on the other hand, the priority for the U.S. is to deploy AI in a safe and secure manner. This is evident with China's AIDP goal of surpassing the U.S. through geopolitical, economy, and legal and ethical aspects (Roberts, et al. 2021). On the other hand, in October 2023, through the Executive Order of the U.S. President Biden, the U.S.'s AI priority emphasizes on its citizens' safety and security while strengthening American leadership abroad is in its eighth and last priority (The White House, 2023, 50–54). China is ambitious with its direction towards leading the AI race and mass deployment through giving a premium in winning the ostensible race by 2030. On the other hand, the US may

be considered to be lagging behind, however, the assurance of safe, secure, and trustworthy AI mass deployment is carried out through striding carefully with its policies and measures. Through an implied comparison, one may imagine that China perceives AI technology as a sword that is sharp in which its blades will allow the dragon to carve its way to the top. On the contrary, the U.S. sees AI technology as a sword with its sharp blades, in which delicate handling should be observed in wielding its benefits and avoiding its sword cut.

CONCLUSION

Critical checks and balances on ethical AI use and adoption should be taken into action. AI as an evolving integral communication system in the global community was evaluated through Rogers' Diffusion of Innovation Theory (1983). Dissemination of AI adoption should be regarded in terms of the elements of innovation, communication channels, time, and social system. AI technology is an authority innovation decision for both the U.S. and Chinese social systems. AI diffusion is culturally bound, and no single approach can be deemed superior, as diffusion varies across heterophilous societies. Simply being the first to adopt AI does not guarantee success; ethical considerations such as data transparency and regard for human data rights are crucial. Despite the rhetoric of safe, secure, and trustworthy AI innovation implementations, there should be a keen regard for AI innovation complexity, cultural compatibility, and triability without forsaking data ethics' notions of data privacy, unwarranted surveillance, and content authenticity. This paper examined the development, use, and deployment of AI technologies in China and the U.S., revealing the shifting dynamics of AI leadership. While China, through its AIDP 2030 milestone, is positioned for significant advancement in AI, the U.S. is struggling to meet its projected development targets, particularly in addressing algorithmic bias and protection of individual rights. The discussion highlighted vital ethical issues in communication systems, such as data privacy and its weight in the implementation of national policies and actions. Both nations are grappling to protect citizens' data without compromising personal freedoms as nuanced with unwarranted surveillance and synthetic media.

This study advocates prioritizing data ethics in AI development, emphasizing consent, transparency, and responsible technology rollouts to ensure that AI advancements align with ethical standards forwarding social justice. The AI arms race between the Chinese dragon and the American eagle should not be reduced to a perception of a blood sport. Veering away from the outlook of interspecific competition advances greater focus on the task of forwarding ethical AI development, use, and deployment. Why not consider coexistence over competition through a coordinated action in which the global human community aspires for symbiosis amidst differences in the AI ecosystems?

REFERENCES

Al Jazeera English. 2023. "AI in China: Computer-Generated 'People' Used for Promotions." Posted August 6, 2023. YouTube, 2:27. https://www.youtube.com/watch?v=C-oTCvDMzac.

Al Jazeera. 2019. "HRW: China Using Mobile App for Surveillance of Uighurs." Al Jazeera, Last modified May 2, 2019. https://www.aljazeera.com/news/2019/5/2/hrw-china-using-mobile-app-for-surveillance-of-uighurs.

Amer, Karim and Jehane Noujaim, dir. 2019. *The Great Hack*. Netflix.

ASEAN. 2020. *Final Review: ASEAN ICT Masterplan 2020.* Indonesia. https://asean.org/book/final-review-of-asean-ict-masterplan-2020/.

Bock, Carolin and Christian Hackober. 2020. "Unicorns–what drives multibillion-dollar valuations?" *Business Research* 13: 949–984. https://doi.org/10.1007/s40685-020-00120-2.

Bundy, Alan. 2016. "Preparing for the future of artificial intelligence." *AI & Society* 32: 285–287. https://doi.org/10.1007/s00146-016-0685-0.

Calzada, Igor. 2022. "Citizens' Data Privacy in China: The State of the Art of the Personal Information Protection Law (PIPL)" *Smart Cities* 5, no. 3: 1129–1150. https://doi.org/10.3390/smartcities5030057.

Campbell. Charlie. 2019. "How China is Using "Social Credit Scores" to Reward and Punish its Citizens." *Time*. https://time.com/collection/davos-2019/5502592/china-social-credit-score/.

Canaria, Alexis Julia. 2023. "Data is Everywhere in the Digital World." Last modified January 10, 2023. https://kpmg.com/ph/en/home/insights/2023/01/data-is-everywhere-in-the-digital-world.html.

Center for Humane Technology. 2023." The A.I. Dilemma—March 9, 2023" Posted March 9, 2023. YouTube, 1:07:30, https://www.youtube.com/watch?v=xoVJKj8lcNQ.

Cesareo, Serena, and Joseph White. 2023 "The Global AI index." Tortoise. Accessed July 12, 2024. https://www.tortoisemedia.com/intelligence/global-ai/.

Chen, Wenhong, and Anabel Quan-Haase. 2018 "Big data ethics and politics: Toward new understandings." *Social Science Computer Review* 38, no.1: 1–7. https://doi.org/10.1177/0894439318810734.

Chin, Kyle. 2024. "Biggest Data Breaches in US History." *UpGuard*. Last modified February 20, 2024. https://www.upguard.com/blog/biggest-data-breaches-us.

Chitturu, Sachin, Diaan-Yi Lin, Kevin Sneader, Oliver Tonby, and Jonathan Woetzel. 2017 "Artificial intelligence and Southeast Asia's future." Singapore Summit 2017.

Cote, Catherine. 2021. "5 Principles of Data Ethics for Business." Harvard Business School Online. Posted March 16, 2021. https://online.hbs.edu/blog/post/data-ethics.

Fischer, Sophie-Charlotte. 2018. "Artificial intelligence: China's high-tech ambitions." *Center for Security Studies*, 220: 1–4. https://ethz.ch/content/dam/ethz/special-interest/gess/cis/center-for-securities-studies/pdfs/CSSAnalyse220-EN.pdf.

Giattino, Charlie, Edouard Mathieu, Julia Broden, and Max Roser. 2023. "Artificial Intelligence." *Our World in Data*. Accessed July 12, 2024. https://ourworldindata.org/artificial-intelligence.

Hall, Edward Twitchell. 1981. *Beyond Culture*. Anchor Books.

Hasselbalch, Gry. 2019. "Making sense of data ethics. The powers behind the data ethics debate in European policymaking." *Internet Policy Review* 8 (2): (2019). DOI: 10.14763/2019.2.1401. https://policyreview.info/articles/analysis/making-sense-data-ethics-powers-behind-data-ethics-debate-european-policymaking.

Hawkins, Amy. 2019. "How Elderly, Sickly Farmers Are Quenching China's Thirst for Data." WIRED. Last modified April 12, 2019. https://www.wired.com/story/china-ai-healthcare/.

He, Yujia. 2017. "How China is Preparing for an AI-powered Future." Last updated June 2017. https://www.wilsoncenter.org/sites/default/files/media/documents/publication/how_china_is_preparing_for_ai_powered_future.pdf.

Ho, Ping-Tsan. 2022. "Smart Tourism Recommendation Method in Southeast Asia under Big Data and Artificial Intelligence Algorithms." *Mobile Information Systems*. https://doi.org/10.1155/2022/4047501.

InvestGlass. 2023. "Which Countries are Leading the AI Race?" Investglass. Last modified February 6, 2023. https://www.investglass.com/which-countries-are-leading-the-ai-race/

Jochheim, Ulrich. 2021. "China's Ambitions in Artificial Intelligence." *European Parliamentary Research Service*. https://www.europarl.europa.eu/RegData/etudes/ATAG/2021/696206/EPRS_ATA(2021)696206_EN.pdf.

Johansson, Anders. 2022. "China's AI Ecosystem." *Stockholm School of Economics Center for Asian Studies*. https://www.hhs.se/contentassets/bc962221471a415ba8ac01fbbf160277/chinas-ai-ecosystem-nov-2022.pdf.

Kantayya, Shalini, dir. 2020. *Coded Bias.* 7th Empire Media, Ford Foundation—Just Films, Chicken & Egg Pictures.

Kaur, Dashveenjit. 2023. "Chip War: As US Tightens Curbs, China Silently Poaches Foreign Tech Talent." Tech Wire Asia. Last modified August 28, 2023. https://techwireasia.com/08/2023/is-china-reviving-dead-plan-to-wage-chip-war-on-us/.

Keary, Tim. 2023. "Top 10 Countries Leading in AI Research & Technology in 2024." Techopedia. Last modified November 16, 2023. https://www.techopedia.com/top-10-countries-leading-in-ai-research-technology.

Li, Jane, and Mary Anne Benitez. 2018. "Tencent-Backed Health Care Platform WeDoctor Shrugs off Bear Market Concerns, Prepares for Hong Kong IPO." South China Morning Post. Last modified July 9, 2018. https://www.scmp.com/business/china-business/article/2154514/tencent-backed-health-care-platform-wedoctor-shrugs-bear?campaign=2154514&module=perpetual_scroll_0&pgtype=article.

Martinez, Rex. 2019. "Artificial intelligence: Distinguishing between types & definitions." *Nevada Law Journal* 19 (3): 1015–1042. https://scholars.law.unlv.edu/cgi/viewcontent.cgi?article=1799&context=nlj.

Mongkol, Kulachet. 2023 "The future of artificial intelligence in Southeast Asia: The case of Thailand." In *Handbook of research on artificial intelligence and knowledge management in*

Asia's digital economy, 12–35. IGI Global. https://www.igi-global.com/gateway/chapter/314437.

O'Neil, Cathy. 2017. Weapons of Math Destruction. Harlow, England: Penguin Books.

Ortiz, Sabrina. 2023. "AI Arms Race: This Global Index Ranks which Nations Dominate AI Development." ZDNET. Last modified June 28, 2023. https://www.zdnet.com/article/ai-arms-race-this-global-index-ranks-which-nations-are-dominating-ai-development/.

Petrosyan, Ani. 2024. "U.S. Data Breaches and Exposed Records 2018 | Statistic." Statista. Last modified February 12, 2024. https://www.statista.com/statistics/273550/data-breaches-recorded-in-the-united-states-by-number-of-breaches-and-records-exposed/.

Pew Research Center. "AI and Human Enhancement: Americans' Openness is Tempered by a Range of Concerns." Pew Research Center. Last modified March 2022. https://www.pewresearch.org/internet/2022/03/17/how-americans-think-about-artificial-intelligence/.

Poon, Teresa Shuk-Ching, Chia-Hsuan Wu, and Meng-Chun Liu. 2023. "Developing Entrepreneurial Ecosystem: A Case of Unicorns in China and Its Innovation Policy Implications." *Asian Journal of Technology Innovation* 32, no.1: 20–36. https://doi.org/10.1080/19761597.2022.2157849.

Prensky, Marc. 2011 "Digital Natives, digital immigrants: Part 1." *On the Horizon 9* (5): 1–6. https://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf.

Prier, Jarred. 2017. "Commanding the Trend: Social Media as Information Warfare." *Strategic Studies Quarterly* 11, no. 4: 50–85. http://www.jstor.org/stable/26271634.

Richards, Neil M. and Jonathan H. King. 2014. "Big data ethics." *Wake Forest L. Rev.* 49: 393–432. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2384174.

Richterich, Annika. 2018. *The big data agenda: Data ethics and critical data studies*. University of Westminster Press. https://doi.org/10.2307/j.ctv5vddsw.

Riparbelli, Victor. 2023 "The Future of [synthetic] Media." Synthesia. Last modified November 1, 2023. https://www.synthesia.io/post/the-future-of-synthetic-media

Roberts, Huw, Josh Cowls, Jessica Morley, Mariarosaria Taddeo, Vincent Wang, and Luciano Floridi. 2021. "The Chinese Approach to Artificial Intelligence: An Analysis of Policy, Ethics, and Regulation." *AI & Society* 36, no. 36: 59–77. https://doi.org/10.1007/s00146-020-00992-2.

Rogers, Everett Mitchell. 1983. *Diffusion of Innovations* (3rd ed.). The Free Press.

Seddon, Sean. 2024. "AT&T Data Breach: Millions of Customers Caught up in Major Dark Web Leak." *BBC*. Last modified March 30, 2024. https://www.bbc.com/news/world-us-canada-68701958.

Soni, Ashi. 2023. "Top 10 Countries Leading in AI Research and Technology in 2024." Analytics Insight. Last modified November 18, 2023. https://www.analyticsinsight.net/top-10-countries-leading-in-ai-research-technology-in-2024/.

Srnicek, Nick. 2017. *Platform capitalism*. John Wiley & Sons.

Stefanko, Lukas. 2023. "BadBazaar espionage tool targets Android users via trojanized Signal and Telegram apps" Welivesecurity. Last modified August 30, 2023. https://www.welivesecurity.com/en/eset-research/badbazaar-espionage-tool-targets-android-users-trojanized-signal-telegram-apps/.

The White House. 2023. "Executive Order on The Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence." The White House. Last modified October 30, 2023. https://www.whitehouse.gov/briefing-room/presidential-actions/2023/10/30/executive-order-on-the-safe-secure-and-trustworthy-development-and-use-of-artificial-intelligence/.

The White House. n.d. "Blueprint for an AI Bill of Rights: Making Automated Systems Work for American People." The White House. Accessed January 2, 2024. https://www.whitehouse.gov/ostp/ai-bill-of-rights/

Thormundsson, Bergur. 2023. "Topic: Artificial Intelligence (AI) Worldwide Statistics & Facts." Statista. 2023. https://www.statista.com/topics/3104/artificial-intelligence-ai-worldwide/#topicOverview.

Traylor, Jake. 2023. "AI-generated 'Synthetic Media' is Starting to Permeate the Internet." NBC News. Last modified March 4, 2023. https://www.nbcnews.com/tech/tech-news/ai-generated-synthetic-media-future-content-rcna72958.

U.S. Department of State. 2020. "Artificial Intelligence (AI)." United States Department of State. Accessed December 29, 2023. https://www.state.gov/artificial-intelligence/

Varley-Winter, Olivia, and Hetan Shah. "The opportunities and ethics of big data: practical priorities for a national Council of Data Ethics." *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 374 (2083): 1–7. https://doi.org/10.1098/rsta.2016.0116.

Wang, Pei. 2019. "On defining artificial intelligence." *Journal of Artificial General Intelligence* 10, no. 2: 1–37. https://doi.org/10.2478/jagi-2019-0002.

Webster, Graham, Rogier Creemers, Elsa Kania, and Paul Triolo. 2017. "Full Translation: China's 'New Generation Artificial Intelligence Development Plan' (2017)." Stanford University. Last modified August 1, 2017. https://digichina.stanford.edu/work/full-translation-chinas-new-generation-artificial-intelligence-development-plan-2017/?fbclid=IwZXh0bgNhZW0CMTEAAR1GqyyPhxqUI5DUmjosRpIMOZ8DJAodufMi0BMmHRVazmWd8Xabk6tHbYo_aem_lad4azp2S2n75jPqvSyjqA.

Wu, Yanfang, Tuenyu Lau, David J. Atkin, and Caroly A. Lin. 2011. "A comparative study of online privacy regulations in the U.S. and China" *Telecommunications Policy* 35, no. 7: 603–616. https://doi.org/10.1016/j.telpol.2011.05.002.

Yao-Huai, Lü. 2005. Privacy and Data Privacy Issues in Contemporary China. *Ethics and Information Technology* 7: 7–15. https://doi.org/10.1007/s10676-005-0456-y.

Zhang, Hongzhou, and Shaleen Khanal. 2024. "To Win the Great AI Race, China Turns to Southeast Asia." *Asia Policy* 19, no. 1: 21–34. https://dx.doi.org/10.1353/asp.2024.a918871.

Zhao, Hui and Haoxin Dong. 2017. "Research on Personal Privacy Protection of China in the Era of Big Data." *Open Journal of Social Sciences* 5, no. 6: 139–145. https://doi.org/10.4236/jss.2017.56012.

Zhu, Julie, Fanny Potkin, Eduardo Baptista, and Michael Martina. 2023. "Insight: China quietly recruits overseas chip talent as US tightens curbs" Reuters. Last modified August 25, 2023. https://www.reuters.com/technology/china-quietly-recruits-overseas-chip-talent-us-tightens-curbs-2023-08-24/.

ABOUT THE AUTHOR

REYJANE CALICDAN-DEL CAMPO graduated from the University of the Philippines Diliman, College of Arts and Letters with an MA in Speech Communication. Her BA in Communication is from the University of the Philippines Baguio. She is a faculty member of the Communication Department of Far Eastern University in Manila where she teaches research, theory, knowledge management, and speech communication. She is a PhD in Communication graduate student at the University of the Philippines Diliman, College of Mass Communication. She is a member of the Speech Communication Organization of the Philippines (SCŌP), the Philippine Association for Communication and Media Research, Incorporated (PACMRI), and the Southeast Asian Media Studies Association (SEAMSA). Her research interests include ICT, AI, intercultural communication, chronemics, feminism in media, and political communication.

Email: rdelcampo@feu.edu.ph

Marcos Forever: Apologists' Resistance to Anti-Marcos Persuasion and Anti-Disinformation Efforts

KARL LEWIS L. CRUZ
University of the Philippines Diliman

ABSTRACT

The late dictator Ferdinand E. Marcos Sr.'s declaration of martial law in the Philippines involved thousands of enforced disappearances, executions, and torture incidents. Despite the countless atrocities, the late dictator and his living family have been regaining their socio-political acceptability largely due to historical denialism and systematic disinformation in the form of fake news. Even with the anti-disinformation and anti-Marcos persuasion strategies of various scholars, activists, and news organizations that aim to counter the pro-Marcos propaganda both outside and inside digital spaces, there still is an alarming number of Marcos apologists among Filipinos carrying pro-Marcos sentiments. This research paper sought to investigate the possible ineffectiveness of such strategies and to view them through the lens of the persuasion resistance framework proposed by Fransen, Smit, and Verlegh (2015). Using a multiple case study design and in-depth semi-structured interviews, the study inquired into the resistance of purposively sampled Marcos apologists to representative anti-Marcos persuasion and anti-disinformation messages. The participants belong to different generations, including Generation X, Millennial, and Generation Z. Results showed that the participants exhibited the resistance motives of distrust, inertia, and reactance through their adopted strategies of contesting, biased processing, empowerment, and avoidance. The multiple case analysis—composed of within-case analyses and a cross-case analysis—also elicited the emergent resistance motive of antagonism, and emergent resistance strategies of dismissal and redirection among Marcos apologists.

Keywords: disinformation, historical denialism, Marcos apologists, persuasion resistance, social influence

INTRODUCTION

On the night of September 23, 1972, as he appeared on national television, the late dictator Ferdinand E. Marcos Sr. placed the whole Philippines under martial law. The corrupted authoritarian rule was the late dictator's response to the series of national crises that he himself contrived. These crises included an alleged communist insurgency, a Muslim separatist movement, militancy among the Filipino populace, and other notorious events that Marcos Sr. had identified as threats to national peace and order (Mijares 1976).

Upon Marcos Sr.'s imposition of martial law, the military began the crackdown on his political enemies, media critics, activists, labor leaders, and even business rivals who dared to challenge his dictatorship. This military crackdown resulted in approximately 1,000 enforced disappearances, 2,000 executions, and 7,000 known incidents of torture in addition to an unknown number of illegal arrests (Chua 2012). The martial law under Marcos Sr.'s regime, described as an authoritarian regime that has grown to be absolutely corrupt and evil, was foremost an outright attack on democracy in the Philippines (Mijares 1976).

On November 18, 2016, despite the strong opposition of activist groups, families of the disappeared and executed, and the general public, the remains of the late Marcos Sr. were buried in the national heroes' cemetery of the Philippines. For the past years, the remaining members of the Marcos family were also able to secure seats in the government, for instance, Bongbong Marcos in the Philippine Senate (2010–2016) and as the national president (2022–present), Imelda Marcos in the Philippine House of Representatives of Ilocos Norte's Second District (2010–2016), Imee Marcos in the Philippine Senate (2019–present), and Sandro Marcos in Philippine House of Representatives of Ilocos Norte's First District (2022–present), to name a few (Fonbuena 2019). The Marcoses regaining their social acceptability and good reputation despite their family's atrocities is largely attributed to historical distortion (Limpin 2021). Historical distortion is popularly described as the falsification of the past through the gradual revision of the collective memory (Berdos 2020). In the Philippines, similar to several societies of the past and present, historical distortion is considered to be politically motivated (Mendoza 2019).

The principal method of Marcos-related historical distortion is disinformation which, compared to misinformation, is intentionally deceptive or misleading (Berdos 2020). Various disinformation strategies are being used, including the construction of Marcos commemoration sites such as the Marcos Presidential Center in Batac, Ilocos Norte (see Figure 1), pro-Marcos publications including the late dictator's autobiography titled *Every Tear, A Victory*, and proliferation of fake achievements attributed to Marcos Sr. (Berdos 2020). The most recent and persistent disinformation strategies involve the outright denial of the recorded human rights violations and the material and political corruption that happened during the dictator's martial law (Mendoza 2019).

Statistical economic data are no exception. False economic data provided without context are being abused by the pro-Marcos propaganda machine to argue that the Marcos regime paved the way for the Philippines' golden age of economic growth in the 1980s (Mandrilla & Punongbayan 2016). In light of all these disinformation strategies offline and online, scholars and activists alike argue that Marcos-related historical distortion is politically motivated, well-funded, long-standing, and most importantly, systematic (Limpin 2021).

In recent years, several academic institutions and media companies in the Philippines have employed strategies to counter the long-standing attempts at historical distortion related to Marcos Sr. (Limpin 2019). From educational materials to fact-checking campaigns, various strategies are being implemented by scholars, journalists, activists, and advocates to battle revisionist propaganda and remind the Filipino people of the martial law atrocities.

Figure 1: Remains of Marcos Sr. inside the Marcos Presidential Center in Batac, Ilocos Norte. Source: Villamor (2016).

These strategies were designed not only to inform Filipinos and counter false information but also to convert back those who are already exhibiting pro-Marcos sentiments. Such individuals or groups are often referred to as Marcos loyalists, Marcos sympathizers, or most recently, Marcos apologists (Robles 2016). Despite the multitude of anti-disinformation and anti-Marcos persuasion strategies over the years, there still is a persistent and evident re-emergence of Marcos apologists among Filipinos (Santos 2020).

The act of persuasion constitutes only half of the whole persuasion process. An individual's resistance to said persuasion is the other, often neglected half of the equation (Knowles & Linn 2004). The study of persuasion resistance was also a product of recognizing such negligence in the fields of social influence, persuasion research, and communication studies. In line with these observations, the research argues that the persistent re-emergence of Marcos apologists and their pro-Marcos sentiments cannot be fully attributed to the lack of quality education in the Philippines. This research posits that the proper recognition and understanding of persuasion resistance tendencies among Marcos apologists is also lacking. After all, the effectiveness of persuasion lies not only in the improvement of persuasion itself but also in the recognition and reduction of resistance among the targets of persuasion (Knowles & Linn 2004). In light of these arguments, the present paper puts forth a qualitative inquiry into the persuasion resistance behaviors of select Marcos apologists.

ANTI-MARCOS PERSUASION AND ANTI-DISINFORMATION CAMPAIGNS

Many human rights activists, advocates, and scholars believe that an effective way of creating a humane society centered on peace and justice is institutionalizing and integrating human rights education in the basic educational system (Abuso 2019). To ensure that citizens never forget the atrocities of their past rulers, a society must look for methods to remember its history in the most accurate manner. These methods may include education, legal constitution, culture, and the arts (Guillermo 2021). European education and laws, for example, stipulate potential sanctions related to Holocaust denial (Abuso 2019).

In the Philippines, there are attempts as well to institutionalize and integrate martial law education in the basic educational system. However, the existing research on Marcos Sr. and the EDSA (Epifanio de los Santos Avenue) People Power seems to downplay the atrocities of the Marcos family and highlight their contributions and political achievements instead (Reyes and Ariate 2019). Currently, the most accurate and trustworthy martial law education comes in the form of public lectures, symposia, roundtable discussions, scholarly publications, physical or digital archives, film screenings, and art exhibitions (Abuso 2019).

The academic-oriented Third World Studies Center of the University of the Philippines Diliman was established in 1977, partly as a response to threats to democracy, activism, and freedom of thought in countries such as the Philippines (Reyes & Jose 2013). It became the university's center for critical discussions from the period of martial law (1972–1981) until today. In 2013, the center held a public forum series that sought to discuss martial law experience, its negative and allegedly positive legacies, and the collective memory that the current Filipino society holds.

All of these past, present, and future initiatives by scholars and activists are directed towards the creation of a "counter-archive" (Reyes & Jose 2013). A martial law counter-archive, through anti-Marcos persuasion and anti-disinformation campaigns, is envisioned to battle the revisionist propaganda of the Marcoses and impede their complete political re-emergence in the future. The vision for a counter-archive is born out of the collective sentiment to counter the whitewashing of the brutal dictatorship under Ferdinand Marcos Sr.'s regime (Reyes & Jose 2013). Amidst the multitude of persuasion and information strategies, it cannot be denied that the battle for a just and truthful collective memory is far from over (Santos 2020). Statements of facts, historical research, and news articles are still struggling to counter the myth-making machines of the Marcoses.

Apart from the lack of collective memory and faulty educational system, the persuasion and information campaigns of scholars and activists are also faced with challenges on social media and online websites (Santos 2020). Marcos apologists and historical revisionists have established a massive online network of pro-Marcos accounts and pages on Facebook. While most of these accounts and websites use fabricated identities, they have greatly aided the pro-Marcos propaganda through the simple acts of liking, commenting, and sharing apologist posts to abuse social media algorithms (Elemia 2021). More recently, social media platforms such as X (formerly known as Twitter) and TikTok have become the newest hosts of the Marcosian disinformation campaign. The presidential elections in 2022 have also made Marcos apologists and shadow propagandists more aggressive than ever (Limpin 2021). While the challenges faced by the anti-

Marcos and anti-disinformation efforts, Filipinos on social media are relatively recent, persuading and countering disinformation among Marcos apologists has always been a persistent and complex struggle (Berdos 2020).

MOTIVES FOR RESISTING PERSUASION

As a field of study, persuasion resistance has gained relevance and popularity starting with McGuire's Inoculation Theory (1961) and Brehm's Reactance Theory (1966), both being well-established persuasion resistance theories of the 1960s (Tormala & Petty 2004). Prior to this development, scholars had only studied the enhancement of persuasion through the enhancement of its design, route, style, and content (Knowles & Linn 2004). Resistance then became recognized as the other, relatively unexplored, half of the persuasion process. The study of resistance, including the reduction thereof, as an alternative approach to achieving and understanding persuasion served as a modern academic turn in the fields of social psychology, communication, consumer research, sociology, and political science (Ahluwalia 2000).

The first category of resistance motives is premised on the idea that humans have an innate need for freedom which they are naturally inclined to preserve. Humans have the desire to freely choose for themselves and act on their own judgments (Brehm 1966). Acts of persuasion, in particular, are perceived as threats to this freedom as the goal of persuasion is to shift the attitude, influence the opinions, or encourage actions among the targets of persuasion. When individuals experience threats to or deprivation of their freedom, they enter a psychological state called reactance which then motivates them to restore or maintain their freedom by rejecting persuasion (Knowles & Linn 2004).

The second category of motives in resisting persuasion is distrust. Many individuals reject persuasive messages due to the fear of being deceived and taken advantage of (Knowles & Linn 2004). People often desire to hold accurate beliefs and attitudes, even if the supposed accuracy is objectively questionable, resulting in keener defense mechanisms against persuasion and scrutiny of persuasive messages. Motives behind persuasion are also questioned in light of this category.

The third category of motives for resisting persuasion is inertia. This persuasion resistance motive is primarily anchored in an individual's reluctance to change (Fransen et al. 2015). Instead of focusing on the reinstatement of autonomy or the scrutiny of persuasion, inertia is simply concerned with the preservation of the status quo and avoidance of new belief territories. Scholars argue that inertia as a motive for resistance is based on individuals' fear of change and uncertainty, as these two motives are associated with loss of control over a new and unfamiliar situation.

STRATEGIES FOR RESISTING PERSUASION

While persuasion resistance has a rich body of literature at its foundation, there has not been one type of literature that has integrated all accepted knowledge into a single framework prior to Fransen, Smit, and Verlegh's Strategies and Motives for Resisting Persuasion (SMRP) Framework (2015) for persuasion resistance. The SMRP framework is recognized as the initial attempt to not only consolidate but also integrate the rather disconnected concepts and findings under the persuasion resistance scholarship.

At the top of the SMRP framework (see Figure 2) are the three persuasion resistance motives (from left to right), namely freedom threats or reactance, concerns of deception or distrust, and reluctance to change or inertia. These resistance motives are linked to particular resistance strategies that, based on past studies, serve as the cognitive and behavioral manifestations of each of the resistance motives (Fransen et al. 2015). For example, individuals whose freedom is threatened by a persuasive message will enter the psychological state of reactance and will seek to reinstate the threatened freedom through contesting and empowerment strategies. A study by Dillard and Shen (2005) demonstrated that reactant individuals tend to counterargue against a persuasive message or source more than non-reactant ones. Attacking the message or the source of the message, where attacking is done to weaken the threats to freedom, is seen as a method of restoring autonomy (Fransen et al. 2015). Studies also conclude that reactant individuals may use empowerment strategies. When an individual's freedom is threatened, empowering one's own arguments is seen as a method of reassuring the original attitude and increasing resistance against the persuasive message (Brehm 1966).

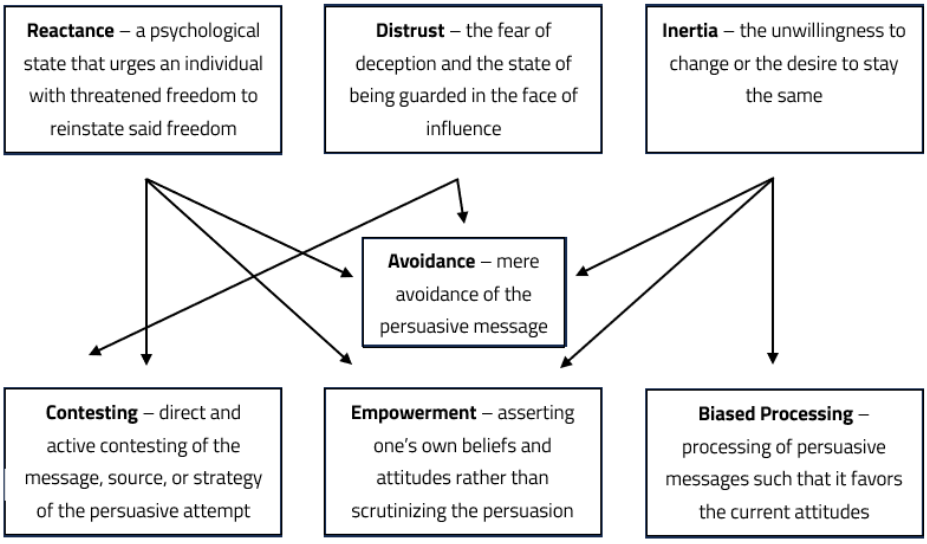


Figure 2: Strategies and Motives for Resisting Persuasion Framework.
Source: Fransen et al. (2015).

In the context of distrust or concerns of deception, people were observed to exhibit contesting among other resistance strategies (Fransen et al. 2015). Individuals who fear being deceived or misinformed tend to be more critical of the message, source, and strategy of the persuasion. On the other hand, individuals who exhibit inertia or reluctance toward change are more likely to use empowerment and biased processing strategies to preserve their original attitudes (Ahluwalia 2000). Since individuals exhibiting inertia are concerned with retaining their current positions, scholars argue that an empowerment strategy is likely to be adopted as this strategy also aims to retain the current beliefs and attitudes (Compton & Pfau 2009). Such individuals also use biased processing as a resistance strategy. In an attempt to maintain the status quo, they tend to downplay the threats of the persuasive message and highlight the effects of their current arguments (Ahluwalia 2000).

Lastly, the SMRP framework argues that avoidance strategy can be adopted to fulfill all three motives. Instead of directly and actively resisting influence, individuals may choose to avoid the sources of the influence altogether. Unlike contesting, empowerment, and biased processing, which are used by resistant individuals during or after exposure to a persuasion attempt, avoidance strategies are adopted before exposure and are used as anticipatory resistance methods (Fransen et al. 2015). When individuals detect threats to freedom, show concerns of deception, or are reluctant to change, they can first adopt the passive avoidant strategy towards persuasion and lessen the need for the three active strategies.

PERSUASION RESISTANCE AMONG APOLOGISTS

As previously mentioned, the present paper puts forth a qualitative case inquiry into the persuasion resistance behaviors of select Marcos apologists. The study was designed to develop an in-depth understanding of real-life, contemporary bounded systems called cases (Creswell & Poth 2018). In this research, a case refers to a Marcos apologist carrying pro-Marcos sentiments and resisting anti-Marcos persuasion and anti-disinformation efforts. This paper sought to investigate persuasion resistance motives and strategies through in-depth semi-structured interviews not only to establish context, but also to acquire a deeper understanding of the communication phenomenon. More specifically, this research took a multiple case design to allow for participant triangulation and a more detailed description of persuasion resistance tendencies among Marcos apologists through within-case analyses and a cross-case analysis.

Anonymized Participants	Background
Rey	24 years old, male, customer service representative Rey is aware that the term "Marcos apologist" has a negative connotation. For Rey, being a Marcos apologist is his "*chosen path*" (Interview with Rey 2021).
Judy	27 years old, female, customer service representative Judy used to be against Marcos Sr. when she started college. Upon meeting her pro-Marcos professor, Judy changed her mind and felt that "*a whole new reality*" (Interview with Judy 2021) was shown to her.
Regine	28 years old, female, customer service representative Regine shared that she grew up in a household that supports the Marcos family and that she has been a Marcos supporter for as long as she remembers.
Cardo	45 years old, male, small business owner Cardo shared the most information about the history of Martial Law and appeared the most confident about it. Cardo is the guardian of Janine, the youngest among the Marcos apologist interview participants.
Janine	16 years old, female, student of humanities and social sciences Janine lives in the same household as Cardo and considers herself a Marcos supporter like her guardians.

Table 1: Background of each anonymous Marcos apologist participant. Source: Interviews.

Recruited through a purposive criterion sampling wherein the criteria included specific age ranges, and support and defense of Marcos Sr., the participants of this study (see Table 1) consisted of one Marcos apologist from Generation X (43–57 years old, born 1966–1980), three from the Millennial generation (23–42 years old, born 1981–2000), and one from Generation Z (12–22 years old, born 2001–2011) following the generational age ranges cited in several local and international studies (Krause 2012; Posadas and Fernandez, 2015; Schroer 2012). Informed parental consent was secured from the guardians of one participant who was 16 years old at the time of data collection. As defined by relevant literature, a Marcos apologist is a Filipino individual expressing defense of the late dictator Marcos Sr. in light of the latter's martial law atrocities and acts of corruption (Guillermo 2021).

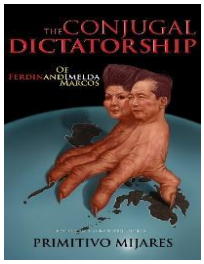
Material	Title	Description
	Approved Human Rights Violations Claims (HRVMCB)	This specific material enumerates the verified count of human rights violations during martial law, including extrajudicial killings, disappearances, tortures, rape, abductions, and illegal detainments.
	The Conjugal Dictatorship of Ferdinand and Imelda Marcos (Mijares 1976)	An academic initiative against the social and political restoration of the Marcos family involves a community-consolidated collection of research articles, class resources, and conference materials uploaded to a cloud storage application. The references include the works of Primitivo Mijares.
	Traceable Sources of False Information Supporting the Marcos Family (Berdos 2020)	An investigative article by Vera Files that explores the disinformation networks and mechanisms built by pro-Marcos groups. An important conclusion of this article states that Filipinos are systematically disinformed and manipulated by distorted versions of history found online and offline.
	Lost Years of Development under the Marcos Administration (Mandrilla & Punongbayan 2016)	An article by Rappler that focuses on debunking the myth that the Philippines experienced the golden age of economic growth under Marcos Sr. The article explains how the Philippines during martial law is actually considered the "Sick Man of Asia."

Table 2: Representative anti-Marcos and anti-disinformation materials presented to participants. Source: author.

The research instrument is a semi-structured in-depth interview guide that consists of questions and probes seeking to elicit the resistance motives and strategies of select Marcos apologists. This included providing examples of anti-Marcos persuasion and anti-disinformation materials (see Table 2) and asking about their initial reactions, interpretations, degree of acceptance or rejection, and resistances. The interview guide also drew specific pro-Marcos and anti-Marcos artifacts from social media that were used to expose the participants' degree of agreement and identification with the Marcos-related sentiments and resistance.

PERSUASION RESISTANCE OF MARCOS APOLOGISTS

After performing five within-case analyses to elicit the salient resistance motives and strategies of each participant, a cross-case analysis was conducted to compare the cases and identify overlapping attitudes and behaviors. The findings of the within-case analyses (see Table 3) and the cross-case analysis are discussed in this section. The elicited motives and strategies include those that already exist under the SMRP Framework (Fransen et al. 2015), and some that emerged only during the interviews and after the case analyses.

Anonymized Participants	Resistance Motives	Resistance Strategies
Rey	reactance, inertia, distrust	contesting, empowerment, biased processing, dismissal
Judy	distrust, inertia, antagonism	avoidance, contesting, biased processing, empowerment, redirection, dismissal
Regine	inertia, distrust, antagonism	empowerment, dismissal, contesting
Cardo	distrust, antagonism, inertia, reactance	biased processing, dismissal, contesting, empowerment, redirection
Janine	reactance, inertia, distrust	dismissal, contesting, empowerment

Table 3: Resistance motives and strategies of each participant listed in descending order of salience. Source: author.

Distrust Motive: Fear of Deception

The most salient motive for resisting persuasion among the five Marcos apologist participants is distrust. This motive involves resisting influence out of the fear of being deceived, manipulated, or disinformed by the sources of persuasion (Fransen et al. 2015). Across all case participants, the motive of distrust manifested as a fear of being deceived by anti-Marcos individuals and organizations through their persuasion and anti-disinformation materials. The participants are not convinced by data such as statistical figures and graphs, arguing that such information can be easily manipulated by anti-Marcos entities to serve their own interests. Judy, for example, answered "*The list of human rights violations that they are showing me, are they sure that it was really Marcos who ordered their execution? Unless I see any proof of it, I will not believe them"* (Interview with Judy 2021). The Marcos apologists seem to value empirical truth, but strongly doubt statistics and published research due to the disparity between the presented information and what they currently know, and the assumption of an existing ulterior motive behind the persuasion. The Marcos apologists

favor what they currently know and believe as the truth, then exhibit distrust towards other information that contradicts their existing beliefs.

Inertia Motive: Reluctance toward Change

The second most salient persuasion resistance motive among the case participants of the study is inertia. This motive involves the desire to stay the same, unmoved, or unchanged (Knowles & Linn 2004). Inertia among the case participants is unique because their apparent stubbornness results not only from the mentioned desires but also from a desire to defy. The Marcos apologists choose to resist influence and to remain unmoved to show defiance, demonstrating their capacity to stand their own grounds in the face of facts. Inertia now becomes a performance of power and integrity. Regine, the case participant who grew up in a Marcos-supporting household, shared that she would never become an anti-Marcos proponent mainly because she has been a Marcos supporter for as long as she can remember: "*Whatever my belief is about them [the Marcos family], I will stand by it. I really am a pro-Marcos*" (Interview with Regine 2021).

Reactance Motive: Threats to Freedom

The third motive for resisting influence among the case participants is reactance. This motive involves the innate desire for autonomy and freedom, i.e., a desire to think, believe, and act based on one's accord (Brehm 1966). Among the Marcos apologists, reactance is manifested as respect for each other's opinions. As Rey has implied, "*We have our own beliefs. I will tell you what I know, but I will not force you to believe what I believe. In the same way, you can tell me what you know but you cannot force me to believe it*" (Interview with Rey 2021). The case participants packaged their desire for autonomy and freedom as a simple wish to respect others and be respected by them. Reactance also serves as a protective mechanism, asking for respect so that one's own opinion will not be challenged. Among the case participants, Janine most frequently mentioned her desire for autonomy compared to older interviewees.

Antagonism Motive: Perceiving an Enemy

This emergent motive called antagonism, identified during the interviews, involves resistance that results from an antagonistic, hostile, or entirely negative perception of the source of influence. In this motive, the source of influence is viewed as an enemy. While distrust can be associated with antagonism, the latter takes a higher level of doubt not simply caused by fear of being deceived or manipulated but also by anger or hate directed at the source of influence. This antagonistic tension serves as a psychological wall between the sender and receiver of the persuasive and informative messages. Among the case participants, Judy, Regine, and Cardo exhibited the most antagonistic perception of organizations, institutions, and individuals involved with anti-Marcos persuasion and anti-disinformation campaigns. Rappler, one of the news organizations in the Philippines that openly perform fact-checks on Marcos-related claims, is considered an enemy of the truth. Cardo, for instance, answered "*Rappler, in my opinion, they are very unfair with their news. That is why their founder was convicted with libel, because they always slander the government. They have always been*

like that" (Interview with Cardo 2021). These Marcos apologists not only feel distrust toward anti-Marcos individuals and organizations but also view them as threats and direct opposition.

Contesting Strategy: Attack on Persuasion

The most common strategy for resisting persuasion among the case participants is contesting. This strategy involves counterarguments that seek to challenge the content, source, or strategy of the persuasive message (Fransen et al. 2015). The types of content being contested by the case participants include anti-Marcos messages that debunk the golden age economy during the martial law, discredit the Marcos family of their claimed accomplishments, enumerate the human rights violations during martial law, and expose the ill-gotten wealth of the late dictator. A major part of the case participants' contesting strategy is how they position the anti-Marcos entities in the least favorable angle and proceed to attack them. As a result of distrust and antagonism, it appears that the first instinct of the Marcos apologists is to attack the identities and histories of the anti-Marcos individuals and organizations.

Dismissal Strategy: Discrediting the Attempt

The second most salient strategy for resisting anti-Marcos persuasion among the case study participants is dismissal. Identified through the interviews, this emergent strategy involves treating the persuasive message as unworthy of serious attention or consideration. Dismissing the persuasion attempt also includes showing indifference or reducing its relevance to oneself. Among the case participants, dismissal strategy includes the utterances "*I don't care*" (Interview with Regine 2021), "*Listening to that won't make me rich*" (Interview with Judy 2021), and "*Let them be*" (Interview with Janine 2021). The Marcos apologists do not necessarily avoid persuasion in this strategy. Instead, they pay minimal attention to the message, then dismiss it outright. Janine, the youngest among the case participants, even showed willingness to dismiss the opinions of the entire generation she belongs to. According to Janine, her generation is not yet knowledgeable, autonomous, or old enough to participate in political discussions related to Marcos Sr.

Empowerment Strategy: Asserting the Position

The next strategy for resisting persuasion among the case participants is empowerment. This strategy aims not to weaken the anti-Marcos argument but to strengthen one's own pro-Marcos arguments in the face of influence. Empowerment is achieved either through self-assertion, which involves independently improving one's arguments through research and reasoning, or through social validation, which involves seeking out and aligning with others who share similar beliefs. Among the case participants, the most used empowerment strategy is social validation. All five participants resorted to the knowledge of the elderly who lived through the Martial Law era, arguing that what they know and believe align with what the older generation had directly experienced. While select participants also used self-assertions to empower their arguments, all of them were more likely to depend on what they learned from older individuals with similar beliefs.

Biased Processing Strategy: Understanding with Partiality

Another salient persuasion resistance strategy among the case participants is biased processing. This strategy involves being selective with the available information or imposing double standards, wherein stricter moral or logical criteria are used against the opposing position (Fransen et al. 2015). When asked about her reaction to articles and websites that enumerate the human rights violations under Marcos Sr., Judy insisted that she needs proof on this matter before she believes it. However, when provided with visual and statistical proofs from legitimate sources, Judy still appeared resistant. Rey and Judy also argued that the atrocities committed during the martial law imposed by Marcos Sr. should not be a burden on his living family members. However, they were more likely to criticize Leni Robredo—the former vice president of the Philippines and the current president Bongbong Marcos' primary rival during the 2022 presidential elections. Most of such criticisms were based on the public service scandals of Robredo's political predecessors.

Redirection Strategy: Changing the Subject

Redirection is the last salient strategy used by the case participants to resist anti-Marcos messages and anti-disinformation materials. This strategy is an emergent one which involves the attempt to both distract and shift the focus of the current communication to a different yet relevant topic as a way of resisting persuasion. Redirection is not simply avoidance, as the latter strategy is passive and entails the absence of attention or cognition, while the former entails actively attending to the persuasive message but chooses to shift away from it.

Among the participants of the study, redirection is mostly observed in the utterances: *"Let's talk about the Aquinos"* (Interview with Cardo 2021)—another influential political family in the Philippines—or *"What about the massacres enabled by the Aquinos?"* (Interview with Judy 2021). In this strategy, Marcos apologists resist persuasion not by contesting anti-Marcos persuasion, empowering their own pro-Marcos arguments, dismissing or processing information in a biased manner, but by leading the communication transaction to a different direction. Instead of discussing the topic at hand, the case participants shifted the topic to resist the impact of the original dialogue. While such a strategy can be described as escapist or intentional deflection, redirection appears to be some participants' convenient yet effective method of resisting facts.

Avoidance Strategy: Refraining from Contact

The remaining strategy presented in the literature is the least observed one among the interviewed Marcos apologists. This strategy of avoidance involves placing a physical, mechanical, or cognitive distance between the self and the source of influence (Fransen et al. 2015). When asked if they choose to block, mute, or unfollow any account that shares anti-Marcos materials, to place a virtual distance between themselves and the anti-Marcos reports, they said that they do not. They believe that blocking or muting those who challenge one's beliefs is not a reasonable action as this will only make one appear threatened and less open to opposing discourse.

CONCLUSION

The present research concludes that the select Marcos apologists exhibit a multitude of persuasion resistance motives and strategies in deflecting the influence of various anti-Marcos persuasion and anti-disinformation efforts in the Philippines both outside and inside digital spaces. Such motives include fear of being deceived or manipulated by anti-Marcos individuals and institutions; mere desire of retaining pro-Marcos beliefs and reluctance toward changes in beliefs or attitudes; value for personal autonomy and freedom as a Marcos supporter to think, believe, decide, and act on one's own accord; and perception of anti-Marcos individuals, organizations, and other similar entities as enemies.

The resistance strategies exhibited by the select Marcos apologists include several distinct approaches. They contest the content, source, and strategy of anti-Marcos persuasion and anti-disinformation materials. Additionally, they process persuasive or informative content in a selective and biased manner to preserve their current pro-Marcos position. Empowerment of their own pro-Marcos arguments is achieved through either self-assertion or social validation. Furthermore, they dismiss persuasive or informative anti-Marcos messages as unworthy of serious consideration or attention. They also redirect the dialogue from Marcos-related atrocities and disinformation to other related issues involving different individuals or organizations. Lastly, they avoid the source of influence, even if minimally.

The research also supports the assumption that these motives and strategies are not mutually exclusive and can be exhibited by resistant individuals simultaneously (Knowles & Linn 2004). The research also demonstrated how these motives and strategies tend to overlap and interact with each other during persuasion transactions. Distrust and antagonism, for example, seem to amplify each other's impact on the motivation for persuasion resistance among the recruited Marcos apologists. Contesting and empowerment strategies also appear to complement each other in the process of resisting anti-Marcos influence.

Second, the present research concludes that existing anti-Marcos persuasion and counter-disinformation strategies, aimed at counteracting the political restoration of the Marcos family, show signs of ineffectiveness when confronted with motives and strategies for persuasion resistance. Academic, journalistic, and social media efforts may be hypothesized as having reduced impact in the presence of motivated and strategic resistance to persuasive and informative anti-Marcos messages. Initiatives such as fact-checking, publications, museums, investigative articles, visual documentation, historical research, and social media posts may not be as impactful as previously assumed by social justice institutions. Such conclusions, however, still need to be investigated further. The findings illustrated to some extent how the political restoration of the Marcos family and the purification of the Martial Law legacy could be reinforced not only through historical distortion and systematic disinformation network in the form of fake news, but also by on-ground resistance to anti-Marcos persuasion and anti-disinformation strategies among Marcos apologists.

Most importantly, the present research illustrates the situation of social justice efforts in the Philippines in the face of persuasion resistance motives and strategies among Filipinos. Beyond the issue of historical denialism and popular pro-Marcos sentiments, the research implies that

persuasive and informative materials that seek to forward social causes need to be revisited and investigated in terms of their effectiveness among resistant Filipino citizens, regardless of whether such movements concern a specific political issue or not.

Given its limitations in terms of sample size and generalizability, the present research recommends replication that involves a larger number of Marcos apologists recruited through an extensive quota sampling technique, and a confirmatory method that will cross-validate the resistance motives and strategies elicited from the participants.

REFERENCES

Abuso, Ma. Rhea Gretchen Arevalo. 2019. "Narrating Human Rights in the Philippines." *Journal of Southeast Asian Human Rights* 3, no. 1: 7. https://doi.org/10.19184/jseahr.v3i1.8411.

Ahluwalia, Rohini. 2000. "Examination of Psychological Processes Underlying Resistance to Persuasion." *Journal of Consumer Research* 27, no. 2: 217–232. https://doi.org/10.1086/314321.

Berdos, Enrico. 2020. "Propaganda Web: Pro-Marcos Literature, Sites, and Online Disinformation Linked." Vera Files. https://verafiles.org/articles/propaganda-web-pro-marcos-literature-sites-and-online-disinf.

Brehm, Jack. 1966. "A Theory of Psychological Reactance." New York: Academic Press.

Chua, Michael Charleston. 2012 "TORTYUR: Human Rights Violations during the Marcos Regime." For democracy and human rights. Center for Youth Networking and Advocacy.

Creswell, John W., and Cheryl N. Poth. 2018. "Qualitative Inquiry and Research Design." SAGE Publications Inc. April 13, 2018. https://us.sagepub.com/en-us/nam/qualitative-inquiry-and-research-design/book246896.

Compton, Josh, and Michael Pfau. 2009. "Spreading Inoculation: Inoculation, Resistance to Influence, and Word-of-Mouth Communication." *Communication Theory* 19, no. 1: 9–28. https://doi.org/10.1111/j.1468-2885.2008.01330.x.

Dillard, James Price, and Lijiang Shen. 2005. "On the Nature of Reactance and Its Role in Persuasive Health Communication." *Communication Monographs* 72, no. 2: 144–168. https://doi.org/10.1080/03637750500111815.

Elemia, Camille. 2021. "Imee Still Holds Grudge against Facebook Takedown of Marcos-Linked Fake Network." 2021. Rappler. January 21, 2021. https://www.rappler.com/nation/imee-decries-facebook-takedown-marcos-linked-fake-network/.

Fonbuena, Carmela. 2019. "Marcoses take seats in Senate, Congress, province and city." 2019. Rappler. https://www.rappler.com/nation/elections/marcoses-takeseat-senate-congress-province-city-ilocos.

Fransen, Marieke L., Edith G. Smit, and Peeter W. J. Verlegh. 2015. "Strategies and Motives for Resistance to Persuasion: An Integrative Framework." *Frontiers in Psychology* 6: 1–12. https://doi.org/10.3389/fpsyg.2015.01201.

Guillermo, Ramon. 2021. "Mito at Disimpormasyon: Ang Resureksyon ng mga Marcos." Hindi Bayani si Marcos, UP Days of Remembrance.

Interview with Judy, Quezon City, Philippines, November 22, 2021.

Interview with Regine, Quezon City, Philippines, November 22, 2021.

Interview with Rey, Quezon City, Philippines, November 22, 2021.

Interview with Cardo, Quezon City, Philippines, November 23, 2021.

Interview with Janine, Quezon City, Philippines, November 23, 2021.

Knowles, Eric S., and Jay A. Linn. 2004. *Resistance and Persuasion*. Mahwah, N.J.: Lawrence Erlbaum Associates.

Krause, Heidi. 2012. "The Next Generation: Alpha." Accessed January 2013. http://www.readersdigest.co.nz/the-next-generation.

Limpin, Dianna. 2019. "Pushing Back Against the Lies: Efforts to Fact-Check the Marcoses on Social Media." *Social Science Information*. 47–48. Philippine Social Science Council.

Limpin, Dianna. 2021. "After EDSA: Historical Revisionism and Other Factors That Led to the Marcoses' Return." Philippine Social Science Council. February 25, 2021. https://www.pssc.org.ph/after-edsa/.

McGuire, William. 1961. "Resistance to Persuasion Conferred by Active and Passive Prior Refutation of the Same and Alternative Counterarguments." *Journal of Abnormal and Social Psychology* 63: 326–332. https://psycnet.apa.org/doi/10.1037/h0048344.

Mendoza, Gemma. 2019. "Networked Propaganda: How the Marcoses Are Using Social Media to Reclaim Malacañang." Rappler. November 20, 2019. https://www.rappler.com/features/newsbreak/investigative/245290-marcos-networked-propaganda-social-media/index.html.

Mercado, Neil Arwin. 2021. "DepEd, CHR to Hold 'Summit' on Inclusion of Martial Law in Curriculum." INQUIRER.net. September 24, 2021. https://newsinfo.inquirer.net/1492312/deped-chr-to-hold-summit-on-inclusion-of-martial-law-period-in-curriculum.

Mijares, Primitivo. 1976. *The Conjugal Dictatorship of Ferdinand and Imelda Marcos I. Google Books*. Union Square Publications. https://books.google.com.ph/books/about/The_Conjugal_Dictatorship_of_Ferdinand_a.html?id=IdlwAAAAMAAJ&redir_esc=y.

Posadas, Lorizza Mae, and Rowena Fernandez. 2015. "Palaweños, Do We Know Where We're Going To? The Dynamics of Generation Y and Z." *Filipinos Generations in a Changing Landscape*. 27–47. Philippine Social Science Council.

Punongbayan, Jan Carlo, and Kevin Mandrilla. 2016. "Marcos Years Marked 'Golden Age' of PH Economy? Look at the Data." Rappler. March 5, 2016. https://www.rappler.com/voices/imho/124682-marcos-economy-golden-age-philippines/.

Reyes, Miguel, and Joel Ariate. 2019. "The 'Marcos Truths': A Genealogy of Historical Distortions." https://diktadura.upd.edu.ph/the-marcos-truths-a-genealogy-of-historical-distortions/.

Reyes, Miguel Paolo P., and Ricardo T. Jose. 2013. "Why Marcos Pa Rin!" *Kasarinlan: Philippine Journal of Third World Studies* 27, no. 1–2 – 28, no. 1–2: 1–18. https://www.journals.upd.edu.ph/index.php/kasarinlan/article/view/6233.

Robles, Alan. 2016. "Introducing: the Marcos apologist starter pack." ABS-CBN News. https://news.abs-cbn.com/blogs/opinions/11/29/16/opinion-introducing-the-marcos-apologist-starter-pack.

Santos, Franz. 2020. "Remembering Martial Law in the Philippines: Education and Media." New Mandala. October 1, 2020. https://www.newmandala.org/remembering-martial-law-in-the-philippines-education-and-media/.

Schroer, William J. 2012. "Generations X, Y, and Z and the Others." The Social Librarian. Accessed February 2013. http://www.socialmarketing.org/ newsletter/features/generation3.htm.

Tormala, Zakary L., and Richard E. Petty. 2004. "Source Credibility and Attitude Certainty: A Metacognitive Analysis of Resistance to Persuasion." *Journal of Consumer Psychology* 14, no. 4: 427–442. https://doi.org/10.1207/s15327663jcp1404_11.

Villamor, Felipe. "Push to Give Marcos a Philippine Hero's Burial Finds an Ally in Duterte." The New York Times, November 5, 2016. https://www.nytimes.com/2016/11/06/world/asia/philippines-duterte-marcos-burial.html.

ABOUT THE AUTHOR

KARL LEWIS L. CRUZ is an instructor in the Department of Speech Communication and Theatre Arts at the University of the Philippines Diliman, where he also earned his undergraduate degree in speech communication. He is currently pursuing a graduate degree in speech communication within the same department. He teaches courses in public speaking and persuasion, as well as speech communication research methods with a focus on quantitative techniques. His research interests include interpersonal communication, social influence, persuasion resistance, and inoculation strategy, particularly in the context of disinformation and misinformation issues in the Philippines. He has presented his work at both national and international conferences and advocates for the importance of quantitative research and data analytics in critical discourse and emancipatory efforts.

Email: klcruz1@up.edu.ph

Information

The Association

The **Southeast Asian Media Studies Association (SEAMSA)** is an international, non-profit, non-government community of academics, researchers, media practitioners, and institutions who are actively committed to the study and research on the mass media of the Southeast Asian region, which is comprised of the countries Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor Leste, and Vietnam.

Founded in 2017 by a group of young media scholars from the region, **SEAMSA** has aimed to be at the forefront of Southeast Asian media studies and research.

OUR VISION

SEAMSA seeks to be the leading organization for the study and research of the mass media of the Southeast Asian region.

OUR MISSION

The mission of SEAMSA is to contribute to the promotion, growth, development, and popularization of the study and research of Southeast Asian mass media.

HEADQUARTERS

The organization is based in the Philippines.

EXECUTIVE COUNCIL

Alexander J. Klemm, PhD	Executive Director
Alonzo dela Cruz	Secretary
Le Thu Mach, PhD	External Relations Director
Jason Paolo Telles	Finance Director
Ina Nur Ratriyana	Membership Director
Sabariah Mohamed Salleh, PhD	Events Director
Amalia Nurul Muthmainnah	Publicity Director

CONTACT

For more information and to contact SEAMSA, please visit **www.seamsa.org**

Membership Guidelines

All memberships will begin on January 1 and will expire on December 31 each year regardless of when an individual joins.

A. INDIVIDUAL MEMBERSHIP

- An individual membership is open to all scholars, students, and media practitioners from around the world who are interested in the study of various forms of media of the Southeast Asian region.
- **Membership for 2025 is free.**
- The benefits of becoming a member:
  1. Exclusive invitation to attend events, webinar, or conference hosted by SEAMSA
  2. Exclusive invitation to contribute in SEAMSA Journal
  3. Special rate for SEAMSA's programs.
  4. Access to available research grants and funding.
  5. Participate in any special tasks force, e.g.: moderator
  6. Opportunity to network with other members within Southeast Asian and beyond.

B. INSTITUTIONAL MEMBERSHIP

- An institutional membership is open to all institutions that work in education, media, research, and government policy in the Southeast Asian region.
- An institutional membership could cover up to 10 persons in the organisation.
- **Membership for 2025 is free.**
- The benefits of becoming a member in addition to individual membership (as mentioned above) are also:
  1. Special invitation to join partnership with SEAMSA event, conference, and seminars
  2. Special invitation to guest editor for SEAMSA Journal
  3. Participate in any special tasks force, e.g.: guest speaker, guest editor

APPLICATION PROCESS

- Fill out the official membership application form: https://forms.gle/VfrMGCEEFb4EUarP6
- For further information, please contact: membershipdirector.seamsa@gmail.com

The Journal

Southeast Asian Media Studies Journal is the international, bi-annual, blind peer-reviewed, and open-access scholarly journal of the Southeast Asian Media Studies Association (SEAMSA). It publishes open-call and special themed issues. Each issue includes a section for scholarly articles and another section for the reviews of books, film festivals, exhibitions and media events. Every issue is guest-edited by a media studies expert.

Publisher: **Southeast Asian Media Studies Association**
ISSN (Online): **2718-9236**
Member: Asian Journals Network

There are **NO** submission or publication charges for this journal.

AIMS AND SCOPE

Southeast Asian Media Studies Journal aims to be at the forefront of media research in Southeast Asia. The journal concentrates on Southeast Asian media frameworks, perspectives, theories, and practices. Submissions adhering to the journal's aims and scope will be considered for publication. The journal welcomes scholarly articles, book reviews, film festival reviews, as well as exhibition and event reviews.

Submissions may address any topic on media studies in Southeast Asia, including the following:

- Audience studies
- Broadcast communication
- Digital media
- Film studies
- Journalism
- Mass communication
- Mass media
- Media and culture
- Media and diaspora
- Media and environment
- Media and political economy
- Media and religions
- Media and society
- Media and transnationalism
- Media business and management
- Media communications
- Media convergence

- Media criticism
- Media education and literacy
- Media ethnography
- Media histories
- Media laws and ethics
- Media linguistics
- Media marketing
- Media programming
- Media spaces
- Media technologies
- Media theories and practices

REVIEW POLICIES

Peer Review Process

Southeast Asian Media Studies Journal adheres to rigorous standards of peer-review in order to ensure the high quality of all published contributions.

Submitted manuscripts of scholarly articles first undergo a stringent internal quality check with the Editorial Board. The Editorial Board may request the author to improve the manuscript according to the board's recommendations. The Editorial Board may reject submissions that are deemed to be of low quality or do not fall within the scope of the journal.

In a second step, the manuscript undergoes the double-blind peer review with external experts in media studies. The external reviewers may accept the manuscript for publication as it is, accept it with minor or major changes, or reject it.

Submitted reviews of books, film festival reviews, exhibition and media events undergo a strict internal quality check with the Editorial Board.

SUBMISSION GUIDELINES

Submissions should be sent to eic.seamsj@gmail.com
Use the subject: "SUBMISSION: Surname_Short Title" (e.g. SUBMISSION: Nguyen_A Review of Southeast Asian Media Theories).

Authors are advised to consult previously published issues of ***Southeast Asian Media Studies Journal***.

SCHOLARLY ARTICLES

Preamble

Scholarly articles should follow either the social scientific, humanistic, or any other disciplinary approaches in media research. They should be original and not duplications of previously published articles. They should be solely submitted to the journal and are not being considered for publication

elsewhere, and they must be free from abusive, libelous, defamatory, fraudulent, illegal, or obscene content.

Word Limit

5,000 to 8,000 words excluding references, tables, notes, acknowledgements, and captions. Submissions that do not fall within these word-limits will not be considered by the Editorial Board.

Style Guidelines

Manuscripts should be submitted in Word (doc or docx) format.

Cover Page: The cover page contains the title and the names, affiliations, and bio-notes of the author/s of the article:

Title: Bold, Times New Roman, 20 pt., capitalize each word, double-spaced, center aligned
Authorship and Affiliations: Name of author/s should be in Bold, Times New Roman, 12 pt, center aligned. The institutional affiliation of the authors should be placed beside their name and must be in Italics, Times New Roman, 12 pt., center aligned. Separate the names and their affiliations with a comma. [Example: **Jane Doe,** *Chulalongkorn University*]
Author/s Bio-note: Provide a short bio-note for each author of not more than 100 words. [Example: Jane Doe is an Associate Professor of Journalism from the Chulalongkorn University in Thailand. She has published …]; Times New Roman, 12 pt. sentence case, double-spaced, left-aligned

Body: The body of the manuscript contains the abstract, the whole article, and the list of references. Here are the guidelines for the body:

Font: Times New Roman, 12 pt., double-spaced. Use one-inch margins for all sides of the document.
Abstract: The abstract should be 150 to 200 words long. Indicate the abstract paragraph with a heading (Bold, Times New Roman, 12 pt.). Place at least eight keywords below.
Headings: The font size for all headings should be 12 pt. To make the article readable, the use of fourth-level and more headings is discouraged.

- First-level headings should be in Bold, all uppercase, and left aligned
- Second-level headings should be in Bold Italics, title case, and left aligned
- Third-level headings should be in Italics, title case, and left aligned

Tables, Figures, and other Supplementary Materials: Insert all tables, figures, and other supplementary materials where you would like them to be placed. Provide captions for them. For copyrighted materials, authors should acquire signed permission from the owners.
Acknowledgement: This is an optional section of a research article. It should be placed before the references. Acknowledgement paragraphs must not exceed 250 words.

References

The manuscript should adhere to the prescribed referencing format of the Chicago Manual of Style (CMS), Author-Date Style. Check the citation style here: https://bit.ly/2vn8VRM

REVIEWS

The purpose of the ***Reviews*** section is to inform the readers about new scholarship in Southeast Asian media studies and to support critical engagement with recent publications, film festivals, exhibitions and other media events.

Book Reviews

The book review section publishes critical texts on recent academic publications that fall within the scope of Southeast Asian media studies. A review may focus on a single or two thematically connected publications. Rather than providing general summaries, authors should take a critical stance on their chosen publications, providing an insightful account of the texts and their position alongside other media studies scholarship. The journal also welcomes English-language reviews of non-English language publications. The authors must not be involved in any way in the publications they review. Contributions must be under 2,500 words long. Authors of book reviews include their name and affiliation but no bio-note.

Film Festival Reviews

The film festival review section publishes critical writing on film festivals. Authors should take a critical stance and reflect on at least one theme of the film festival/s that is relevant to the aims and the scope of the journal. Authors may discuss up to three thematically connected film festivals and should submit a well-structured critical review. Authors must not be employed by the festival/s they are reviewing. Contributions must be under 2,500 words long. Authors of critical film festival reviews include their name and affiliation but no bio-note.

Exhibition and Event Reviews

The exhibition and event reviews section publishes critical texts on media exhibitions and events. Scholars, artists, curators and media practitioners are encouraged to submit reviews that apply academic and critical approaches. Authors may discuss up to three thematically connected exhibitions or media events and should submit a well-structured critical review. Authors must not be employed by the exhibitions and events they are reviewing. Contributions must be under 2,500 words long. Authors of critical exhibition and event reviews include their name and affiliation but no bio-note.

Contact the Editor

eic.seamsj@gmail.com

Partner Institutions

Faculty of Social and Political Sciences—Universitas Gadjah Mada, INDONESIA
https://ugm.ac.id/en/fakultas/faculty-of-social-science-political-science/

Universiti Tunku Abdul Rahman, MALAYSIA
https://utar.edu.my/

Konkuk University—Academy of Mobility Humanities, KOREA
https://mobilityhumanities.org/en/

Mahakarya Institute of The Arts Asia, BRUNEI
https://miaa.edu.bn

Polytechnic University of the Philippines, PHILIPPINES
https://www.pup.edu.ph/

Far Eastern University, PHILIPPINES
https://www.feu.edu.ph

Faculty of International Communication and Culture—
Diplomatic Academy of Vietnam, VIETNAM
https://www.dav.edu.vn/

Sunway University, MALYASIA
https://sunwayuniversity.edu.my/

Swinburne Vietnam Alliance Program, VIETNAM
https://swinburne-vn.edu.vn/

Royal University of Phnom Penh–Department of Media and Communication, CAMBODIA
https://dmc-cci.edu.kh/

Universitas HKBP Nommensen, INDONESIA
https://uhn.ac.id/

Sri Padmavati Mahila Visvavidyalayam (Women's University), INDIA
https://www.spmvv.ac.in/

BENILDE ANTIPOLO

De La Salle-College of Saint Benilde, Antipolo Campus, PHILIPPINES

https://www.benilde.edu.ph/benilde-antipolo/

Asian Journals Network, ASIA

https://www.asianjournalsnetwork.net/

Asia Research News, MALAYSIA

https://www.asiaresearchnews.com/

EdukSine, PHILIPPINES
https://app.eduksine.com

The Third Degree, MALAYSIA
https://ttd.education/

EBSCO, USA
https://www.ebsco.com/

SOUTHEAST ASIAN MEDIA STUDIES JOURNAL

VOL. 6, NO. 1, 2024

SEAMSA