

Title

Media, Art & Technology in the
Nine Portuguese-Speaking Cultures

Editor and Organizer

José Manuel Simões

Foreword

João Nuno Brochado

Introduction

José Manuel Simões

Authors

Wilson Caldeira || Angola
Daniel Farinha || Brazil
Silvino Évora || Cape Verde
Camará Morto || Guinea Bissau
Carmen Monereo || Macao
Vanessa Rodrigues || Mozambique
Rui Torres and Fernanda Bonacho || Portugal
José Manuel Simões || São Tomé and Príncipe
Paulo Faustino and Rui Novais || East Timor

Revision

Anna Grandchamp || USP Brazil
Marisa Aldeias || Media XXI/Formalpress

Design Coordination

Filipa Martins de Abreu

Layout Design and Illustrations

Heaven Simões
Yshie Reyes

Youtube Channel Setups

Filipa Martins de Abreu

Video Captions

David Chiongson Ng Alves

University of Saint Joseph

University Library and Academic Press

@: <https://library.usj.edu.mo> || e: university.press@usj.edu.mo

Date of Publication and Date of Printing

September 2025

Publication

University of Saint Joseph, Macao SAR (China)

Printing

Print in Macao | The One Design
1st Edition

ISBN

978-99981-138-6-2

INDEX

ANGOLA ANGOLA'S HIGHER EDUCATION SYSTEM: AN ANALYSIS OF THE OPPORTUNITIES AND CHALLENGES PRESENTED BY ARTIFICIAL INTELLIGENCE WILSON GOMES CALDEIRA (USJ)	11
BRAZIL CRYPTO ART: OPPORTUNITIES AND CHALLENGES FOR THE BRAZILIAN DIGITAL ART SCENE DANIEL FILIPE FARINHA (USJ)	31
CAPE VERDE ARTIFICIAL INTELLIGENCE, NEWSROOM CULTURE, AND JOURNALISM: FROM INTERNATIONAL SPECTRUM TO EXPERIENCES IN CAPE VERDE SILVINO LOPES ÉVORA (UNI-CV)	55
GUINEA-BISSAU GUINEA-BISSAU ETHNICITY AND KEY ELEMENTS THAT CONTRIBUTE TO ITS CULTURAL CHARACTER MORTO CAMARÁ	89
MACAO THE IMPACT OF CORPORATE PHILANTHROPY ON MEDIA, ART, AND TECHNOLOGY IN MACAO / WHAT DO WE KNOW ABOUT PHILANTHROPY IN MACAO? WHAT IS THE RELATIONSHIP BETWEEN CONFUCIANISM, PHILANTHROPY, MEDIA, AND STRATEGIC COMMUNICATION? CARMEN ZITA MONEREO (UNL)	107
MOZAMBIQUE NAKHODHA AND THE MERMAID ON THE ISLAND OF MOZAMBIQUE: IMMERSIVE TRANSMEDIA NARRATIVES AS A COMMUNICATION MODEL FOR HUMAN AND SUSTAINABLE DEVELOPMENT VANESSA RIBEIRO-RODRIGUES (ULUSOFONA, CICANT)	123
PORTUGAL ART AND TECHNOLOGY IN PORTUGAL: CHRONOLOGIES, ARCHAEOLOGIES, SYMBOLOGIES RUI TORRES (UEP; ICNOVA); FERNANDA BONACHO (ESCS/IPL; ICNOVA)	143
SÃO TOMÉ AND PRÍNCIPE DIGITAL MEDIA CONTRIBUTION TO ENTREPRENEURSHIP AND DEVELOPMENT IN SÃO TOMÉ AND PRÍNCIPE JOSÉ MANUEL SIMÕES (USJ)	171
EAST TIMOR THE MEDIA SYSTEM AS A LEVERAGE FOR DEMOCRATIC DEVELOPMENT IN EAST TIMOR PAULO FAUSTINO (FLUP; CITCEM); RUI ALEXANDRE NOVAIS (UCP; CEFH)	193

FOREWORD

Ultra-fast technological advancements are defining the era we live in. It has become increasingly evident that media and technology are not just means of communication but fundamental parts of artistic expression and cultural identity. The media landscape is constantly changing; the interconnections between media, art, and technology are growing as their boundaries are fading. The dynamics of these relationships shape cultural discussions worldwide and drive breakthroughs in innovation and substantial changes in social norms. Such prerogatives are felt uniquely in the context of the Portuguese-speaking nations, deeming their interactions as ones that often break geographical, cultural, and technological borders.

This collection of essays aims to uncover different approaches of scholars from/about these countries, who have been exploring the intersections of media, art, and technology and seek to understand better how lusophone countries are shaping and are being shaped by global media developments.

The articles in this book analyse contemporary practices and the challenges each Portuguese-speaking nation faces on topics such as cultural preservation, ethical implications of artificial intelligence, and the role of digital media in promoting social awareness. This work can be considered an interesting and valuable resource for this field of research, as it explores web-binding media, art, and technology as a topic that has yet to receive enough attention.

The research presented here can be fascinating for a wide range of groups, including, but not limited to, scholars, creative practitioners, decision-makers, and people engaged in the lusophone culture.

Portuguese-speaking countries share a cultural legacy - cultural identity is strongly linked to language - and, in a way, a collective identity that evolves with modern technological advancements. Cultural exchange and collaboration in a globalised world are essential as media has shown to be crucial in shaping identities. This shared heritage encourages cooperation and interaction between these nations, which have grown stronger throughout the last decades.

These connections are behind some innovations in art through the use of digital technologies and the use of media by social movements for advocacy and visibility. Some of these cultural narratives in this era of globalisation and information technology are analysed here from the perspective of the nine countries of the Portuguese-speaking world - covering a broad spectrum of topics that demonstrate the cross-disciplinary research of media, art, and technology in lusophone contexts.

These diverse contributions came together here through the hand of the researcher, traveller and Professor José Manuel Simões - a special gratitude for his dedication and effort in finding and compiling these texts, creating and completing this project - who has been committed to honoring different cultures and promote development and cooperation all over the world.

As you turn the pages, may you travel too.

João Nuno Brochado

INTRODUCTION

“Media, Art & Technology in the 9 Portuguese-speaking Territories” transmits knowledge and shares knowledge in an interconnected way, reaching multiple and diverse audiences.”

We reflect together on technology at the service of the fields of media and art, education, information systems, and the construction of values, especially cultural ones, we analyze current contemporary artistic practices as elements that seek to highlight, question, and understand recent currents, creating languages verbal and visual, formal and semantic issues, words, images, market influences and issues, technological developments that expand cultural commodification, that understand and make socio-cultural changes possible. Contemporary societies, open to interaction and sharing, make communication in their different fields of action common to more and more areas and people. It is this multicultural sharing based on a common language, Portuguese, that we deal with here.

The relationships, understood from these perspectives, adopt integrated viewpoints and draw on pioneering practices and studies, such as those by Eduardo Kac, who transcends the boundaries of traditional poetry by integrating it with new technologies. Kac explores mediums like holograms, bioart, and interactive works, establishing the principle of cultural transcodification. This concept implies the translation and transformation of artistic messages through multiple media, creating new forms of expression that encourage us to reflect on the interactions between art, technology, and culture.

In this relationship between arts - predominantly audiovisual - and technology, we were inspired by the work of artists such as Luke DuBois, who begins with research into electronic and digital photography associated with themes such as online relationships; Hito Steyerl, a filmmaker, writer and performer whose installation videos mix virtual and augmented reality with poetic and fictional narratives; or Parreno, which uses innovative media and technological supports, namely the use of augmented and virtual reality devices together with concrete and real objects.

The line between what is fictional (imaginary or invented) and what is real becomes increasingly blurred or difficult to differentiate. Aspects of fiction, such as stories, scenarios, or events typically considered imaginary, start to feel as accurate or plausible as actual events or experiences.

As a result, people may struggle to separate what is genuinely happening from what is merely a product of fiction or imagination. These blurred boundaries can lead to uncertainty about what is real and not, challenging traditional notions of perception and reality and raising questions about how individuals perceive and interpret the world around them.

The cases are increasingly frequent - see the Italian duo, Eva and Franco Mattes, active under the pseudonym 01001011010101.org and known for being one of the pioneers in the use of the

internet and computers in artistic production, creating works that debate implications ethics. If ethical considerations were initially limited to humanity, with the emergence of autonomous and intelligent machines, the fundamental challenge to traditional moral thinking began to be questioned regarding established assumptions. Promoting, accountability, and prioritization of social well-being have become fundamental in guiding the development and use of technology associated with the arts and media. Ethics in Artificial Intelligence (AI) encompasses epistemic and normative aspects ranging from the opacity of algorithms to the need for a deeper understanding of the epistemic processes underlying their systems.

Ayling and Chapman (2021) discuss normative concerns about the fairness of decision outcomes, the erosion of privacy, and the risks associated with increased surveillance and profiling. They also highlight the challenges in algorithmic systems related to accountability and moral responsibility, emphasizing the ambiguity in attributing the results obtained. In contemporary society, challenges span diverse fields and generate a growing inclination to use data-centric solutions to address these same challenges. Concerns about implementing technologies associated with the arts and media must go beyond data processing and problem-solving capabilities. It is crucial to consider aligning media, arts, and technology with human ethical principles.

The higher education system in Angola is addressed, analyzing the opportunities and challenges presented by artificial intelligence in this country. The article (Caldeira, 2024) analyses the benefits and consequences that technology integration can bring to higher education in Angola, addressing the progress, challenges, and opportunities associated with AI in education and exploring how new technologies are transforming and impacting advances in teaching and institutional development.

Also, pay attention to the article that comes to us from Brazil, “Crypto art: opportunities and challenges for the Brazilian digital art Scene”, which documents a study of crypto art situated at the intersection of art with blockchain technology and its effect on the panorama of Brazilian digital art. Analyzing the opportunities presented by technology, such as the monetization of digital art and the democratization of access to a global market, as well as some of the challenges faced by artists, the author, in addition to a brief bibliographical review of the area, conducted interviews with several artists Brazilians with experience in creating crypto art to identify common themes and insights of interest for this relevant and innovative study (Farinha, 2024).

Starting from the international spectrum to focus on the media rooms of the country’s islands, in Cape Verde, artificial intelligence is being investigated in the culture of newsrooms. The article explains how new technologies have moved productive routines away from practices rooted in the founding processes of the profession. Cape Verdean academic Silvino Évora explains how these changes in journalistic practices register a gradual adherence to this international movement of artificialization of the productive processes of journalism (Évora, 2024).

The “Ethnicity of Guinea-Bissau and key elements that contribute to its cultural character” rethinks ethnicities, linguistic diversity, cultures, symbols, and belonging to distinct cultural identities and points out the possibility that Guinean linguistic identity is on the verge of extinction. In this article, we see how the main objective of cultural promotion in this country

is to develop this endangered language and transform it again into the mother tongue of the Guinean people (Morto, 2024).

In Macao, local knowledge is studied about what the territory knows about philanthropy and the relationship between confucianism, philanthropy, the media, and strategic communication. The Impact of Corporate Philanthropy on the Media, Art, and Technology in the territory is also analyzed, demonstrating that philanthropists can contribute to social stability, improvement of social awareness, and the perception of corporate social philanthropy (Monereo, 2024).

“Nakhodha and the Mermaid on the Island of Mozambique. Immersive narratives as a communication model for human and sustainable development” is the title of the study that focuses on the work of Mozambican filmmaker Yara Costa, addressing issues of identity, memory, culture, and ecology, especially through documentary cinema. Taking as a starting point the function of documentary as a counter-narrative to dominant narratives, and the importance of communication from/to/about development in a bottom-up line, this article emphasizes cultures that are still invisible, especially those from the Global South, and studies to what extent the development project transmedia narratives Nakhodha and the Mermaid is configured as communication for/from/about human and sustainable development, making Mozambican epistemologies visible (Rodrigues, 2024).

In the research carried out by professors Rui Torres and Fernanda Bonacho, “Art and technology in Portugal: chronologies, archeologies, symbolologies”, presents us with Portuguese electronic literature understood from the perspective of the relationship between art and technology, adopting integrated perspectives. By identifying three generations of electronic literature proposed by Flores, from experiences before the World Wide Web to the use of social networks and mobile applications, the study discusses the challenges inherent to digital preservation, describing methods that allow maintaining the accessibility of these works in the face of obsolescence technological, suggesting a symbolic analysis centered on the metaphor of water as a transversal element that reflects the transformations and flows that the practices of electronic literature signal. The selected works illustrate the media, cultural, and technological diversity of e-literature, highlighting its value both as a pedagogical tool and as a means of promoting digital literacy (Torres and Bonacho, 2024).

In São Tomé and Príncipe, digital media can be premised on facilitating communication between multiple and diverse development agents. It is suggested that international actors play an essential role, sponsoring digital media producers recently born on the largest island, São Tomé. Credibility, internal and external, will promote sustainable growth and resilience, contributing to development, namely intercultural relations on an international scale. The research reveals how digital media can boost the economic growth of this African country and the essential role that international stakeholders can play in this boost (Simões, 2024).

The article “The media system as a leverage for democratic development in East Timor” addresses how the media constitute a fundamental instrument for strengthening civic participation and the transparency of political decisions. Knowing that the territory has a media ecosystem with limited resources and a small market, the study demonstrates how local media are undergoing

transformation, their potential to grow, and how positive impacts are expected on this country's media system (Faustino and Navais, 2024).

You will enjoy reading this book. The approach is stimulating, the themes addressed, and the way they are integrated is relevant and innovative.

José Manuel Simões, Editor



VIDEO

ANGOLA



VIDEO



ANGOLA'S HIGHER EDUCATION SYSTEM:

AN ANALYSIS OF THE OPPORTUNITIES AND CHALLENGES

PRESENTED BY ARTIFICIAL INTELLIGENCE

Wilson Gomes Caldeira (USJ)

Abstract: The article offers an examination of the benefits and consequences that integrating Artificial Intelligence (AI) technology may bring to Angola, particularly within its higher education sector. The analysis delves into the progress, challenges, and opportunities associated with AI in education emphasizing the importance of learning and teaching methods. It also explores how AI is reshaping education and the impact of advancements on student learning and institutional development. Additionally, it touches upon the significance of tutoring systems and artificial educational agents in enhancing the learning process. These AI tools have the potential to customize education, enhance student involvement, and provide tailored assistance.

Keywords: Angola Higher Education; Artificial Intelligence; Education

Wilson Gomes Caldeira

He is a Guest Lecturer and PhD in Global Studies (Communication) at the University of Saint Joseph (USJ) in Macao, China. He earned his MBA from USJ in 2016 and a BA in Photography from the Portuguese Instituto Politécnico de Tomar in 2010. His research focuses on the impact of Artificial Intelligence on communication processes. In addition to his academic work, Wilson has published several articles on AI and visual communication, exploring the intersection of technology and its transformative role in contemporary media.

[e: wilson.caldeira@usj.edu.mo](mailto:wilson.caldeira@usj.edu.mo)

INTRODUCTION

“When the civil war ended in 2002 after 27 years of conflict, the transition to development was swift. The strong economic growth has been based on the oil and diamond revenues; however, despite Angola’s financial capital the country struggles to build infrastructure to support human and commercial development. Also, a lack of human capital exists, largely the result of the conflict-affected education system that remains fragmented and often dysfunctional” (UNICEF, 2011).

The progress of the education system in Angola was hindered for an extended period because of the civil war, which concluded in April 2002. The first higher education institution established in Angola, a Portuguese colony then, was founded in 1962 and initially called the University of General Studies of Angola. After independence, the institution’s name became ‘University of Luanda’ and later, in 1976, it was renamed ‘University of Angola’. Subsequently, in 1985, it was officially recognized as Agostinho Neto’s University, in commemoration of the inaugural president of the Republic of Angola, who also served as the university’s first rector. During its early years, Agostinho Neto’s University encountered several operational challenges, including deficiencies in infrastructure and instructional materials. The inception of private higher education universities only occurred in 1999. In 2009, the establishment of seven academic areas was initiated, namely in Luanda, Benguela, Cabinda, Malange, Huambo, Huíla, and Uíge provinces. Each province was allocated one higher education institution, with the primary objective of facilitating a steady expansion in the number of students who may pursue higher education (Mendonça da Costa e Silva, 2023). Consequently, following the conflict’s cessation in 2002, a noticeable increase in enrollment of students pursuing tertiary education was observed.

Specifically, the number of students seeking higher education increased from 871 during the academic year of 1977/1978 to 12,566 that year. From 2002 to 2008, there was a variation in this number, ranging from around 12,566 to 70,000. Additionally, the yearly availability of open positions for these students varied between 850 to 8,300. This phenomenon resulted in the endorsement and establishment of several public and private institutions around the nation, as the government was unable to keep pace with the increasing demand (Mendonça da Costa e Silva, 2023).

AI has had an incredible ascension on contemporary society. Whether we realize it or not we frequently engage with AI technologies, from voice assistants to recommendation systems, AI has become an element of our world. Within this context, a post-humanist viewpoint suggests that the lines between human and non-human entities are blurring (Park & Kaye, 2018).

The field of education is currently transforming by incorporating AI tools (Bozkurt et al., 2021). AI has the potential to significantly impact education around the world, such as in Africa, where access to quality education is limited. By integrating AI into education meaningful improvements

can be made in countries like Angola. Research indicates that despite years of schooling many children in Africa still face challenges with literacy and numeracy skills. While AI isn't meant to replace teachers, it can enhance the learning journey for students (Li, 2017).

The potential of AI in revolutionizing facets of education such as learning methods, teaching practices, innovative pedagogies, evaluation processes and educational management cannot be overlooked (Adiguzel et al., 2023).

Advocates of using AI in education highlight its ability to improve effectiveness and the creation of opportunities for students to succeed. They believe that these systems can increase students' engagement and contribute to learning outcomes (Sapci & Sapci, 2020). On the other hand, critics express concerns about the risk of standardization and reduced human interaction. The deployment of AI systems in Africa is becoming more evident as they move from being ideas to practical applications. Notably, this advancement is largely driven by companies hailing from countries with high levels of industrial development (Eke et al., 2023).

1. Angola's Higher Education System

Angola has made significant progress in enhancing its education system, resulting in improvements in literacy rates and school enrollment numbers (Africano et al., 2019). Despite these advancements, many students still lack access to education due to cultural reasons rooted in Angola's history and challenges encountered in its educational infrastructure. The Angolan Education Law of 2021 stipulates that primary education must be free and compulsory for six years from the entrant's enrollment. However, despite this requirement, around two million children in Angola are still unable to receive education (GPE, 2022). Additionally, there is a growing demand for schooling that surpasses the offer, mainly concentrated in Luanda. This imbalance in education accessibility across regions of Angola has led to increased dropout rates. The educational programs provided by universities in Angola have often not matched the demands of the job market, worsening the problem (Moimaz et al., 2021). Over time, the Ministry of Education in Angola has focused more on expanding education, than ensuring teaching standards within these institutions. As a result, new institutions have emerged without proper validation of their curriculum to meet operational requirements. Many of these establishments lack sufficient resources and staff to effectively deliver their range of courses (Mendonça da Costa e Silva, 2023).

In the 46 years of existence, the educational system has encountered difficulties that have significantly impacted its functioning. These issues involve shortcomings in management and evaluation across several aspects of the system (Vidal, 2022). Consequently, there is a growing concern among educators, administrators and academics regarding the need to establish regulations and specialized methods to evaluate the quality of services provided by Higher Education Institutions (HEI) (Africano et al., 2019). One major hurdle faced by HEIs in Angola is the infrastructure and material resources. This has obstructed these institutions' operational efficiency. Restricted their capacity to deliver high quality education. There is a scarcity of resources complicating the challenges experienced by HEIs, and administrative problems in schools have also been identified as barriers to higher education advancement (Marchi Alves et al., 2013). The training programs often lack research elements for adequately preparing students for future employment. To enhance access to education in Angola efforts have been made to

of faculty members with qualifications. Most educators at universities possess no more than a bachelor's degree, with very few holding master's or doctoral degrees. This shortage is partly due to the availability of degree programs. Furthermore, substandard working conditions and a lack of incentives for teaching and research are factors that contribute to the disengagement of staff. Another issue arises from leadership, governance and management practices in HEIs resulting in institutional vulnerabilities and inefficient resources. Many academic leaders and administrators lack education in management and planning, which hampers institutional governance and financial transparency (Simões et al., 2016).

The matter of quality poses a challenge for African countries like Angola. To heighten the quality of education, there is a need to prioritize the development of professionalism among academics and foster learning capabilities among university administrators and students (Mendonça da Costa e Silva, 2023). Further adding to lecturers' skills and improving their working conditions in assessing the quality standards of education institutions. In Angola, striving for excellence in education has been a problem for both academic establishments and government entities. Many educational institutions have been set up with the goal of reaching students, but overlook the essential requirements needed to deliver high quality education. Moreover, graduates from universities in Angola are often criticized by their leaders when compared to their counterparts from other nations (Marchi Alves et al., 2013).

2. *Technology, AI, and Education*

The advancement of technology is widely acknowledged as the driver behind progress, innovation, inclusivity, and sustainability. It is vital to equip individuals with the skills and knowledge to navigate the opportunities and challenges brought about by globalization and the digital age ensuring that everyone can actively participate and reap the benefits of emerging job roles and skill demands (Xu et al., 2022). The educational system plays a role in nurturing competencies among young people. These competencies will not only offer advantages by safeguarding against technology misuse but also bring significant professional benefits.

Today proficiency in these technologies has become essential across all sectors (Tuomi, 2022). The incorporation of technology into education in Angola signifies an advancement in the country's landscape. This shift involves the adoption of tools that transform teaching methodologies, learning strategies and administrative procedures (Africano et al., 2019). While many organizations may prioritize the aspects of transformation, the education realm heavily relies on fostering a conducive culture having capable individuals and implementing effective processes (Liebowitz, 2020). It is imperative to have change catalysts and structured management practices integrated throughout the planning, execution, and deployment phases of transformation.

Insufficient changes of management and a lack of resources to expand transformation initiatives are key factors contributing to their failure as noted by Liebowitz (2020). Organizations engaged in transformation must understand that it goes beyond introducing new tools or infrastructure, it involves an approach that considers people, processes and technology, requiring planning and the commitment of all stakeholders. The successful execution of transformation also hinges on having appropriate technologies available and how they interact with broader organizational

aspects. While not a new concept, the understanding and impacts of transformation have evolved over time according to S. Kim et al. (2021) it is now regarded as a driver for growth and a fundamental to bridge the cyber realms.

Education is currently experiencing changes by harnessing intelligence and related technologies. This shift is creating opportunities for teaching and learning, enhancing experiences and bettering student outcomes. The integration of AI into education can customize learning experiences, offer feedback and bolster interactive learning environments. The rise of online learning stands out as an advancement embraced swiftly by colleges and universities. This trend is projected to persist in the future as academic institutions aim to offer “knowledge as a service” to their stakeholders. To stay competitive universities will increasingly turn to personalized learning analytics, augmented reality, gamification, and other cutting-edge technologies. This transition has unlocked opportunities for these institutions to provide knowledge in a flexible and accessible manner. Additionally, personalized adaptive learning systems can customize content and experiences according to student needs, thereby boosting their engagement and academic achievements (Liebowitz, 2020).

Since 2002, Angola has witnessed a surge in the adoption of Information and Communication Technology (ICT). This growth has been spurred by increased government investments in the telecommunications sector, resulting in operators and services emerging in the ICT domain. As we move further into the 21st century, daily use of ICT has become increasingly vital (Yurdakul & Coklart, 2014). The government’s investments in the ICT industry have played a role in enhancing infrastructure development, such as expanding broadband networks and establishing communication systems. These advancements are trying to boost connectivity in Angola and positioning the nation to actively engage in the global digital age. It’s important to acknowledge that, despite the growth of ICT in Angola, there are still pressing issues that require attention. These challenges involve ensuring access to ICT resources by promoting literacy among the population and addressing problems of affordability and connectivity in remote areas (Barbante, 2021). The rapid progress of technology including the emergence of AI has underscored the significance of ICT across the nation. The increased utilization of ICT in Angola has led to advantages such as information access, enhanced communications, possibilities for education, business endeavors and social interactions. With expanded internet accessibility, individuals now have the opportunity to connect with people and resources worldwide.

Today digital transformation is widely seen as the driver of innovation, broad expansion, and sustained economic growth. Education plays an important role by equipping students with the skills to navigate the challenges and opportunities brought about by globalization and the digital age. It also ensures that everyone can fully engage in benefit from and adapt to emerging job roles and skill demands. According to a study conducted by PricewaterhouseCoopers (PwC) the adoption of AI technologies is projected to contribute to a \$15.7 trillion (14%) boost in the economy by 2030 (PricewaterhouseCoopers, 2017). The report underscores that AI development is still at an early stage with Europe, North America, and China leading in advancements compared to other regions.

The advancement of AI in Africa is still in its initial stages, facing challenges that hinder its

potential to drive change. New technological developments have led to different views, some are optimistic about the future, while others are skeptical. This debate is particularly prominent in education, where the impact on humanity's future is a topic of discussion. There are contrasting beliefs among experts and skeptics regarding how AI will shape students' futures. Whether empowering them to make significant changes or aligning them with cold, automated systems. AI holds promise in revolutionizing education at all levels, from primary to higher education with many seeing it as a key factor in creating inclusive societies and strong economies.

Understanding the impact of AI requires a grasp of what it is, and how it differs from other technologies. Since the mid-20th century, theoretical frameworks related to AI have been influenced by different fields, such as chemistry, biology, linguistics, and mathematics. However, there is debate over definitions and interpretations. Many current methods focus on aspects while overlooking broader political psychological and philosophical dimensions of AI.

Despite the benefits it offers, there is a recognition of the importance of integrating values and needs into the design and deployment process of these systems. There are organizational challenges that make it difficult for AI to be widely accepted and integrated in various parts of the world. These barriers include issues with infrastructure, data availability, government policies, and funding. It's important to realize that AI systems go beyond software. AI algorithms customized interventions can be provided to students enhancing their learning results and involvement. It's crucial to note that AI's impact on education extends beyond it and has the ability to expand science interventions in learning (Schiff, 2020), with technologies like intelligent tutoring systems and adaptive learning platforms tailored to meet individual student needs and offer personalized guidance (Bozkurt et al., 2021).

The realm of AI has seen growth and progress in recent times, being used in various ways to enrich the educational experience. One key application of AI is its role in predicting student performance and detecting students at risk. Through data analysis and pattern recognition AI algorithms can pinpoint students requiring assistance or support, and this timely identification enables educators to deliver interventions for student outcomes. AI programs have the ability to analyze aspects, like student demographics, past performance and engagement levels in order to pinpoint the main elements that lead to student success. This data can then be used to create personalized interventions and strategies aimed at supporting student learning. AI technology is also employed in assessing performance and providing descriptions of students (Chan & Zary, 2019). Through the examination of student data and performance indicators, AI programs can offer feedback and insights into students' strengths and areas needing improvement. Educators can leverage this information to customize instruction methods and deliver feedback to students by incorporating AI tools into school curricula offering students with the skills and knowledge required for success in a world driven by intelligence (Chiu & Chai, 2020). Nevertheless, it is imperative for educational programs to concentrate on comprehending both the capabilities and limitations of AI, while ensuring the cultivation of skills (Dignum, 2021).

Luckin and colleagues (2016) suggest that changes in employment opportunities are expected as robots and advanced algorithms become more prevalent in the economy. However, the impact on education has not been thoroughly examined. Previous studies have focused more on job types

than skills, prioritizing identifying jobs at risk of automation over those that may emerge. To address this challenge, we have to leverage AI with educational reform. AI is integrated with fields such as psychology, neuroscience, linguistics, sociology, and anthropology to create learning environments and tools in AI education that are adaptable, inclusive, personalized, engaging, and effective. The essence of AI is to make educational, psychological, and social knowledge precise and explicit through computation. This enables Artificial Intelligence to unravel the complexities of learning processes by delving into factors like socio backgrounds, physical surroundings, and technology (Lavoué et al., 2019).

In AI educational tools there are several models. We will briefly present some; the model that pertains to effective teaching methods; the domain model, which focuses on the subject matter being taught; and the learner model, which centers around individual learners. For instance, an AI educational system designed to offer tailored feedback to a student must draw insights from these models to determine the interactions. The learner models capture how students engage with computers by considering their activities, accomplishments, emotional states, and responses to feedback. With AI the information is utilized by components to assess the learner's progress and decide on the step. The system continuously updates the learner model based on their activities, making it more comprehensive and enhancing its intelligence. By processing the knowledge stored in these models, AI algorithms provide content to learners according to their abilities and requirements. Analyzing the students' interactions continually guides feedback delivery. Some AI systems also incorporate Open Learner Models that showcase analysis outcomes, to both learners and educators offering insights into accomplishments, emotional states, and misunderstandings. Adaptive AI education systems collect amounts of data that can be leveraged to refine teaching approaches and specific models. This ongoing cycle leads to customized support that deepens our comprehension of educational practices. Researchers of AI have also created models that take into account the emotional and cognitive aspects of learning. This enables AI systems to consider a range of factors that impact the learning process. Various AI applications have already been integrated into institutions using educational data mining techniques to observe student behaviors and support those who may be at risk. Furthermore, experts are currently exploring user interfaces of natural language processing and gesture recognition to improve both AI-driven tools and traditional software.

Over the years there has been a growing development aiming to tailor experiences to suit each learner's unique needs and preferences (Kim & Kim, 2020). This approach acknowledges the diversity among learners in terms of learning styles, interests, and abilities. It highlights the importance of adjusting the learning process to fit the learners' requirements than expecting them to adapt to a standardized system (L. Chen et al., 2020). Intelligent Tutoring Systems (ITS) have emerged as a solution offering adaptable learning experiences across different subjects (Kulik & Fletcher, 2016). These systems leverage AI methods to provide learning activities that address each student's needs. Through feedback ITS can assist learners in developing self-regulation skills and guiding their learning journey. The use of adaptive tutors takes a different approach by integrating learner, pedagogy, and domain models to support personalized learning experiences. These tutors present a learner model that enables instruction and assistance. Adaptive tutors based on these models can use AI tools to enrich the learning process. These tools are designed to understand the emotional states of learners, involve students in learning experiences through

conversations, encourage contemplation and self-awareness boosting motivation and engagement (Kulik & Fletcher, 2016). This tailored approach can improve outcomes, writing, reading and fundamental mathematics. According to Luckin et al. (2016), studies have demonstrated the potential of AI teaching methods to enhance the effectiveness of education and learning quality.

Additionally, AI has the ability to contribute to developing user profiles for lifelong learning (Kay & Kummerfeld, 2019).

Collaborative learning has been shown to be effective in promoting higher learning outcomes compared to learning alone. It encourages participants to articulate their thoughts, reflect on different perspectives, engage in constructive dialogue, and build shared knowledge. However, collaboration between learners does not always happen naturally, especially in online settings where participants rarely meet in person. Several different methods that facilitate collaborative learning are provided by Artificial Intelligence in Education (AIED).

The first method is adaptive group creation, and it uses machine learning and other forms of AI to create teams that are optimally suited to do a certain kind of collaborative work. The second is expert facilitation, and it involves artificial systems providing interactive help based on models of effective collaboration. These models, known as collaboration patterns, can be provided by system authors, or mined from previous collaboration. Intelligent moderation is the third AIED approach that uses machine learning and text processing to analyze and summarize discussions in large-scale collaborative settings. This enables human tutors to guide students towards fruitful collaboration by identifying noteworthy events, or misconceptions that require intervention or support. These AI techniques can enhance the effectiveness of collaborative learning by addressing challenges such as group formation, interaction support, and data analysis in large-scale collaborations (Erez et al., 2013).

The use of virtual reality (VR), in settings is based on a similar concept that has been present in video games since 1979. This approach involves using a system to control the actions of non-player characters (NPCs). VR offers experiences that replicate real-world elements that may otherwise be inaccessible (Luckin et al., 2016). Studies have demonstrated that allowing the students to explore and engage with different environments can improve their learning and help them apply their knowledge in real-life situations. When AI is incorporated into VR it becomes “smart” and can enrich the environment by enabling it to interact with and respond to the user’s actions more naturally. AI can also be embedded in VR to offer support and guidance to learners, ensuring they obtain the intended learning goals without confusion or feeling overwhelmed. Virtual teaching agents can also be integrated into VR settings, serving as instructors or educational aids while offering viewpoints, posing questions, and providing feedback based on a framework (O’Connor, 2019). According to O’Connor (2019), studies have highlighted the advantages of using VR technology by engaging students to improve learning outcomes. Moreover, it has been found to boost the confidence levels of underperforming students enabling them to transform their self-perception. Within VR simulations artificial characters, students can take roles in scenarios that may be too risky or unpleasant for real-life learners. Furthermore, intelligent VR platforms are beneficial for team training sessions, where virtual characters engage in reasoning processes, perform actions, and discuss strategies to assist trainees in making informed decisions (O’Connor, 2019).

The use of Augmented Reality (AR), in the field of education has received attention with studies conducted across educational levels such as early childhood education, primary and secondary schooling, and even up to university levels. Tzima et al. (2019) argue that studies in this area has delved into a range of areas within both formal and informal learning environments, while taking into account theoretical frameworks, like situated learning theory, and constructivist learning theory (Tzima et al., 2019). A key benefit of incorporating AR into education is its ability to boost student motivation. According to Tzima et al. (2019), AR can enhance student motivation and interest, leading to improvements in learning drive and student creativity. Additionally, AR provides opportunities for learning experiences, allowing users to gain knowledge through experiential learning, within real-world contexts (Tzima et al., 2019).

The introduction of AI-powered tools is predicted to transform the role of teachers. These tools can take over routine tasks, such as marking and record-keeping, freeing up teachers' time to focus on more creative and human-centered aspects of teaching (Lameras & Arnab, 2022). Teachers will need to develop new skills as the transformation brought about by AIED takes place. They will require a sophisticated understanding of what AIED systems can do to evaluate and make informed judgments about AIED applications (Luckin et al., 2016). This transformation requires teachers to develop their technological literacy, acquire innovative design skills, and gain a deeper understanding of what AIED systems can offer. By embracing AIED, teachers can improve their ability to innovate, experiment, and employ different teaching methods, taking learning to the next level (Lameras & Arnab, 2022). Teachers play a crucial role in the later phase of AIED. They are the ones who will determine when and how to use AIED tools, and the insights provided by these devices will empower them to make informed decisions (Touretzky et al., 2019). Additionally, teachers will need to develop research skills to interpret the data provided by AIED technologies and ask relevant questions to guide students through data analysis (Luckin et al., 2016). It is important for teachers, along with students, and parents, to be involved in the design of AIED tools and their implementation. This participatory design approach ensures that the tools take into account the complexities of real classrooms and provide the necessary support for educators (Touretzky et al., 2019).

The impact of AI on teaching effectiveness has been studied, and it has been found that teachers' perception of educational technology is crucial for using Artificial Intelligence to positively assist and improve teaching effectiveness by providing personalized support for large-scale settings (Seo et al., 2021). Furthermore, the perception of AI among teachers can also impact their attitudes towards AI-driven educational interventions. For example, a study conducted in London found that postgraduate trainee doctors perceived an overall positive impact of AI technologies on their training and education. This positive perception can be attributed to the recognition of AI's ability to support clinical decision-making, reduce workload, and ameliorate the curriculum (Banerjee et al., 2021). The evolution of the teacher's role will also lead to changes in the classroom, AIED devices can enable the positive impact of one-to-one tutoring, as well as facilitate effective collaborative learning. These tools provide additional support to keep collaborative learning on track which can be challenging without some form of assistance (Luckin et al., 2016). However, it is important to address concerns about responsibility, agency, and surveillance issues when designing AI systems for education (Seo et al., 2021). It is vital to comprehend that the incorporation of AI into education requires a meticulous examination of

ethical considerations, privacy issues, safeguarding of student data, and the promotion of algorithmic transparency (Kay & Kummerfeld, 2019).

3. The Urgent Challenges Faced by Angola's Education System

The use of AI is increasingly widespread across societies and regions worldwide. However, a lack of understanding of diversity could have implications for fully harnessing the potential benefits offered by AI. In this environment, it is essential to establish incentives and regulations that encourage recognition and embrace of diverse viewpoints, ensuring that AI applications can effectively adapt to different cultural contexts and provide access for everyone. Recognizing diversity is crucial because different cultures may hold values, norms, and ethical considerations that must be taken into account when designing and implementing. Cultural biases and preconceptions embedded within AI algorithms can result in undesired outcomes. Hence, integrating perspectives and cultural insights into the development and deployment of these systems is vital to prevent bias propagation and guarantee everyone access.

The digital transformation is gradually taking root in Africa bringing forth both opportunities and daunting challenges. However, the integration and spread of networking technologies are obstructed by existing infrastructure, economic conditions, cultural influences, and political environments (Enakrire & Onyenania, 2007). Individuals in developing nations encounter hurdles in accessing information because of their location, financial status, and social isolation. This struggle is particularly notable in Africa where despite the increase in information, accessibility remains limited. The continuous surge of information and widespread use of technology in developed countries further compound the information gap experienced by developing nations. A key reason for this limited access to information is the barrier posed by language differences. Many people in developing regions barely speak the language of their country of residence, which hinders their ability to obtain information. Enakrire & Onyenania, (2007) argued that language barriers can disrupt access affecting students, teachers, well as educational systems. Similarly, marginalized communities encounter difficulties in obtaining information related to literacy due to language obstacles. The challenges Africa faces are mainly related to management, politics, culture, and available resources (S. Chen & Ravallion, 2010).

In Angola's education system, there are various problems of disparities in achievement, teacher training, retention, and student shortages. These obstacles negatively impact the country's well-being and overall welfare (Marchi Alves et al., 2013). The combination of education neuroscience and AIED developers shows promise in creating technology interventions that can identify and address learning challenges hindering a student's advancement. AIED tutors can offer customized support to students both in classroom settings and at home. The importance of this issue becomes more pronounced when we consider students from low-income families, who often begin their journey at a disadvantage compared to those with higher incomes. Additionally, AI systems can offer learning and helpful feedback to teachers, assisting them in improving their teaching methods and enhancing student performance (Schiff, 2020). These systems also provide training and support to educators based on their needs and are available at their convenience. They offer tailored tutoring services for teachers or groups and facilitate connections with experts for guidance. AI education helps educators efficiently choose and distribute materials

by offering personalized recommendations that consider teacher's preferences and students' unique requirements (Chiu & Chai, 2020). Educators can access AI assistants giving students the flexibility to use these tools regardless of their location.

However, the use of Artificial Intelligence in Angola faces significant obstacles due to the lack of reliable data and insufficient infrastructure. One of the challenges lies in the scarcity of training data needed to create precise and efficient models. AI algorithms depend on high-quality data to recognize patterns and offer predictions or suggestions. Without access to varied educational data, AI systems may struggle to deliver effective learning experiences for students. These systems rely on support like fast internet connectivity, computing capabilities, and storage space to handle and analyze large volumes of data in real time. Without infrastructure, deploying and sustaining AI education systems could prove itself very challenging. To address these obstacles, it is crucial to devise strategies for gathering and managing data in regions with resources. This might entail partnerships with institutions or organizations, for sharing data and assets. In addition, we should strive to enhance the setup in these areas by extending internet access and offering resources (Barbante, 2021).

In Africa, a significant problem is the lack of coordination and interchange of information among networking projects. This problem disrupts the distribution of resources leading to duplicated efforts (Chitungo et al., 2021). This deficiency limits internet availability and quality constraining communication and information. Secondly, language differences complicate networking endeavors (Diamani & Snyman 2017). Africa boasts diversity with languages spoken across different regions, posing difficulties in disseminating information effectively. Lastly, varying network technologies and protocols further complicate connectivity implementation (Wischhof et al., 2005). Different countries and regions may adopt technologies and protocols hindering connectivity across the continent. Addressing these challenges and enhancing connectivity is essential. Primarily, strengthening communication infrastructures is vital (Chitungo et al., 2021). This includes investing in telecommunication development by expanding network coverage and improving internet access. Bridging the infrastructure gap can significantly boost the availability and quality of connectivity.

4. The Ethics of AI

The road to responsible AI ethics in Africa should be paved by regulations driven by knowledgeable and dynamic systems, rather than only by good intentions. Africa needs adaptive AI ethics systems to keep up with the fast-moving technologies and ensure progress. These systems are critical enablers of progress and can help Africa to be included in global conversations about AI ethics. There is an ongoing debate about what constitutes "ethical AI" and what are its ethical requirements, technical standards, and best practices needed for its realization. Various organizations, including private companies, research institutions, and public sector organizations, have issued principles and guidelines for ethical AI. However, there is a need for clarity and consensus on these matters (Ruttkamp-Bloem, 2023). The ethical ramifications of AI have been thoroughly examined by a multitude of researchers. Ethical consequences of the increasing ubiquity and advancement of AI in numerous domains need thoughtful consideration.

When formulating algorithms to supplant human reasoning in social functions, it is essential to meticulously contemplate certain criteria such as accountability, transparency, auditability, incorruptibility, and predictability (Tomasev et al., 2020).

While sharing anonymized data is essential for integrating AIED systems and advancing the field, it raises concerns about individual privacy and proprietary intellectual property. The increasing volume and diversity of data generated by AIED systems further exacerbates ethical concerns regarding the use and implications of this data. Ownership, usage rights, and accountability for education data need to be clearly defined. AIED systems also aim to effect behavioral change in users, which raises ethical considerations about the potential manipulation of individuals (Luckin et al., 2016). Additionally, there are concerns about the perpetual recording of learner failures by learning colleagues, which could potentially hinder future progress. The use of AIED teaching assistants as classroom spies to monitor and report on teacher performance is also a worry (Zawacki-Richter et al., 2019). These challenges are not unique to AIED and are also present in other areas where AI is being adopted. Addressing these challenges requires clear definitions of ownership and accountability for education data, responsible AI practices, and consideration of social and ethical norms.

CONCLUSION

Lately, education has seen some shifts that are redefining our traditional views on knowledge and learning. One key change is the move towards a digital era, where knowledge is not limited to just schools. This new perspective highlights the connections between society and technology, leading to a variety of knowledge sources of traditional educational organizations. Thanks to media, online platforms, and tech companies offering courses, we now have access to a wealth of information. This shift has made education more open and inclusive, breaking away from the confines of institutions. Additionally, the integration of technology in education has become increasingly prevalent. New educational technologies like tools, social learning platforms, and cloud-based resources, have revolutionized how education is imparted. These innovations have introduced ways of learning and enhanced both student and teacher engagement. Technology-driven learning holds promise for empowering students by boosting their involvement in the learning process and enabling teachers to deliver instruction. Many reasons support the integration of tools in education institutions as a key strategy to improve competitiveness and appeal to future generations.

Angola's higher education system has faced challenges due to the aftermath of the war and efforts to rebuild resources. Despite this, progress has been made, leading to an increase in students pursuing education. The advancement of AI technologies in Africa holds promise for social and cultural changes. Incorporating AI applications into Angola's higher education system will align with trends where this technology is being used not only in education, but also in areas like politics, healthcare and agriculture. However, issues must be addressed concerning theoretical limitations related to the use of AI. It is crucial to address these challenges, and ensure that the adoption of AI improves effectiveness, while providing opportunities for academic success. In conclusion, leveraging AI in Angola's education system shows potential for improving academic standards and overcoming existing obstacles faced by the nation. With the help of AI

technology, Angola stands on the path to enhance the learning experience for students to boost their achievements and tackle educational inequality. By planning and effectively implementing AI solutions, there is an opportunity for AI to significantly improve Angola's higher education system. Moreover, it is essential to align ethics and cultural values with Angolan society, to ensure the success of the transformation, and the nation's well-being. This needs engagement and collaboration between the government and private sector to narrow the educational quality gap between Angola and developed nations. Additionally, it is vital for countries including Angola to participate in shaping AI advancements for Africa future. For this, prioritizing investments in infrastructure and connectivity should be a focus of Angola's strategies to facilitate flawless integration of AI.

BIBLIOGRAPHY

- Adiguzel, T., Kaya, M., & Cansu, F. (2023). Revolutionizing education with AI: Exploring the transformative potential of ChatGPT. *Contemporary Educational Technology*.
- Africano, N., Rodrigues, A., & Santos, G. (2019). The Main Benefits of the Implementation of the Quality Management System in Higher Education Institutions in Angola. *Quality Innovation Prosperity*.
- Banerjee, M., Chiew, D., & Patel, K. (2021). The impact of artificial intelligence on clinical education: Perceptions of postgraduate trainee doctors in London (UK) and recommendations for trainers. *BMC Medical Education*.
- Bankole, F., Osei-Bryson, K., & Brown, I. (2013). The Impacts of Telecommunications Infrastructure and Institutional Quality on Trade Efficiency in Africa. *Information Technology for Development*.
- Barbante, C. (2021). Digital Inclusions in Education in Angola: Advances and Retreats. *Brazilian Journal of African Studies*.
- Bozkurt, A., Karadeniz, A., & Baneres, D. (2021). Artificial Intelligence and Reflections from Educational Landscape: A Review of AI Studies in Half a Century. *MDPI*.
- Challenor, J., & Ma, M. (2019). A Review of Augmented Reality Applications for History Education and Heritage Visualisation. *Multimodal Technologies and Interaction*.
- Chan, K. S., & Zary, N. (2019). Applications and challenges of implementing artificial intelligence in medical education: Integrative review. *JMIR Medical Education*.
- Chen, L., Chen, P., & Lin, Z. (2020). Artificial Intelligence in Education: A Review. *IEEE*.
- Chen, S., & Ravallion, M. (2010). The Developing World Is Poorer Than We Thought, But No Less Successful In The Fight Against Poverty. *The Quarterly Journal of Economics*.
- Chitungo, I., Mhango, M., Mbunge, E., & Dzodo, M. (2021). Utility of telemedicine in sub-Saharan Africa during the COVID-19 pandemic. *Hum Behav Emerg Technol*.
- Chiu, T., & Chai, C.-S. (2020). Sustainable Curriculum Planning for Artificial Intelligence Education: A Self-determination Theory Perspective. *MDPI*.
- Diamani, N., & Snyman, M. (2017). Institutional repositories in Africa: Obstacles and challenges. *Library Review*.
- Dignum, V. (2021). The role and challenges of education for responsible AI. *London Review of Education*.
- Dwivedi, Y. K., Hughes, L., Ismagilova, E., & Gert, A. (2019). Artificial Intelligence (AI) Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management*.
- Eke, D., Wakunuma, K., & Akintoye, S. (2023). Introducing Responsible AI in Africa. In *Responsible AI in Africa Challenges and Opportunities*. palgrave macmillan.
- Enakrire, R., & Onyenania, G. (2007). Causes Inhibiting the Growth or Development of Information Transfer in Africa: A Contextual Treatment. *Library Hi Tech News*.
- Erez, M., Lisak, A., Harush, R., Glikson, E., Nouri, R., & Shokef, E. (2013). Going Global: Developing Management Students' Cultural Intelligence and Global Identity in Culturally Diverse Virtual Teams. *Academy of Management Learning & Education*.
- Feenberg, & Hamilton, E. (2012). Alternative rationalisations and ambivalent futures: A critical history of online education. In *(Re)inventing the internet: Critical case studies*. Sense Publishers, Boston.
- Gaspar, A., & Soares, J. (2021). Factors influencing the choice of higher education institutions in Angola. *International Journal of Educational Administration and Policy Studies*.
- GPE. (2022). Transforming education in Angola. <https://www.globalpartnership.org/where-we-work/angola>
- Horizon. (2023). 2023 EDUCAUSE Horizon Report® Teaching and Learning Edition. EDUCAUSE.
- Jobin, A., Ienca, M., & Vayena, E. (2019). The global landscape of AI ethics guidelines. *Nature Machine Intelligence*.
- Kay, J., & Kummerfeld, B. (2019). From data to personal user models for life-long, life-wide learners. *British Educational Research Association*.
- Kiembe, S., & Kora, A. (2021). Towards an ethics of AI in Africa: Rule of education. *AI En Ethics - Springer*.

- Kim, S., Choi, B., & Lew, Y. (2021). Where Is the Age of Digitalization Heading? The Meaning, Characteristics and Implications of Contemporary Digital Transformation. MDPI.
- Kim, W., & Kim, J. (2020). Individualized ai tutor based on developmental learning networks.
- Kulik, J., & Fletcher. (2016). Effectiveness of Intelligent Tutoring Systems: A Meta-Analytic Review. Review of Educational Research.
- Lameras, P., & Arnab, S. (2022). Power to the Teachers: An Exploratory Review on Artificial Intelligence in Education. MDPI.
- Lavoué, E., Monterrat, B., Desmarais, M., & George, S. (2019). Adaptive Gamification for Learning Environments. IEEE Computer Society.
- Li, X. (2017). The Construction of Intelligent English Teaching Model Based on Artificial Intelligence. Int. J. Emerg. Technol. Learn.
- Liebowitz, J. (2020). Digital Transformation for the University of the Future: A Perspective. Computer.
- Luan, H., Geczy, P., Lai, H., & Gobert, J. (2020). Challenges and Future Directions of Big Data and Artificial Intelligence in Education. Frontiers in Psychology.
- Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. B. (2016). Intelligence Unleashed: An argument for AI in Education. London: Pearson.
- Marchi-Alves, L., Ventura, C., & Trevizan, M. (2013). Challenges for nursing education in Angola: The perception of nurse leaders affiliated with professional education institutions. Human Resources for Health.
- Mendonça da Costa e Silva, A. (2023). Perspective Chapter: Higher Education Problems in Angola. In Higher Education—Reflections From the Field (Vol. 2). IntechOpen.
- Moimaz, S., Songa, M., Saliba, N., & Saliba, T. (2021). Dental education and proportion of inhabitants by Dentist in Angola. Research, Society and Development.
- O'Connor, S. (2019). Virtual reality and avatars in health care. Clining Nursing Research.
- Park, C., & Kaye, B. (2018). Smartphone and self-extension: Functionally, anthropomorphically, and ontologically extending self via the smartphone. Mobile Media & Communication.
- Popenici, S., & Kerr, S. (2017). Exploring the impact of artificial intelligence on teaching and learning in higher education. Springer.
- PricewaterhouseCoopers. (2017). Sizing the prize What's the real value of AI for your business and how can you capitalise?
- Ruttkamp-Bloem, E. (2023). Epistemic Just and Dynamic AI Ethics in Africa. In Responsible AI in Africa Challenges and Opportunities. palgrave macmillan.
- Sapci, A., & Sapci, H. (2020). Artificial Intelligence Education and Tools for Medical and Health Informatics Students: Systematic Review. JMIR MEDICAL EDUCATION.
- Schiff, D. (2020). Out of the laboratory and into the classroom: The future of artificial intelligence in education. Springer-Verlag London.
- Seo, K., Tang, J., & Roll, I. (2021). The impact of artificial intelligence on learner–instructor interaction in online learning. International Journal of Educational Technology in Higher Education.
- Simões, C., Sambo, M., Ferreira, A., & Fresta, M. (2016). Higher education in Angola: Challenges and opportunities at the institutional level. Revista FORGES - Fórum Da Gestão Do Ensino Superior Nos Países e Regiões de Língua Portuguesa.
- Tomasev, N., Cornebise, J., & Hutter, F. (2020). AI for social good: Unlocking the opportunity for positive impact. Nature Communications.
- Touretzky, D., Gardner-McCune, C., & Martin, F. (2019). Envisioning AI for K-12: What Should Every Child Know about AI? AAAI.
- Tuomi, I. (2022). Artificial Intelligence, 21 st Century Competences, and Socio-Emotional Learning in Education: More than High-Risk? Euro J of Education.
- Tzima, S., Styliaras, G., & Bassounas, A. (2019). Augmented Reality Applications in Education: Teachers Point of View. MDPI Education Sciences.

- UNICEF. (2011). Progress Evaluation of UNICEF's Education in Emergencies and Post-Crisis Transition Programme: Angola Case Study. United Nations Children's Fund,.
- Vidal, A. (2022). Avaliação do Desempenho no Ensino Superior Percepções e Expectativas dos Docentes. Revista FORGES - Fórum Da Gestão Do Ensino Superior Nos Países e Regiões de Língua Portuguesa.
- Wischhof, L., Ebner, A., & Rohling, H. (2005). Information dissemination in self-organizing intervehicle networks,. Transactions on Intelligent Transportation Systems.
- Xu, A., Qian, F., Pai, C.-H., & Zhou, P. (2022). The Impact of COVID-19 Epidemic on the Development of the Digital Economy of China—Based on the Data of 31 Provinces in China. *Frontiers in Public Health*.
- Yurdakul, I. K., & Coklart, A. N. (2014). Modeling preservice teachers' TPACK competencies based on ICT usage. *Journal of Computer Assisted Learning*.
- Zawacki-Richter, O., Marin, V., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education -where are the educators? *International Journal of Educational Technology in Higher Education*.

BRAZIL



VIDEO



CRYPTO ART:

OPPORTUNITIES AND CHALLENGES FOR THE BRAZILIAN DIGITAL ART SCENE

Daniel Filipe Farinha (USJ)

Abstract: This article documents a study of crypto art, which lies at the intersection of art with blockchain technology, and its effect on the Brazilian digital art scene. It looks at the opportunities presented by technology, such as the monetisation of digital art, democratisation of access to a global marketplace, as well as some of the challenges found by artists. In addition to a brief literature review of the field, interviews were conducted with several Brazilian artists, who have experience in creating crypto art, in order to identify common themes and insights of interest to the study. It concludes with a critical discussion of the potential of this technology for digital art, in Brazil and beyond.

Keywords: Non-Fungible Tokens, Digital Art, Brazil, Blockchain, Crypto Art

Daniel Filipe Farinha

He is a software developer with over 10 years of professional development experience in a range of industries including digital marketing, biotechnology, telecommunications, and education. He has worked for the University of Saint Joseph (USJ) since 2009, where he occupied several roles including Head of the Information Systems Office, and is now a Senior Lecturer at the Department of Media, Art & Technology of the Faculty of Arts and Humanities. He holds a BSc (Hons) in Computing Studies from the London South Bank University, a Post-Graduate Diploma in Artificial Intelligence from the University of Edinburgh, a Master's in Information Technology at USJ, and is currently working towards a PhD in Information Systems also at USJ.

ORCID: 0000-0002-2260-6340

e: daniel.farinha@usj.edu.mo

INTRODUCTION

Digital art has its roots in the 1960s, with the first experiments in computer art by pioneers such as John Whitney Sr, followed by Vera Molnar and Harold Cohen in the 1970s (Sito, 2013; Dodds, 2019). In Brazil, Waldemar Cordeiro was also an innovator in this field, with some of his early experiments with computer and robotic art dating back to the late 1960s (Arantes, 2017), however, at this time access to computing resources was still limited to a select few.

The rise of the Personal Computer (PC) in the 1980s, with products like the Apple Macintosh, the Commodore Amiga, and IBM compatible PCs, as well as software tools like Adobe Illustrator, Photoshop, and Corel Draw, popularised the creation of digital art amongst a wider audience of artists (Dicharry, 2005), giving birth to digital art as a concept. This was also the decade when prominent Brazilian artists such as Eduardo Kac and Guto Lacaz began exploring digital art (Santos, 2024).

The development of the Web in the 1990s led to a further increase in the adoption and dissemination of digital art, with artists exploring this new networked medium by creating what became known as net art (Gere, 2013). This growth continued through the 2000s, and social platforms like Facebook, Instagram, DeviantArt, and Behance, amongst many others, provided digital artists with a very accessible way to publish their work to a global audience.

However, even if such platforms allowed artists to publish their portfolios online and gain exposure to a wide audience, they still lacked a way to directly monetise that art. Although a small minority of artists were able to sell prints of their digital artworks, it constituted an exception to the rule. The nature of digital art is that the file that contains its digital representation is trivial to copy. Anyone can “right-click” an image on their browser and download it to their computer for free, without any loss of quality. This meant that a digital artwork, regardless of its inherent aesthetical and cultural values, remained unappealing to an art collector for whom the economic value of the artwork also mattered.

The invention of blockchain technology brought with it a novel concept, digital scarcity. Based on a mix of cryptographic proofs and consensus protocols, a blockchain allows for the creation of digital assets, which can be securely transferred from one person to another, and at the same time make it impossible for the same asset to be copied or counterfeited. Even though blockchain technology was originally designed to support financial applications such as cryptocurrencies, artists were quick to see the benefits of such a technology applied to art, and thus crypto art was born (Radziwill, 2018). A core component of this ecosystem is the Non-Fungible-Token (NFT), which is typically a digital record of the artwork, as well as proof of its ownership (Wang et al., 2021).

1. *Research Questions*

This study explores the impact that this technology had on the art community, specifically in the context of Brazil, a country with a rich artistic culture. The study was guided by the following broad research questions:

1. How have digital artists reacted to and experienced the rise of crypto art?
2. What opportunities do artists recognize in using this technology?
3. What are the main challenges posed by crypto art?
4. How do artists see the future development of crypto art?

In addition to these main questions, the study also enquired about the impact of, Hic et Nunc (HEN), an NFT platform that originated in Brazil and which operated during 2021.

2. *Methodology*

The study used a qualitative research methodology designed to understand the nuances and detailed impact of this technology on the Brazilian art scene.

An initial literature review was undertaken, aimed at collecting and reviewing the theoretical background required to understand this topic. A total of 64 Brazilian digital artists who were known to create crypto art and who had experience with HEN were contacted via Twitter (now renamed as X) and e-mail. From these, 13 artists replied and agreed to take part in the study. However, due to time constraints, only 8 were able to take part in the interviews. The interviews were conducted in a written medium, by email. The responses were then subjected to a thematic analysis and are presented in this chapter.

This report is structured in two main sections. The first offers a brief theoretical background into blockchains, NFTs, and crypto art. The second section focuses on the interviews with the artists and is structured to highlight the main themes extracted from the study, whilst selecting some of the best quotes that illustrate those themes.

3. *Blockchain and Art: a brief introduction*

Blockchain technology, at its core, is a type of global, decentralised, and public database used to record transactions across many independently run computers so that any record added to it is permanently accessible to the public and cannot be altered or tampered with retroactively by anyone. This public and immutable storage of data is economically sustainable due to the economic granted by the digital tokens which are natively created in the blockchain, known as cryptocurrencies. This technology was first conceptualized and applied by an individual or group known as Satoshi Nakamoto in 2008, and it underpins the operation of the cryptocurrency Bitcoin (Nakamoto, 2008).

One of the core philosophies of blockchain technology is decentralisation. Unlike traditional financial ledgers and databases which are controlled by a central entity, for example, a bank

or even a government, a blockchain's data is replicated across a network of independently run computers, known as nodes. Anyone with a computer that has a moderate amount of disk space, CPU, and RAM, can download the blockchain's software and run a node, even from home. Each node stores a full copy of the entire blockchain and validates every new transaction added to the ledger, ensuring that all rules defined in the protocol are being followed. By adding cryptographic proofs to each transaction, to blocks of transactions, and to the links between these blocks, the blockchain effectively creates a chain of truth that no individual entity can tamper with. Due to the public nature of all transactions, a public blockchain also provides transparency and full provenance over the assets that it tracks.

Most blockchains issue a native asset, or cryptocurrency, which it uses to provide an economic incentive for node operators to secure the network. Each native token is normally named after the blockchain that it is produced by: Bitcoin and BTC, Ethereum and ETH, Solana and SOL, and others. There are many such projects, known as Layer 1 (L1) blockchains, but at the time of writing most blockchain tracking websites list approximately 150 active L1s. Many of these L1 blockchains do have a limitation in terms of scalability, due to the limited amount of transaction throughput allowed. This limitation is often by design, to keep the cost of running nodes relatively low to maintain the decentralised nature of the projects. For this reason, many other projects created additional chains, also called side chains or level 2 (L2) chains, which expand the capacity of the L1s by processing transactions in parallel and settling their overall state on an L1. Just like their L1 counterparts, each L2 also issues its native token to incentivise node participants to secure the L2 chain.

On top of that, L1s and L2s which support smart contracts, often allow the creation of tokens by their users, resulting in thousands of tokens, or cryptocurrencies in circulation. What all of these tokens or cryptocurrencies have in common is the fact that they are fungible, meaning that they are divisible and interchangeable as balances, rather than as unique assets with special properties.



Figure 1. *"Blind by Freedom"* by Lukas Azevedo. NFT minted on Rarible (Azevedo, 2021)
© 2021 Lukas Azevedo. Used with permission.

4. *Non Fungible Tokens*

Unlike cryptocurrencies such as BTC or ETH, which are fungible and can be exchanged on a one-to-one basis, as well as being natively divisible, Non-Fungible Tokens are unique digital assets. Each NFT has a distinct value and specific information that sets it apart from any other token, hence the term ‘non-fungible’.

NFTs can confer ‘digital scarcity’ upon a piece of digital art. In the digital world, where files can technically be copied at will by any individual, NFTs provide a solution to the problem of creating and trustlessly proving uniqueness. When an NFT is created, or ‘minted’, it is linked to a specific digital asset and that link is recorded on the blockchain. This record, as any other record on the blockchain, is immutable, meaning it cannot be altered or deleted by anyone, and it publicly verifies the authenticity and ownership of the digital asset (Wang et al., 2021).

This digital record of ownership provided by the NFT is potentially transformative for the art world. In the traditional art market, artists sell physical works, which the collector gains physical possession of, and even though physical certificates of ownership can also be used, these can also be counterfeited. NFTs use cryptographic proofs, which cannot be falsified or tampered with, and by creating these records on the blockchain, they are also immune from unauthorized duplication. The blockchain also tracks the full history of the NFT, from the moment of conception to the first sale, and all subsequent re-sales and transactions until its current owner, therefore ensuring the provenance of the artwork’s market activity.

Once minted, the NFT can be bought, sold, or held just like any other type of asset in a digital wallet that supports that blockchain. Often the media file associated with the NFT exceeds the data storage limits supported by the blockchain, in which case the NFT only contains the artwork’s metadata, including a hyperlink to the media file stored in an external web server. To avoid single-point-of-failures with privately owned web servers, NFT media files are often stored in decentralised file storage networks, such as the Interplanetary FileSystem (IPFS) or ArWeave.

This means that, in the context of an NFT, even though the artwork’s media file can often still be copied ad-nauseam like any other digital file, the NFT record on the blockchain constitutes a resilient and long-lasting digital representation of a scarce certificate of ownership of that artwork, which is what confers the NFT with an economic value that was unfeasible in the traditional digital art world.

This is the reason why NFTs can be considered to represent a paradigm shift in the way we conceive of art in the digital age. They provide a mechanism for proving and transferring ownership of digital assets, opening up new possibilities for artists and collectors in the digital art market.



Figure 2. *“We build this together”* by Eduardo Politzer “Edmarola”. NFT minted on Teia (Politzer, 2024) © 2024 Edmarola. Used with permission.

5. *Crypto Art and the Brazilian Digital Art Scene*

The year 2021 saw a period of hype surrounding NFTs with the market hitting an all-time high in terms of volume of sales (Mentzer et al., 2022), and it was during this period of rapid adoption and high cryptocurrency liquidity that most of the artists interviewed had their first experience with this technology. NUMA, an artist born in Curitiba and residing in Recife, who had started experimenting with digital art in the early 2000s, was first introduced to NFTs in 2021 and, after observing the space for about a month, minted her first NFT in August 2021. “After selling my first NFT, I realized that I wanted to dedicate myself fully to this universe, putting almost all my energy into maximizing my work in this field” she explained.

Lukas Azevedo, a 3D digital artist from Campos dos Goytacazes, was already following the space of crypto art during the pandemic and was interested in mining his first work, but at that time the minting fees on Ethereum were outside his budget. Fortunately for Lukas, he found assistance from the cryptocurrency community:

“Someone on Twitter liked my art and offered to donate the amount needed to mint it. From that moment on, I made my first sale and became increasingly connected with the Brazilian and international crypto art community. I made great friends, received awards, and was able to continue my 3D career thanks to my connections and visibility from when I was doing crypto art.”
(Lukas Azevedo)

The high cost of minting on Ethereum was a common deterrent for artists from the Global South. This is one of the reasons why Tezos, a blockchain that operated at much lower costs, offered a more assessable on-ramp to minting and saw significant adoption in early 2021, especially after the launch of a Brazilian NFT platform called Hic et Nunc (HEN). In addition to that, the community that formed around HEN donated tez (XTZ) to a common pool of funds, from which small amounts could be distributed to new artists so that they could mint their first NFTs on Tezos. These communal pools of funds, also known as fountains, are a common practice across many blockchains to help onboard new users.

Eduardo Politzer, a.k.a. Edmarola, is a contemporary artist from Rio de Janeiro, and like many artists from the Global South who were priced out of minting on Ethereum, started his crypto art career by minting on HEN:

“My initial reaction to crypto art was to recognize that it was more than a financial movement, it was an aesthetic movement that was unique to my time. As soon as I heard about this medium, I immediately wanted to learn how to participate and I used HEN exclusively during the first few months”.
(Eduardo Politzer)

Estelle Flores, a contemporary artist from Curitiba who has been exploring video game art since 2020, also started on Tezos via HEN:

“My first experience with NFTs was on Tezos blockchain on Hic et Nunc. Coming from the zine community I thought it was the perfect translation of this DIY context (zine) to a virtual space. I noticed how it was very different very soon though. But HEN really felt like zine making but for digital art”.

(Estelle Flores)

As many artists, after her initial experience through Tezos, Estelle also experimented with other platforms: “Now I use many chains and platforms according to my intentions and the markets associated with these communities, open editions on OBJKT[.com], generative on fxHash, capillarizations of my initial NFT project on Teia, spontaneous work on Zora, 1/1’s on Exchange.art”.

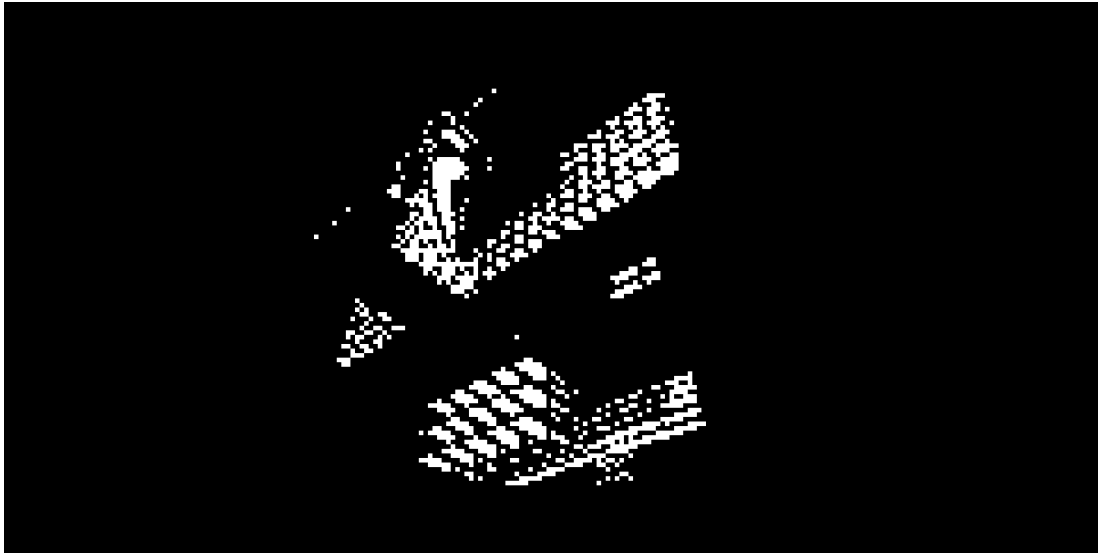


Figure 3. “ZTR#CT#R3S.13” by André Oliveira Cebola. Minted on Teia (Cebola, 2024)
© 2024 André Oliveira Cebola. Used with permission.

6. Opportunities

When talking about the opportunities enabled by crypto art, most artists agree that a key aspect is the ability to sell their work to a global audience. Jessica Magalhães, an independent artist who already sold her art before NFTs, recognised the turning point that crypto art represented:

“For an independent artist in Brazil to make a living from their art, having all these new ways of selling is very important. The opportunity for new people to have access to my work, and also to get to know me, talk to me, and understand more about art and my life reality, the opportunities expand. It happened to me, I make a living from this and since I’ve been here I’ve met people from all over the world, my work has reached collectors from all corners of the planet and I’ve also had access to new artists, being able to work with collaborations from artists on the other side of the planet”.
(Jessica Magalhães)

André Oliveira Cebola, a generative artist and motion designer from São Paulo, highlighted the impact that the crypto art movement had on his career in such a short amount of time. He claimed that:

“Participating in this movement has brought international recognition to my work, generating several opportunities. I have had my work exhibited in more than 10 countries throughout this period”. (André Oliveira Cebola)

This sentiment of reaching a global audience was echoed by the majority of the artists. Gabriel Böing “Köi”, a 25-year-old digital artist and filmmaker from São Paulo mentioned that, despite artists still having to overcome many hurdles, crypto art made a positive impact on the space:

“This possibility of selling our digital pieces in cryptocurrencies (which can then be converted to dollars, worth much more here) has changed a lot in the digital art scene in Brazil and countries in the Global South. Even though the market may still be dominated by specific elites and vested interests, it was much harder to survive and make money with digital art in Brazil, with practically no investment in this type of art, in addition to a lack of understanding, with markets, exhibitions, and galleries mostly focused on traditional art. The path was much more arduous, square and traditional”.
(Gabriel Köi)

Gabriel then continued, “the crypto art market has brought independence, autonomy, and a way to make an income, to survive and continue being an artist, and in some cases, making them very successful artists globally”.

Whilst recognising the positive aspects of crypto art, some artists look at the technology simply as one of many tools in their creative toolkit, and rather not be pigeonholed into the category of “crypto artists”. This is the case of Estelle, who stated:

“I don’t consider myself a crypto artist, maybe is a question of semantics but I see myself as just an artist, my work is not centred around crypto or crypto technology. Of course, it comments on this context here and there but it could live anywhere else”.
(Estelle Flores)

However, Estelle also acknowledged that “being involved with crypto expanded the impact of my work”.

The global marketplace created by blockchain technology, is undoubtedly one of the key benefits of crypto art, however, this global reach is often mistakenly confused with the concept of democratisation of art, since it fails to account for the issue of the digital divide, a problem that is especially prevalent in the Global South. Estelle provided an important reminder of this:

“The digital art market was facilitated through Tezos and Hic et Nunc, because of the low fees, but still I think democratisation is too much of a strong word in the case of Brazil because the ones affected by any NFT talk are already involved in the digital and artistic contexts (...) of course I’d love to have heaps of money coming from NFTs but I still would have to push myself in the traditional art contexts because of many things, but mainly because the NFT context is still very segregated and I make art for everybody not just for crypto dudes. As an artist I don’t battle only for survival but for my work to be accessible to the average person”.
(Estelle Flores)

If bridging the digital divide is a complex problem that requires major structural changes in society, a task that cannot be undertaken by any single community, then at least the Brazil crypto art community is demonstrably focused on creating a welcoming and friendly environment for new artists, providing them with both the knowledge, the tools, and the contacts to get up to speed and improving their chances of success. Eduardo highlights this:

“Support networks are essential. For me, the main one is the Pupila Dilatada artist collective, but there are countless others and they are all important. The Pupila Dilatada collective has already organized

exhibitions in the metaverse and in digital art and culture institutions in São Paulo and Rio de Janeiro”.
(Eduardo Politzer)

Lukas Azevedo mentioned how some of these groups formed and operated:

“Soon after I discovered crypto art, I also discovered a newly created community on Telegram called Crypto art Brasil. There I met very talented artists who I work with, remain friends with, and admire to this day. In that community, we artists had the ideal of always being willing to help those who were starting or had questions. There we created the so-called Crypto art BR Pindorama, a document open to everyone to explain the concepts, best practices, and general things that people needed to know to get started. In that document we also had a database of all the artists who were interested in exhibiting there to create contacts”.
(Lukas Azevedo)

Some other social projects include Colectivo OYX, Social Crypto Art, Casa NUA, MC.Metaverso Brasil (Godoy & Godoy, 2024). The crypto art community is also generous and often engages in fundraisers and donations towards networks outside of their own community. For example, NUMA mentioned that she often donates sales proceedings to indigenous people.

In terms of international networks, the Portuguese language does not seem to play a major role in promoting networks with artists from other Portuguese-speaking countries. Even though some artists mentioned connections with Portugal, most artists have expressed that their international connections and collaborations happen mostly within the Global South, with artists from countries like the Philippines, Thailand, Mexico, and Argentina. This indicates that similar socio-economic factors associated with developing countries, as well as a shared history as colonized regions, create a stronger cultural bond. Estelle Flores explained:

“Somehow even my jokes land better with global south people. The closest analogy I can think of is having rich friends. You might communicate well, but there are aspects of your life that your wealthy friend will never fully understand. To truly grasp your reality and priorities, they would need to be born into it”.
(Estelle Flores)

At the same time, these international ties between South American and Southeast Asian artists have clearly not yet extended to Africa, and this may be due to the fact that the African continent, with a few exceptions, is generally lagging behind its Global South counterparts in the adoption of both digital technology and crypto art in specific. This is arguably the manifestation of the digital divide which was mentioned before.



Figure 4. "The Lab" by Gabriel Böing Köi. NFT minted on OBJKT.COM (Köi, 2022)
© 2022 Gabriel Böing Köi. Used with permission.

Removing gatekeepers and middlemen such as art galleries or art brokers may open the art marketplace to a much larger number of artists, however, this also puts an additional burden on the artist, who must promote and market their work directly to prospective collectors. Not only does this constitute a significant distraction from what should be the focus of their work, the creation of art, but it can prove to be particularly difficult for those not fluent in English, the lingua-franca of the social networks where this promotion must occur. Most of the artists interviewed acknowledged this problem. Eduardo Politzer mentioned that his introduction to crypto art was not without its hurdles:

“My first experience was a bit negative because I didn’t know how to find an audience or how to promote my work, so the first contacts were pretty empty of feedback and engagement”.
(Eduardo Politzer)

André Cebola highlighted the language barrier:

“Language is certainly a barrier. I never had the opportunity to study any language other than Portuguese, which often proved to be a significant obstacle. Today, I have a little more command of English and feel more confident in that regard”.
(André Cebola)

Other challenges mentioned were the high cost of digital equipment and the unreliable electrical power grid where artists live, again highlighting the existence of the socio-economic threshold under which the digital divide manifests itself.

Jessica Magalhães outlined this issue:

“Equipment for creating digital art is always a challenge, it is expensive and there is always the question of whether to buy food, pay bills, have the basics, or spend all that money by paying for the equipment in installments?! It is a delicate subject because everyone needs to eat and have a place to live, but better equipment would also bring better results and thus the possibility of eating and living in a better place. The theory is simple but the practice is not, but I ended up creating a motto that is ‘do what you can, with what you have’”.
(Jessica Magalhães)

7. Challenges

Eduardo Politzer is in a similar situation, claiming “problems such as the price of electronics and Brazilian infrastructure, like power surges and internet supply failures are common problems in the neighbourhood where I live whenever it rains”.

Online fraud related to crypto was also mentioned. This is, unfortunately, one of the most well-known criticisms of crypto and it is still prevalent in the space, with many scams targeting those who are less educated with regard to online security and how to protect their digital assets from falling into the wrong hands.

The global nature of the space can also lead to cultural clashes, and these can be challenging for some artists. NUMA highlights this:

“In my case, the worst thing is the lack of consideration and representation in spaces. The space in general is still very clueless about social differences and is also very sexist. It’s common to see racist and sexist things, and that bothers me a lot”.
(NUMA)

This lack of sensitivity by the predominantly male Global North culture, and the resulting clash with their Global South counterparts can be witnessed throughout the space of crypto art and it casts shadows of neo-colonialism onto the digital realm.

Finally, several artists pointed out the fact that the crypto art space in Brazil is still maturing and is not always taken seriously by the population in general, and even within the traditional art circles. For example, Eduardo Politzer stated:

“Crypto art is still too small a niche to be considered a tool for impact in Brazilian society (...) I believe that crypto art is still poorly regarded within the Brazilian artistic and cultural scene due to a lack of quality information. My dream is to see educational institutions adopt blockchain as a way to showcase the benefits of organizing smart contracts in the creative industry.”
(Eduardo Politzer)



Figure 5. “Jardim.2021-02-27-19.34.33” by Taís Koshino.

Picture created at jardim / 枯山

水 / garden

NFT minted on HEN (Koshino, 2021)

© 2021 Taís Koshino. Used with permission.

8. The Impact of the *Hic Et Nunc* Experiment

As mentioned before, the HEN platform was launched in March 2021 by a Brazilian developer, Raphael Lima, on the Tezos blockchain. Since Tezos provided a much cheaper alternative to minting than Ethereum, and with HEN not gatekeeping and allowing anyone to mint NFTs, it instantly became popular, especially among artists from the Global South. For this reason, it is not surprising that a large number of Brazilian artists had their first experience of minting their first NFTs on HEN.

Taís Koshino, a contemporary artist from Brasília who has regularly published digital art since 2016, got involved in the HEN project even before its launch:

“I was invited by my brother KOSHA to be part of the team, which at the time consisted of just him and Rafael Lima. At first, I still didn’t understand the power that the platform could have, the concept of NFT was still very new to me, but since I was working on a digital art project, I thought it would be very interesting to participate. My role on the team was to understand how art could be more present, through texts that talked about some works, events, and other initiatives.”

(Taís Koshino)

In response to the predominantly white male culture from the Global North, Taís and British artist Amelie Maia co-founded the *DiverseNftArt* collective, to increase diversity and inclusivity within the crypto art space, an effort which was supported by HEN. Together they organized events that promoted collaboration and art appreciation, as opposed to commercial value, such as *objkt4objkt*, a popular event where artists were encouraged to exchange art with one another without charging a price.

André Cebola is clear about the impact of HEN: “I participated as an artist and I can say with certainty that HEN was a milestone in the history of global art. HEN was and continues to be a true revolution”. Eduardo Politzer also commented: “it was here I built the entire visual arts part of my career. It was where I found my audience and from there I developed my work”. Estelle Flores, who makes a point of having no preference for any platform or blockchain still reserved praise for the platform where she started with crypto art:

“I don’t know if any other platform would have had the same allure with me to get me involved in crypto, I feel only a certain type of culture could get me there. It really was a parallel with zine fairs and the independent publication context for me and I really needed that during the pandemic. HEN coming from the global south was something that could be instantly captured in the experience (...). No other platform or virtual community captured me as much as HEN through all these years and all my strong relations in the community come from this period, but all this was because of the market and historic timing too”.

(Estelle Flores)

This last point made by Estelle is important because much of the experience that revolved around HEN also came during the NFT market boom, and that may have contributed to a time that is now nostalgically remembered as a golden age of crypto art.

In the summer of 2021, HEN saw a significant rise in popularity, even momentarily displacing OpenSea as the platform with the most active users. With its roots being in Brazil, and with a fast-growing community around the world, tensions developed between the community and the platform developer, which eventually led to the shutting down of the platform by its creator in November 2021. This event led to many discussions between the community members as to what caused this sudden ending of the platform. And even though many point the finger at the creator, Raphael Lima, others believe that this was yet another case of colonialism by the Global North, whether intentional or not. Taís Koshino believes the closing down of the platform was a combination and accumulation of factors:

“I believe that many of them are linked to our structural condition as people from a country in the Global South, which leads us to distrust institutions and the violence we have to deal with on a daily basis, which creates a huge mental burden and personal issues for those who could make this decision. (...) We had people with great technical skills who wanted to help us, improving some functions or implementing new ones, but this was not always done in the best way and, in general, those who made the decisions did not deal well with it either.

However, sometimes, because we are from the Global South, we were treated in an inferior and violent way, repeating a colonial logic.”
(Taís Koshino)

9. The Future

Concerning the future of crypto art in Brazil, artists have mixed feelings. A few expressed optimism for the potential in the space and are looking forward to seeing well-established institutions in the creative industries adopting and promoting crypto art. Others are more cautious in their assessment:

“I believe there is still a long way to go, but it is impossible not to see the relevance of the Brazilian crypto art scene on a global scale. Collectives and institutions are organizing themselves within Brazil with great effort to faithfully express the greatness and power of Brazilian digital art, but we still have many challenges and many things to learn internally. I believe that we have to increasingly believe in our own identity and not want to replicate something hegemonic globally because that way we will lose our power and authenticity.”
(Gabriel Köi)

Lukas Azevedo, whilst overall pessimistic about the future of crypto art in Brazil, sees a future in programs that outreach to those on the other side of the digital divide:

“Projects which started with crypto art, like 2050, which seeks to bring technology and art to the favelas in Rio de Janeiro. It is gratifying to see such a cool project take the cutting edge of current technology and put a smile on the face of a kid who may have never had a computer. That is why I say that I do not think crypto art innately democratizes art and technology, but rather what we do and what projects we create through it.” (Lukas Azevedo)

Overall, the dominant sentiment is that the crypto art space mostly works at an economic level, as a market, and is less tied to any meaningful cultural movement. With much of the market focus being on PFPs and other projects based on hype and speculation, there is a clear sense of disillusionment amongst Brazil-based artists.

CONCLUSION

After analysing the responses of the artists interviewed for the study, it is clear that while crypto art has the potential to provide life-changing opportunities to digital artists in Brazil, by giving them access to a global marketplace, it also presents an environment that is not necessarily respectful of their cultural values, and therefore presents itself as a necessary evil. On one hand, it has the potential to become a sustainable source of income (which under the current market conditions is not able to deliver), while on the other hand being a space that does not respect their work’s intrinsic, creative, and cultural values. If there was ever an exception to this rule, it was the brief period of the HEN experiment, and it could be argued that this was only the case because it was a platform that originated in the global South, namely, in Brazil. It remains to be seen if a space that challenges the Global North hegemony and welcomes Global South values can be recreated in the crypto art scene.

BIBLIOGRAPHY

- 2050official. (n.d.). INSTAGRAM. <https://www.instagram.com/2050official/>
- Arantes, P. (2017). Digital Art in Brazil: A look at the history of exhibitions. *Proceedings of the 8th International Conference on Digital Arts*, 55–60. <https://doi.org/10.1145/3106548.3106600>
- Arweave - A community-driven ecosystem. (n.d.). Arweave.org. Retrieved October 14, 2024, from <https://www.arweave.org/>
- Azevedo, L. (2021, August 21). Blind by Freedom. <https://rarible.com/token/ox60f80121c31a0d46b5279700f9df786054aa5ee5:1211812>
- Cebola, A. (2024). ZTR#CT#R3S.13. <http://teia.art/objkt/855773>
- Dicharry, K. M. (2005). *Process: A Visual Exploration of Digitization's Effect on the Artistic Process* [PhD Thesis]. <http://scholarsbank.uoregon.edu/xmlui/handle/1794/1028>
- Dodds, D. (2019). Collecting, Documenting, and Exhibiting the Histories of Digital Art: AV&A Perspective. In T. Giannini & J. P. Bowen (Eds.), *Museums and Digital Culture* (pp. 217–229). Springer International Publishing. https://doi.org/10.1007/978-3-319-97457-6_10
- Gere, C. (2013). The history of network art. In *Network Art* (pp. 11–23). Routledge. <https://www.taylorfrancis.com/chapters/edit/10.4324/9781315018997-2/history-network-art-charlie-gere>
- Godoy, N., & Godoy, G. (2024). At the frontier of the metaverse: NFTs, artistic expression, and digital immersions. *Metaverse*. https://www.academia.edu/116058836/At_the_frontier_of_the_metaverse_NFTs_artistic_expression_and_digital_immersions Interplanetary FileSystem (IPFS). (n.d.). <https://ipfs.tech>
- Koshino, T. (2021). Jardim.2021-02-27-19:34:33. <http://teia.art/objkt/167>
- Mentzer, K., Price, J., Powers, E., & Lavrenchuk, N. (2022). Examining the hype behind the blockchain NFT market. *Issues in Information Systems*, 23(4). https://iacis.org/iis/2022/4_iis_2022_15-29.pdf
- Nakamoto, S. (2008). Bitcoin: A peer-to-peer electronic cash system. *Decentralized Business Review*. <https://assets.pubpub.org/d8wct41f/31611263538139.pdf>
- Politzer, E. (2024, August 7). We build this together. Teia. <http://teia.art/objkt/855692>
- Radziwill, N. (2018). Blockchain revolution: How the technology behind Bitcoin is changing money, business, and the world. *The Quality Management Journal*, 25(1), 64–65.
- Santos, P. (2024, February 11). O Desenvolvimento da Arte Digital Brasileira—Cultura Nova Fase. <https://culturanf.com.br/explorando-a-vanguarda-da-arte-digital-brasileira/>
- Sito, T. (2013). *Moving innovation: A history of computer animation*. MIT Press. [https://books.google.com/books?hl=en&lr=&id=defxCwAAQBAJ&oi=fnd&pg=PP8&dq=Sit+o,+T+\(2013\).+Moving+Innovation:+A+History+of+Computer+Animation&ots=TrmPqTz74f&sig=WuPjpH6ZvNxt5SOD3ziWs_eOkOA](https://books.google.com/books?hl=en&lr=&id=defxCwAAQBAJ&oi=fnd&pg=PP8&dq=Sit+o,+T+(2013).+Moving+Innovation:+A+History+of+Computer+Animation&ots=TrmPqTz74f&sig=WuPjpH6ZvNxt5SOD3ziWs_eOkOA)
- Wang, Q., Li, R., Wang, Q., & Chen, S. (2021). Non-Fungible Token (NFT): Overview, Evaluation, Opportunities and Challenges (arXiv:2105.07447). arXiv. <http://arxiv.org/abs/2105.07447>

CAPE VERDE



VIDEO



ARTIFICIAL INTELLIGENCE, NEWSROOM CULTURE, AND JOURNALISM:

FROM INTERNATIONAL SPECTRUM TO EXPERIENCES IN CAPE VERDE

Silvino Lopes Évora (USJ)

Resumo: A aplicação da Inteligência Artificial no processo de produção de bens intangíveis acelerou, de forma dramática, a cristalização da cultura digital nas sociedades contemporâneas e, no campo do jornalismo, afastou as rotinas produtivas das práticas arraigadas nos processos de fundação da profissão, que Warren Breed (1955), em meados do século passado, apelidou de “cultura das redações”. O novo modelo de conceção informativa deixou de se alicerçar nas culturas das redações – enquanto práticas sociais e profissionais, com convicção de obrigatoriedade, que fundaram as rotinas produtivas do jornalismo – e passou a guiar-se por processos robotizados de sistematização e de processamento de informações a partir de uma enorme base de dados, apelidada de big data. A própria redação dos textos jornalísticos passou por um processo de automatização, com ganhos a nível da rapidez e perdas no domínio dos recursos estilísticos, da densidade textual, da configuração da ética discursiva e da humanização narratológica, desenraizando o texto jornalístico do território da criatividade. Estas alterações que têm sido registadas nas práticas jornalísticas não alcançaram, de forma abismal, o setor produtivo dos media cabo-verdianos, mas tem-se registado, nas ilhas, uma adesão paulatina a este movimento internacional de artificialização dos processos produtivos do jornalismo, com a sua expressão máxima na introdução de próteses vocais na sonorização dos offs noticiosos dos media audiovisuais, num cenário que constitui um desafio aos sistemas de regulação dos conteúdos informativos veiculados pelos mass media em Cabo Verde.

Palavras-Chaves: Inteligência Artificial, Cultura das Redações, Jornalismo Digital, Cabo Verde.

Silvino Lopes Évora

He is a faculty member at Uni-CV and completed his Postdoctoral studies at Fernando Pessoa University, Porto, Portugal. His research focused on the topic “Technological Changes and Journalism Businesses: A Study of the Political Economy of Communication in Cape Verde between 2001 and 2021,” which aims to understand the disruptions that technologies have caused or will cause in the media companies’ market in Cape Verde. Silvino Évora holds a degree in Journalism from the University of Coimbra, a Master’s and a Ph.D. in Communication Sciences from the University of Minho, and a specialization in Judicial Studies from the Faculty of Law of the Portuguese Catholic University. He conducts research at Uni-CV and the Communication and Society Research Centre at the University of Minho on topics such as journalism, the political economy of media, communication, democracy, freedom of the press, and economy. Currently, Silvino Lopes Évora is the President of the Scientific Council of the University of Cape Verde.

ORCID: 0000-0002-9216-1818

e: silvino.evora@docente.unicv.edu.cv

INTRODUCTION

While Cape Verde's independence took place in the mid-1970s, the history of communication and the media in the archipelago goes back much further. In addition to all the processes of interconnection between communities and people that took place from the beginning of the settlement of the islands (in 1462) until the course of the 19th century, it is worth highlighting the emergence of the periodical press in the Cape Verdean territory, with the publication of the Official Gazette (*Boletim Oficial* in Portuguese) of the General Government of Cape Verde, which began publication on August 24, 1842. Since then, there has been a proliferation of newspapers and magazines on the islands, and the pace of new publications has practically kept pace with the disappearance of titles in circulation. It was in this sequence that the newspaper 'Independente' appeared in 1877, which many consider to be the starting point for journalistic practices on the Cape Verdean islands since the Official Gazette is considered to be the voice of the metropolitan system of government, which was exercised in a trans-territorial way between Europe and the world, within the scope of the colonial administration (Évora, 2010; 2012).

The pace of media sector expansion in Cape Verde closely followed international practices, more in terms of the solutions introduced than the density of supply. Thus, in the 20th century, the media context on the islands underwent major transformations, with the endorsement of audiovisual media, particularly radio and television. However, we cannot ignore the emergence of digital platforms between the late 1990s and the beginning of the new century.

There is no doubt that the 20th century was a landmark period for transformations in the various sectors of communication, not only in Cape Verde but globally. Given the densification of information traffic throughout that century, some sociologists, including Robert Park, began to defend the assumption that journalism is a way of sharing and parameterizing knowledge. This increase in academic attention to the field of communication, journalism, and the media went hand in hand with the development of a considerable body of theory aimed at explaining communication phenomena and their impact on the behavior of individuals and the shaping of urban cultures. This led to the emergence of the Hypodermic Needle Theory, followed by the Family of Limited Effects Theories, the body of thought that predicts the effects of the media on shaping individuals in the long term, and the Cumulative Effects Theories, or Sociological Theories of Communication.

It was also in the 20th century that international experiments in the application of artificial intelligence to the field of journalism and communication more broadly emerged. During this period, however, Cape Verde was looking for ways to set up an efficient media system, with the then minister, Corsino Fortes, drawing inspiration from Iceland's community/local television models to orchestrate the first official public station, called 'Televisão Experimental de Cape Verde' (Experimental Television of Cape Verde), or 'TVEC'. Therefore, the country, independent in 1975, involved in a struggle for survival and its viability, was unable to keep up with the most

disruptive steps in mass communications research, which would lead to the discovery of a set of solutions that ended up imposing technicality, speed, and economy on the practices of media operators (Évora, 2010).

While testing functionalist theories of communication, media professionals were already beginning to report on the pioneering spirit of Artificial Intelligence, which began to resonate in the media field in the first half of the 1940s. In the following decade, there was a certain enthusiasm for the future of Artificial Intelligence and, with it, the possibility of its application in the most varied sectors of society. In this sense, Herbert Simon wrote in 1957 that Artificial Intelligence was equipped with properties that allowed it to think, learn, and create (Russell, Norvig, 2013: 20).

Experiences in the last decade have given artificial intelligence editorial properties, leading algorithms to write news stories, breaking the barrier of a practice that, throughout human history, has been left exclusively to human beings. In this case, algorithms stand out, not only because of the amount of information they can unravel but also because of the speed with which they carry out these practices, responding to one of the main imperatives of journalism, which is speed in providing information and speed in managing information about everyday life.

In this chapter of the book “Media, Art & Technology in the 9 Portuguese-speaking Territories”, we propose to discuss the implications of artificial intelligence for the field of journalism, intertwining this view with readings on organizational constraints and the culture of newsrooms, which for almost a century have been seen as one of the main vectors shaping journalistic practices. At the same time, we will try to give the problem of the application of artificial intelligence to the field of journalism and media communications a Cape Verdean perspective.

1. Artificial Intelligence, Newsroom Culture and Robotic Journalism

To begin this section of the article, we would like to point out that the entire theory of journalism developed throughout the 20th century was based on the premise of the information profession as a human practice, in which the information and communication professional, as a productive agent, is a human being endowed with a culture that results from their intra-family, intra-school and intra-social socialization process. In these spaces within society, the thinking developed encompasses the influences that communication itself exerts on the formation of a human being's personality, culture, and identity. This means that journalism's relationship with other social systems develops based on a symbolic feedback chain, in which society provides communication professionals with inputs for the formation of their professional identity and they provide society with a set of information that embodies the processes of externalization and internalization, within the scope of the social construction of reality, through which society is objectified as a solid reality, equipped with established identity and cultural constructs.

This whole assumption of the organization of the profession is questioned with the entry of algorithms into the production processes of journalism. This is no longer an eminently human product and newsrooms are no longer physical spaces populated by journalists, reporters, newsroom secretaries, photographers, editors, newsroom and section managers, and the other

elements of the upper structures of the newsroom environment (directors, deputy directors, and assistant directors). This is because many of the jobs carried out by all these professionals are now carried out automatically by sophisticated algorithms. Although we can talk about machine learning in these cases, the concept does not take us into the field of socialization and cultural formation, if we understand culture as man's action on nature, in a relationship with space and time, creating symbolic marks and references, establishing identities and referential constructs and generating feelings of belonging, emotions and axiological commitments within societal structures. The product of robot action can result from a systematic standardization of processes, conducted by algorithms that are not visible to the human eye, but whose results are mirrored on computer screens, mobile devices, and all other technological paraphernalia. "O algoritmo é introduzido como um sistema de processamento da aprendizagem no segmento da machine learning, sendo que a amplitude da sua eficácia deriva, em grande medida, do volume de dados disponíveis" (Évora, 2023: 83) ("Algorithm is introduced as a learning processing system in the field of machine learning, and the extent of its effectiveness largely depends on the volume of data available" (Évora, 2023: 83, my translation).

This new era in journalism practice began on July 21, 2013, with the experiences of the US newspaper Los Angeles Times in covering an earthquake in the state of California. "A matéria, que tinha como fonte a base de dados do Serviço de Notificação de Terremotos do U.S. Geological Survey (USGS), citava ainda outros terremotos que ocorreram na região nos últimos 10 dias, bem como as localidades afetadas por meio de imagens no Bing. Links no meio e no fim do texto redirecionavam para a cobertura completa, trazendo todas as matérias envolvendo terremotos no arquivo do jornal" (Costa e Santos, 2015: 484) ("The story, which was sourced from the U.S. Geological Survey's (USGS) Earthquake Notification Service database, also cited other earthquakes that had occurred in the region in the last 10 days, as well as the locations affected using images on Bing. Links in the middle and at the end of the text redirected to the full coverage, bringing up all the stories involving earthquakes in the newspaper's archive" (Costa e Santos, 2015: 484, my translation).

For Costa and Santos (2015), the content of the Los Angeles Times met all the criteria to be classified as "any other follow-up story, which would follow on from new stories produced by the newsroom throughout the day, except for the content of its last paragraph: 'this post was created by an algorithm, developed by the author. Ken Schwencke, digital content editor at the Times, is the author in question. A journalist and programmer, he is the creator not only of 'Quakebot' - as the algorithm is called, but also of HomicideReport4, a bot that publishes a basic lead of all homicide incidents recorded in Los Angeles County" (Costa and Santos, 2015: 484, my translation). Although the episode described above is a historic milestone for the practice of journalism, as it establishes 'ground zero' for the presence of bots in modern journalism, we should point out, however, that this subject has already been studied by computer programmers on how to automate news practices.

In 2011, with the earthquakes in Japan, concerns arose about new, faster, and more automated ways of producing news, intending to create 'low-cost production' news content to be made available to the public. Following in the footsteps of the Los Angeles Times, the British newspaper The Guardian, which at the time was only accessible in the US via digital platforms, began to publish a monthly print edition that summarized the entire publication made available

during that period in cyberspace. The monthly, called #Openoor, had a circulation of only 5000 copies, which were sent free of charge to US media agencies (Costa e Santos, 2015: 484), in a clear strategy to expand the editorial vision of The Guardian within the US media, using news agencies as channels for passing on information content. The difference here is that the selection of this content was made by an algorithm, which dispensed with the human figure in the gatekeeping process. The fundamental criteria that the algorithm applied in this case were not the criteria of newsworthiness and news values - considering elements such as geographical and cultural proximity because it was a British (European) publication being distributed in the United States - but the popularity of the content in cyberspace, the result of interactions on social networks. In this case, we are dealing with a situation where algorithms are programmed according to commercial criteria and to meet a sacrosanct value in the process of rationalizing the news market, which is the 'interest of the public'. This establishes the practice of providing news content according to the 'sympathy' of consumers and the removal of the human gaze from the symbolic and journalistic product distributed in North American society.

Tracing the experiences of indexing robots to the production of news and automating the production routines of journalism that are now systematized by the machine, we can find several interesting international experiences, such as the ARTHR robot, programmed to layout and print newspapers, and the newspaper, *The Long Good Read*, produced by a robot with similar characteristics to ARTHR, with the collaboration of the newspaper, *Newspaper Club*. In these two cases, it is clear that a large part of the tasks that generate news do not involve human intervention and follow the commands of algorithms, the result of both programming and machine learning. Information databases are always needed where the robots will collect the information to systematize it, select it, and move on to the editorial phase, in a neutral environment to formulate a newsroom culture along the lines mentioned by Warren Breed (1955). In these cases, the social control of newsrooms takes place through the development of software and programming techniques. Furthermore, the scope of algorithm learning is important for delimiting the territory of semantic expansion that is alien to human production and coding, since learning leads the robot to expand the previously established semantic field. This expansion results from populating the density of the field left for the algorithms to evolve, according to the dictates of machine learning. Since there is no hesitation in the procedures and choices, as the algorithms follow the lines of command that result from programming or learning, the processes are faster. That's why, for example, in the case of ARTHR, the time it takes the robot to close the newspaper is estimated at one hour, which, from the point of view of human practices, is practically unfeasible.

Looking back over the history of robotic journalism, it can be seen that its evolution has been marked over the last decade. Therefore, we can see the increasingly effusive participation of robots in the very social construction of reality, acting alongside human professionals in the construction of social meanings through the news. By this, we mean that, although robots are agents of 'neutral autochthonous culture' or of 'symbolic substrates borrowed from the human imagination', their journalistic products are capable of establishing symbolic links between human beings. They are also capable of providing symbioses that link the relationship between man and time, on the one hand, and between man and space, on the other. They are symbolic goods that carry meaning, capable of defining the framework of social mediations, contributing to the consolidation of social objectification, and giving body and form to a given society.

If we look at the last decade, we find sophistication in the development of algorithms that work in the field of journalism, programmed to develop a semantic product that is established amid social correlations. The work of gatekeeping¹, which coined the journalist as a ‘watchdog’, has now been developed, in part, by a ‘cyber watchdog’, which has also started to act at all stages of journalistic production. In addition to selection, algorithms now write the news texts, manage the information banks (not just the internal sources of a media organization, but extending to other data reservoirs in the extensive universe of big data), lay out the newspapers, and print them. When it comes to online newspapers, its work extends to the field of distribution, since it monitors the browsing experience of individuals and provides them with notifications of the availability of information content on the networks according to their consumption experiences.

We should point out that although the application of artificial intelligence to journalism is not new - it dates back to the last century, with the experiments of Philip Meyer (1993), who is considered to be the proponent of a model of professional practice dubbed ‘precision journalism’, based essentially on the viability of algorithms capable of producing so-called data-driven journalism - it is in the last decade that Artificial Intelligence has brought about a procedural change in the practice of journalism, with the development of bots that are increasingly aligned with journalism’s production processes. As we pointed out earlier in this section, these bots now cover the entire production chain and, in some cases, operate in the field of distribution, segmenting the public in cyberspace and supplying them with journalistic products according to niche market strategies.

2. Data Journalism, Human Face News and AI

Let’s start here by distinguishing between the production of cultural goods and the creation of organizational culture. These are two different issues. The production of cultural goods can be done by humans or supported by machines. Considering this ability of machines to compete with human beings in the ‘technical reproducibility’ of cultural goods was the origin of the whole thesis around the cultural industries developed by the theorists of the Frankfurt School. When Walter Benjamin (1933/2014) developed the text ‘The Work of Art in the Age of Its Technical Reproducibility’, he felt motivated to question symbolic production based on technical artifacts. This led to the creation of antagonistic poles between ‘technical art’ and ‘genuine/human art’, the ‘original’ and the ‘copy’, the ‘aura’ and the ‘simulacrum’. Roughly speaking, the theorizers of the Frankfurt School considered the authenticity of a work of art to be its ‘here and now’. This line of thought cuts across several of them, with the work *Dialectic of Enlightenment*, by Max Horkheimer and Adorno (1991), and the concept of the ‘culture industry’ being two fundamental elements.

¹ For Donohue, Tichenor, and Olien, in the media practices, the gatekeeping process incorporates the various forms of information control, manifesting itself either in the decision-making regarding the coding of messages or in the acts of “seleção, da formação da mensagem, da difusão, da programação, da exclusão de toda a mensagem ou das suas componentes” (1972: 43) (“selection, the formation of the message, the diffusion, the programming, the exclusion of all the message or its components”, my translation).

In this way, there was a common understanding among all the Frankfurt authors: machines could be producers of cultural content. It's no coincidence then, that, just as we can visit an exhibition of paintings by a renowned artist, we can also visit an exhibition by a photographer. They can deal with themes related to war, nature, and human landscapes or immortalize important moments in the life of communities, such as cultural events, rituals, pilgrimage festivals, or other types of situations. The artist essentially relies on his talent to configure the visual landscape fields, while the photographer uses a device equipped with a 'lens' to fix the visual fields he wants to immortalize. Just as a painter's painting is a work of art, so is photography. So, there are machines designed to produce cultural goods.

For some Frankfurtians, the nature of the content produced by machines (products of technology) is so inert that it will lead societies towards a situation of moral depravity and the loss of human experience, annihilating 'aura', authenticity, and art itself, reducing culture to the law of market value. This whole thesis is part of the axiomatic order of cultural studies and the political economy of the media. It is different to talk about organizational culture, which comes in the wake of Organizational Theory and which, in the field of journalism and media studies, was triggered by Warren Breed's research (1955), from which the processes of standardization of professional practices within journalistic organizations were established, as a result of the references that man's actions germinate. It is this organizational culture that we seek to show here, showing that it is attenuated with the introduction of machines into journalistic production processes, since, while the products of machines can generate axiomatic elements of culture because they result from semantic programming, machines per se do not have a culture of their own engendered by their actions. They follow the established procedures and act in a programmed way, although machine learning points to the breakdown of routines, implying an adaptation of practices according to the inputs received through learning.

Studies on the journalistic narratology of robots point to basic texts, which are not complex in their phrasing or language formulations, let alone in the depth of their treatment of themes. This finding will probably be overtaken by new narratological solutions based on generative Artificial Intelligence, such as OpenAI's ChatGPT robot, which develops texts with a higher level of complexity in the field of syntax, with ample resourcefulness in subordinate clauses. Other technology companies have been tirelessly developing solutions in this field and, invariably, it won't be long before their resources or similar solutions developed from their principles are transferred to the field of journalism. This ends up mitigating one of the criticisms of robot journalism, which is the aesthetic poverty of the texts.

Analyzing the journalistic products developed by robots, some researchers point out that, although they fulfilled the basic requirement of news - answering Lasswell's (1948) five questions: What? Who? When? Where? How? and Why - the truth is that the depth of treatment in the interpretative field was impoverished. In the segments of 'telegraphic' news similar to leads, research has pointed to the operational primacy of algorithms over human capacity. In this cohabitation between humans and machines in production processes, it's important to see that there are sectors where humans have advantages and others where algorithms are more efficient. They are able to surpass humans in handling large amounts of information, systematizing data, managing content and processing statistical data, speeding up the production process, lowering

production costs and making journalism companies viable in the most demanding markets. However, in his study carried out in Sweden, Clister Clerwall (2014) notes that the journalistic product developed by human beings tends to result in texts that contain fundamental elements in the definition of journalism as a profession, such as clarity, depth of treatment and ease of reading. This means that they end up resulting in better understanding and denser information. Despite these gains in human production over algorithms, Clister Clerwall nevertheless argues that bots are more efficient in terms of ‘reliability’, ‘informativeness’ and ‘objectivity’ (Clerwall, 2014: 9). A parallel approach is taken by Angelino Coelho, for whom “a inteligência artificial tem trazido um conjunto de vantagens nas mais diversas áreas e tem sido determinante em vários setores: referimo-nos à redução do tempo e custo da produção, eficiência e fluidez nos procedimentos e comunicação, planeamento e rapidez na resolução dos problemas, racionalização dos recursos, etc.” (Coelho, 2020: 131). (“artificial intelligence has brought a number of advantages in the most diverse areas and has been decisive in various sectors: we are referring to reducing production time and costs, efficiency and fluidity in procedures and communication, planning and speed in solving problems, rationalization of resources, etc.”, my translation).

Let’s use the term ‘informativeness’ as applied by Clerwall (2014) as the amount of information the machine can generate and the multiple possibilities for engendering news, and expanding data news, rather than depth, clarity, triangulation within the angle, creativity, and historical, cultural, geographical or other framing. The scope that human beings can achieve in the field of environmental reporting, describing smells, places, color temperature, reading facial expressions and the feelings expressed in looks, voice density, gestures, signs, or other elements of meaning will be far beyond the ability of bots to decipher meanings, so in this case, the news developed by human beings ends up being more complete than the texts generated by an algorithm. It is in this sense that information built by human beings, when it is well done and built with the distinctive eye of a professional, is still much more complete than the work done by bots.

News from bots is more likely to generate information, while news developed by human beings when done well and complying with all the rules of ethics and the extent of the journalist’s social responsibilities with social formation (to inform, entertain, and educate), generates knowledge, shapes positions, engenders new behaviors and provides inputs capable of contributing to social transformation. This is the densest space of culture, with its high symbolic potential, the result of a social laboratory of meaning, in which men exchange experiences with each other and contribute to the psychological orientation of other members of the community.

Despite the observations about the transposition of human qualities into journalistic texts, the impact of journalistic and business culture on the social control of newsrooms cannot be considered to be of the same proportions as Warren Breed (1955) described in the middle of the last century. In this way, we can see that there is no ‘place of comfort’ for the premises that defend the great strength of newsroom culture in controlling communication practices, since, in the migration from the ‘text and image screen’ to the ‘artificial intelligence screen’, the interpretative production part of journalism has been replaced by the process of systematizing and presenting data, correlating it with space, time and people so that it can take on the form and content of a news story. Therefore, the bulk of what used to be the profession’s identity elements, engendered from the formulation of an organizational identity based on repeated and obligatory

practices, has been replaced by accelerated mechanisms for processing and systematizing data to generate information and, concomitantly, news. The agility of the algorithm, in this case, takes on a superhuman dimension and the bots assert themselves over human beings in the field of precision and reliability. This contributes to the erosion of journalism as a profession, following the traditional conceptions that were solidified over the last century, with the affirmation of the large daily newspapers, the emergence of weeklies and monthlies with interpretative content, being the children of the rotary presses, which imprinted new dynamics on the production process, accompanied by the introduction of four-color printing in the production of print media.

When we ask “What ‘culture’ in the production of robotized journalism?”, it is because the pre-robotization model of professional practice had placed human beings at the center of decisions on the choice of topics to be covered and their components, angling news and facts and establishing a regime of professional practice based on newsroom culture. This newsroom culture was engendered from a set of factors, including the

editorial line and editorial policy of the media outlet, the mission and values of the journalistic company, internal regulations such as the newsroom statute, the code of ethics, the style book, the ethics manuals and a set of other tools that set the parameters for action, generating repeated practices, creating behavior and forming organizational culture. It is this organizational culture that influences the journalism production process in several of its stages, but it is only applicable to human beings because machine learning is not triggered in the same way as human learning and socialization. Therefore, the model for structuring the professional practice of journalism was based on an anthropocentric parameter, placing the human element as the pivot of the entire process. It is this model that ends up, in some way, being challenged and overtaken by Artificial Intelligence, which leads us to question what to do with the cultural substrates that newsrooms would eventually generate, following the axioms of Organizational Theory.

There is a clear paradigm shift here, in which the media ecosystem is populated by human subjects and non-human actors, with screens being the mirrors through which this fusion and cohabitation shines. This new system allows man and robot to cohabit and at the same time compete in the practice of journalism, as they outperform each other in different segments of the production process. The journalistic profession is thus becoming an increasingly fragmented territory, losing the solidity it acquired with the affirmation of the news industry and the establishment of frameworks to regulate the profession, acting upstream in defining who practices journalism through the establishment of professional licenses and downstream, assessing the conformity of published content with the normative, deontological and axiological frameworks of the profession. In this way, it becomes difficult to control access to the profession for robots, for example by requiring them to have a professional license, academic qualifications, or any other system for gauging skills, accreditation, and authority in the field.

The upstream quality control of journalistic practice, which results from the processes of supervising the products made available in the public space through the communication regulatory agencies, also ends up not reaching the direct producers of the news, when they are made by robots. There is no way to penalize a robot for a mistake made in the production of a news story. You could even consider deactivating it from the productive fabric of a company.

Even so, it's not enough to penalize the agent producing the news content because not being a human being and not having feelings, the robot cannot feel penalized. In this sense, there are very serious challenges facing the profession, leading us to think that newsroom culture is not only an element of social control of newsrooms, but also human semiotics in news production, which generates responsibilities and commitments to ethics, axiology, legal norms and organizational infrastructures that structure the profession within society.

3. Artificial Intelligence Applied to Journalism in Cape Verde: the debate beyond newsroom culture

The application of Artificial Intelligence to the field of journalism is one of the concerns that involves and challenges communication and media professionals and researchers today. As a result, there has been a growing debate on this issue, involving the nature of its application, its impacts and effects on communication processes and the media professions in general. This reality is the result of the increasing digitalization of the signs that mediate human relations, placing technology at the epicenter of the whole process, which led us to write in 2022 that “o espetro digital da comunicação constitui a face das tecnologias, refletida nas práticas quotidianas das pessoas. São várias as áreas da vida social nas quais as tecnologias têm tido efeitos, alterando os *modus operandi*, as rotinas produtivas e procedimentais, as formas de atuação e, em última análise, os processos de mediação social” (Évora, 2022: 443) (the digital spectrum of communication is the face of technologies, reflected in people's daily practices. There are various areas of social life in which technologies have had an effect, altering *modus operandi*, productive and procedural routines, forms of action and, ultimately, the processes of social mediation (Évora, 2022: 443), my translation). In this diversity of technological application areas, the mass communication sector is gaining relevance. Technological convergence has brought about both media integration and the globalization of symbolic interaction, pushing the world into a new atmosphere of communication and establishing contacts. Life in the endogenous community is now lived in parallel with the cyber experience in the global community, radically altering the perception of experience and bringing the real and the virtual closer together.

Concerning the ‘virtual’, Pierre Lévy (2007) conceived it as a reflection of the changes that technological growth has brought about in modern societies and the changes in the ways in which human beings interact. In his observation, this reality becomes present through global networks that instrumentalize mediation processes, which facilitate communication, with the computer being a fundamental part of this operation. Nowadays, there is a profusion of devices that subsist as prostheses and extend the human being, allowing them to be permanently connected to other members of the human community, within their network of interaction.

Analyzing the increase in the computerization of social relations and social infrastructures, we can see a densification of the information society and virtuality is becoming increasingly important at this juncture. Based on these new forms of sociability, we can reflect on the contributions made by Lévy (2007), for whom the virtual allows people to ‘be together’ and generates the feeling that the relationship takes place in proximity, humanizing contact and allowing us to feel that things happen ‘among us’. In this way, the virtual brings us closer together, humanizing the relationships

developed in the intermittence of the ‘machines’, enabling us to listen to the other and manage emotions, establishing regimes of connectivity that cause empathy or antipathy.

The technologization of social processes is an important movement in social transformation, with an orientation towards the digital spectrum, which translates into a process of convergence and integration of societies. In fact, “a crescente digitalização do espaço público conduziu a um incremento de mediação e da formulação das decisões de forma acelerada” (Évora, 2023: 70) (the growing digitalization of the public space has led to an accelerated increase in mediation and decision-making (Évora, 2023: 70), my translation).

Looking at the subject of our study, António Joaquim Fernandes, a professor at the University of Cape Verde and a specialist in Data Science, argues that “the impact of AI will be great in all areas that build and use ‘knowledge bases’, because if search engines already helped to access and filter, AI will not only help to access data, but also to ‘create’ content based on patterns” (Interviewed on 02.08.2024). It is in this segment that one of the main concerns with the application of Artificial Intelligence and its endorsement in the field of mass communication lies, since the creation of content was, before this application to these functionalities, essentially reserved for human beings, who used machines as auxiliary instruments and supporting tools in the process of creating meanings of things in our societies, through language systems and the processes of textual, iconographic and symbolic coding.

For Tito Olavo Rocha Gonçalves, who has a Bachelor’s degree in Philosophy, a doctorate in Psychology, and is a professor of Communication Ethics, having taught the Multimedia Communication course at the University of Cape Verde, the current scenario presents us with a situation of increasing interpenetration of technologies in human experiences and the involvement of Artificial Intelligence resources is a symptom of this time. “The so-called fourth Industrial Revolution, AI, is itself a constantly evolving tool. It, like the high technology that it is, has redefined journalism in Cape Verde and around the world... its exploitation in the journalistic field and the media field as a whole. This does not mean, however, that this fusion is exempt from ethical and deontological concerns, many of which are inherent to the profession itself. Its application to journalism is gradually growing in Cape Verde” (Tito Olavo Rocha Gonçalves: Interviewed on 13.08.2024).

For the aforementioned professor, the application of Artificial Intelligence to Journalism is both innovative and dangerous. It is therefore imperative to understand the risks and challenges associated with this new map of media production, analyzing in depth the dimension of the application of algorithms to professional fields, above all because of the implications that the media has for shaping public opinion, promoting civic culture, strengthening values, principles and national identities and establishing a sense of collectivity and belonging.

It is important to point out that all the theorizing that took place around the social role of the media throughout the 20th century was based on the understanding that they were instances of social mediation, but also laboratories for reformatting values and itinerant cultures, which circulate and densify around the world, under the protection of the worldwide movement of globalization, as a process of integration that deepens and densifies every day. The triple social

function of the media, which involves the processes of information, training, and entertainment, has always assumed that the media is an important segment of society, which feeds on eminently social phenomena and feeds society with cultural and symbolic substrates and elements that consolidate identities (Évora, 2011; 2018). For this reason, the media field - from the conception to the production and reception of symbolic content - has always been filled with essentially human landscapes, and all the paraphernalia of technological equipment that has participated in the construction of the media industry's itinerary has had the purpose of assisting in the assembly of the semantic infrastructure and not leading the processes of signification. For this reason, the production and dissemination of news on its own is a 'step backward' with all the work that has been done and requires a rethinking of some of the theoretical assumptions that have served as the basis for explaining communication phenomena over the years, both in their procedural dimension and in the field of effects.

3.1 Artificial Intelligence and Journalism: analysis of the impact from a Cape Verdean perspective

Although the application of artificial intelligence to the field of journalism and communication (from a broader perspective) is not widespread in Cape Verde, it is often found in the communication practices of Cape Verdean media operators. In this case, there is the experience of *Televisão de África* (TVA), coupled with Saulo Montrond's Green Studio business platform. However, we will focus on this particular case later.

In this section, we seek to analyze the perceptions of the different Cape Verdean social actors about the problem, since it is an issue that challenges all societies today. Thus, Cape Verdeans, both producers and consumers of media products, have a high rate of socialization in cyberspace (due to the dense penetration of mobile internet in the country) and end up having permanent contact with communication orchestras and online sales platforms based mainly on the scope of Artificial Intelligence. The great penetration of the social network Facebook in interactive mediation among Cape Verdeans is a sign of this contact since this platform of the US company Meta has an increase in Artificial Intelligence in its operation, with powerful algorithms that respond to a set of objectives that the company proposes to develop and achieve in the market.

If Artificial Intelligence has a wide application in the field of communication and social mediation, the field of journalism is not left out. As a result, there has been a lot of debate on this subject, which has almost always been taken to opposite poles, concentrating the discussion between the list of benefits and the mapping of the potential damage, constraints, or challenges it could pose for the media professions. It is therefore necessary to deepen studies in the field of Mass Communication Research, intending to provide more in-depth information on what Artificial Intelligence represents for the architecture of today's communication infrastructures and processes.

The debate on the impacts of the application of Artificial Intelligence in the field of journalism has mobilized many experts, who have been pointing out the positive and negative aspects of this process. Professionals in the field are therefore looking at the problem with a certain apprehension. However, António Joaquim Fernandes, a specialist in Data Science, believes that we shouldn't focus on the way journalism is done, pointing out that it began with production

using ‘pencil and paper’. After that, there was the typewriter, then computers, and today we have the application of Artificial Intelligence to communication and media production. For this reason, the researcher suggests that form is not the most important element in the process. “The robotization of information dissemination is not new. It can be seen in the ‘sounding boards’ that the mainstream news media have become, which follow other people’s agendas and editorial lines, not to mention the so-called ‘international news’ in national newspapers, where the journalist only reads the information that is passed on to him/her” (António Joaquim Fernandes: Interviewed on 02.08.2024).

Professor António Joaquim Fernandes’ perspective of the problem is somewhat similar to that of Heder Savy, Head of Production and Programs at the Cape Verde Television Station (TCV). With a specialty in audiovisual and television production, Heder Savy sees an auspicious future for journalism supported by algorithms with high data processing capacity. The interviewee emphasizes, above all, the acceleration of production efficiency, which will ultimately increase the economic efficiency of media companies that use these technological tools. Considering that journalism encompasses different areas of intervention, Heder Savy emphasizes the possibility of algorithms acting more assertively in repetitive tasks, adding that, with the implementation of digital robotic resources in the production chain of media companies, it is possible to “significantly transform the way journalism is practiced, improving the speed and scope of reporting, but it must be implemented carefully to maintain the fundamental values of journalism” (Heder Savy: Interviewed on 07.08.2024).

Looking at the new media scenario that is becoming disruptive with the introduction of Artificial Intelligence into the productive fabric of journalism, Sara Almeida, a journalist with the Cape Verdean weekly *Expresso das Ilhas*, believes that the impacts are starting to be felt, “and, so far, I think it’s a very positive impact in that it’s starting to establish itself as a powerful support tool. We can see this, for example, in the transcription of interviews (sound- script), whose programs have become increasingly accessible and more accurate, saving journalists a lot of time. We also see this in the detection of errors in a given text (although it is not very precise in this regard). It’s also good for more targeted research” (Sara Almeida: Interviewed on 12.08.2024).

As we can see, although there are some fears about the application of Artificial Intelligence to the field of journalism, the current perspective of the different professionals in Cape Verde, including those in the media, is positive in relation to this application, if only because, if we look at the list of applications listed by Sara Almeida (interviewed on 12.08.2024), it is still seen as helping professionals in their daily tasks. The perspective of its application in the international spectrum is more densified, precisely when there are situations of human beings being replaced by algorithms, which translates into a reduction in job offers. For some advocates of this more robust increase in Artificial Intelligence in the field of journalism, there is no reduction in job opportunities, but a transformation of professions, so there is still a need to readjust professional profiles in the field of communication and the media. In this way, Sara Almeida, a journalist with the newspaper *Expresso das Ilhas* (interviewed on 12.08.2024), argues that the implications of Artificial Intelligence for journalism, both in Cape Verde and on the international stage, will depend on what journalists and newsrooms do to apply it. As for optimizing the work of communication professionals, the tendency is for this to increase, and communication and

media operators and professionals in Cape Verde tend to seek its best application, intending to result in efficiency gains. The move towards more complex content creation processes within the scope of AI's productive autonomy, as some countries have already experienced, is not certain to happen in Cape Verde in the next few years and the legal framework regulating the media and communication sectors is not clear on this point. That's why it's important to keep an eye on the evolutionary paths of this sector, not least to better understand how the Regulatory Agency for the Media (ARC - Agência Reguladora para a Comunicação Social - in Portuguese), which acts above all in matters concerning media content disseminated in the public space, should proceed.

The introduction of Artificial Intelligence into the production fabric of international journalism in countries with a high level of penetration and technological development, such as the United States of America and the Netherlands, involves the production of short pieces of content, especially information that is embodied in short news items. In Cape Verde, this can be done through the creation of systems for processing more basic texts, such as press releases, communiqués and text types with unified formats, which tend to be sent to newsrooms through the media departments of 'organized societies': government, city councils, NGOs, Embassies, Intergovernmental Organizations, Universities, Churches, among others. Indeed, the interventions of the 'machine' in the actual construction of the semantics through which public opinion is formed cannot be confined to the domain of Artificial Intelligence. It will continue to be important for humans to proofread the final text, although there have already been experiments in automatic publishing which, however, always end up entailing risks in terms of the credibility of the news.

Two of the main functions of Artificial Intelligence in the field of journalism are the virtual translation of texts written in foreign languages and the linguistic correction procedure, which has already been effectively applied in Cape Verdean journalistic circles. In this respect, Artificial Intelligence tools play an extremely important role, helping to make up for the shortcomings of practically every newsroom in the country, both in terms of incorporating linguistic proofreaders of texts and the translators themselves from and into foreign languages. For Sara Almeida (interviewed on 12.08.2024), Artificial Intelligence is helping to free media professionals from menial tasks, enabling them to devote more time to topics that require in-depth study. The journalist believes that real journalistic work will never be achieved with the use of digital robots unless they evolve to a sensory level that allows them to travel to the field, conduct interviews, contact sources, and monitor the development of events that can be reported on.

It is also important to emphasize that another area that has most marked the studies and research in the fields of journalism and media, throughout the twentieth century, is embodied in the structuring and mapping of criteria that govern the processes of newsworthiness, mapping the associated news values. The application of the newsworthiness criteria implies a strong human judgment, in that, according to the categorical elements, we proceed to the gatekeeping, valuing the variables established and agreed upon in the interpretative community or the 'tribe' (Maffesoli, 1998; Traquina, 2004; Zelizer, 2000). The introduction of algorithms in news production routines, for Sara Almeida (interviewed on 12.08.2024), does not invalidate the implication of the newsworthiness criteria in journalistic practices, which presupposes that, even if the algorithms are included in the process of selecting newsworthy events, their programming should obey the codes of newsworthiness, so that the operation can continue to be considered

as news and the final work be classified as journalistic. Sara Almeida (interviewed on 12.08.2024) also argues for the need to continue applying the criteria of newsworthiness, even in contexts where artificial intelligence is used. This is essential for the profession because such “criteria and values are fundamental to ensuring that news is relevant, accurate and ethical”. Using the algorithm, it is possible to “identify trends and data, but the final decision on what is newsworthy should continue to be made by journalists” (Sara Almeida: Interviewed on 12.08.2024).

As we can see, the respect of newsworthiness criteria is fundamental for the professional identity of journalism and, concomitantly, for the recognition and framing of journalistic products. Thus, Sousa argues that “a enunciação jornalística está submetida a determinadas regras. Uma mensagem jornalística deve cultivar a simplicidade, a clareza, a concisão e a precisão para ser facilmente apreendida e processada. Deve também obedecer a critérios de seleção e hierarquização da informação, pois essa é uma das contingências do jornalismo. O domínio das regras é uma manifestação de profissionalismo jornalístico. São os saberes, a função/missão e o campo de atuação que separam o jornalismo das restantes profissões” (Sousa, 2006: 213) (the journalistic enunciation is subject to certain rules. A journalistic message should cultivate simplicity, clarity, conciseness and precision to be easily grasped and processed. It must also comply with criteria for selection and hierarchy of information, because this is one of the contingencies of journalism. The rule of rules is a manifestation of journalistic professionalism. It is knowledge, function/mission and field of action that separate journalism from other professions (Sousa, 2006: 213), my translation).

Another important issue that marks journalistic activity is the credibility of the information conveyed, the media, and the information professionals themselves. Studies developed by Hovland, Lumsdaine, and Sheffield (1949), in the framework of the ontological structuring of the Theories of Limited Effects, had identified the ‘law of the issuer’, according to which persuasion, through the It becomes more effective when the message is conveyed from a credible source. “A mesma mensagem, consoante o emissor seja mais ou menos credível aos olhos do receptor, tende a ser mais ou menos persuasiva. Porém, segundo os autores, a ‘lei do emissor’ funciona, principalmente, logo após a mensagem ser consumida, porque, posteriormente, os seus efeitos perdem força” (Sousa, 2006: 497). (The same message, depending on whether the sender is more or less credible in the eyes of the receiver, tends to be more or less persuasive. However, according to the authors, the ‘law of the issuer’ works mainly after the message is consumed, because its effects subsequently lose their force (Sousa, 2006: 497), my translation). Although this last part of the message points to the prevalence of persuasive effectiveness through a phenomenon called ‘latent effect’ (Santos, 1992: 36), the credibility of the issuer is important to reinforce the persuasive potential of the messages of the social media, as proved by Hovland, Lumsdaine, and Sheffield (1949).

In this sense, journalism, although integrated into a process of productive automation, cannot ignore fundamental elements that contributed to the establishment and affirmation of the profession, such as rigor, seriousness, truthfulness, and credibility. Thus, Sara Almeida (interviewed on 12.08.2024) considers that it is possible to maintain credibility, “if AI is used transparently and ethically. It is important that readers know when AI is used and that there is human supervision to ensure the accuracy and integrity of information” (Sara Almeida: Interviewed on 12.08.2024). In

the same line, Tito Olavo Rocha Gonçalves, professor of Communication Ethics, argues that the level of incorporation of automated technology in news production cannot be called into question “the rigor in the treatment of information, the confrontation of sources, the contradictory, that is, the respect for a set of ethical and deontological principles that the profession requires. There are several dimensions of action in which they demonstrate that the alliance between AI and journalistic tasks brings benefits” (Interviewed on 13.08.2024).

In this respect, it is worth noting that the perspective of researcher António Joaquim Fernandes (interviewed on 02.08.2024) is quite different, and he argues that, hardly, AI can affect the credibility of journalism, since the profession is no longer very credible. He also argues that there has been an instrumentalization of the processes of significance, pointing to the manipulation of ‘international information’. It should be noted that the application of Artificial Intelligence to the field of production of social meanings, with the use of media operation structures, brings a set of other concerns. One of the central themes of the debate on journalism has to do with the regimes of responsibilities that the profession entails and that are often solidary and can be imputed, both the professionals who signed the pieces, as the directors of the media, who authorized the publication and allowed a certain subject to be disseminated in the public space. In this chapter, generative artificial intelligence brings a set of challenges, since the text may not be authored by an individual and, under these circumstances, the responsibilities may eventually be determined at other levels. The essential question to which we seek an answer is about who is responsible for a piece of information produced by the algorithm and that can cause damage in the legal sphere of third parties. Is it the responsibility of the person who programmed the algorithm? Is it the social media company that acquired the resources of Artificial Intelligence and integrated them into its production chain? Is responsible for the digital, audiovisual, or multimedia publishing of the media company? Can it still be used against entities that were not addressed in the previous questions? There is, here, a set of very relevant questions for which, however, no concrete answers have been built to remedy any cases that may arise. In any case, the question of the burden of responsibility for the harmful effects of journalistic pieces does not disappear just because there is no human being with direct and immediate implications in the process of producing the text.

Sara Almeida always insists on human supervision of any content produced by the algorithm, to guarantee compliance with the profession’s criteria. In the last ratio, “responsibility must remain with human editors and journalists. Even if a piece is produced by AI, there must be human supervision to ensure the accuracy and ethics of the content” (Sara Almeida: Interviewed on 12.08.2024). A similar position is expressed by Tito Olavo Rocha Gonçalves, professor of Ethics in Communication, for whom “the responsibility for the burden of the piece, when it is something produced essentially by Artificial Intelligence, in my view, consists in taking into account that the human factor should never be left aside, and the final decision should belong to the editor. This is, for example, in the case of automated journalism, it is the editor who must evaluate and decide what can or cannot be published and also he will be responsible for systems and accountability if there are ethical or deontological problems” (Interviewed on 13.08.2024). These questions, still, have no final answers. The debate on these issues is not only in Cape Verde but even in countries with a longer history in this matter, no final formula for the problem has yet been found.

Likewise, the question of journalism as a cultural space has also mobilized arguments among thinkers of the technological media field and the algorithmizing of news.

3.2. From the Culture of Essays to the Interpretative Community: for an axiology of journalism supported by artificial intelligence

Some Cape Verdean journalists understand that Robotized Journalism will not constitute a deconstruction of the professional identity of journalism as an interpretative community and will not even call into question the sociological constitution of the profession, generating its own culture, that emerges in the newsroom, through socialization processes. Sara Almeida argues that the issue arises more in the labor field. “It may lead to more unemployment within the sector, since it can replace journalists in the most undifferentiated tasks, taking into account that journalists have more free time to devote to more in-depth pieces (i.e., a single journalist can dedicate himself/herself to various reports). But I don’t think it will deconstruct identities. AI can write better than me or my colleagues but doesn’t write ‘as’ me/us. In my view, AI is only a problem if there is no human eye/control in the process. If there is, I repeat, it’s just a fantastic tool” (Sara Almeida: Interviewed on 12.08.2024). Thus, the essence of journalism, as a profession that results from deep social interaction, is not confined.

The idea of urban tribes that Michel Maffesoli (1998) used to refer to urban communities and that Nelson Traquina (2004) borrowed to refer to the journalistic community, is still preserved, if Artificial Intelligence is applied to journalism with the reservations identified by Sara Almeida. In this sense, the perspective of Barbie Zelizer (1993; 2000) also prevails, who classified communication and information professionals as an ‘interpretative community’, assuming that they share common values and principles, that are transversal to the whole typology of media organs. Thus, it is noted that the essence is established in the profession and not properly in the means of dissemination of information content. The criteria of newsworthiness and the news values, as semantic and conceptual constructs that are the basis of systematized thinking about professional practices, continue to prevail in the debate on journalism supported by Artificial Intelligence because regardless of the applied technology, journalism - as a profession, as a practice, and as a concept - cannot degenerate to the point of losing its essence. “The criteria and values are the same and still need scrutiny and human decision. In addition to these, however, a need for demystification of AI and ethically transparent use. The production process will be simpler, especially for ‘basic’ journalistic genres, but this process includes all the supervision that the journalist must make use of and the content whose creation is supported, to a greater or lesser degree, by AI. AI only works with what we give it, with our inputs, therefore, the interpretative community maintains its role and profile” (Sara Almeida: Interviewed on 12.08.2024).

It is important to acknowledge that the interpretation of Heder Savy, Head of Production and Programs of Television of Cape Verde, presents points of convergence and divergence concerning the proposals of the Express das Ilhas journalist. The two communication and media professionals agree on the premise that Artificial Intelligence opens space for journalism professionals to devote themselves to work of greater density. Heder Savy argues, in this respect, that “robotized journalism can complement the work of journalists, allowing them to focus on more analytical and investigative aspects of the profession”. However, unlike Sara Almeida, she argues that “robotized journalism can deconstruct the identity of media outlets by reducing the presence of

human touch in reports and narratives” (Heder Savy: Interviewed on 07.08.2024). He also argues that there is a possibility of disintegration of the concept of ‘interpretative community’ by the introduction of Artificial Intelligence in the production chain of journalism, since, according to him, “machines do not share human values and subjectivity. However, AI can be used as a tool to support the interpretive community by providing data that can enrich news analysis and contextualization” (Heder Savy: Interviewed on 07.08.2024).

It is important to note that the professor of Ethics of Communication, Tito Olavo Rocha Gonçalves, understands that there must be a congregation of professional values around the journalistic community, which must assume the productive processes and lead all production and exhibition of media products, particularly in the field of news production. With this, it is possible to ensure greater robustness of the interpretative community, which must ensure its balance and credibility around the values of the profession. Indeed, the use of Artificial Intelligence in the field of journalism should succeed, as in any other area, “since the fruits harvested from the work derived from the binomial Man and AI are greater than the individual work of each party alone” (Tito Olavo Rocha Gonçalves: Interviewed on 13.08.2024). To ensure the integrity of the journalistic class and communicators in general and their foundations in the values of the profession, the aforementioned argues that journalistic work and media operations and construction of social meanings should be supervised by human beings, to whom should be confined the power of decision, in last ratio, in the publication of any content. For this, he calls for the role of editors as central figures in journalistic retreats, whose role and responsibility are strengthened within the newsroom, with a view to comprehensive supervision of the entire symbolic production chain, not limiting itself to the field of human action, but following the results of the incorporation of Artificial Intelligence and the content generated from its functionalities.

3.3. TVA's Experience on and Understanding of the Issue

Television of Africa (TVA) is one of the most recent channels that has emerged in the Cape Verdean audiovisual panorama, having taken as its starting point the experiences of Saulo Montrond's television production which, within the framework of his incorporated a set of communicative solutions, including audiovisual production, advertising production, content development in the form of institutional videos, streaming services for sports events (through its Green Sport channel), the holding of major television events, such as the reality show program, called ‘Casa do Líder’.

On the official website of the television station, TVA assumes as

“um canal moderno de vocação multimédia, montado e a funcionar com base na utilização das novas tecnologias e sempre em sintonia com as inovações que vão acontecendo no setor da teledifusão e da Comunicação Social, encontrando-se ao serviço de Cape Verde e de África e objetivando assegurar ao leitor o direito a ser informado com verdade, rigor e isenção” (Televisão de África (TVA): “Editorial da TVA”)

“a modern multimedia channel assembled and operating based on the use of new technologies and always in tune with the innovations that are happening in the television sector and Social Communication, looking forward to serving Cape Verde

and Africa, aiming to ensure the right of the reader to be informed with truth, accuracy and exemption” (my translation).

The emergence of TVA, as well as that of TV Cidade (Santiago Island) and Televisão da Cidade de Santa Maria (TCSM TV, Sal Island), results from the use of remaining spaces in the television spectrum, which emerged with the implementation of Digital Terrestrial Television (DTT) in Cape Verde. Presenting itself as a general television service channel, TVA points to areas of national and international coverage, focusing on the Cape Verdean and African societies in general.

For all intents and purposes, it is necessary to realize that there is a whole history until the creation of Television of Africa. In February 2013, on one of his trips to the United States of America, Saulo Montrond gave an interview to The Network Journal, expressing his interest in diversifying the service offering, which at the time was focused on advertising, marketing, and audiovisual production:

“Queremos entrar na produção de conteúdos televisivos. Já temos a experiência de produzir três temporadas de um programa, o “Vencedor”, que foi transmitido pela Televisão Nacional de Cape Verde, TCV. A longo prazo, os nossos projetos incluem a criação de uma ou mais estações de televisão. Em breve, lançaremos um programa de televisão, uma espécie de reality show. Será um conceito semelhante ao fenómeno ‘Big Brother’, mas obviamente com especificidades diferentes e bem adaptadas à nossa realidade e contexto sociocultural” (The Network Journal: “Green Studio: On The Fast Track in Cape Verde”)

“We want to enter the production of television content. We already have the experience of producing three seasons of a program, the “Winner”, which was broadcast by the National Television of Cape Verde, TCV. In the long term, our projects include the creation of one or more television stations.

Soon, we will launch a television program, a kind of reality show. It will be a concept similar to the phenomenon ‘Big Brother’, but obviously with different specificities and well adapted to our reality and sociocultural context (my translation).

In this way, the television program ‘Casa do Líder’ emerged, with executive and editorial production of Green Studio, which marked the Cape Verdean audiovisual panorama, in the sense of being the first reality show program made in the country and by a national audiovisual company. Green Studio defined its core business from the outset: graphic design, multimedia production, and consulting services in marketing and television advertising. With the initial effort of attracting and retaining customers, it was possible to ensure, in its profile, the entities with greater capacity to purchase audiovisual and communication services in Cape Verde, which allowed it to establish itself on the market and its financial stability, a fundamental reason for the economic sustainability of projects in the audiovisual field. Thus, back in 2013, Saulo Montrond had told the information professionals of The Network Journal that “its clients are some of the largest companies in Cape Verde, as well as the government, including the airlines TACV, the

telecommunications company CVMóvel, Shell, the Stock Exchange of Cape Verde, the National Police and the Government of Cape Verde, among many others” (The Network Journal).

Analyzing the investment made in the company, Green Studio, and the demands of the media industry, both in economic terms and in the technological field, Saulo Montrond recognized difficulties in the technological update of its operations, sustaining itself in need of large investments in equipment and software for the normal growth of the company and the design of new evolutionary paths. Despite the difficulties, he argued that his investments were essential to ensure the quality of products and services of the company Green Studio. “We Invest such that a market of our size can only guarantee the return in the medium or long term. To be at the forefront, we must constantly update at all levels, from equipment and technologies, but also and especially training, and human resources” (The Network Journal).

Even before his project evolved into the creation of a television station that broadcasts through the broadcasting system, Saulo Montrond sought to make money from its technological resources and, with this, tried to overcome the trade-off and monetize the financial investments in the company, diversifying the areas of action in the market. It was in this sense that he expanded his operations to the production of events and transport of signals through the live stream system. These accumulated experiences led to the emergence of a new television station, which currently broadcasts in open signal in Cape Verde and is included in platforms for the sale of subscription television services in Portugal and other countries. Thus, Television of Africa (TVA) presents itself as the media outlet in Cape Verde that has shown more appetite for the integration of Artificial Intelligence into its productive fabric. At the beginning of the operationalization of its news service, the station resorted more to ‘synthetic voices’, generated by generative Artificial Intelligence, which reproduced the news utterances, with a phonology that was far from the Portuguese linguistic identity, of Cape Verdean matrix. The accents, almost always ensured by a male vocal prosthesis, were exaggeratingly ‘alfacinhas’ (the accents of Lisbon and its inhabitants), departing from a context of own linguistic mestizo, that results from the configuration of the identity of a Portuguese language spoken and developed from a social laboratory of everyday Cape Verdean accent.

Other areas of the construction of television semantics have been heavily affected by artificial intelligence. The graphics, the generic and the very synthetic digital background under which the pivot was based - when it began to be seen as the guide of the News alignment in the information services of that station, that initially began to offer a news sequence without the guidance of a pivot -, were also greatly affected by this increase in technology, with various implications on the perception of reality provided to viewers. In this sense, looking at the audacity scenario of the programmers of the television station, Heder Savy argues that TVA can apply Artificial Intelligence to its functional base to improve the efficiency and accuracy of its operations, It is necessary to ensure the balance so that the virtuality of technologies do not overlap with the creative, analytical and judgment capacity of human beings. Thus, looking at the operation of this private television station, Heder Savy understands that Artificial Intelligence can endow it with added value in its production process, providing it “Greater operational efficiency, ability to analyze large volumes of data, personalization of content for viewers and automation

of repetitive tasks, allowing journalists to focus on more creative and analytical work” (Heder Savy: Interviewed on 07.08.2024).

The experiments undertaken by the television company mentioned above are described as innovative for the Cape Verdean context, but without knowing the impact on the national media system. One of these areas of reflection on this matter has to do, above all, with the performance of the Regulatory Authority for Social Communication (ARC). It is unknown whether ARC has made a public pronouncement on the matter or if they have taken a strong position on the subject. This question becomes interesting if we consider the rigor that has been shown in the placement of voice in television plays by trainees. They face difficulties at the beginning of their professional career, particularly when they enter technical-scientific internships in national television companies. They are limited in the vocal narration of their pieces since the entrepreneurs of the sector have claimed difficulties in sustaining such options before the regulatory authority of the media in Cape Verde. In some cases, when there are interests in which the trainees integrate such media companies, are very responsible for these information organizations that try to ensure that the final students can complete their university courses and apply for a Professional Journalist License. However, in this scenario, it is interesting to know a more solid position of the Regulatory Authority on the current situation in the country, in which the trainees, as human beings, cannot endorse their voice to the sound constitution of television and radio news pieces, and the ‘off-news’ has been produced through synthetic voices that emerge from generative Artificial Intelligence. This leads us to question, in the case of consent, if the ‘voices’ generated by generative Artificial Intelligence pass, also, like the human being, for a probationary period, embodied in the internship for access to the license for the legal exercise of the profession.

In the case of students leaving universities, the probationary period takes place in two stages: first, they undergo a technical and scientific internship, which enables them to complete their degree, after which they defend their final thesis in public examinations. Then they move on to the stage of the Professional Internship, which allows them to have access to the Professional License. Thus, the application of Artificial Intelligence in an audiovisual narrative, using synthetic voices, built through generative processes places us in a situation of undefinition of contexts suitable for the determination of equity in the treatment of the matter in question, since, Artificial Intelligence not being human, we cannot even discuss the issue of justice, that implies equal treatment in access to authorization for the exercise of their tasks as journalists duly licensed based

on professional license. Thus, it is emphasized that if there is an enabling process that takes the graduates in Journalism and Communication Sciences to the stage that allows them to lend their voice to news broadcasts, It is questioned how the problem of the construction of the legitimacy of ‘synthetic voices’ in journalistic texts can be understood and what are the steps to verify the merit for vocal prostheses to integrate the production processes of journalistic companies. Thus, it would be interesting if the Regulatory Authority of Media itself could open a debate on this matter and provide information to the Cape Verdean society on the interpretation of the professional environment of journalism in which synthetic vocal prostheses are usually integrated with processes of social significance, through the narration of audiovisual news.

3.4. *Journalism, AI, and the Cape Verdean Media System: analysis of transdisciplinary perspectives*

Looking at the possible advantages and disadvantages that Artificial Intelligence can bring to the field of journalistic practices, Sara Almeida does not think that the territorial dimension and geographical density are elements that may constitute some kind of specificity. Therefore, she argues that the implications are in a proportion equivalent to what can be recorded in other countries. Likewise, she contends that there is no way to escape the orchestra of algorithms in the field of journalism, given the media context of the country, considering the fact that the increase in artificial intelligence use allows the social media of the archipelago to increase production without having to increase the number of employees. “At the level of human resources, it will be possible to do more with less. There is also access to tools at increasingly lower prices, which has some impact on the sustainability of companies. However, I do not know if at a relevant level. In fact, I think the impact on the sustainability of companies is quite low. In the opposite direction, there may be greater media production, yes, and even an increase in quality, taking into account that the journalist is almost free of the more ‘mechanical’ tasks, such as transcribing interviews” (Sara Almeida: Interviewed on 12.08.2024). The interviewee looks at the Cape Verdean media context ‘with fear’, since, as she argues, regardless of Artificial Intelligence, there are structural issues that persist, among them, the low readership and small size of the market. The media market in Cape Verde is indeed structurally small and the core business is therefore low. However, the dematerialization that digital imposes as order implies a regime of action beyond borders. This regime of action should not be limited to the areas of axiological influences of the Cape Verdean media, as well as to the search for new sources of revenue.

In the context of a study we developed, we have written in 2022 that:

“a internacionalização não tem sido uma característica específica das empresas cabo-verdianas. Assim, defendemos que ela não marca o perfil das empresas cabo-verdianas de diferentes setores e nem as empresas mediáticas têm apresentado um perfil de operadores internacionais. Entrando para o ciberespaço e desenvolvendo os conteúdos nas plataformas digitais, esses produtos das organizações empresariais cabo-verdianas passam a estar disponíveis fora do contexto geográfico de Cabo Verde. As plataformas digitais da RTC, S.A. ou da Record Cabo Verde e/ou outras empresas que operam no ramo da comunicação social cabo-verdiana têm um potencial alcance internacional, na medida em que, estando alojadas nas infraestruturas da internet, podem ser acedidas e consultadas a partir de qualquer parte do mundo onde haja pontos de conexão com a internet, sem que haja restrições de acesso aos conteúdos no território” (Évora, 2022: 439)

“the internationalization has not been a specific feature of Cabo Verdean companies. Thus, we argue that it does not mark the profile of Cape Verdean companies from different sectors and neither media companies have presented a profile of international operators. Entering cyberspace and developing content on digital platforms, these products of the Cape Verde business organizations are now available outside the geographic context of the country. The digital platforms of RTC, S.A. or Record Cape Verde and/or other companies operating in the field of social communication from Cape Verde have a potential international reach, as being hosted on the internet infrastructures, can be accessed and consulted from any part of the world where there is internet

connectivity, without restrictions on access to content in the territory” (Évora, 2022: 439, my translation).

Despite this finding, we argue that the media companies of Cape Verde, although with content available internationally, are not international players.

“Merece consideração o facto de a internacionalização das empresas implicar que elas desenvolvam operações económicas fora do seu espaço geográfico de surgimento. Deste modo, apesar de as empresas mediáticas cabo-verdianas terem presença nas plataformas digitais, não chegamos a um patamar em que consideramos que elas alcançaram um perfil de empresas internacionais, na medida em que não conseguem desenvolver operações financeiras fora do seu espaço geográfico oficial de estabelecimento” (Évora, 2022: 440).

“It is worth, considering the fact that the internationalization of companies implies that they develop economic operations outside their geographical area of origin. Thus, although the media companies of Cape Verde have a presence on digital platforms, we do not reach a level where we consider them to have reached a profile of international companies, in so far as they cannot develop financial operations outside their official geographical area of establishment” (Évora, 2022: 440, my translation).

Thus, looking at the digital field of Cape Verde, Heder Savy considers that there are real possibilities for the dissemination of the use of artificial intelligence in journalism, “especially if there is an investment in technological infrastructure and training of professionals”. Furthermore, Tito Olavo Rocha Gonçalves summarizes the essential question that is under analysis: “It seems to me that in the markets of small companies like Cape Verde, AI allows a greater media production, contributing to better support the sustainability of companies because, in the case of journalism, AI will have a great impact, because it has the ability to produce news quickly and respond to a large and immediate demand of readers. AI has brought a wave of transformation to business management, through automation that will increase productivity exponentially. It also allows the improvement of the speed and solidity of decision-making and enables employees to dedicate themselves to more strategic tasks with greater added value” (Interviewed on 13.08.2024).

Analyzing the problem from the angle of economic efficiency, Heder Savy considers that the advantages of applying Artificial Intelligence to journalism are essentially in the productive and distributive efficiency in the issue of informational content, that is being released more quickly. Also, entertainment programs are benefited at this level. All this increases the capacity of media companies since the media agencies integrated with them begin to cover a greater volume of events with fewer human resources. Regarding the possible disadvantages, the Head of Production and Programs of Television of Cape Verde points to risks, both in the possibility of job losses, as well as in the excessive dependence of media operators on technologies, being at the mercy of possible technical failures, that can compromise the media industry.

Looking at the Cape Verde media context, the above-mentioned maintains that “the future of journalism in Cape Verde can be promising with the adoption of new technologies, including AI. With the right investment in technology and training, journalism can become more efficient,

comprehensive, and tailored to the needs of the public. In a country the size of Cape Verde, AI can facilitate wider and more efficient coverage, making journalism more accessible and relevant to all citizens. With these strategies, journalism can evolve significantly, taking advantage of the best new technologies while preserving the essence of the profession” (Heder Savy: Interviewed on 07.08.2024). António Joaquim Fernandes (Interviewed on 02.08.2024) believes that the future of journalism in Cape Verde should not be dictated by the ‘destiny of the nation’, despite the interpenetration between mechanized processes and human presence in productive environments. Tito Olavo Rocha Gonçalves understands that communication technologies, particularly artificial intelligence, are already benefiting the media sector in Cape Verde, especially if we consider the facilitation of access to information. “As we know, mobility and AI are paving new paths for journalism. The spread of the use of AI in journalism in Cape Verde is a reality that may take time, but we can’t escape it, because otherwise we will be left behind. When we talk about the use of AI in journalism, we are talking about the selection of information through so-called algorithmic gatekeeping, how the media industry has been using AI, and how journalists and companies perceive the importance of AI in their activity. The use of AI in the context of media can benefit the profession, allocating resources differently and saving time on certain more time-consuming functions” (Interviewed on 13.08.2024).

Analyzing the insularity, the low population, and territorial density of the country, the above-mentioned understands that there are net benefits in the application of tools of Artificial Intelligence in journalism in Cape Verde, having cited the case of ChatGPT, that is, already being used with a certain regularity in the Cape Verdean society. In his analysis, he points out elements of emphasis such as automation, speed, and efficiency, since he considers that the algorithms induce media production systems, within the contexts of lack of resources in written production such as those established in countries with the same socio-economic structure like that of Cape Verde. In media contexts where the economic structure is deficient, automation can increase the productive potential. “As an archipelagic country [...], the use of Artificial Intelligence in the context of media can benefit the profession, allocating resources differently and allowing to save time on certain functions that take longer. Although it is recent, AI, for both the area of journalism and journalists, has the power to produce instant news and to make a quick reading, freeing journalists to produce news that require deeper research and with precision” (Interviewed on 13.08.2024).

Analyzing the future of journalism in Cape Verde, the above puts emphasis on professionalism. He considers the media as a great source of power of influence in the Cape Verdean society, because they integrate, in their scope, entertainment, information, and other content nature, carriers of symbolic load capable of shaping society. Social hyper-mediation, which brings together social media and mass communications, is the visible face of this capacity for media influence, due to the enormous attention that Cape Verdean citizens give to technological devices, Taking screens as interfaces in the phatic dimension of language functions (Jakobson, 1960), placing itself between the human sensory spectrum and the ‘brain’ of the ‘machine’. From this point of view, Tito Olavo Rocha Gonçalves argues that “the future of journalism in Cape Verde must always be to maintain ethical-professional commitments, because the media have a huge power and, for this reason, they have an equally great responsibility... always meeting the Code of Ethics of the Journalist, that is, the analysis of data and sources must always be a work that the journalist must perform according

to his Code of Ethics, which must be fulfilled with all accuracy” (Interviewed on 13.08.2024). As it is possible to note, in Cape Verde as elsewhere in the world, concerns about the ethics of communication are added, particularly due to the endorsement of Artificial Intelligence to the production processes of social media companies, aimed at creating social meanings, through news, reports, stories, analyses, and other textual genres. The advantages are many, but still, the presence of the human being is fundamental, if only to make news, journalism, and the media interpretative community should not distance themselves too much from the core values and principles that established them.

CONCLUSION

The theme discussed in this chapter is very important for the questioning and understanding of the organizational nature of modern societies and the sociability relations supported by computer infrastructures, which connect human beings, reducing physical borders and creating geographically dispersed crowds, which have been called digital social networks or virtual communities.

The reflection on these issues, from a marginal social reality as that of Cape Verde, is of greater importance, since the bulk of the thought and conceptual articulations about the digitalization of societies comes from the countries of the North, with more advanced economies and more robust research and criticism densities. Therefore, the peripheral countries must participate in this debate and contribute solid bodies of thought, which do not translate into a localization on the periphery, but into an interdisciplinary, intertextual, and international dialogue, confronting the endogenous realities, the thinking about local existence, theorizations about the international sphere and the body of thought prevailing in certain stages of Human History.

Thus, we emphasize that the problematization of local perception of how Artificial Intelligence can influence media professions, taking Cape Verde as the geographical delimitation of the corpus of empirical analysis, is an important contribution to understanding a fundamental theme of our times, which affects all societies. Looking at the media architecture that constitutes the system of symbolic meaning in Cape Verde, we think this study is an important contribution to the development of deep reflections on the articulation of news in daily life, from a landscape populated by screens and human intermediation supported by the resources that technological evolution has made available to the human being.

If, on the one hand, an instrumental utilitarian dimension of Artificial Intelligence prevails in Cape Verde in the field of sense production (audio transcription, translation of texts from and into various languages, internet searches, etc.), on the other hand, have emerged more disruptive trends, which introduce algorithms as ‘active entities’ in the process of building the signs of daily life, represented in news pieces. This expansion of the occupation of participatory spaces in media production by Artificial Intelligence occurs, in Cape Verde, mainly by the ‘vocalization’ of news texts for audiovisual media, Breaking with the historical processes of production of radio and television news in which the recording of ‘off’ was always a task reserved, exclusively to human beings.

More demanding questions arise, in this aspect, when we verify that to human beings who are at the beginning of their incursion into the journalistic profession, the possibilities of voicing their texts are forbidden because, as trainees, their voices should not reach the homes of Cape Verdeans because they are in a learning process. There is condescendence with the scenarios of incorporation of synthetic voices, often depersonalized, that occupy abundant spaces in the field of oral construction of the news text. In this matter, we find a disproportionality in the approach and a need to clarify the metrics of regulatory processes.

When we analyze the environment of production of meanings that interpenetrate human beings and technological paraphernalia, we find in journalistic practices, algorithms as active 'entities', that represent an invisible part of the entire media ecosystem that contemporaneity has produced. Screens play a key role in this process. In addition to being the showcase of news products engendered by humans, they give a 'face of light' to Artificial Intelligence that acts in a space sub-understood from the media ecosystem of our days. Therefore, it is in the screens that the confluence of news produced by information and communication professionals and news products engendered by the systematization of robot procedures, according to their order instituted, which may result from programming command lines or machine learning.

Another fundamental question, besides the others here released, is to think that in this transit of the first phase of 'news screens' brought by television to the robotized news, something was lost along the way. At the international level, it is noted that Artificial Intelligence tends to reinforce the industrialization process of news, raising the levels of standardization to the highest levels we can imagine, while the humanization of practices is reduced and fades in front of a growing advance of 'machines' over men in the generation of texts carrying semantics of everyday life. The artery that transported us from the first experiences of 'news screens' (television) to our days (robots) absorbed practically all telematic media that emerged in this interval, including cinema that preceded television. Bringing together cinema, television, computers, and mobile devices (cell phones, tablets, laptops, iPhones, iPads, etc.), Artificial Intelligence unifies telematics and presents itself in an environment of hyper-media - almost a new god -, in which any subject that can be treated through computer programming and capable of generating a social sense, becomes present anywhere, at any time and by any means of connection to the dematerialized network of the Internet. The time has come for the dematerialized 'pantheism' of artificial news, in which international media densify and for which Cape Verde begins to take its first steps.

Furthermore, the thought about the control regimes of the production processes in the scope of news making gains relevance, since, with news production through Artificial Intelligence, it has questioned the foundation of the profession in the sociology of the as entities that generate an organizational culture, which parametrizes the practices of the profession and embodies an idea of interpretative community, based not only on the editorial policy of each media, but essentially on the values and principles that are at the base of a conception of journalism as a profession and journalists as a professional class. From the assumptions of the sociological dimension of journalism identified by Warren Breed (1955), who studied the traditional processes of journalistic production, to the present day, the germination of the intangible identity passes, also, to be based on the command lines of computer programming and the breadth of learning boundaries conferred to the algorithm. Although most of the professionals interviewed in this study understand that journalism does not regenerate as a profession and that editorial culture

will continue to weigh the construction of the signs of daily life through the news, we cannot ignore that media digitalization has altered the ecosystem of journalistic production, causing journalism to cease being an eminently human production landscape, to become a confluence of contributions, that promotes a meeting between the semantics of human vision and the meanings encoded through computer systems densified in machine learnings, in the atmosphere of an incorporeal territory populated by human populations and by 'multitudes' of algorithms, that they find in the 'screens' a point of light for the 'brain' of the computerized equipment.

BIBLIOGRAPHY

- Adorno, Theodor (1987). “A Indústria Cultural”. In COHN, Gabriel (org.) (1987). *Comunicação e Indústria Cultural*. São Paulo: T.A. Queiroz Editor.
- Adorno, Theodor (2003). *Sobre a Indústria Cultural*. Coimbra: Angelus.
- Adorno, Theodor; & Horkheimer, Max (1991). *Dialética do Esclarecimento*. Rio de Janeiro: Jorge Zahar Editor.
- Balle, Francis (2011). *Médias et Sociétés*. Paris: Montchrestien.
- Benjamin, Walter (1933). “A Obra de Arte na Era de sua Reprodutibilidade Técnica”. In Benjamin, Walter (1994). *Magia e Técnica, Arte e Política: Ensaios Sobre Literatura e História da Cultura*. Obras Escolhidas, volume I, 2ª edição. São Paulo: Editora Brasiliense.
- Brandão, Nuno Goulart (2002). *O Espectáculo das Notícias: A televisão Generalista e a Abertura dos Telejornais*. Lisboa: Editorial Notícias.
- Breed, Warren (1955). *Social Control in the Newsroom: A Functional Analysis*. Newcomb College: Tulane University.
- Bryant, Jennings; & Zillmann, Dolf (1991). *Responding to the Screen: Reception and Reaction Processes*. Hillsdale: Lawrence Erlbaum Associates, 133-172.
- Bryson, Lyman (ed.) (1948). *The Communication of Ideas*. New York: Institute for Religious and Social Studies.
- Bustamante, Enrique (1999). *La Televisión Económica: Financiación, Estrategias y Mercados*. Barcelona: Gedisa.
- Bustamente, Henrique (2003). *A Economia da Televisão – As Estratégias de Gestão de um Media*. Porto: Campo das Letras.
- Chin, Yik-Chan (2017). *Television Regulation and Media Policy in China*. London: Routledge.
- Clerwall, Clister (2014). “Enter the Robot Journalist: Users’ Perceptions of Automate Content”. *Journalism* 8(5): 519-531.
- Coelho, Angelino Gomes (2020). *Personalidade Jurídica: Redimensionamento do Conceito à luz da Perspetiva Personalista*. Coimbra: Instituto Iuridico – Faculdade de Direito da Universidade de Coimbra.
- Costa, Andriolli de Brites da; & Santos, Francisco do (2015). “Reportagem Algorítmica: Imagens de um Jornalismo sem Jornalistas”. II Congrès International du CRIzi La théorie générale de l’Imaginaire 50 ans après: Concepts, notions, métaphores 29-31 octobre 2015 - Porto Alegre, Brésil.
- Cushion, Stephen (2011). *Television Journalism*. London: SAGE Publications.
- Dayan, Daniel; & Katz, Eliuh (1992). *Media Events: The Live Broadcasting of History*. Cambridge: Harvard University Press.
- Doyle, Gillian (2009). *Understanding Media Economics*. Los Angeles/Londres/Singapura/Nova Deli/Washington: Sage.
- Évora, Silvino Lopes (2010). “Políticas de Comunicação e Liberdade de Imprensa: Análise da Situação Cabo-verdiana entre 1991 e 2009”. [Tese de Doutoramento]. Braga, Universidade do Minho.
- Évora, Silvino Lopes (2011). *Concentração dos Media e Liberdade de Imprensa*. Coimbra, MinervaCoimbra.
- Évora, Silvino Lopes (2012). *Políticas de Comunicação e Liberdade de Imprensa: Para Compreender o Jornalismo e a Democracia em Cabo Verde*. Cidade da Praia, Editura/Ministério da Cultura de Cabo Verde.
- Évora, Silvino Lopes (2018). *Comunicação Social e Cidadania*. Cidade da Praia: ISE Editorial.
- Évora, Silvino Lopes (2022). “Mudanças Tecnológicas e Negócios Jornalísticos: Estudo da Economia dos Media em Cabo Verde entre 2001 e 2021”. [Relatório de Investigação de Pós-Doutoramento]. Porto: Universidade Fernando Pessoa.
- Évora, Silvino Lopes (2023). “Comunicação Política, Inteligência Artificial e Ciberesfera”. In *Revista Internacional Em Língua Portuguesa* [RILP], (43), 67–92. <https://doi.org/10.31492/2184-2043.RILP2023.43/pp.67-92>.
- Grice, Paul (1989). *Studies in the Way of Words*. Cambridge: Harvard University Press.
- Grice, Paul (1991). *The Conception of Value*. Oxford: Oxford University Press.
- Grice, Paul (2001). *Aspects of Reason*. Oxford: Oxford University Press.

- Herman, Edward; & Mcchesney, Robert (1997). *The Global Media – The New Missionaries of Corporate Capitalism*. London/Washington: Cassel.
- Hovland, Carl I.; Lumsdaine, Arthur A.; & Sheffield, Fred D. (1949). *Experiments in Mass Communication*. Princeton: Princeton University Press
- Jakobson, Roman (1960). “Closing Statement: Linguistics and Poetics”. In SEBEOK, Thomas A. (ed.) (1960). *Style and Language*. Cambridge: MIT Press
- Kerckhove, Derrick de (1997). *A Pele da Cultura: Uma investigação Sobre a Nova Realidade Electrónica*. Lisboa: Relógio D’Água.
- Lasswell, Harold (1948). “The Structure and Function of Communication in Society”, in Bryson, Lyman (ed.). *The Communication of Ideas*. New York: Institute for Religious and Social Studies.
- Lévy, Pierre (2007). *O Que é o Virtual?* São Paulo: Editora 34.
- Maffesoli, Michel (1998). *O Tempo das Tribos*. Rio de Janeiro: Forense Universitária.
- Malamuth, Neil; & Check, James (1980). “Penile Tumescence and Perceptual Responses to Rape as a Function of Victims’ Perceived Reaction”. *Journal of Applied Social Psychology*, Volume 10, Issue 6, December 1980, Pages 528-547, DOI: <https://doi.org/10.1111/j.1559-1816.1980.tb00730.x>.
- Marcondes Filho, Ciro (1993). *Jornalismo: Fin-de-Siècle*. São Paulo: Scritta.
- Mathien, Michel (1992). *Les Journalistes et le Système Médiatique*. Paris: Hachette Supérieur.
- Martins, Moisés de Lemos (2002a). “O Trágico na Modernidade”. *Interact: Revista On-line de Arte, Cultura e Tecnologia*, n.5. Lisboa. Disponível em <https://hdl.handle.net/1822/1087> [Consultado a 17.06.2022].
- Martins, Moisés de Lemos (2002b). “O Trágico como Imaginário da era Mediática”. *Comunicação e Sociedade*, volume 4, 73-79. Disponível em <https://hdl.handle.net/1822/25340> [Consultado a 15.06.2022].
- Martins, Moisés de Lemos (2011). *Crise no Castelo da Cultura: Das Estrelas para os Ecrãs*. Coimbra: Grácio Editor.
- Mcluhan, Herbert Marshal (1964). *Os Meios de Comunicação como Extensões do Homem*. Rio de Janeiro: Cultrix.
- Meyer, Philip (1993). *Periodismo de Precisión*. Barcelona: Bosch.
- Mora-Figeroa, Borja. (2009). *El Mercado Global de la Comunicación: Éxitos y Fracasos*. Navarra: EUNSA.
- Mosco, Vicent (1996). *The Political Economy of Communication: Rethinking and Renewal*. London: Sage.
- Pass, Christopher (1994). *Business and Microeconomics: An introduction to the Market Economy*. London: Routledge.
- Pinto, Manuel (2005). “A Busca da Comunicação na Sociedade Multi-ecrãs: Perspetiva Ecológica”. *Comunicar*, 25, 2005, Revista Científica de Comunicación y Educación: ISSN: 113478; páginas 259-264.
- Russel, Stuart; & Norvig, Peter (2004). *Inteligência Artificial*. Rio de Janeiro: Campos.
- Sá, José Carlos Vasconcelos; & Subtil, Filipa (2006). “Comprender os Media: As Extensões de Marshall McLuhan”. *Interações: Sociedade E As Novas Modernidades*, 6(11). Obtido de <https://www.interacoes-ismt.com/index.php/revista/article/view/203>.
- Santos, José Rodrigues dos (1992). *O Que É Comunicação?* Lisboa: Difusão Cultural.
- Simmel, Georg (1990). *Philosophie de la Modernité*. Paris: Payot.
- Soloski, John (1989). *Media, Culture and Society News Reporting and Professionalism: Some Constraints on the Reporting of New*. New York: Monthly Review Press.
- Sousa, Jorge Pedro (2006). *Elementos de Teoria e Pesquisa da Comunicação e dos Media*. Porto: Universidade Fernando Pessoa.
- Steiner, George (1992/1971). *No Castelo do Barba Azul: Algumas Notas para a Redefinição da Cultura*. Lisboa: Relógio D’Água.
- Traquina, Nelson (2004a). *Teorias do Jornalismo: Porque as Notícias São como São*. Florianópolis: Insular.
- Traquina, Nelson (2004b). *A Tribo Jornalística: Uma Comunidade Transnacional*. Lisboa: Editorial Notícias.
- Traquina, Nelson (org.) (2000). *Jornalismo 2000*. Revista de Comunicação e Linguagens. Lisboa: Universidade Nova de Lisboa, n.27, fevereiro de 2000, p.50-65.
- Thompson, John (1995). *Ideologia e Cultura Moderna*. Petrópolis: Vozes.
- Thompson, John (1998). *A Mídia e a Modernidade*. Petrópolis: Vozes.

- Zallo, Ramón (1988). *Economía de la Comunicación y la Cultura*. Akal: Madrid.
- Zelizer, Barbie (1993). "Journalists as Interpretive Communities". *Critical Studies in Mass Communication*, 10 (3): 219-237.
- Zelizer, Barbie (1993/2000). "Os Jornalistas como Comunidade Interpretativa". In Traquina, Nelson (org.) (2000). *Jornalismo 2000*. Revista de Comunicação e Linguagens. Lisboa: Universidade Nova de Lisboa, n.27, fevereiro de 2000, p.50-65.
- Zillmann, Dolf (1991). "Television Viewing and Physiological Arousal". In

INTERNET SITES CONSULTED

- Televisão de África* (TVA): "Editorial da TVA". Link: <https://tva.cv/> [consultado a 16.08.2024].
- The Network Journal* (TNJ): "Green Studio: On The Fast Track in Cape Verde". Link: <https://tnj.com/green-studio-fast-track-cape-verde> [consultado a 16.08.2024].

INTERVIEWS

- António Joaquim Fernandes:** Professor at the University of Cape Verde and Data Science Specialist - Interviewed on 02.08.2024.
- Heder Savy:** Head of Production and Programmes at Televisão de Cabo Verde [Radio-Televisão Cabo-verdiana, S.A.] - Interviewed on 07.08.2024).
- Sara Almeida:** Journalist at 'Expresso das Ilhas' [Cape Verdean Printed Weekly, with an Online Edition] - Interviewed on 12.08.2024.
- Tito Olavo Rocha Gonçalves:** Professor of Philosophy and Ethics of Communication [Degree in Philosophy and Doctorate in Psychology] - Interviewed on 13.08.2024.

GUINEA-BISSAU



VIDEO



GUINEA-BISSAU ETHNICITY AND KEY ELEMENTS THAT CONTRIBUTE TO ITS CULTURAL CHARACTER

Morto Camará

Abstract: Guinea-Bissau is a country in the west of Africa. Specifically, it is on the Atlantic coast, bordering Senegal to the north, and Guinea-Conakry to the south and east. The capital is Bissau, and the official language is Portuguese. The Guineans live mainly in large cities, where the ethnic groups Balantas and Papéis fully adopt the customs and lifestyle of most of the Guinean society. It is a unique country with over thirty ethnicities coexisting in a limited space, each with its history and culture. In this paper, we rethink cultures, symbols, and belonging to a straight cultural identity. These facts lead us to the widespread opinion that the Guinean language identity is on the verge of extinction (or has already disappeared). Still, the six main ethnic groups are deeply rooted in their traditions, rituals, religion, and belief systems. In cultural terms, gastronomy plays an essential role.

Keywords: Guinea-Bissau, Ethnic Groups, Language Identity, Culture, Tradition.

Morto Camará

He is a native of Djaal, Safim sector, in the Republic of Guinea-Bissau. In 2018, he arrived in Macao, where he completed a Bachelor's degree in Communication and Media at the University of Saint Joseph in 2022—and graduated with a Master's degree in Communication and Media from the University of Saint Joseph. Before that, he attended the Dr. Rui Barcelo da Cunha High School in Guinea-Bissau from 2009 to 2012 before transferring to the private school Centro de Formação Juvenil - CFJ, where he completed his secondary education in 2015.

Despite being far from his origin, Camará continued his pursuit of knowledge. In Macao, he began his professional activities as a student ambassador in the Department of Arts and Humanities at the University of Saint Joseph. He has also been a photographer and videographer at the Rui Cunha Foundation Gallery since August 2018. Camará was the Director of a short film project of the Communication and Media Group at the University of Saint Joseph (USJ) in Macao, being elected as Director of the short film *Missing Stars*.

In 2022, he participated in the China-Portuguese Speaking Countries Voice Exchange Program, co-organized by the Macao Special Administrative Region (MSAR) government. In 2019, he attended a Creative Video Spectacle workshop at MGM Cotai in Macao. Additionally, he conducted a photography workshop with charity workers, teaching them the basic concepts of photography and the use of the camera.

INTRODUCTION

The Guineans have changed and adapted to the modern way of life, the rules of welfare state politics, and what makes them bearers of a distinctive cultural identity. Insofar as Guineans do not appear to have any unique characteristics as an ethnic group, except for their language, the main objective of cultural promotion is to develop this endangered language and make it the mother tongue of the Guinean people again. From the perspective of a given investigation, the question of Guinean culture refers to the question of language use in general and its future. Tradition is not Guinea-Bissau's main problem, but different members of the revitalizing community deal with this issue differently according to the goals they have set.

This article examines the culture and physical surroundings of Guinea-Bissau, focusing on the key elements that contribute to its cultural character, presenting a historical overview of the country, one of the first African regions to receive Portuguese arrival.

It is one of the less well-known nations, although it has a rich cultural history. Prominent intellectuals and writers from the country, including Germano Almeida, José Craveirinha, Mia Couto, Luandino Vieira, José Eduardo Agualusa, and Baltazar Lopes, have been promoting the local culture.

However, there is a lack of knowledge about the country. The literature focuses on six specific ethnicities from Guinea-Bissau to help understand and focus on their cultural harmony.

In this article, we also seek to explore the research and scholarly discourse on the cultural aspects of Guinea-Bissau, with a particular emphasis on gastronomic traditions and the specific ethnic groups, including the *Manjaco*, *Papéis*, *Balanta*, *Mansoancó*, *Bijagós*, and *Fula*.

Exploring non-fictional and contemporary literature is crucial to understanding the specific cultural practices and traditions of these ethnic groups. The cultural exchange and assimilation between different nations and regions within Guinea-Bissau have been a subject of interest for researchers, particularly in the context of globalization.

1. Ethnic Groups, Roots, Rituals, and Norms

The six distinct ethnic groups in Guinea-Bissau are deeply rooted in ancient beliefs, rituals, and social norms (Silva, 2019). Furthermore, (Nhaga, 2021) explores the gender roles and prospects among the *Manjacos* ethnic group. The *Manjaco* ethnic group highlights the division of labor, decision-making processes, and community power dynamics.

Manjaco, which comes from *Manjaku*, is the name of the people who inhabit the *Pecixe* and *Djeta* islands on the banks of the *Cacheu* and *Geba* rivers in Guinea-Bissau. The name of the *Manjacos*

people means: “I tell you.” Currently, Nhaga (2021) data revealed that in 2006, the Manjacos were the third-largest population in Guinea-Bissau, with 14.69%. The *Manjaca* language is classified as part of the languages of Senegal and Guinea, a subdivision of the Atlantic languages. *Manjacos*, a large Senegal, France, Gambia, and Guinea-Bissau community, are deeply rooted in their religion and belief system. The *Manjacos* says Iran (*Spirit*) is an intermediate, dynamic, and cursed spirit between man and God (Nhaga, 2021). The *Manjacos* are divided into four social classes and have a government system based on the *régulo* (chief or king), elected by priests or nobles. They emigrated periodically to Senegal, where they founded the Guinea Liberation Movement (MLG). After the extinction of the MLG by the enemy PAIGC, *Manjaca* society is subdivided into four groups: those divided by the African Party for the Independence of Guinea and Cape Verde (PAIGC), the Liberation Front for the Independence of Guinea (FLING), those faithful to the Portuguese authority, and non-active elements, (Nhaga, 2021).

Some say that in ancient times, *Manjacos*, *Papéis* (*Pepel*), and *Mancanhas* formed a single ethnic branch (Ferreira, 2020). Linguistic similarities may prove this. Traditional dancing and singing among *Manjacos* are complex and inaccessible to outsiders. They adhere to animism, believing in an all-powerful God who desires the good of humanity but is inaccessible to the ordinary person. The contact between a person and divinity can be established through spiritual forces called Iran (Ferreira, 2020; Soares, 2017). Similarly, studies (Soares, 2017; Faria, 2022; Cá, 2016) examine the six specific ethics among the *Papéis*, *Balanta*, and *Mansoancós*, respectively, shedding light on the traditional practices, rituals, and beliefs that shape the gender dynamics within these communities (Cá, 2016).

The other ethnic group, the *Papel* (*Pepel*) ethnicity, has a cultural trait like the *Manjaca* and *Mancanha* ethnicities that share the same ethnic configuration. With the arrival of the colonizers, separations began in terms of different devices; to this day, in Guinea-Bissau, when an individual from the *Papel* ethnic group speaks, a *Manjacos* understands it as *Macanha*, and as in the rituals, three ethnic groups in Guinea-Bissau have this tradition of *regulado* (Cá, 2016). The ethnic group comprises seven *quinhas* (seven clans), a group of people united due to a certain degree of kinship, a lineage defined by the ancestry of a common ancestor, which follows a matrilineal scheme. Still, leadership is always exercised by male individuals incorporated into the paternal uncle's clan. The maximum figure is the *regulo* (the king), whose clan “*basses*” within the seven clans is the noblest; the only one who can occupy this position of *regulo* is to take care of the village.

The *Papel* roles constitute seven *quinhas* (clans), which are: *Bassassu* “*djagra*” the noblest, *Nanque and Lé*, *Insó-Batsó-Có*, *Badjocomo* – *Cá*, *Bitsanfinte-Té*, *Bitsutu-Dju*, *Bitsale* - *Batat* – *Indi*, *Biga* – *Baiga* – *Sá* (Cá, 2016). The weddings for the *Papel* ethnic group are significant rituals in Guinean culture, passed down through generations. To become a member of the same or an adult, individuals must undergo various ritual phases, including *Fanado* circumcision, which is an initiation ceremony. Dogs symbolize the union between the bride and groom, while *binderies*, or *comb cloths*, represent wealth in women's roles (Mbundé, 2021). Musical instruments used during marriage include *Sadjó Tumba*, *horana*, and *mandjuandadi* (college of sing and dance or associations). The *Ontelar-kibeek* flute is made from cow's horn, and *Sadjó* is from dried mango seed. *Mandjuandadi* designates age-class associations and meetings. *Tumba* is a drum-shaped instrument, while *horana* is a group of people of the same age playing and dancing during the ceremony. Women dance on the wedding

day as a moment of joy, singing songs in the language (Mbundé, 2021). The *Papéis*, a people closely related to the *Manjacos*, use similar instruments and dances, such as *Kansaré* and *Baloba*, with the *Kansaré* acting as a protective spirit for the village and its cultures.

According to *archaeological data*, it is believed that the *Balanta* ethnic group migrated to Guinea-Bissau in small groups between the 10th and 14th centuries. During the 19th century, it spread throughout the same country and to the south of Senegal, resisting the expansion of the kingdom of *Gabú* (*Mandinka*). Oral tradition among the *Balantas* says that they migrated from the west, from the region where Egypt, Sudan, and Ethiopia are located, to escape drought and wars.

Currently, the *Balantas* are found mainly in the southern and central regions of Guinea-Bissau and across almost the entire national territory, comprising 30.4% of the population. They are primarily farmers and livestock breeders, especially of pigs. According to historical data, the *Balantas* are also currently found in Angola. The real name of the *Balanta* people, which many Guineans are unaware of, is *Braasa*. This name has a strong meaning, translated into Portuguese as *permanent, immutable, does not yield to anyone, firm and unshakable, and does not bend to anyone*. As demonstrated, it is not easy for a group to impose its cultural values on the social organization of this ethnic group; the name *Balanta*, in history, came from the wrong way of pronouncing the word “*shake*” from the *Mandingo* language. In the *Mandingo* language, the phrase “*Abalanto*” means “*not accepted, always in refusal*.” This fact occurred when the *Mandingos* failed to Islamize the *Braasas* (Temudo, 2021).

Regarding their culture, according to the text (Balanta people, 2024), the *Balantas* are the only ethnic group in Guinea-Bissau without a recognized chief or leader, and a council of wise men makes decisions. They are the most numerous ethnic group in the country and are traditionally dedicated to rice cultivation. Over the last century, they have spread mangrove rice cultivation and replaced the traditional *pam-pam* rice technique. Due to Portuguese repression, the *Balantas* enlisted as soldiers and initially supported the African Party for the Independence of Guinea and Cape Verde (PAIGC) in the national liberation struggle. Their religion is mainly animistic, with *Djon Cago* being their primary deity. In the *Balanta* civilization, God is seen as exceedingly distant and is known as *Nghala*, which means “very lofty”. The loyal *Balantas* attempt to contact this distant deity through spirits and animal sacrifices, produced only for these religious ceremonies, which occur within a specific period. However, the *Balantas* also accept Catholicism and Islam as religious practices for those who have abandoned other practices, such as animism.

According to Ferreira (2020), *Kussunde* is a traditional celebration of the *Balantas* in Guinea-Bissau, held at the end of the dry season. Each community organizes its festival, sometimes with multiple *tabancas* (villages) participating. The festival reinforces the hierarchy of power in *Balanta* society and features a percussion instrument called *kussunde*. Women accompany the young *Blufu* with songs and dances, while girls and men dance in isolated groups. The *Kussunde* festival is the most significant cultural manifestation of the *Balantas*, allowing age groups to act spontaneously and experience spiritual liberation. A group leader and soloist guide the festival. The *Balantas* essentially practice *Kussundé* and *Broksa*. The former is accompanied by the *Bumbulum*, a local percussion instrument built with a trunk or branch of a tree. At the same time, the *Broksa* is played with *Simbi*, a traditional guitar with two or three strings, and an artisan (Ferreira, 2020).

N'foré Sambi was one of the illustrious artists who witnessed these rhythms.

The *Mansoancós* or *Suéns*, located in the North of Guinea-Bissau, is the region where ethnic diffusion is most significant. According to Sambu (Sambu, 1999), the area between present-day *Cumush* (Farim) and present-day *N'sua* (Mansoa) was predominantly inhabited by the *Mansoancó* tribe, originating from a split between the *Biafadas*. Although known throughout Guinea by that name, the correct name is *Suéñ*, a tribe from *Bundjo*, an interior region of southern Guinea. They are essentially dedicated to extracting palm wine from the abundant palm trees in Guinea, and it's commonly said that this liquor is delicious and intoxicating, like wine if not diluted with water. The sale of their wine during the dry season is highly profitable.

Sambu (1999) highlights that the *Mansoancó's* subsistence agriculture involves cultivating rice, corn, and peanuts. The *Mansoancó* group, which suffered a significant decline after the Holy War, now constitutes one of the most minor ethnic groups in Guinea-Bissau. The tribes have a considerable similarity in their surnames, the *Mansoancó* and *Biafada*, and some even admit to being part of the same family. However, the *Mansoancós* have surnames that the *Biafadas* do not: *Sindjancane*, *Tchandjelane*, and *N'djai*, *Seidi*, the *Beafadas* do not have it. They are subdivided into *Mansoancós-Mandingós* and *Mansoancós Balantas*, with characteristics similar to *Mandingas*. They are often confused with Muslims as Animists but are far from achieving this designation (Sambu, 1999). *Mansoancós* presents many common aspects, sharing similarities with the *Balantas*. They share dialects, *fanado* dances, songs, and farming practices. Despite similarities, the *mansoancó-balanta* dialect is easier to learn, making it more spoken by most Guineans (Pais, 2021). Songs are identical, that is, shared with *mandingas*, who have *djambadon*, a rhythm, and dance at the same time, and are accompanied by three drums (*tambur* or *djimbe*) with different sounds: medium, bass, and treble for solos. *Malam Camalion*, a singer and dancer from *Bafatá*, was the most famous artist, followed by *Bacar Mané* and *Sáco Djana*. *Fay Kumpo* and *N'gumbu* introduced creole to *djambadon* shows, while the *Cora*, a renowned instrument in Guinea-Bissau, is of Guinean origin. *Kabá Galissa* is the most famous artist with the *Cora*. *Djidius* and Europeans believe *Soundiata Keita* invented the *Cora* in the 14th century during the *Mandingo* Empire of Mali.

Furthermore, the research (Barbosa, 2018) explores the role of women in *Bijagos*; this tribe lives mainly in the *Bijagós Archipelago*, which is made up of around sixty islands, fifteen of which are inhabited, the main ones being *Bubaque*, *Caravela*, *Uno*, *Orango*, *Canhabaque*, *Fornosa* and *Carache*. Given their distance from the continental plate, the *Bijagós* were never victims of invasion by other Guinean ethnic groups. Thus, it protected against exogenous influence, they did not organize themselves into a State and knew how to remain faithful to their matriarchal system. The *CBD-Habitat Foundation* states that the *Bijagós Archipelago* was once the largest sales center for enslaved people (Madeira et al., 2022), obtained through various methods, including assault, robbery, heirship, and crimes. Streams cross the archipelago, some carrying salt water, affecting swampy areas where rice cultivation was once practiced. The *Bijagós* are considered the best sculptors in Africa due to their rare artistic talent. European explorers described the *Bijagos* as fierce and warlike.

2. The Women's Power of the Bijagos Islands

According to the CBD-Habitat Foundation, the *Bijagós* Islands, inhabited by around 33,000 people, were conquered by the Portuguese in the 1450s and colonized in the late 1800s. Queen *Okinka Pampa Kanyimpa*, the most famous sovereign, concluded a peace agreement with the Portuguese colonizers. Women hold power in the *archipelago*, managing the economy, social well-being, and choosing husbands. They also manage the village temple, educate children, and determine their husbands' status by placing food on a plate. Women also handle ceremonies, including cooking, music, dancing, and serving drinks. The animistic religion and mysticism in society have led to women's roles in the spirit world (Ferreira, 2020). The *Bijagós*, a group of indigenous people, have connections to some islands but not others. They prepare masks for initiation ceremonies, which are held in traditional houses. Young *Camobi* emissaries arrive at play parties accompanied by a long drum. Women play the drum, while elders play the *bumbulum*. Masks of animals, such as buffaloes, cows, crocodiles, and sharks, are displayed.

The masks symbolize various life events, such as strength, agility, lightness, speed, and ferocity. According to Ferreira (2020), the bull mask symbolizes strength (the desire to be strong); the shark mask symbolizes agility; the gazelle mask suggests lightness and speed; the crocodile mask symbolizes ferocity. The singing and dancing during these beautiful demonstrations are not only encouraging the young man to be a good fisherman (as agile as a shark) (Ferreira, 2020), a good hunter, or to have the strength to work in the field. The *Bijagó* song: "*Okinka*" – an old song collected in *Bubaque* – talks about the life of an older woman called *Okinka* who, in *Bijagó* society, is designated as the guardian of the sacred fire of the sanctuary. She sacrifices her family by dedicating her entire life to the Great Spirit. She is the organizer of feminine ceremonies, particularly the ceremony of the deceased. Sometimes, it seemed to us that it was the same reality when designating *Okinka* as "*balobeiro*" (Creole), wise or, as several ancient records point out, queen (Ferreira, 2020). The *Okinka* priestess enjoys much respect in *Bijagó* society.

Furthermore, the ethnicity of the *Fula* culture emphasizes their participation in economic activities, social organizations, and decision-making processes (Carvalho, 2021).

Nowadays, according to history, the *Fulas* came from the interior and occupied the area close to the coast of Guinea. They had relationships with other ethnic groups with similar traditions, who occupied an area today called Mauritania and also to the east with present-day Sudan and Niger. However, a Field study (Barbosa, 2018) states that this coexistence between the *Fulas* and other ethnicities allowed them to resist European colonization more than other ethnicities. The origin of the *Fulas* who populate the region of Guinea is linked to that of the Common *Fulas*; in general, no one disputes that the *Fulas* are not black; the *Fula* pastors of Sudan have different characteristics, such as their skin color, more similar to that of the Egyptians and Palestinians than with the *Fulas* of West Africa.

The *Fulas* of Guinea comprise 21.46% of the population (Nhaga, 2021). Amílcar Cabral, a pioneer of Guinea-Bissau's independence, studied the *Fula* society before the Portuguese arrived. This semi-feudal ethnicity was dominated by a hierarchy of chiefs, nobles, and religious people living off peasants' and artisans' profits. Polygamy allowed women to work with men, and the Muslim religion exacerbated this exploitation (Nhaga, 2021). Cabral's description of the *Fula* and *Mandinga* ethnic groups is incomplete compared to horizontal societies in Guinea-Bissau, such

Guinea for centuries, converting to Islam.

Music is an integral component of Guinea-Bissau's culture, comprising activities such as *fanado* and traditional festivals. *Gumbe*, a genre linked with *Cacheu*, *Geba*, and Bissau, has a distinct musical identity in the region. These historically significant forts and commercial outposts, built during Portuguese colonization, are ideal locations for gathering various peoples and cultures. The fact-finder is sure that this work will enlighten all readers on the cultural richness of Guinea-Bissau; more is needed to trust what the mass media says about the African continent, particularly Guinea-Bissau.

3. *Gastronomy as a Cultural Identity*

Gastronomy is a significant part of Guinea-Bissau's cultural identity, with research (Santos, 2018) highlighting its diverse culinary traditions. Guinean flavors like *pó di buli di no tera* are popular among women, mothers, and sisters. Guinean cuisine mixes several ethnic specialties from Guinea-Bissau. (Lucidi & Milano, 2010) Chef *Abdon Manga* cautions that industrialized broths may reduce women's use of Indigenous flavors like *baguitchi*, *lemon*, *oil palm*, and *chili*. Traditional spices are healthy and come in a range of flavors. *Velia Lucidi*, *Serena Milano*, and Chef *Abdon Manga* work together to present traditional Guinea-Bissau cuisine, showcasing Chef *Abdon*'s efforts to promote local products and his book *Slow Food*. The researcher will explore some famous dishes featured in the chef's book. "*Pó di Buli*" is a culinary item made of wood from Guinea-Bissau's forests, representing ethnic unity and diversity. It symbolizes the importance of preserving culinary cultures and diverse foods representing the country's ethnicities. Food is associated with biodiversity in agriculture, marine, and natural plants.

Fúti (mixed stuff) combines rice, vegetables, and palm oil. *Fúti* is a customary breakfast for the *Fula* ethnic group (Lucidi & Milano, 2010). Chef *Abdon Manga* and many Guineans believe a good day begins with a beautiful *fúti* meal! This dish's components include 500g *barbarido* pestle rice (steamed and dried), palm oil (*citi*), tiny dried fish, crushed, pounded *netetu*, 1 liter of water, okra, and a small bunch (one hand) of small tomatoes, *baguitchi* (leaf), salt, and dried chili. To prepare this meal, bring water to a boil, wash the rice, and pour it into the boiling water (Lucidi & Milano, 2010). Boil the okra and the small *Solanum* (*berinjela*) in another pan for 15 minutes. Remove from the water, pound everything, and put the palm oil to heating. And then add salt to taste and pound the dried fish into a blender. Then serve the rice with the okra or *birinjela* in the center, above a small amount of pounded dried fish on the edges. Okra has beautiful yellow blossoms and elongated light green pods that can be eaten whole, sliced, or incorporated into soups (Lucidi & Milano, 2010). Chef *Abdon Manga* notes that even the leaves of okra are used, often boiled, to accompany rice in the *fúti*.

Fúti is a traditional and popular meal in Guinea-Bissau. *Fúti* usually comprises fragrant ingredients like onions, tomatoes, bell peppers, and leafy greens like spinach or leaves. All of the ingredients are simmered together in a flavorful broth seasoned with a blend of local spices, herbs, and occasionally a touch of palm oil, resulting in a dish that is both nourishing and comforting, as well as bursting with bold, earthy flavors that are characteristic of West African cuisine. *Fúti* is a popular dish known for its pleasant texture, rich yet balanced flavor profile, and ability to provide a complete meal in a single serving.

Peanut Broth (*Caldo Mancarra*) is made from pan-fried white rice with a sauce made from various ingredients, such as *jiló*, meat, or fish, and prepared for broth in cubes (Lucidi & Milano, 2010). For Chef Abdon Manga, the *mancara* broth, as it is known, requires you to roast and then peel the peanuts, put them in a blender with a bit of water, blend until they become soft, and separate them in a container. Then, wait one hour for the meat to boil in the pressure cooker. When removing the meat from the pan, wash it before adding the peanuts. First, add water to the peanuts and knead them (Lucidi & Milano, 2010). For *Chef Abdon Manga*, from this moment on, throw the peanut mass into the pan along with the *jiló* to boil for thirty minutes. After this time, add the meat (Lucidi & Milano, 2010). At this point, it is up to the cook to pay close attention; in some cases, for example, they need to add a little water. After boiling for at least another half hour, it is time to add the broth cubes and salt.

One large onion, thinly sliced, two red chili peppers, minced, or one teaspoon red pepper flakes, three tablespoons lemon juice, one teaspoon salt, 1 cup raw unsalted peanuts, and large tomatoes, peeled, seeded, and puréed 8 ounces dried white fish, skinned and flaked (optional) Wash the chicken and cut it into eight pieces. Put it in a glass bowl or dish and season with the sliced onions, chili peppers, lemon juice, and salt; marinate for 1 hour. Place the chicken in a large pot with 2 cups of water and cook over medium heat for twenty minutes or until cooked (Lucidi & Milano, 2010). Remove the chicken and set aside. Reserve the broth. Blend peanuts, tomatoes, broth, chicken, and dried fish in a blender. Heat water in a saucepan, add tomato mixture and simmer for 10 minutes. Add reserved chicken and dried fish. You can make this sauce with beef instead of chicken.

Caldo de Mancarra, often known as peanut broth, is a cherished traditional soup considered a gastronomic staple in Guinea-Bissau. The end product is a hearty, comforting meal infused with the robust, earthy flavors that distinguish this West African country's culinary traditions. *Caldo de Mancarra* is renowned for its bold flavor profile, nutritional content, and capacity to feed the body and the spirit.

Chabéu broth (*Caldo de Chabeu*) (Lucidi & Milano, 2010) According to Chef Abdon Manga, *Chabéu* is the fruit of a particular palm tree that grows in all Guinea-Bissau regions. You can prepare the broth with local fish, meat, or chicken. The ingredients are 500g of *chabéu*, 1 liter of water, one or two *sukulbem*, cassava, small *djagatu*, local meat, fish, or chicken, and salt. To prepare, boil the *chabéu* with water until the lumps disappear (Lucidi & Milano, 2010). Drain and crush in a mortar. Place under cold water and pass through a sieve. Let it boil until you get a thick, red broth. In another pan, bring the chosen *mafé* (meat, fish, chicken) to a boil with the seasonings. Put everything in the *chabéu* sauce and let it cook, adding the other ingredients, such as cassava and *sukulbem*.

There are two oil production seasons: April and May and June and July. During this period, the price of oil is lower. The oil must be packaged in glass bottles or jars and kept away from heat sources and direct sunlight. Consume palm oil within one year of purchase! How to recognize good palm oil: the color should be intense red-orange, which is why it is called (*Citi red*). The pink color indicates mediocre quality. A good oil should not contain impurities, burnt aroma, or water. Palm Oil evolved thousands of years ago in western Africa's Guinea-Bissau and Sierra

Leone woodlands, where agriculture and innumerable wild palm trees coexist today. According to Velia Lucidi and Serena Milano (2010), communities traditionally gather and prepare bunches of red fruits to produce a rich orange oil with the scent of tomatoes, fruits, and spices. This oil is healthy and nutritious because of the inclusion of carotenoids and vitamin E. We eat locally! Growing, producing, and consuming local food benefits the economy by supporting small producers; it benefits your health because local products are healthier, fresher, and more nutritious; it benefits the community by preserving food traditions and instilling pride in one's origins and region (Lucidi & Milano, 2010). *Caldo de Chabeu* is a beloved and hearty stew that holds an esteemed place within the culinary heritage of Guinea-Bissau. The result is a thick, comforting, and incredibly flavorful dish often served as a main course, typically accompanied by rice or other starchy staple foods. *Caldo de Chabeu* is revered throughout Guinea-Bissau for its ability to provide a filling and nourishing meal that captures the essence of the region's vibrant culinary traditions.

Okra Sauce (Siga): Siga, or okra sauce, is a versatile and beloved side dish commonly enjoyed throughout Guinea-Bissau. It is frequently served alongside rice, grilled or stewed meats, fish, or other staple foods, providing a flavorful accompaniment that helps to round out the meal and complement the other dishes on the plate. This versatile sauce is revered for its ability to add both substance and bold, satisfying flavor to any Guinean culinary creation.

Siga can be prepared with meat or fish. The ingredients are thirty finely sliced local okra, a glass of palm oil (red Citi), an onion, six well-blended local *djagatus* peppers (two green, four red), and salt. To prepare: Cook the peeled prawns in a little water with the chopped onion, salt, and chili chili. Then, add the fresh okra, the sliced *djagatus* peppers, the Citi (palm oil), and a bit of water. Cook until the okra forms a thick, slightly tangy, and somewhat dense sauce.

Okra has beautiful yellow flowers and elongated light green pods, which can be eaten whole, cut into slices, or used in soups. According to Velia Lucidi and Serena Milano (2010), the okra, called “*candja*,” is also generally cooked to accompany rice. Okra is easily cultivated and has a high yield, often found in small family gardens, especially in the country's eastern region (Lucidi & Milano, 2010). The local variety of the plant has red and green thorns and can reach up to three meters tall. The fruit is smaller than the non-indigenous variety, which has a more attractive appearance for consumers but is less tasty.

Siga can be prepared with meat or fish. The ingredients are thirty finely sliced local okra, a glass of palm oil (red Citi), an onion, six well-blended local *djagatus* peppers (two green, four red), and salt. To prepare: Cook the peeled prawns in a little water with the chopped onion, salt, and chili. Then, add the fresh okra, the sliced *djagatus* peppers, the Citi (palm oil), and a bit of water. Cook until the okra forms a thick, slightly tangy, and somewhat dense sauce.

Try traditional products and discover forgotten flavors: instead of imported rice, use a local rice variety. Instead of peanuts, use *mancarra* from the *Bijagos* (Lucidi & Milano, 2010). The name is due to the fruits' similarity to peanuts and the *Bijagos* archipelago, where it was traditionally cultivated. Unlike peanuts, introduced by Portuguese settlers, *Mancarrados Bijagos* is a traditional

crop in the country, playing an essential role in many ceremonies: it is said that the first to sow *mancarra* is the village chief and that the entire community must be present at harvest time.

According to Velia Lucidi and Serena Milano (2010), women take care of the processing of *Chabeu* for palm oil, a long and delicate operation. The techniques are slightly different, depending on the regions and tribes (such as the Balantas and the Manjacos), but some steps are essential for the final quality. The bunches are left for a few days under banana leaves to make them softer, making it easier to separate the fruits, which must dry in the sun for one or two days. After separation, the fruits are placed in a large pot of water, which must boil for a long time. Then, a long and delicate operation begins, carried out manually: the women separate the seeds from the pulp, leaving it aside. Then, they add water, alternating cold and hot, to facilitate extraction and squeeze the pulp with their hands. As the oil rises to the surface, it is collected and separated from the water. This operation is repeated several times.

Both oil and fresh palm fruits are fundamental ingredients in traditional Guinean cuisine: they can be served with meat, fish, vegetables, and rice. According to Lucidi and Milano (2010), a sustainable food production and distribution system, developing education projects worldwide and promoting regional food products are traditional, slower, and more harmonious rhythms of life. *Fortresses* are projects to preserve local, conventional, and quality production, which are at risk of extinction. More than three hundred and fifty in more than fifty countries worldwide.

Guinea-Bissau has two fortresses: the Fortress of Saint Joseph Amura and the Fortress of the Bissau (Lucidi & Milano, 2010). Food communities are hubs of the Terra Madre network: groups of people who produce, process, and sustainably distribute quality food, maintaining a solid link with the region. Palm oil usage has also been a source of contention in recent years. While palm oil is a versatile and economical vegetable oil, its rapid expansion has raised concerns about deforestation, habitat loss, and the displacement of Indigenous communities in Southeast Asia and Africa. Sustainable palm oil production strategies have emerged to address these challenges, although there is still controversy about the industry's environmental and social implications.

Natural juice production and consumption have long been integral to Guinea-Bissau's culinary and cultural heritage. Guinea-Bissau's tropical environment is ideal for producing a wide range of fruits, including cashews, mangoes, papayas, and pineapples, frequently used to prepare fresh, handmade juices. These juices are refreshing, contain essential nutrients, and are a staple of many local foods and festivals. Natural juice manufacturing and sales have also become a significant source of income for Guinea-Bissau's small farmers and businesses.

According to Lucidi and Milano (2010), the most sacred tree in West Africa is the *Baobab* (imbondeiro). The *Baobab* has excellent material, symbolic, and magical value. It can be up to a thousand years old (some specimens are even older); it is a natural water reservoir (the trunk can hold up to one hundred and twenty thousand liters of water); it withstands any climate; and it is a fundamental food resource. The edible parts of the baobab are numerous. The leaves are rich in protein and vitamin A: fresh, cooked, and seasoned with palm oil, they are used in soups. The green and oval fruit contains a white, spongy pulp with many seeds, is rich in vitamins A, B1, B2, B6, and PP, and includes a high vitamin C and calcium content. The pulp tastes sour and can

be eaten fresh or mixed with water and sugar to prepare a toning and refreshing juice (Claudia, 2009). The fruit's dark, bean-like seeds can be roasted and turned into a cream to season rice or, with a bit of sugar, as a dessert. *Baobab* Juice Ingredients: 250 grams of *Cabaceira* fruit powder, 500 grams of sugar, 2 liters of water, and 0.5 liters of milk. The best way to prepare: sift the baobab fruit powder through a cloth or sieve. Pour into a container and gradually add water, mixing gently. Add the sugar and, lastly, the milk. Freshness is critical (Claudia, 2009).

As stated on the Facebook page of Juice *Ondjo* (hibiscus Juice) (Guine, 2021), the hibiscus leaf is one of the essential legumes in typical Guinean cuisine dishes. Hibiscus is a plant known throughout the world, and hibiscus tea is used to treat and prevent some health conditions and to help with weight loss. In Guinea-Bissau, it is also consumed a lot as juice (*ondjo*). One of the properties that stand out in hibiscus tea is its antioxidant power. When consuming the drink, the body undergoes a detoxification process in which all toxins are eliminated through urine, which is why hibiscus tea is also known as a famous diuretic.

Hibiscus (*baguiqui*) is a group of horticultural crops adaptable to high temperatures, humidity, and frequent rain. That's why the Guinean organization Hortas (*Cacheu*) recommends its production at this time of year (Guine, 2021).

Additionally, despite its sacred and secret nature, there is always a festive and popular aspect surrounding the significant events in the lives of Guineans, with gastronomic rituals honoring these moments. The Facebook page "*Guiné 2021*" mentions that Guinea-Bissau is rich in wild and cultivated fruits. Their welcoming is done by women, who also process them into juices and jellies. Among the wild trees, we have the *baobab*, whose fruit is also used in savory dishes; the *mandiple*, with small yellow fruits; the *veludo*, with small dark fruits; the gigantic *baobab* tree; *tamarind* (occasionally cultivated); *tambacumba*, whose fruits are children's favorites. Among the shrubs is the *manganaça*, a plant very resistant to droughts. For example, in the south of the country, it is common to grow *banana* trees and numerous species of citrus fruits, such as *lemons*, *oranges*, and *tangerines*, which Portuguese settlers introduced to Guinea-Bissau.

CONCLUSION

This article describes Guinea-Bissau's cultural, ethnic groups, and culinary traditions, which are essential for understanding Guineans' food culture and social elements. As a former Portuguese colony, this country has been shaped by typical historical and cultural influences, which may be seen in its distinct cuisines. We hope our findings underscore the importance of preserving and promoting cultural diversity in an increasingly globalized world and the vital role that individuals and communities play in shaping cross-cultural exchange and understanding.

BIBLIOGRAPHY

- Agar, M. H. (1980). *The professional stranger: an informal introduction to ethnography*. Academic Press.
- Balanta people. (2024). Wikipedia. https://en.wikipedia.org/wiki/Balanta_people
- Barbosa, A. (2018). Women's roles in bijagos and fula cultures. *Journal of Cultural Studies*, 12(2), 45-62.
- Barreto, G. (2017). Maintaining Guinean cultural traditions in the Macau diaspora. *Journal of Lusophone Studies*, 22(1), 45-68.
- Bennett, M. J. (1998). *Basic concepts of intercultural communication: selected readings*. Intercultural Press.
- Bhatia, S., & Ram, A. (2009). Theorizing identity in transnational and diaspora cultures: A critical approach to acculturation. *Elsevier*, 140-149.
- Butcher, & Seidman, I. (1902). *Interviewing as qualitative research: a guide for educational and social science researchers*. Manufactured in the United States of America: Library of Congress Cataloging.
- Cá, E. D. (2016). Casamento da etnia Papel na Guiné-Bissau, pp. 15-40.
- Cabo, V. G. (2011, 11). Um olhar sobre as raízes africanas nas comunidades remanescentes de quilombos do Estado do Maranhão, Brasil. pp. 42-87.
- Camara, Conte, F., M., & S., D. (2024). Navigating Cultural Boundaries: Experiences of the Guinean Community in Macau. *Journal of Migration Studies*, 78-95.
- Cardina, M. (2024). *The Portuguese Colonial War and the African Liberation Struggles*. New York: Routledge.
- Carvalho, M. S. (2021, 12). Léxico da língua futa-fula da Guiné-Bissau: Uma proposta de vocabulário trilingue, pp. 294-321.
- Chitungo, I., Mhango, M., Mbunge, E., & Dzodo, M. (2021). *Utility of telemedicine in sub-Saharan Africa during the COVID-19 pandemic*. Hum Behav Emerg Technol.
- Claudia, A. (2009, julho 25). *Sumos naturais*. Afric-ana. <https://afric-ana.blogspot.com/2009/07/sumos-naturais.html>
- Couto, H. H., & Embaló, F. (2010). *Literatura, língua e cultura na Guiné-Bissau: um País da CPLP*.
- Denzin, N. K. & Lincoln, Y. (2011). *The sage handbook of qualitative research*. London.
- Denzin, N. K. (2018). *The SAGE Handbook of Qualitative Research*. Sage Publications.
- Dna Consultants. (2024). *Guinea-Bissau - West Africa*. African DNA Consultation. <https://dnaconsultants.com/guinea-bissau>
- Emerson, R., M., Frets, R. I., & L. L., S. (2011). *Writing Ethnographic Fieldnotes*. University of Chicago Press.
- Faria, R. (2022). Sex-specific ethics among the mansoancos. *Journal of African cultural studies*, 28(4), 345-362.
- Ferreira, M. (2020). *Sons da tradição*. Guinea-Bissau.
- Guine, L. (2021). Lanta Guine. Facebook. <https://www.facebook.com/iandaguine/photos/a.343564936536617/863502634542842/?type=3>
- Hofstede, G. (2001). *Culture's consequences: comparing values, behaviors, institutions, and organizations across nations*. Thousand Oaks: Sage Publications.
- Johnson, D. V. (1984). Notes on the palms of Guinea-Bissau. pp. 155-162.
- Johnson, L., & E, D. (2023). Sampling Techniques in Qualitative Research. *Qualitative Inquiry*, 123-140.
- Katayama, H. R. (1994). *Culture and the self: implications for cognition, emotion, and motivation*. New York: Psychology Press.
- Kempny, M. (2012). University of Bucharest: *International Review of Social Research*, vol. 2, issue 2, June 2012.
- Lee, J. T.-h. (2022). Globalizing Macau's food culture. pp. 123-129.
- Liam, C., & M, M. (2023). *Ethical Considerations in Qualitative Research: A Practical Guide*. Routledge.
- Lucidi, V., & Milano, S. (2010). *Guiné-Bissau, da terra à mesa, produtos e pratos tradicionais*. Guiné-Bissau.

- Lukaszuk, E. (2021). (Post) Colonial Chrono politics and Mapping the Depth of Local Time(s) in Global Literary Studies: An Itinerary to Guinea-Bissau. *Metacritic Journal for Comparative Studies and Theory*, 69-83.
- Madeira, F. M., Rebelo, R., Catry, P., Neiva, J., Barbosa, C., Regalla, A., & Patricio, A. R. (2022). *Fine-scale foraging segregation in a green turtle (Chelonia mydas) feeding ground in the Bijagós archipelago*, Guinea Bissau.
- Mbundé, R. O. (2021). *Mandjuandade como espaço de luta pela emancipação feminina no contexto social na Guiné-Bissau*, pp. 36, 141-162.
- Mendes, P. (2014, 08). *Entre os “saberes locais” e o “saber universal”: a modernização das comunidades Manjaco e Mandjização do Estado da Guiné-Bissau*, pp. 62-92.
- Nhaga, G. J. (2021). *Formação da identidade nacional da Guiné-Bissau*, pp. 55-58.
- Oliveira, o. B., Havik, P. J., & Schiefer, U. (1993). *Armazenamento tradicional na Guiné-Bissau*, pp. 431-437.
- Pais, Sidónio. (2021). Radiokussunde. Facebook. <https://www.facebook.com/radiokussunde/posts/1630114357188029>
- Pereira, M. (2018). Negotiating Guinean and Macanese identities in the diaspora. *Diaspora Studies*, 11(2), 179-198.
- Ricoeur, P. (1993). *The model of text: meaningful action considered as a text*.
- Ringer, F. (1997). *The Max Weber dictionary: the unification of the cultural and social sciences*. London: Harvard University Press.
- Rosa, J. B. (2015). *Tourist guide discovering Guinea-Bissau*, pp. 4-162.
- Rosa, J. B. (2018). *Guia turístico à descoberta da Guiné-Bissau*, pp. 01-179.
- Sambu, A. (2022). Educação para os direitos Humanos em Guiné-Bissau. Proposta de fundamentos teórico-críticos e estratégias de ação, pp. 22-66.
- Sambu, M. (1999). *Guiné-Bissau, dos povos a nação, uma longa marcha de sofrimento*. Macau: Macau.
- Sangreman, C., Magalhães, J., & Faria, R. (2023). *A identidade Nacional na Guiné-Bissau*, pp. 13-60.
- Santos, A. (2018). Culinary traditions of Guinea-Bissau: a focus on local ingredients. *Journal of food culture*, pp. 25(4), 267-284.
- Schwandt, T. A. (2000). Three epistemological stances for qualitative inquiry: interpretivism, hermeneutics, and social constructionism. In N.K. Denzin & Y. S. Lincoln (eds.), *Handbook of qualitative research. A thousand oaks*. Sage.
- Schwartz, S. H. (1992). A theory of cultural values and some implications for work. *Journal Applied Psychology: An International Review*.
- Schwartz, S. H., & Belsky, W. (1987). *Universals in the content and structure of values: theoretical advances and empirical tests in 20 countries*. New York: Academic Press.
- Silva, A. C. (2022). Transnational Cultural Practices: The Case of Guinea-Bissau Community in Macau. *International Journal of Cultural Studies*.
- Silva, J. (2019). Gender roles and expectations among the manjaco. *Ethnographic Research*, 256-273.
- Smith, J. (2003). *Research Design and Methodology: A Practical Guide*. Reputable Academic publisher.
- Soares, P. (2017). Sex-specific ethics among the Papéis and balance. *African Studies Review*, 41(2) 89-106.
- Subuhana, Y. V. (2018, 04). *O casamento tradicional na Guiné-Bissau: o k'mari na etnia Papel*, pp. 5-14.
- Swedberg, R. A. (2016). *The Max Weber Dictionary: keywords and Central Concepts* (2nd ed.). Stanford University Press.
- Té, A. A. (2016). *Principais rituais da etnia Pepel: fanadu e casamento*, pp. 32-52.
- Temudo, M. P. (2021). *Brief notes on Balanta's history before and after Guinea Bissau's independence*. <https://www.balanta.org/history/brief-notes-on-balanta-history-after-guineabissau-independence>
- Van Dijck, J. (2017). Digital Ethnography: Anthropology, Narrative, and New Media. *Anthropological Quarterly*.
- Watkins, S. I. (1987). *Interviewing as qualitative research: a guide for educational and social science*

- researchers. Manufactured in the United States of America: Library of Congress Cataloging.
- Williams, P., & Chrisman, L. (2015). *Colonial Discourse and Post-Colonial Theory*. London: Routledge.
- Wong, T. (2021). Cultural fusion: Guinea-Bissau and Macanese cuisines in Macau. *International Journal of Food Studies*, 8(2), 123-140.
- World Congress on Matriarchal Studies (2009). *Societies of Peace: Matriarchies Past, Present and Future: Selected Papers, First World Congress on Matriarchal Studies, 2003, Second World Congress on Matriarchal Studies, 2005*. Inanna Publications.
- Worldometer (2024). *World Meter*. <https://www.worldometers.info/world-population>.

MACAO



VIDEO



THE IMPACT OF CORPORATE PHILANTHROPY ON MEDIA, ART, AND TECHNOLOGY IN MACAO

WHAT DO WE KNOW ABOUT PHILANTHROPY IN MACAO?

WHAT IS THE RELATIONSHIP BETWEEN CONFUCIANISM, PHILANTHROPY, MEDIA, AND STRATEGIC COMMUNICATION?

Carmen Zita Monereo (UNL)

Abstract: In the communication sciences field, philanthropy has gained importance as a communication tool in recent years. Corporate philanthropy represents one of the most rapidly growing areas of communication activity today. This article offers a framework for understanding philanthropy in Macao - SAR. It is argued that philanthropy defines and explores certain tenets essential namely etc, goodwill, generosity, image transfer, focus, and strategy. The concept relates these tenets to the achievement of public opinion response, building a proposed model of how philanthropy works in Macao and the impact on Media, Art, and Technology. On this basis, the main objective is to map what are the values of an organizational culture capable of generating communication flows propitious to innovation through philanthropy activity. Overall, this study finds that the personal characteristics of individual philanthropists, their sensitivity, and goodwill for the arts, innovation, and technologies are differentiating factors in strategic decisions. This paper demonstrates that Philanthropists can contribute to social stability, improving social awareness and the perception of corporate social philanthropy.

Keywords: Corporate Philanthropy, Reputation, Strategic Communication, Media, Macao, Confucianism.

Carmen Zita Monereo

She holds a Ph.D. in Communication Sciences, specialization in Communication and Arts at NOVA University of Lisbon, a Master's (M.Sc.) in Communication and Media Studies cum laude at the Catholic University of Portugal, and a B.A in Management at Technical University of Lisbon, Portugal; Postgraduation in Financial Instruments, Products, and Markets at NOVA School of Business and Economics and Postgraduation in Cultural Management (Catholic University of Portugal). Research interests focused on branding, strategic communication, and digital communication. In parallel to academic activities, she gained experience in the Financial industry as well as strategy consulting. Currently, she is a researcher at ICNOVA.

ID: oC16-A05F-E9B9 || **ORCID:** 0000-0002-7133-5065

e: carmen.g.monereo@gmail.com

INTRODUCTION

This chapter seeks to bring to academic circles the debate on evidence that corporate philanthropy has been growing in recent years in Macao, the Special Administrative Region of China, hereinafter referred to as Macao SAR. It is a debate that is particularly relevant given the economic, political, and social role that philanthropy has taken on as a communication tool and branding factor. This work aims to discuss how philanthropy in Macao has been reconfigured after the COVID-19 Pandemic, and how this might affect the way that individual philanthropes gain visibility and reputation in Macanese society. Furthermore, this research seeks aim to understand the dominant philanthropy model that prevails in the territory of Macao.

Since the handover in 1999, the principle of “one country, two systems” applies following the Basic Law that governs economic development and aims to guarantee the principles of prosperity and social stability. Macao is a historic city where Western and Eastern cultures meet. It is the heir to the traditional culture of Southern China and has absorbed its unique style from the European continent. Geographically, in a small area of about 30 km², Macao offers communities of different ethnic origins coexist in harmony. The cultural activity in contemporary Macao centers mainly around three components. The first is the central government, the second is the corporate giving and the other one is the third sector and individual giving. Despite the evident importance of the philanthropy phenomenon, on rankings and the World Index little is known about what role philanthropy plays in Macao society, in terms of statistical data, its social impact, and improving the quality of life of the population.

The use of philanthropy in art and technology and the trends of digital communication strategy which includes the social media platforms. In order to understand the relationship between philanthropy, media, art, and technology, it is essential to contextualize the origins and evolution of philanthropy in academic concepts to understand the present and reflect on how it might evolve in the future. Many argue, with some academic evidence, that the concept of philanthropy in the arts should only be used when the objective of the action is cultural, civic, or humanitarian, and always without compensation (Palencia-Lefler, 2001). Another perspective comes from Parés (1994). The author states that when a person or organization undertakes a premeditated action of this kind, there is always, whether explicitly or not, a will or a desire to get something in return. For the author, philanthropy without a *quid pro quo* is not usual or frequent. Unlike in Anglo-Saxon countries, particularly in the USA, where institutions are the driving force behind the creation of social sector companies. In Macao, the government is the main promoter of this ecosystem. Nevertheless, there are private institutions as well as individuals who practice philanthropy. This chapter examines the state of philanthropy in Macao the areas of interest of philanthropists and the way they communicate acts of philanthropy using the Media. Indeed, corporate funding has a long history in the arts (Allen, 1983; Martorella, 1990; Monereo, 2021). In reality, philanthropy is a complex and dynamic phenomenon that can contribute to changing individual lives.

Individual philanthropic actions are deeply rooted in personal experience and one's system of beliefs. Thus, this article first laying out some of the issues that need to be addressed when thinking about and studying how philanthropy impacts communities through Media, Art, and Technology. Philanthropy is not charity. Charity has a long and noble history in Asia. Existing literature related, to pragmatic Philanthropy makes an important contribution to understanding the way in which social investment in Asia takes place. What is Philanthropy and charity? What is the difference? According to the definition of the Centre for Asian Philanthropy and Society, Philanthropy is an active effort to promote human welfare. It goes beyond pure charity, which involves the act of giving money, food, or other kinds of help to those in need. Philanthropy is a formalized and systematic process of being charitable. Charity generally focuses on providing immediate relief to people while philanthropy is focused on helping solve long-term problems. Concurring to the same source, while charity, through individual and family efforts, has a long history in Asia, philanthropy as a widespread and systemic practice has only developed in recent years. Among the various components of integrated corporate communication, known as communication mix in scientific literature (Lendrevie, 2010; Monereo, 2021) philanthropy is, undoubtedly, at once one of the most important and one of the least studied.

The present chapter delves into the evolution of the concept of philanthropy in Asia, specifically in Macao SAR over time and the ambiguous relationship it has always established between interest and altruism, power and generosity, and the values of Confucianism. A key assumption of this chapter about corporate philanthropy is that funders have strategic objectives that shape their giving and that different objectives favor different artworks. There is, however, a constant element on the part of the philanthropies: the intention and the power to communicate. The varying element throughout time is not, therefore, communication, but the intentionality of the message and the means available to estimate its effectiveness with the target audience.

Understanding corporate philanthropy's effect on the organization's reputation for corporate social performance (CSP) is important for many reasons. According to the review of relevant scientific literature, and several studies, it appears that in recent years this topic has kept more research interest. GlobalGiving, a nonprofit that supports other nonprofits by connecting them to donors and companies, offers tools and specialized solutions to help companies enhance their corporate giving strategy, empower their stakeholders, and support high-impact projects around the world. Furthermore, the data published by the CAF World Giving Index in 2023, Global trends in generosity demonstrate, that philanthropy has been growing, primarily through Foundations and individual persons. The world's most generous countries (2023) are Indonesia, Ukraine, Kenya, Liberia, the United States, Myanmar, Kuwait, Canada, Nigeria and New Zealand. The 2023 Charities Aid Foundation (CAF) World Giving Index gives us reasons for hopeful optimism against a backdrop of global instability. It shows that the increased generosity as a result of the COVID-19 pandemic was broadly maintained at a global level. That means that almost three-quarters of humanity did something to help others in the course of 2022. In this research, it appears that the World Index does not publish data about Macao. On the other hand, the World Giving Index shows, it looks particularly at insights on the role of religion in giving, the role of giving in happiness, and whether people who migrated have different giving habits.

There are some key types of philanthropy. The first is the Family Philanthropy. The act of giving as a family is very much in the long term. It helps establish a culture of giving for generations and passes on positive attitudes towards money and helping others. It's a powerful form of philanthropy, as it allows families to keep giving as the philanthropic landscape changes. Second, is the Impact of philanthropy. This focuses on making the strongest impact and benefitting as many people as possible through strategic philanthropic actions. It often involves grassroots approaches that target specific goals. Venture philanthropy. Here, venture capital principles and services are applied to the social economy. Overall, corporate reputation has been mainly viewed from an economic and an institutional perspective. This kind of social investment may include long-term investment approaches, hands-on support, and board management. In the last, the Strategic Philanthropy. This involves someone supporting the causes that matter the most to them, and deciding on the best way to help. It may be a matter of donating to a single charity yearly or building a portfolio of organizations to donate to at different times. This study focuses on this last one. I argue that underlying the strategic options of the "new philanthropy", there are image and branding enhancement and individual reputation interests, as well as social and civically responsible. "Do not worry about those who do not know you, but strive to be worthy of being known." (Confucius). Furthermore, the essence of philanthropy is discretion, based on the thought of "doing good without looking at who". The concern with face (or honor in Chinese terminology is a universal concept. In the Chinese case, is the independence between the ever-present need to preserve or dignify the face and also that of the others (to give face) in an environment that respects reciprocity and the Chinese hierarchy that mainly aims at furthering harmony (Trigo, 1996).

1. Let's Explore some Questions about Philanthropy

Corporate giving is becoming big business and a major strategic issue for firms as they increasingly position themselves as socially responsible organizations. Philanthropy in Macao could be one of several communication tools available in an organization and individuals allowing them to communicate by giving their support to social and cultural initiatives. The research explores, within an analytical framework of Institutional Communication the purposes of communication underneath the cover of kindness of rich men and well-known persons. To learn more about philanthropy in Macao, it is important to highlight the activities carried out by the foundations such as the Rui Cunha Foundations (founded 2012), Macao Foundations (2001), and Orient Foundations (1988).

An organization's reputation for Corporate Social Performance results from the accumulation of various positive and negative signals, which enhance and diminish reputation, respectively (Cornelissen et al., 2007; Janney & Gove, 2011; Rao, 1994). Following extensive work in the reputation literature (Fombrun et al., 2000; Fombrun & Riel, 1997; Rindova et al., 2005). The term philanthropy, etymologically rooted in Greek, is defined as "love of humanity", "detachment", "generosity towards others" and "charity". It is the practice of voluntary donations that can encompass donations of tangible and intangible goods.

The development of philanthropy - as an object of study and the increase in the number of researchers has favored an increase in interpretations and theoretical diversity. From the

perspective of moral values, social, financial, and economic motives, and individual virtues (altruism), we find the role of philanthropy's power in societies. Philanthropy is therefore rather dispassionate and impersonal and focuses on solving the root causes of human issues and aims to contribute to the Common Good. Conceptually, it differs from charity in that charity refers to helping those most in need, especially in times of crisis.

What role does philanthropy play in Macao society? Philanthropy has the power to influence lasting social change. When an organization or project receives support, a 'ripple effect' occurs. Many lives are touched, potentially for generations. When people come together to help others, whether donating money or time, that means to be human. And from there, communities grow stronger. Another point emphasized by the World Giving Index, it looks particularly at insights into the role of religion, values, the spirituality in giving and the role of giving in happiness. Thus, what is the impact of the traditional Chinese value of harmony on the companies' and foundations' activity in Macao? Although cultural values influence motivations, they vary according to the political and socio-economic contexts. The association of philanthropy and business, private nonprofit organizations supporting, cultural activities, education, and wealth is a relatively new phenomenon that has been increasing (Zhou, 2019).

Is philanthropy a practice of gratitude, and giving back in Macao society? (i) Is philanthropy a tool of reputation and visibility through the media in Macao? (ii) How do the values of Confucianism have an impact on strategic communication in Macao? (iii)

This study hypothesizes that in Macao, the values of Confucianism could have an impact on contemporary society and influence the corporate philanthropy, and organizational communication strategies of non-profit organizations and individual philanthropists. Once philanthropists make decisions about which projects to support, they are motivated by tangible resources but they are also concerned with their reputation and visibility sometimes in the media – traditional and social media. The motivation for exploring the dialogue that is established between the practices of the Foundation's social-cultural initiatives in Macao also results from the fact that the relationship of Confucianism. Philanthropy and strategic communication have been underexplored either theoretically or empirically with the cases of the third sector in Macao. Additionally, through the study, the intention is to analyze the key challenges and the relationship between the Chinese model, based on the traditional Chinese value of harmony guiding the people to approach giving and the key challenges after the handover.

It can also be important for organization that intend to manage their communication strategically, which will contribute to the development of societies. To find out possible to understand, the fact that Macao is a territory culturally with diverse influences. The model of philanthropy that is practiced in Macao to what extent is a junction, a mix of a model of the West, North American (give back), European model (welfare state) plus Chinese model with influences of Confucianism. Let's start with terminological issues. Confucius 孔夫子 Kǒng Fūzǐ, is the name that corresponds to the Latinisation of the Chinese name literally Master Kong. He was a Chinese sage who was born in 551 B.C. and lived until 479 B.C. In the central county of today's Shān dōng province, he was the inspiration behind Confucianism (Granel, 1997). Confucius defended the idea that a

ruler has the duty to be a moral example to the people and to govern with benevolence and justice. Confucianism emphasised the importance of education (Wen) for the development of virtues and the improvement of character, as well as the balance between wisdom and courage (Wu). This cultural phenomenon determined Chinese civilization. Over the centuries, Confucianism has exerted a significant influence in China, molding the country's culture, beliefs, attitudes, ethics, and politics. (Qing, 2018). The central concept of Confucianism is “Ren”, which can be translated as humanity, kindness, benevolence, or virtue. Now, how do Confucian values relate to the act of generosity, the altruism that underlies corporate philanthropy? According to the foundations of Confucianism, Ren emphasizes the importance of human relationships and the proper treatment of others, cultivating qualities such as empathy, respect, courtesy, and responsibility. These values are inherently related to the practice of acts of philanthropy, the “inner moral” aspect of the individual, because it is assumed that human beings are naturally good. On the other hand, philanthropy is a strategic action with socioeconomic goals. The emergence of institutional communication to the need to distinguish between communication actions that were not restricted to the promotion and sale of products (Weil, 1992). Instead, institutional discourse sought to “modify behavior, attitudes or gain adherence to an idea [...]” (Weil, 1992: 25). On this basis, the research has a conceptualization of Philanthropy in the literature dedicated to the subject tools of Communication and analyzes the relationship with Confucianism.

Macao is “one country, with two systems” and there are strong Chinese's cultural values that promote social and economic development, consequently improving the lives of the population. The experiences of many Asian scientific researchers indicate the need to take account of Asian Cultural characteristics. For example, the book “Philanthropy in a Flat World: Inspiration Through Globalisation” edited by Lester M. Salamon (2009) includes a chapter on philanthropy in China and its potential to contribute to global philanthropy. The article “The Role of Philanthropy in China's Development” by Tony Saich (2011) discusses the challenges and opportunities of philanthropy in Mainland China and its potential to promote positive social and economic development. Mark Sidel (2014) in his book “The Chinese and Their Philanthropy” provides an in-depth analysis of the history, development, and current state of philanthropy in China. Nan Zhang (2014) in the article “The Emergence of Philanthropic Foundations in China: An Overview of the Current Situation” examines the rise of philanthropic foundations in China and their potential to contribute to social and environmental change. Freifelder wrote about the topic “How philanthropic are China's new billionaires and millionaires? in his article published in 2014 entitled *Giving it away in China*.

In sum, experts in the world of giving say the potential is there, but the motivation and mechanisms for giving may not be. The article “Philanthropy and Civil Society in China” provides a comprehensive overview of philanthropy in China, including its historical development, current state, and prospects (Kang & Ma, 2016). Prof. Fr. Stephan Rothlin, S.J., published the book “Corporate Philanthropy in China and Beyond” (World Scientific Press, Singapore, 2024) which explores the new Charity Law in China and compares different approaches to poverty alleviation and corporate philanthropy between China and Europe. These resources provide a good starting point for learning more about philanthropy in China. Little writes about Macao. These authors offer critical analyses and insights into the opportunities for philanthropy in China and the potential for contributing to economic development. Philanthropy can be seen from the

perspective of harmony, and this is the point of intersection that this study intends to address in this trilogy: philanthropy, strategic communication, and the doctrine of Confucianism.

“If we are working to increase harmony, we are working to attain a balance within a system of institutions and people that is more productive and acceptable to our stated beneficiaries and the other people and institutions within that system. And it is by focusing on this system that we can achieve our greatest impact” (Chandler Foundation <https://www.chandlerfoundation.org/about-us>).

It is necessary to mention that giving is best signified by the golden rule of Confucianism expresses the core attitude of humaneness: “Do not do to others what you do not want them to do to you”. Therefore, when one gives, one can be regarded as a morally superior or ideal human being. According to Confucian principles, the concept of harmony does not mean that everyone is the same with identical or even similar ideas, backgrounds, and goals. Harmony is seen to mean that different ideals and perspectives are respected. These principles can be guidelines in the leadership model, in the harmony of relationships with stakeholders, and the strategic communication of organizations.

The pursuit of harmony, as understood by Confucius guides the philanthropic approach and may help guide philanthropists as they endeavor to spread good. Harmony is a powerful and effective guiding principle for social stability. Firstly, a focus on harmony encourages us to consider multiple points of leverage. From this perspective, organizations such as companies and foundations, when practicing philanthropy, are simultaneously working to increase harmony in the endogenous sense and from the exogenous perspective, i.e. social stability, a balance in the system of institutions, and Macao society.

From an internal point of view, people tend to be more productive when they have a sense of belonging to the institution. In this sense, all stakeholders are involved and move in the same direction to achieve harmony, and progress and contribute to economic and social development. It is important to frame the theme of this chapter with some fundamental conceptual notions about the teachings of Confucius. His reflections are an essential starting point for understanding the tradition and political and legal thought of mainland China and Macao.

2. Additional Learning Outcomes About the Regulation of Philanthropy in Macao

In the scientific literature, authors are in agreement that fiscal incentives while affecting the amount they give to the arts, do not affect giving per se (Martorella, 1990; Gray & Balmer, 1997). In Macao, the culture of philanthropy has grown, but it is still concentrated in large foundations such as the Macao Foundation, the Orient Foundation, and the Rui Cunha Foundation. The Foundations's purposes are the promotion, development, and study of actions of a cultural, social, economic, educational, scientific, academic, and philanthropic nature, including activities aimed at promoting Macao. In this sense, the practice of philanthropy, as revealed by various authors, does not have tax benefits as its main objective. In this sense, although there is philanthropy in Macao, the main objective is not to obtain direct tax benefits. Although not regulated, there is no specific patronage law in Macao.

This article develops a theory first by considering an example of effective corporate philanthropy. The case study of one of the most well-known Foundations' cases in Macao: Rui Cunha Foundation. The foundation's main goals are to promote positive and sustainable education, support research and development, and encourage and help instill a modern culture of philanthropy in Macao. According to the 2023 activity and accounts Report, released by the Rui Cunha Foundation on the socio-cultural and philanthropic support practiced, it can be seen that throughout the Foundation's existence, almost 1000 cultural events of the most varied nature have been held in this area, among which 572 musical events stand out.

Important not only for their number but also for the reflection that we have been able to witness over time in the growth and training of younger artists. As for the exhibitions that the Foundation hosts in its Gallery, it is worth highlighting the policy followed by giving way to younger artists, allowing them to exhibit, often for the first time, their art. The Foundation's main objective, in this field, is to give rise to the largest number of artists, which is why the exhibitions only exceptionally exceed two weeks, in addition to experience having dictated that exhibitions very rarely maintain a longer interest of the public.

It should be noted that in Macao, there is a tax benefit scheme for companies that carry out scientific and technological innovation activities. Indirectly, these could be a trend and the priority areas for corporate philanthropy in Macao. In terms of "patronage", the existence of a legal framework or any law to this effect was not identified. Macao's tax system still predates the handover. There is a complementary income tax, professional tax, etc. The tax legislation is being revised and perhaps something new will come out at the end of this year or next. As far as I can tell, there are only a few scattered tax benefits and a law on tax benefits for companies carrying out scientific and technological innovation activities (Law1/2021)

A further incentive for companies and Foundations is good media coverage (Martorella, 1990). This is specifically true in times of economic difficulty. Philanthropy in Mainland China has a long history, but it has undergone significant changes in recent decades as China has transitioned to a market-oriented economy and increased its engagement with the global community.

The government began to encourage private giving and established regulations and tax incentives to support charitable activities. Today, philanthropy in Mainland China is growing rapidly, with more and more wealthy individuals and corporations establishing their foundations and making large donations. The total value of charitable donations in China reached 140.9 billion yuan (approximately 21.5 billion USD) in 2020 (China Philanthropy Research Institute). According to the Report Giving Index, which establishes a ranking of 149 countries, there has been an increase in acts of giving between 2019 and 2022. The ranking includes data for China, Taiwan, and Hong Kong, but nothing refers to the data about Macao. This index is based on a study centered on three questions: have you helped a stranger in recent years? Have you donated money to charity? Have you volunteered your time to an organization? The pandemic and its economic impact do not seem to have dampened our enthusiasm for giving. On the contrary, the Global World Giving Index score for 2021 now stands at 40%, having recorded its largest-ever annual increase of five percentage points. Participation and giving levels increased substantially for each of the three measures included in the Index. The global increase is most marked amongst high-income

countries, many of which first recorded a decline in 2018 that was sustained until 2021. Despite a global pandemic and the economic hardship experienced by many communities worldwide, people continued to donate money to charity. In high-income economies, the rate of donations sharply increased by 10%. Except for Indonesia and Myanmar -which have strong traditions of religious giving - high-income countries made up the top 10 for this measure.

Some of the major areas of focus for philanthropy in Mainland China include education, poverty alleviation, healthcare, environmental protection, and disaster relief. However, there are also challenges and concerns around transparency, accountability, and the independence of philanthropic organizations from government control. Overall, philanthropy in China is a dynamic and evolving field that is playing an increasingly important role in addressing social and environmental issues and promoting positive social change. Within the communication mix, philanthropy is the result of strategic communication aimed at practicing acts of generosity. What differs in its purpose is the reputational impact and positive image of those who practice it. In other words, measuring the impact on the reputation and image of the “generous” person.

Now, the trends in philanthropy according to the rankings of the “most generous countries” and the “least generous countries” show that there are countries that position themselves as the most generous and for this reason gain visibility. The objective is to serve as basic material for studying the motivations for developing philanthropic initiatives, the areas of interest, the trends, and opportunities for developing private philanthropy in Macao, how have digital platforms facilitated the interaction of philanthropists, and the proliferation of acts of philanthropy. According to statistics from the China Philanthropy Research Institute and the World Giving Index (2023), there is a growing trend in Mainland China, which may tend to be reflected in Macao. However, as mentioned above, there is no statistical data for Macao alone to show that philanthropy practiced by foundations and individuals is not yet included in the world rankings. About the key findings in 2023, the global World Giving Index, the results indicate that the increase in global giving seen during the pandemic has been broadly maintained. Scores are calculated from an average of the responses for each country.¹

3. Discussion

How do arts and businesses make great partners in corporate philanthropy in Macao? The multiplicity of initiatives in Mainland China today that claim to be inspired by “Confucianism” calls for particular attention to the diversity of their practical application. Through three case studies in Macao in this study, the analysis of the third sector and the workings of a new kind of Philanthropy through the Foundations. Philanthropy in Mainland China today is in a state of expansion, experimentation, and evolution. Giving is increasing and becoming more institutionalized. Donations from the top 100 philanthropists in mainland China more than tripled between 2010 and 2016, from USD 1.3 billion to USD 4.6 billion.

¹ A higher score (out of 100) indicates that more of the population is engaged with giving. 72% of the world’s population supported others, amounting to 4.2 billion people Indonesia is the world’s most generous country for the sixth year in a row Ukraine is this year’s highest climber, gaining 13 points since 2022

This research is not free from limitations. However, it aims to advance the understanding - and ultimately the practice and impact - of philanthropy in Macao by improving knowledge about these important players and their philanthropic initiatives and the relation between Confucianism values (World Giving Index 2013). Among the expected results are the mapping of values of the organizational culture that allow communication more favorable to donation and an in-depth discussion about each of these values. It will seek to discuss the obstacles, risks, and opportunities of the implementation of each mapped incentive, the description of dynamics between communication flows and innovative performance, and, not least, ways in which these values can be implemented in companies. Concerning the use for the companies, they will be able to learn about how to create a giving culture and how communication should permeate the different organizational values to leverage innovation.

4. The Place of Philanthropy in Organizations, the Third Sector, and Individuals

What is behind Macao's rise in philanthropic giving? Fundamentally, Philanthropy in the modern sense of the word is still relatively new to China's landscape, but it has taken a firm hold, increasingly amongst middle-class urban residents and particularly in the form of company corporate social responsibility (CSR) programs. The underlying philosophy of philanthropy is compassion and there is a strong sense of compassion amongst the people in China. According to Borgenproject.org China has often been regarded as an "uncharitable" culture. Based on the numbers, there is a large gap between philanthropy in China and the U.S., with only 17 percent of China's total GDP in 2014 contributed to philanthropy compared to that of the U.S. 12 percent of its total GDP. However, the rise of philanthropy in China cannot be ignored as the country is going through a "Philanthropy Evolution." Through traditions like Confucianism, philanthropy is not a nonexistent concept in China. The concept of philanthropy prevails, often enforcing the idea that man should give to less fortunate people.

5. Trends in Philanthropy

The rise of philanthropy in Macao can be credited to the efforts of the country. Key areas of interest comprised in this new charity law include registration as a charitable organization, new rules for fundraising platforms, new rules for fundraising organizations, the establishment of charitable trusts, and law enforcement. With legal modifications, the internet has made donating funds and supporting philanthropy organizations much easier for the public. Philanthropy leaders in Macao understood quickly that social media had a huge impact and began using it to promote a nonprofit sector that was able to link news-related social issues. For example in Mainland China, through the Tencent Online Donation platform, such as crowdfunding, Sina Micro-Philanthropy Platform, and Alipay E-Philanthropy Platform, ordinary people can donate money to different charities with ease. The total online donations through third-party social network donation platforms surpassed \$83 million in 2013, according to the China Online Donations Report.

The Asia Foundation refers to Give2Asia hosted a forum in Beijing, which brought together over 60 leaders from different sectors of philanthropy, government, and business to discuss the current state of charitable giving in China, and new directions and opportunities for philanthropists in the future.

Image transfer at the individual philanthropist provides further insights to aid understanding of philanthropy effects. When combined with a brand in an advertising message, there is a transfer of values from the media vehicle to the brand. This transfer principle is known as a media-vehicle effect in advertising studies contiguity and similarity in semiotic inquiry and symbiosis in branding research.

CONCLUSIONS

Considering the research questions and based on the findings, philanthropy is growing and can serve to help artists, new media, and new projects based on technology. By focusing on the Macao context, the research provides insights into a relatively understudied area. These findings can be used as a basis for future research in the field of communication. Our results show the vital relationship between government, the private sector, the foundations, the arts, and technology is beneficial for the community. It can be concluded that Macao's social and cultural environment has progressively influenced philanthropic values and practices. Philanthropy is a tool for the reputation and visibility of individuals and organizations through the media in Macao.

There is a long and rich philanthropic tradition in the Asian region that draws on religious thinking and practices from Buddhism and Confucianism. The practice of patronage has a spiritual dimension driven by the greatness of generosity, although it can be an instrument of communication. In sum, traditional philanthropic culture was challenged by social and economic issues of the 21st century.

Recent decades have seen a transformation of the philanthropic culture as economic prosperity and efforts to professionalize the philanthropic and nonprofit sectors have taken hold throughout the region. In this way, the research in this context, reflects on trends and the place of philanthropy in organizations, the third sector, and individuals. What do we know about Philanthropy in Macao? We do not know much. As there is not a lack of available data. However, the last two decades have seen the development of more cases of philanthropy in Macao. There is no ranking of philanthropists and there are no indicators of Macao's position in world rankings. What's more, the individuals who are considered wealthy end up in the rankings of other regions such as Hong Kong. In this sense, the branding associated with non-profit organizations and the reputation indices associated with philanthropists are discreet. In fact, one of the characteristics of philanthropy is the discreet attitude of the philanthropist, who tends not to externalize an image of power and wealth as a donor. They don't promote or exalt personal visibility, in the marketing concept, as a benefit to their brand as a donor.

In conclusion, the relationship between Confucianism, philanthropy, branding, and strategic communication is moving toward the search for a New Philanthropy in Macao in the twenty-first century. This will facilitate the use of technology, digital platforms, and the media. The donors are companies, foundations, and individuals. Their areas of interest focus on education and the environment. Regarding the reasons for donating, how the media has contributed to the proliferation of philanthropic acts. There is widespread optimism that it will grow and increase in impact China's continued economic growth and private wealth accumulation, coupled with traditional Chinese values of generosity and giving back, provide a solid foundation for increased

philanthropic activity. China's wealth holders are giving more, and more reputation and visibly. The policies and institutions to support philanthropy continue to take shape. According to the literature research, Education is the top priority, and educational philanthropy is diverse. Furthermore, to change the philanthropic sector, and to fill the gap between Macao's philanthropic activities and other countries, the government, donors, and foundations must work together.

With China's legal modifications, the rise of philanthropists, and a change in the public's mindset. Many organizations are working to keep propelling philanthropic efforts forward. Foundations, like other funders sponsored community exhibitions, innovation, and technological projects. The following limitations should be taken into consideration. It is difficult to find sources and data, and it is difficult to completely isolate the direct impact of philanthropy on social development in Macao. Overall, the impacts of philanthropy and the contribution of companies and foundations to the creation of intangible cultural wealth in a society are normally noticeable over a long period. Contrary to what normally happens with projects sponsored with commercial and marketing objectives. Projects related to education, art, innovation, and technology should be prioritized in strategic corporate goals. To summarize, there are several to argue the impact of this communication tool: corporate philanthropy can contribute to improving the quality of life in the community, stimulate creative thinking and problem-solving, improve academic performance for students, and advance corporate objectives.

BIBLIOGRAPHY

- Bell, D. A. (2008). *China's New Confucianism: Politics and Everyday Life in a Changing Society*. Princeton: Princeton University Press, p. 24.
- Brammer S. & Millington (2005). *Corporate Reputation and Philanthropy: An Empirical Analysis*. *Journal of Business Ethics*, 61, 29-44. DOI 10.1007/s10551-005-7443-4
- Chang, M. (2019). Charitable Giving in China from Passion to Impact. CKGSB Knowledge. <https://english.ckgsb.edu.cn/knowledges/charitable-giving-china-impact/>
- Cheng, A. (2014). *Histoire de la Pensée Chinoise*. Paris: Gardberg, N. A.
- Freeman, R. (1984). *Strategic Management: A Stakeholder Approach*. Cambridge University Press.
- Granet, M. (1997). *Chinese Thought*. (Translated by Vera Ribeiro). Rio de Janeiro: Contraponto, p. 288;
- Gray, E. & Balmer, J. (1997). *Corporate Identity. A vital component of strategy*. International Centre for Corporate Identify Studies.
- Junkang Ji, Zhi H. & Qi Li (2021). Guilt and Corporate Philanthropy: The Case of the Privatisation in China, *Academic of Management*, 64(6). <https://doi.org/10.5465/amj.2018.0586>
- Kang, X. & MA, J. (2016) *Philanthropy and Civil Society in China*.
- Kuo, V., Miao, J., Feng, T. & HU, M. (n.d.). *Global Chinese Philanthropy Initiative Report*. <https://www.international.ucla.edu/gcpi/about>
- Lester, S. (2009). *Philanthropy in a Flat World: Inspiration Through Globalization*.
- Martorella, R. (1990). *Corporate Art*. Rutgers University Press.
- Mauss, M. (2003). *The gift*. NYC. Routledge
- Monereo, C. (2022). *O Mecenato Cultural como instrumento de Comunicação. O caso Caixa Geral de Depósitos e a Culturgest*. Almedina.
- Pan-Chiu, L. & Lee, P. (2002, March 1). Traditions of giving in Confucianism. *Alliance Magazine*. <http://www.alliancemagazine.org/en/content/traditions-giving-confucianism>.
- Parés, M. (1994). La nueva filantropia y la comunicacion social. Mecenazgo, fundacion, y patrocinio. ESRP-PPU.
- Qing, J. (2020). From Mind Confucianism to Political Confucianism. In R. Fan, *The Renaissance of Confucianism in Contemporary China*.
- Rothlin, S. J (2024). *Corporate Philanthropy in China and Beyond: A Comparative Handbook* (Series on Dialogue with China 2). World Scientific Publishing Company.
- Saich, T. (2011). *The Role of Philanthropy in China's Development*.
- Sidel, M. (2014). *The Chinese and Their Philanthropy*.
- Wang (2020). The Rise of Political Confucianism in Contemporary China. In R. Fan, *The Renaissance of Confucianism in Contemporary China*.
- Wong, V. (2013, January 30). Philanthropy in Confucianism. In: *Global Giving Resource*. Toronto: Ryerson University. <http://www.globalgivingresource.com/blog/philanthropy-in-confucianism-2/>
- Zhang, N. (2014) *The Emergence of Philanthropic Foundations in China: An Overview of the Current Situation*.
- Zhou, M. (2019) Promoting Research on Global Chinese Philanthropy: An Introduction to the Special Issue. *The China Nonprofit Review*.

MOZAMBIQUE



VIDEO



NAKHODHA AND THE MERMAID ON THE ISLAND OF MOZAMBIQUE:

IMMERSIVE TRANSMEDIA NARRATIVES AS A COMMUNICATION MODEL FOR HUMAN AND SUSTAINABLE DEVELOPMENT

Vanessa Ribeiro-Rodrigues (ULusofona, CICANT)

Abstract: Mozambican filmmaker Yara Costa (b. 1981), based on the Island of Mozambique, has focused on issues of identity, memory, culture, and ecology, primarily through documentary filmmaking. The documentary, which intersects with the evolution of human rights movements (Penafria & Freire, 2010) and challenges social conventions (Nichols, 2001), plays a role in the revolution of cultures, serving society and minorities as an activist tool and a critique of hegemonic narratives. In the immersive art installation *Nakhodha and the Mermaid* (2023) on the Island of Mozambique, Yara Costa highlights the impacts of global warming on Swahili coastal communities, whose culture is at risk of disappearing. She combines songs and stories from fishermen and women of the sea, showcasing their knowledge through a hybrid, immersive, and multisensory narrative that blends technology and media art, incorporating documentary, spatial/360-degree audio, virtual reality, and video mapping. Taking as a starting point the role of documentary as a counter-narrative to dominant narratives and the importance of communication for/of/about development in a bottom-up approach, emphasizing cultures that remain invisible (Spivak, 1993; Fraser, 1992, 2003; Benhabib, 2004), especially those from the Global South (Santos, 2007, 2018), this article aims to analyze, following Ribeiro-Rodrigues' model (2021): To what extent does the transmedia narrative project *Nakhodha and the Mermaid* constitute communication for/of/about human and sustainable development, making Mozambican epistemologies visible? To this end, the methodology involves content analysis of the discourse from 20 texts, the project's website, interviews with the artist, and news articles published online about *Nakhodha and the Mermaid* between June 2023 and April 2024. The results show that we are dealing with a media art project with a counter-narrative aim that aligns with the model of communication for/of/about human and sustainable development: i) in the construction of the macro-narrative, through a collaborative process between local communities and youth trained specifically for the project; ii) in the intersection between the themes of this communicative model and the objectives of the global agenda; iii) in the emphasis on first voices and their speaking places, in a co-construction of marginalized knowledge with impact in the public discourse sphere on the web, privileging their epistemologies and making the discourse a political act (Arendt, 1958).

Keywords: Communication for/of/about/ Development, Transmedia Narratives, Epistemologies of the South, Yara Costa, Mozambique Island.

Vanessa Ribeiro-Rodrigues

She is a documentary filmmaker, researcher, freelance journalist, writer, university lecturer, and educator in Media Literacy and Journalism. She is particularly active in the areas of media and film production, namely documentary, journalism, and communication for development, communication and activism, in the context of Media Arts, Creative Industries, and Technology. She has a PhD in Communication for Development Studies, specializing in Documentary, Journalism, and Human and Sustainable Development. She is a University Professor at the Lusófona University, the University of Coimbra, and a Visiting Academic at the University of Saint Joseph in Macao. She is integrated into CICANT - Centre for Research in Applied Communication, Culture, and New Technologies as a researcher.

As a film director, she is the author of the documentaries *The Sand Spell* (Real Ficção and Sabina Filmes, 2025) and *Seed Keepers of Bijagós* (Guinea-Bissau, 2025). She independently directed and produced the feature documentary *Land's Baptism* (2017, 90') in Brazil. She is the author of the narrative journalism book *Ala Feminina* (Desassossego, 2018), about women in prison, and *Tuning into the Ancestral Technology of Listening, Art and Community Notebook* (edited by Calouste Gulbenkian Foundation, 2022).

ID: 6A19-A1CB-73C9 || **ORCID:** 0000-0002-7261-017X

e: vanessa.rodriques@ulusofona.pt

INTRODUCTION

Based on the island of Mozambique, a territory recognized by UNESCO as an intangible heritage of humanity, the multidisciplinary Mozambican artist Yara Costa (b. 1981) has been concerned with questioning contemporary Africa, using audiovisual narrative as a form of communication, especially documentary, fusing new technologies, sound, cinema, tradition and culture, while engaging with the concerns of communities, to record and preserve their stories as epistemological heritage.

The most frequent themes on which her work has focused are memory and identity, emigration, ancestral knowledge, the frontiers of human relations, crossing the arts, culture, the environment, and the sustainable development of communities. Examples of this are the films: i) *Why are they here? Chinese Stories in Africa* (33, 2011)¹ about Chinese immigrants in Lesotho, Ghana and the Island of Mozambique; ii) *The Crossing* (Haiti, 25' 2014), which follows the life of a young Haitian girl studying on the border with the Dominican Republic; iii) *Ruins of the River* (Mozambique, 34', 2021), a poetic film about the spirit of the waters in Dombe, in the province of Manica, which was one of the areas affected by Cyclone Idai in March 2019; iv) *Between God and I* (Mozambique, 60', 2018), about a young woman on the island of Mozambique who advocates sharia law.

With a degree in journalism, Yara Costa specialized in documentary film, where she found an authorial language to make social concerns visible. That's why, in *Nakhodha and the Mermaid* (Mozambique, 2023), the artist combines different media languages to create an immersive art installation, as a complementary element of a transmedia project, which she inaugurated in an old Portuguese customs house, in 2023, on the island of Mozambique, to bring to light her concerns about climate action and how it is contributing to the disappearance of fishing communities on the island's coast and of Swahili origin. For her, "climate issues are directly related to a form of power that persists in being colonial" by usurping the ecologies of ancestral knowledge, such as the case of the communities on the Island of Mozambique, heirs to the Swahili culture² (Yara Costa, personal communication, July 12, 2024).

The project is an immersive art installation that uses spatial sound, video mapping, virtual reality, 360 video, video, and a dhow, specially designed for the exhibition, to tell the stories of coastal

¹ A small village in Lesotho, an isolated island in Mozambique and the bustling capital of Ghana, poor Chinese immigrants arrive there in the hope of thriving but encounter all kinds of obstacles.

² Ethnic and cultural group originated from the eastern coast of Africa, and had a significant presence in Mozambique, particularly along the northern coast, including the provinces of Cabo Delgado and Nampula. The Swahili influence in Mozambique is largely due to the ancient trade routes in the Indian Ocean and historical interactions with Arabs, Persians, and other traders from the region.

³ A traditional type of sailing boat that has been used for centuries in the Indian Ocean, particularly by the coastal populations of the Arabian Peninsula, East Africa, India, and Southeast Asia, and which can still be found today in the Indian Ocean off the coast of Mozambique Island.

communities. The aim is to get community stories documented and shared, to try to preserve the traditional oral heritage of fishing communities at risk of disappearing due to the direct effects of climate change (Baiém Fandé, 2020). Some of these effects are, for example: i) the rise in sea level causes flooding and coastal erosion, increasing the salinization of water which has implications for the quality of water for human consumption and agriculture, destroying crops; ii) bad weather causes damage to infrastructure, affects health and increases insecurity; iii) impacts on fishing, putting pressure on marine ecosystems, since changes in water temperature and ocean acidity impact on marine biodiversity, reducing the fish population and compromising reproduction capacity; iv) promotes forced displacement and cultural disintegration; v) has economic impacts due to the possible loss of livelihoods and also on tourism, since environmental degradation damages the island and its inhabitants.

1. Storytelling and Documentary as Counter-Narratives

Nakhodha and the Mermaid is a storytelling proposal that attempts to alert people to these impacts by addressing the culture and practices of the Swahili culture on the island of Mozambique, through audiovisual recordings of the daily dynamics of the community, showing how the daily lives of these people depend on the sea and how community life is fulfilled through the relationship with marine life.

The use of documentaries and storytelling as activist communication strategies has been recognized by various authors such as Juhasz (1995), Nichols (1991, 2010), Bernard (2011), Lebow (2012), and Mirzoeff (2011). Audiovisual communication has the potential to make visible the stories of communities affected by ecological problems and involve audiences in environmental issues. For example, according to Bernard (2011), "Documentaries take viewers into new worlds and experiences by presenting factual information about real people, places and events, usually portrayed through the use of real images and artifacts" (p.1).

Corner (1996) argues that documentaries can be a form of power for social intervention and have the capacity to make visible stories and perspectives that are usually marginalized in the mainstream media, similar to what Freire and Penafria (2010) point out when they argue that documentaries are a counter-narrative to the discursive public sphere of the media since their genesis is directly linked to human rights movements. It is in this vein that Juhasz (1995) also reflects that documentary cinema has been a communicative strategy of activist agendas, offering a means of emphasizing the voice of those who have not had the space to expose their issues, and bringing critical issues to the forefront of public consciousness. This affirmation is also in line with Lebow (2012), when she affirms the political and activist potential of documentaries which, based on real-life stories and contexts, challenge dominant narratives and offer alternative visions that inspire activism and social change.

As narratives are socially constructed stories that give meaning to phenomena and events in the public and private worlds (Berger & Luckmann, 1966), their ability to shape preferences and opinions is inseparable, having an impact on human perception (Van Der Leeuw, 2019; Fløttum, 2017).

In the case of climate change, a global public problem (World Health Organization, n.d.), its use is more relevant to motivating or discouraging action (Flottum, 2017; Hulme 2009; Moser & Dilling, 2007).

Several studies have already shown how storytelling, specifically the documentary approach, can contribute to preserving Indigenous oral knowledge and making climate change issues visible. For example, Willox et al. (2013) indicate that digital storytelling of ancestral communities can preserve and promote Indigenous oral wisdom, building capacity and celebrating a myriad of stories, lived experiences, and lifeworlds, while also engaging community members by addressing issues of colonization.

For their part, Tàbara et al. (2018) proposed the notion of transformative narratives, which are bottom-up narratives that tell a positive and engaging story, articulate a vision of "where we want to go" and provide solutions to achieve that vision, rather than articulating problems to avoid. Now, in line with this perspective, which configures audiovisual narratives with the capacity to provide relevant changes in the consciousness of audiences, Hinkel et al. (2020) also advocate that transformative narratives can empower people to take action on climate change, rather than focusing on problems and adverse impacts.

2. *Narratives to Emphasize Ecologies of Oppressed Knowledge*

In this sense, works that focus on public and social problems must make room for the invisible voices to have a say, because communication is a strategic element that can help promote change, amplifying discourse as a political act (Arendt, 1958), as subjects of human development and no longer as objects of it (Ribeiro-Rodrigues, 2021).

The assumption that subalterns cannot speak is based on the fact that discourse circulates in societies with patriarchal (epistemological) structures (Spivak, 1993). So, it doesn't mean that they can't speak in a literal sense, the point is that their voices aren't heard and acknowledged, because they have no space in such a hegemonic epistemological public arena (Fraser, 1990, 1992, 2003, 2007). This absence of voice, of the subject who wants to represent himself, only gains ground if he can speak *per se*. So how can these voices be heard? Feminist premises and critical theories have opened up the ground for academic discussion and for this attempt to outline post-bourgeois, post-colonial, inclusive, and more egalitarian discursive arenas.

Authors such as Young (1996), Fraser and Honneth (2003), and Benhabib (2004) call for new competing, alternative, and porous models of public space, which extend to contending counter-publics that have contested and challenge the norms of bourgeois public space and elaborate new styles of political behavior and new forms of public discussion. In other words, they are the voices from the margins — understood here as, those on the margins of dominant thinking, e.g., social minorities. In this respect, Fraser (1992) points out, from an early stage, the existence of alternative public spheres that emerge under conditions of domination and subordination.

Complementing this framework, Santos (2007, 2018) proposes the concept of Epistemologies of the South, valuing knowledge based on the resistance experiences of groups oppressed by

capitalism, colonialism, and patriarchy. This “epistemological South” serves as a methodology of analysis, breaking with patriarchal and supremacist cognitive dominance, and legitimizes the discourse of the excluded (Alcoff, 1991, 2011; Braga, 1995; Amaral, 2004, 2005; Ribeiro, 2017) and therefore an ecology of knowledge, valuing epistemological diversity and recognizing multiple forms of knowledge, such as traditional, Indigenous, popular and local knowledge, to enrich our understanding of the world and overcome the hegemony of Western scientific knowledge (Dussel, 1977; Santos, 2007, 2018; Mignolo, 2011; Escobar, 2018). Epistemologies of the South seek to legitimize these places of speech, avoiding the mediation of those who dominate the discourse, especially on inequalities and oppression. The historical domination of discourse has created grand narratives and abysses of absence, legitimizing blind spots (Davis, 2008) that these epistemologies seek to fill.

3. *Global Agenda and Communication of/about Sustainable Development*

Accordingly, this is where the relevance of communication to/from/about human and sustainable development lies, emphasizing these subaltern voices, in dialogue with the model proposed by Ribeiro-Rodrigues (2021, pp. 504-505) for journalism of/about. Although *Nakhodha and the Mermaid* is an artistic project, Yara Costa was trained and worked for a while as a journalist, so it is hypothesized that there is a contamination of practices and assumptions close to communication for/of/about human development that may have intersections with the field.

Additionally, in the context of a global development agenda, the 17 Sustainable Development Goals (SDGs)⁴ of the United Nations are considered to present a thematic summary of some of the main global problems of contemporary times, in which communication plays a fundamental role, both for public visibility and progress and for the self-expression of the communities that experience these problems first-hand. Moreover, another hypothesis is that the artistic installation will focus on some of these problems to which the Global South is no stranger.

In this sense, we aim to analyze: *To what extent is the transmedia narrative project Nakhodha and the Mermaid configured as communication for/of/about human and sustainable development, making Mozambican epistemologies visible?* Subsidiarily, an answer is sought to the following matrices: i) how the narrative was constructed, i.e. what was the production process and the people involved; ii) what themes did the artistic installation address, linking them to the themes of this communication model and the objectives of the global agenda; iii) and who were the people listened to and what did they talk about.

To this end, a search was carried out on the Google engine between June 2023 and April 2024 — since the exhibition opened in 2023 — with the keywords *Nakhodha and the Mermaid* in Portuguese, English, and French. Once the corpus of analysis had been validated, which resulted in 21 texts

⁴ The SDGs are: (1) No Poverty; (2) Zero Hunger and Sustainable Agriculture; (3) Good Health and Well-Being; (4) Quality Education; (5) Gender Equality; (6) Clean Water and Sanitation; (7) Affordable and Clean Energy; (8) Decent Work and Economic Growth; (9) Industry, Innovation, and Infrastructure; (10) Reduced Inequalities; (11) Sustainable Cities and Communities; (12) Responsible Consumption and Production; (13) Climate Action; (14) Life Below Water; (15) Life on Land; (16) Peace, Justice, and Strong Institutions; (17) Partnerships for the Goals.

(N=21), the material was compiled by entering the texts 666, called YC Creative Platform, as well as the interviews given by Yara Costa and news published in various media (See Table 1 in Section 2) on the web about *Nakhodha and the Mermaid*. Afterward, free coding was carried out to respond, in section 2.4, to the guiding assumptions set out.

4. Discussion and Results

The online survey mapped 21 relevant occurrences between June 2023 and April 2024, identified in different types of media that covered the Nakhodha and the Mermaid exhibition through reports, news, interviews, and institutional texts. For this purpose, we considered media outlets (O País, Buala, Sapo, Notícias ao Minuto, CNN), an information agency (Lusa), the project's website (YC Plataforma Criativa), blogs (Mbenga Blog) and cultural and artistic platforms/collectives (Maputo Fast Forward, Xibugo, Reflorestar and Music in Africa), as well as institutional media (Portuguese Language Observatory, Prince Claus Fund, Futuros Criativos/ACEP/Camões and the US Embassy in Mozambique).

Tabela 1 | Media outlets that covered Nakhodha and the Mermaid (June 2023 - April 2024)

2023	Original title	Medium
Source 1	Yara Costa vence Prémio de Mentoria para Respostas Culturais e Artísticas à Crise Ambiental	Maputo Fast Forward
Source 2	Prince Claus Fund	Prince Claus Fund
Source 3	Moçambicana Yara Costa vence Prince Claus Fund	Observatório de Língua Portuguesa
Source 4	Immersive installation in Mozambique preserves the culture of the sea	Notícias ao Minuto [ENG]
Source 5	Instalação imersiva em Moçambique preserva cultura do mar	Notícias ao Minuto [PT]
Source 6	Instalação imersiva em Moçambique preserva cultura do mar e alerta para mudanças climáticas	Sapo Desporto
Source 7	Lusa Vídeo: Instalação imersiva em Moçambique preserva cultura do mar e alerta para mudanças climáticas (editado)	Lusa vídeo
Source 8	Moçambique preserva cultura do mar e alerta para mudanças climáticas	Observatório de Língua Portuguesa
Source 9	Nakhodka e a sereia. Yara Costa, ilha de Moçambique	Reflorestar
Source 10	Artista moçambicana vence prémio internacional Prince Claus	Buala
Source 11	Girl power on the Island of Mozambique	CNN
2024	Title	Medium
Source 1	Plataforma Nakhodha e a Sereia	YC Creative Platform
Source 2	Facebook de Nakhodha e a Sereia	Facebook YC Creative Platform
Source 3	Yara Costa e a arte de contar histórias entre mares e memórias	Xonguila
Source 4	Artista moçambicana vence prémio no Fórum de Criação África, em Paris	Futuros Criativos
Source 5	Mozambique: Yara Costa wins Forum Creation Africa award	Music in Africa
Source 6	Nakhodka (Nahota) e a Sereia: Uma exposição para celebrar a cultura marítima Suáli	O País
Source 7	"Sofremos da síndrome de não olharmos para nós mesmos", Yara Costa	O País
Source 8	Nakhodka (Nahota) e a Sereia: Uma exposição para celebrar a cultura marítima Suáli	Mbenga Blog
Source 9	Ministério da Cultura francês rende-se a cineasta moçambicana Yara Costa	Xibugo
Source 10	Embaixador Vrooman Lança Oficialmente o Projecto Sea Sound para Preservar e Promover o Património Cultural	Embassy of the US in Mozambique

Source: Own elaboration, 2024

⁵ It is noted that when repeated discourse was found (e.g., when Lusa reported on the topic and, as a result, outlets such as Notícias ao Minuto and Sapo sometimes replicated the informational content), we did not consider the redundancy as it was irrelevant to this investigation.

4.1. *The Production Model and Community Participation*

To characterize the production model, we took into account all the references to collaborations, the project's development intentions, as well as the work process, the involvement of the local community, and the methodologies developed. The idea was to understand how the artist worked, with whom, and how.

In this sense, it is noteworthy that "for a year, six young people from the Island of Mozambique conducted a research project that involved collecting information on various cultural and environmental aspects", along with the integration of "ten interns from Uni Lúrio⁶ who received specialized training in oral heritage research and recording, filming and editing techniques". (Source 8, 2023), emphasizing that this training was crucial for achieving the project's objectives and the quality of the content produced. The young people involved in the research collaborated closely with coastal populations to incorporate local voices and stories into the production of a series of Podcasts, reflecting Swahili maritime cultural sound heritage (Source 1, 2023).

This work included research, interviews, and group discussions on topics such as sea stories and traditional songs, building techniques, navigation, and fishing, along with the memory of slavery and Wars, and understanding climate change (Source 1, 2023).

In addition, a significant part of *Nakhodha and the Mermaid* was the construction of an 8-meter *dhow* in the local community, conjointly with the creation of more than 80 pieces of content about maritime cultural heritage. 120 songs by Men and Women of the Sea were recorded, which will later be made available in audio and video on a digital platform and community radio stations (Source 8, 2023).

The project stands out for its inclusive and collaborative approach. Not only does it "honor the tradition of the Island of Mozambique, but it also strengthens the community's sense of ownership over its culture and reinforces local pride in cultural expression" (Source 1, 2023). *Nakhodha and the Mermaid* was distinguished by the Prince Claus Fund award (2023) and "aims to promote development within the community and support traditional practices by actively involving communities in preservation efforts and promoting transformative micro changes that contribute to resilience and positive self-affirmation" (Source 5, 2024; Source 4, 2024).

4.2 *People Listened to and Ecologies of Knowledge*

Bearing in mind that, in Communication of/for/about Human and Sustainable Development, the people who experience problems that damage their existence and jeopardize their survival should be the first voices to raise the issues, it is crucial to find out who are the people listened to in the narrative construction of *Nakhodha and the Mermaid* and what they talk about.

In this sense, the corpus of Source 1 (2023) identifies that:

⁶ UniLúrio is a public higher education institution, with its headquarters located in the city of Nampula, Mozambique

i) “Through close collaboration with the coastal populations of the Island of Mozambique, the young people taking part in the project gathered information about the Swahili maritime cultural sound heritage”;

ii) “This information was incorporated into a series of podcasts, highlighting the voices and stories of the fishing communities”;

iii) “The project aims to preserve and promote the traditional oral heritage of Mozambican fishing communities, which are threatened with disappearance due to the direct effects of climate change”.

Next, an integration of technology with traditional knowledge is identified, given that the project encompasses sound, sea chants, and “traditional ecological knowledge rooted in the heritage of Mozambique's Swahili maritime culture” (Source 2, 2023), addressing “the threat posed by rising sea levels, which could destroy coastal communities, their cultures and knowledge systems” (Source 2, 2023). Thus, to link traditions with modern technology, the Nakhodha and the Mermaid project “bridges the gap between traditional songs, rituals, and climate change using cutting-edge immersive technology” (Source 3, 2023).

This immersive experience takes the visitor “through the initiation cycle of a traditional Indian Ocean sailor, known as Nakhodha, and his love story with a mermaid” (Source 1, 2023). The aim is to “alert people to the urgent need to focus on local oral traditions and find solutions to contemporary challenges” (Source 4, 2024).

The project thus seeks to “engage in dialogue with the local community, focusing on internal development and support for traditional practices” (Source 5, 2024), trying to promote “transformative changes that contribute to community resilience and self-affirmation, reinforcing the importance of the active involvement of communities in the preservation of their cultural heritage” (Source 4, 2024).

4.3 Themes Addressed and Link to the SDGs

This section summarizes the main themes identified in the discourse analysis, highlighting the free coding and placing it in dialogue with the contents of the SDGs of the UN global agenda. Indeed, the main themes addressed are: i) combating climate action; ii) creating an archive, memory, and global reach for Nakhodha and the Mermaid; iii) addressing and critically reflecting on slavery and its heritage; iv) preserving the ancestral practices of the Swahili people; v) issues of decolonialism; vi) a project with potential for community tourism; vii) preserving cultural heritage.

Based on this initial identification, it was possible to establish a thematic relationship with the following SDGs, as summarized in Table 2, i.e.: SDG 8 (Decent Work and Economic Growth), SDG 10 (Reducing Inequalities), SDG 11 (Sustainable Cities and Communities), SDG 12 (Sustainable Production and Consumption), SDG 13 (Climate Action), SDG 14 (Protecting Marine Life),

SDG 16 (Peace, Justice, and Effective Institutions), SDG 17 (Partnerships for the implementation of the SDGs).

Tabela 2 | Summary of the main categories and relation to the SDG themes

Theme	Sources
[T1] Fighting climate action	SDG 13 + SDG 14
[T2] Archive, Memory and Global Reach	SDG 16
[T3] Slavery	SDG 17
[T4] Preserving ancestral practices	SDG 11
[T5] Decolonialism	SDG 10
[T6] Community tourism	SDG 8 + SDG 12
[T7] Cultural Heritage	SDG 11

Source: Own elaboration, 2024

On T1, it is disclosed that the virtual exhibition “warns of the impacts of climate change, with a projection to 2030 (Source 9, 2024). Yara uses Podcasts, spatial audio, VR/XR, and immersive exhibitions “to create artistic and cultural interventions, emphasizing the need to refocus on local oral traditions and seek shared solutions to the significant challenges of global warming and the impact on the environment and communities” (Source 4, 2024).

The key ideas focus on problematizing the human-sea relationship, “which is still recovering from Cyclone Gombé”⁷ (Source 6, 2023). It is pointed out that this relationship is exposed to climate change, which in turn threatens local knowledge, especially related to fishing activities.

The consequences of global warming are emphasized as a problem to which the Swahili people have not contributed to (Source 1, 2023), yet the survival of African coastal populations is threatened. In this sense, there is an urgent need to “preserve and promote the traditional oral heritage of Mozambican fishing communities, which is imperiled by climate change” (Source 1, 2023). The issue focuses on how “the climate crisis is severely affecting and further threatening traditions” (Source 6, 2024), highlighting the importance of traditional ecological knowledge in preserving the ecosystem.

T2, on Archive, Memory, and Global Outreach, there are cross-cutting references to the potential of the Nakhodha and the Mermaid narratives to constitute a documentary record for the future, creating cultural heritage.

In the text of the YC Creative Platform, it is believed that “the wisdom of the centuries-old Swahili maritime cultural heritage is fundamental to dealing with the current global environmental and climate crisis” (Source 1, 2023). This allows the stories of traditional fishermen “not only to be archived but also distributed to audiences around the world, as well as facilitating the creation of new markets for local communities and artists” (Source 7, 2023). To this end, creative director Yara Costa blends history, documentary, audio, and staging for a journey with immersive sound and 360-degree video mapping projections.

This project is an extended, virtual, and mixed reality to put recipients "on a pendulum between the past and the future", with virtual reality, in this case, representing "the possibility of transporting us to the past" (Source 4, 2023). The result is "an extensive archive database and a 7-part podcast series, entitled Dhowcast, which blends "sea chants and stories from the cultural heritage of the Island of Mozambique through a dive into the unique and melodic traditional maritime culture of the southern Indian Ocean coastal region, and the history, science, and knowledge it carries" (Source 1, 2023).

About T₃, which focuses on the theme of Slavery, we highlight the reference to elements that refer to the slave-owning past and the legacy that remains, both in terms of the architecture of structures bequeathed from that time, and in terms of the social legacies that had an impact on local communities, more specifically on the island of Mozambique and, by extension, in the country.

Firstly, it should be noted that "the exhibition preserves the memory of slavery and wars" (Source 1, 2023), and the building where it is housed used to be, in the past, "an old customs house, the first in Mozambique, which also served as a point of sale for slaves and is proof of the Portuguese aspiration for a permanent presence" (Source 6, 2023). Then, to communicate this heritage, the visitor is invited to use virtual reality glasses "to travel back in time from 1749, when boats took people to be sold as slaves, to 2030, when the water begins to rise due to climate change" (Source 6, 2024).

In turn, the discourses identified on the thematic axis of Preservation of Ancestral Practices [T₄] refer to elements from the universe of community epistemologies. In this sense, it is indicated that the installation on Mozambique Island is guided by a real Nakhodha, who is "a mythical being and expert in meteorological phenomena, reflecting the importance of local maritime traditions" (Source 6, 2023). In addition, the dhow, a historic vessel dating back to the 13th century, "exemplifies the skill of the Swahili people, whose lives are closely linked to the sea." (Source 6, 2023). Visitors to the installation can see 360-degree projections, including the journey to the position of the Nakhodha, "who has a deep knowledge of the sea and its stories" (Source 6, 2024), while at the same time, visitors meet the process of catching mollusks by women singing traditional hymns (Source 8, 2024).

The *Nakhodha and the Mermaid* project then promotes dialogue with the local community, highlighting traditional practices through an immersive installation combining 360-degree audio and video mapping, "warning of the impacts of global warming on African coastal populations" (Source 5, 2024). These traditional practices integrated into nature "are ecological and regenerative, highlighting the importance of preserving these traditions" (Source 8, 2024) and this intention is reinforced thereby rescuing history, habits, and tradition to preserve them, "as well as warning about the consequences of climate change on the lives of fishermen and coastal communities" (Source 8, 2024). For Yara, "traditional practices are severely impacted and threatened by the climate crisis", highlighting the importance of traditional ecological knowledge for preserving the ecosystem. (Source 6, 2024).

⁷ Tropical cyclone Gombe struck Mozambique in March ²⁰²², causing significant damage due to strong winds and heavy rains.

Regarding the subject of Decolonialism [T5], which, following the lines of Fanon (1967), wa Thiong'o (1986), Quijano (2000), and Mignolo (2011), addresses a critical approach to the colonial theme, questioning forms of power, analyzing, and critiquing the knowledge imposed by colonialism and Eurocentrism, identifying some relevant incidences.

It is emphasized that the Island of Mozambique is tackled in Yara's works through issues such as "cultural genocide, heritage, intellectual racism, and white supremacy" (Source 5, 2024). In particular, the immersive installation *Nakhodka and the Mermaid* reinterprets the space, celebrating Swahili maritime culture and highlighting its teachings for a world threatened by climate change" (Source 4, 2024). In this sense, this work is considered "a monument that celebrates Swahili maritime culture and its knowledge, to face climate change, reinterpreting the space previously associated with Portuguese presence" (Source 4, 2023).

In turn, the theme of community tourism [T6] appears isolated, with one incidence, indicating that the project "can be used as a tool for community tourism and local resilience to climate change" (Source 8, 2023).

Regarding the topic of Cultural Heritage [T7], the project aims to preserve and promote "the endangered traditional oral heritage of Mozambican fishing communities, which are now on the brink of disappearing due to the direct effects of climate change" (Source 1, 2024). This initiative includes sounds, sea chants, and "traditional ecological knowledge rooted in the Swahili maritime culture of Mozambique, addressing the threat of rising sea levels that could destroy coastal communities, cultures, and knowledge systems" (Source 2, 2023).

It is also indicated that the exhibition "aims to preserve the cultural heritage of the coastal fishing community of Cabaceira Pequena and the Island of Mozambique," which is being "negatively affected by climate change and threatened by the loss of its unique history due to the spread of violent extremism" (Source 8, 2023).

The preservation and promotion of the cultural, oral, and artistic heritage of the Island's fishing communities "is a central priority, reflecting a continued commitment to the conservation and appreciation of Mozambique's rich maritime heritage" (Source 8, 2023).

4.4. Interpretation of Results

Analyzed at this point, on one hand, the production model of *Nakhodka and the Mermaid* and the level of involvement of the local community, and identified, on the other hand, the voices heard and the main themes addressed, we aim to respond: *To what extent does the transmedia narrative project Nakhodka and the Mermaid constitute communication for/of/about human and sustainable development, making Mozambican epistemologies visible?* And, consequently, we observe: i) how the narrative was constructed, i.e., the production process and the people involved; ii) what themes were addressed by the artistic installation, connecting them with the themes of this communicative model and the objectives of the global agenda; and iii) who are the people being heard.

Therefore, the project stands as a significant example of Communication of/for/about Human

and Sustainable Development, aligning with the Ribeiro-Rodrigues model (2021) by making Mozambican epistemologies visible through an innovative and inclusive approach, prioritizing audiovisual media in a documentary style, and using technology to emphasize the voices of socially oppressed groups, while engaging the visitors within the storytelling.

Firstly, regarding the narrative construction, *Nakhodha and the Mermaid* is an immersive artistic installation that combines an audiovisual approach with virtual reality, 360° video mapping projection, and spatial audio, providing visitors with a 33-minute experience that spans from 1749 to a future threatened by rising sea levels. This experience results from a multidisciplinary effort involving ethnomusicology, anthropology, and active collaboration with the local community. The narrative explores the wisdom and culture of traditional coastal populations, particularly the Swahili culture, and highlights the impact of climate change on these communities.

Secondly, the project adopts a collaborative and inclusive production model.

Six young people from the Island of Mozambique conducted in-depth research on cultural and environmental aspects, involving community leaders and interns from Uni Lúrio. The active participation of the community is evident in the construction of a dhow and the recording of more than 120 fishermen's songs. This process emphasizes the importance of the direct involvement of local populations in preserving their cultural heritage and co-creating with the artist.

Thirdly, the work prioritizes the voices of fishing communities and coastal populations, who are the main sources of knowledge about the impact of climate change and the preservation of traditional practices. Information was collected through interviews, highlighting the importance of incorporating local perspectives into the narrative. Thus, the installation also promotes a dialogue with the community about the human-sea relationship and contemporary challenges, such as the climate crisis.

At the level of communication assumptions for/of/about human and sustainable development per se, according to the Ribeiro-Rodrigues model (2021), it is highlighted that *Nakhodha and the Mermaid*:

i) contributes to understanding human and sustainable development by highlighting the interdependence between coastal communities and their environment, and how climate change threatens this relationship. The immersive narrative allows visitors to experience the impact of climate change on cultural and environmental heritage;

ii) has a bottom-up approach, utilizing the knowledge of the inhabitants themselves to construct the narrative, listened to as primary sources;

iii) follows principles of factuality, although it is not a journalism project, by documenting and preserving cultural heritage and climate change based on research and direct community contributions;

iv) is dialogic and detailed, allowing a deep understanding of local community concerns;

v) uses cinematic language and immersive technologies;

vi) adopts a deeper and more engaging approach, exploring the impact of climate change over time;

vii) returns the narrative to the protagonists, ensuring their perspectives and experiences are showcased within their community;

viii) mitigates the authority of the voice-over, allowing the narrative to be told directly by the protagonists;

ix) captures the essence and complexity of the event by integrating cultural, historical, and environmental elements into the immersive narrative, reflecting the richness of the experiences and challenges of the coastal communities of Mozambique Island;

x) provides a deep insight into the lives and traditions of fishing communities, as well as the challenges faced due to climate change;

xi) contributes to memory creation by preserving and promoting threatened cultural heritage, while the generated narratives have a lasting impact on the understanding of issues faced by coastal communities;

xii) utilizes information sources that were not remunerated for participation, reinforcing the authenticity and integrity of the presented stories;

xiii) humanizes and immerses the audience/visitor in the work by offering a sensory and emotional experience;

xiv) presents a transparent metanarrative about the production process, from identified texts, allowing the public to understand the context and objectives of the work.

Accordingly, the analysis of this case study brings significant contributions to the theoretical understanding and operationalization of Communication of/for/about Human and Sustainable Development, expanding the enunciation of Mozambican epistemologies, in line with self-representation and amplification of voices (Alcoff, 1991, 2011; Braga, 1995; Amaral, 2004, 2005; Ribeiro, 2017). The project validates the importance of the bottom-up model, which prioritizes local voices and uses a participatory approach to promote a deeper understanding of sustainable challenges. The integration of immersive technologies with traditional knowledge not only revitalizes threatened traditions but also creates a bridge between local knowledge and global audiences. Additionally, the re-signification of colonial space and the valorization of local epistemologies promote a critical view of knowledge decolonization (Mignolo, 2011).

In practice, *Nakhodha and the Mermaid* stands as a model for future efforts in sustainable communication and cultural preservation, utilizing immersive technologies and participatory strategies, emphasizing a documentary approach. The demonstrated cultural preservation

approach can be replicated in other contexts to promote heritage appreciation. Moreover, the project highlights the effectiveness of using immersive narratives to raise awareness about climate change and promote sustainable actions.

Regarding limitations, this study relied on secondary sources and a geographically restricted sample, which may have limited the depth of analysis and the diversity of voices represented. Additionally, the analysis focused on a specific period and textual methods that may not reflect all the nuances of cultural practices and climate change impacts.

For future research, it is recommended to deepen local perspectives through more detailed interviews, mainly from the artist's point of view — and this something on the agenda for future research — as well as conduct longitudinal studies to assess impacts over time, alongside exploring new technologies and narrative methods to improve public understanding and engagement, e.g., message reception studies both on-site and on the YC Creative Platform website.

CONCLUSIONS

The *Nakhodha and the Mermaid* project is a transmedia case study on how communication can be used to promote human and sustainable development by integrating local epistemologies and addressing the issue of climate action. This innovative audiovisual approach combines art, communication, and technology to highlight the narratives of the Swahili people from the coast of Mozambique Island, recognizing them as valuable Southern Epistemologies. It also illustrates how climate change impacts ancestral practices, threatening their culture.

As we observe, the artistic installation provides a half-hour immersive experience using virtual reality and 360° video projections. It showcases a collaborative and multidisciplinary production model involving the local community in the collection and preservation of cultural and environmental heritage. The project highlights the participation of young people from Mozambique Island and community leaders. It integrates bottom-up communication voices, employs a long-form and immersive narrative approach, and returns the narrative to the protagonists, emphasizing their voices and perspectives.

The analysis of the themes addressed, such as climate change, the preservation of ancestral practices, and the legacy of slavery, reveals the connection to the SDGs, particularly in combating climate change and preserving cultural heritage. Consequently, the results of this study contributes to the field of communication for human and sustainable development, demonstrating how transmedia storytelling, configured in an immersive installation, can be used to address and engage the public in complex issues like climate change and cultural preservation. In turn, the collaborative and inclusive approach adopted by *Nakhodha and the Mermaid* serves as a relevant model for future initiatives seeking to combine traditional practices with new technologies to promote community resilience and environmental awareness.

Thus, the research offers insights into the effectiveness of transmedia methodologies in communicating and documenting local knowledge, enriching the debate on how narratives can serve as tools for the preservation, promotion, and conservation of cultural heritage.

BIBLIOGRAPHY

- Alcoff, L. (1991). The Problem of Speaking for Others. *Cultural Critique*, (20), 5-32.
- Amaral, R. (2005). *Narrativas marginalizadas e discurso de resistência*. Editora Moderna.
- Arendt, H. (1958). *A condição humana*. Editora Universidade de São Paulo.
- Baiém Fandé, M. (2020). Alterações climáticas e comunidades costeiras: avaliação de risco e adaptação à erosão e inundação costeira em cenários de elevação do nível do mar na Guiné-Bissau [PhD thesis, Faculdade de Ciências da Universidade de Lisboa]. Repositório da Universidade de Lisboa. <https://repositorio.ul.pt/handle/10451/45602>
- Benhabib, S. (2004). *The claims of culture: Equality and diversity in the global era*. Princeton University Press.
- Berger, P. L., & Luckmann, T. (1966). *The social construction of reality: A treatise in the sociology of knowledge*. Anchor Books.
- Bernard, S. C. (2011). *Documentary storytelling: Creative nonfiction on screen*. Focal Press.
- Braga, S. (1995). *Os excluídos e o discurso da exclusão: Reflexões sobre a construção da identidade social*. Editora da Universidade de São Paulo.
- Buala (2024). *Artista moçambicana vence prémio internacional Prince Claus*. BUALA. <https://www.buala.org/pt/da-fala/etiquetas/yara-costa>
- Chao, S., & Enari, D. (2021). Decolonising Climate Change: A Call for Beyond-Human Imaginaries and Knowledge Generation. *eTropic: Electronic Journal of Studies in the Tropics*, 20(2), 32-54. <https://doi.org/10.25120/etropic.20.2.2021.3796>.
- CNN. (2024, January 10). *Girl power Mozambique* [Video]. CNN Business. <https://edition.cnn.com/videos/business/2024/01/10/girl-power-mozambique-pkg-01105psegi-cnni-business.cnn>
- Corner, J. (1996). *The Art of Record: A Critical Introduction to Documentary*. Manchester UP.
- Davis, A. (2008). *Blind spots: Critical theory and contemporary art*. MIT Press.
- Dussel, E. (1977). Eurocentrism and the Development of Scientific Knowledge. *Human Geography*, 62(2), 128-138.
- Escobar, A. (2018). *Constructing the pluriverse: The geopolitics of knowledge*. Duke University Press.
- Fanon, F. (1967). *Black Skin, White Masks* (C. L. Markmann, Trans.). Grove Press
- Flottum, K. (Ed.). (2017). *The Role of Language in the Climate Change Debate* (1st ed.). Routledge. <https://doi.org/10.4324/9781315456935>
- Fraser, N. (1992). Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy. In Craig Calhoun (Ed.), *Habermas and the Public Sphere* (pp. 109-142). MIT Press.
- Fraser, N., & Honneth, A. (2003). *Redistribution or recognition?: A philosophical exchange*. Verso.
- Futuros Criativos. (2023, October 25). *Artista moçambicana vence prémio no Fórum de Criação África, em Paris*. <https://www.futuroscriativos.org/actualidade/artista-mocambicana-vence-premio-no-forum-de-criacao-africa-em-paris/>
- Hinkel, J., Mangalagiu, D., Bisaro, A. et al. (2020). Transformative narratives for climate action. *Climatic Change* 160, p. 495-506 <https://doi.org/10.1007/s10584-020-02761-y>
- Hulme, M. (2009). *Why We Disagree about Climate Change*. Cambridge University Press. <https://doi.org/10.1017/cbo9780511841200>
- Jacinto, D. (2023, October 24). *Ministério da Cultura francês rende-se a cineasta moçambicana Yara Costa*. Xigubo. <https://xigubo.com/ministerio-da-cultura-frances-rende-se-a-cineasta-mocambicana-yara-costa>
- Juhász, A. (1995). *Women of Vision: Histories in Feminist Media*. University of Minnesota Press.
- Lebow, A. (Ed.). (2012). *The Cinema of Me: The Self and Subjectivity in First Person Documentary*. Wallflower Press.
- Lusa. (2024, April 27). *Immersive installation in Mozambique preserves the culture of the sea*. Notícias ao Minuto. <https://www.noticiasao minuto.com/en/cultura/2549268/instalacao-imersiva-em-mocambique-preserva-cultura-do-mar>
- Lusa. (2024b, April 27). *Instalação imersiva em Moçambique preserva cultura do mar*. Notícias ao Minuto.

- https://www.noticiasaoiminuto.com/cultura/2549268/instalacao-imersiva-em-mocambique-preserva-cultura-do-mar?utm_source=ground.news&utm_medium=referral
- Lusa. (2024c, April 27). *Instalação imersiva em Moçambique preserva cultura do mar e alerta para mudanças climáticas*. SAPO Desporto. https://desporto.sapo.pt/noticias/instalacao-imersiva-em-mocambique-preserva_662c796d8b0345014f607905
- Magalo, J. (2024c, April 27). *Instalação imersiva em Moçambique preserva cultura do mar e alerta para mudanças climáticas*. SAPO Desporto. https://desporto.sapo.pt/noticias/instalacao-imersiva-em-mocambique-preserva_662c796d8b0345014f607905
- Mbenga. (2023, June 1). *Nakhodha Nahota e a sereia: Uma exposição para celebrar a cultura marítima swahili*. Mbenga. <https://web.archive.org/web/20230703220028/https://mbenga.co.mz/blog/2023/06/01/nakhodha-nahota-e-a-sereia-uma-exposicao-para-celebrar-a-cultura-maritima-swahili/>
- Mignolo, W. (2011). *The Darker Side of Western Modernity: Global Futures, Decolonial Options*. Duke University Press.
- Mirzoeff, N. (2011). *The Right to Look: A Counterhistory of Visuality*. Duke University Press.
- Moser, S., & Dilling L. (Eds.). (2007). *Creating a Climate for Change: Communicating Climate Change and Facilitating Social Change*. Cambridge University Press.
- MSN. (2024, november 10). *Lusavídeo: Instalação imersiva em Moçambique preserva cultura do mar e alerta para mudanças climáticas* [Video]. MSN Notícias. <https://www.msn.com/pt-pt/noticias/other/lusav%C3%ADdeo-instala%C3%A7%C3%A3o-imersiva-em-mo%C3%A7ambique-preserva-cultura-do-mar-e-alerta-para-mudan%C3%A7as-clim%C3%Aáticas-editado/vi-AAinKoE2>
- Nichols, B. (1991). *Representing Reality: Issues and Concepts in Documentary*. Indiana University Press.
- Nichols, Bill (2010). *Introduction to Documentary*. Indiana University Press.
- Observatório da Língua Portuguesa. (2024, April 27). *Moçambique preserva cultura do mar e alerta para mudanças climáticas*. <https://observalinguaportuguesa.org/mocambique-preserva-cultura-do-mar-e-alerta-para-mudancas-climaticas/>
- Penafria, M., & Freire, M. (2010). Documentário Social e Político. *Revista Doc On-line*, n.o8, August 2010, <http://doc.ubi.pt/o8/doco8.pdf>
- Pila, E. (2023, July, 20). “Sofremos da síndrome de não olharmos para nós mesmos”, Yara Costa. *O País*. <https://opais.co.mz/104240-2/>
- Pila, E. (2023, June, 1). *Nakhodha Nahota e a sereia: Uma exposição para celebrar a cultura marítima Swahili*. *O País*. <https://opais.co.mz/nakhodha-nahota-e-a-sereia-uma-exposicao-para-celebrar-a-cultura-maritima-swahili/>
- Prince Claus Fund (n.d.). *Yara Costa Profile*. Prince Claus Fund. <https://princeclausfund.nl/awardees/yara-costa>
- Quijano, A. (2000). Coloniality of Power, Eurocentrism, and Latin America. *Nepantla: Views from South*, 1(3), 533–580.
- Reflorestar. (2024). *Nakhodha e a Sereia - Yara Costa I Ilha de Moçambique*. Reflorestar. <https://www.reflorestar.org/pt/economia/nakhodha-e-a-sereia-yara-costa-i-ilha-de-mocambique>
- Ribeiro, A. (2017). *Narrativas e identidades: O papel do discurso na construção da exclusão social*. Editora Universidade Federal de Minas Gerais.
- Ribeiro-Rodrigues, V. (2021). *Narrativas cinematográficas, humanizar histórias. Documentário, Jornalismo, Desenvolvimento Humano*. [Ph.D thesis, Universidade Lusófona - Centro Universitário do Porto]. CICANT.
- Santos, B. S. (2007). Para além do pensamento abissal: das linhas globais a uma ecologia dos saberes. *Novos Estudos CEBRAP*, (79). <https://doi.org/10.1590/S0101-33002007000300004>
- Santos, B. S. (2018). *O Fim do Império Cognitivo*. Almedina.
- Shumba, A. (2023, October 23). *Mozambique: Yara Costa wins Fórum Creation Africa award*. Music in Africa. <https://www.musicinafrica.net/magazine/mozambique-yara-costa-wins-forum-creation-africa-award>

- Spivak, G. (1993). Can the Subaltern Speak?. In P. Williams & L. Chrisman (Eds.), *Colonial Discourse and Post-Colonial Theory*. Harvester Wheatsheaf.
- Tàbara, J. D., Jäger, J., Mangalagiu, D., & Grasso, M. (2019). Defining transformative climate science to address high-end climate change. *Regional Environmental Change*, 19, 807–818. <https://doi.org/10.1007/s10113-018-1288-8>
- Thoma, S. P., Hartmann, M., Christen, J., Mayer, B., Mast, F. W., & Weibel, D. (2023). Increasing awareness of climate change with immersive virtual reality. *Frontiers in Virtual Reality*, 4. <https://doi.org/10.3389/frvir.2023.897034>
- US Embassy in Mozambique. (2023, September 6). *Ambassador Vrooman officially launches the Sea Sound Project to preserve and promote cultural heritage on Mozambique Island*. U.S. Embassy in Mozambique. <https://mz.usembassy.gov/pt/ambassador-vrooman-officially-launches-the-sea-sound-project-to-preserve-and-promote-cultural-heritage-on-mozambique-island-pt/>
- Van Der Leeuw, S. (2019). *Social sustainability, past and future*. Cambridge University Press. <https://doi.org/10.1017/9781108595247>
- Wa Thiong'o, N. (1986). *Decolonising the Mind: The Politics of Language in African Literature*. Heinemann.
- Willox, A., Harper, S., & Edge, V. (2013). Storytelling in a digital age: digital storytelling as an emerging narrative method for preserving and promoting indigenous oral wisdom. *Qualitative Research*, 13, 127 - 147. <https://doi.org/10.1177/1468794112446105>.
- World Health Organization: WHO. (2019, August 9). *Climate change*. https://www.who.int/health-topics/climate-change#tab=tab_1
- Xonguila. (2023, November, 31). *Entrevista com Yara Costa*. Revista Xonguila. <https://xonguila.co.mz/rubrics/kS6UggcQtSMcm9Mxa9UkUA%3D%3D%2BEntrevistas/8ovBYuv32X-EvyjCrCaHg%3D%3D%2BYara%2520Costa%2520>
- YC Creative Platform. (2023). *Sea Sound*. YC Creative Platform. <https://www.yc-creativeplatform.org/sea-sound>
- YC Plataforma Criativa. (n.d.). *YCP Plataforma Criativa* [Facebook page]. Facebook. <https://www.facebook.com/ycplataformacriativa>
- Young, I. M. (1996). Communication and The Other: Beyond Deliberative Democracy. In S. Benhabib (Ed.), *Democracy and Difference*. Princeton University Press, 120-135.

PORTUGAL



VIDEO



ART AND TECHNOLOGY IN PORTUGAL:

CHRONOLOGIES, ARCHAEOLOGIES, SYMBOLOGIES

Rui Torres (UFP; ICNOVA)

Fernanda Bonacho (ESCS/IPL; ICNOVA)

Abstract: This article aims to present Portuguese electronic literature, understood through the lens of the relationship between art and technology, by adopting three integrated perspectives: chronological, archaeological, and symbolic. Initially, it presents a chronology that identifies the three generations of electronic literature proposed by Flores, from pre-World Wide Web experiments to the use of social networks and mobile applications. Subsequently, an archaeological perspective is presented, discussing the challenges inherent in digital preservation and describing methods that maintain the accessibility of these works in the face of technological obsolescence. Finally, a symbolic analysis is suggested, centered on the metaphor of water as a cross-sectional element that reflects the transformations and flows signaled by the practices of electronic literature. The article includes a varied corpus of selected works that highlight the media, cultural, and technological diversity of the phenomenon. It concludes by highlighting the potential role of electronic literature in promoting digital literacy, proposing that it can be a decisive pedagogical tool in the current post-digital era.

Keywords: Electronic Literature; Digital Preservation; Digital Literacy.

Rui Torres

(b. Porto, 1973) He studied Communication Sciences (Bachelor's), Romance Languages and Literatures (Master's and PhD), and Semiotics and Communication (Postdoctoral), currently exploring in his pedagogical and creative practice how these areas intersect and transform through digital media. He is a Full Professor at the Universidade Fernando Pessoa in Porto, where he earned a Habilitation in Information Sciences - Multimedia Studies. He has also served as a visiting professor at various universities in Portugal and abroad. Rui Torres is a member of the ICNOVA - NOVA Institute of Communication, and a member of the Board of Directors of the ELO - Electronic Literature Organization. He coordinates the book collection Cibertextualidades (FFP Publications) and is co-editor of the Electronic Literature Series (Bloomsbury Publishing). He created and manages the Digital Archive of Portuguese Experimental Literature (www.pox-ex.net) and is a researcher on the FICTRANS project - Transmedialization and Hybridization of Fiction and Non-Fiction in Contemporary Media Culture, at the University of Granada, Spain. His publications and creative works in electronic literature can be found at <https://telepoesis.net>.

Fernanda Bonacho

(b. Abrantes, 1972) She holds a PhD in Communication Sciences, with a specialization in Communication and Languages, from the Universidade Nova de Lisboa. She is a Coordinator Professor at the School of Communication and Media Studies in Lisbon (ESCS), where she coordinates the Master's program in Journalism. She is part of the group of integrated researchers at LIACOM (Laboratory of Applied Research

in Communication and Media), a collaborator at the NOVA Institute of Communication (ICNOVA), and president of ICML (Institute of Communication and Media of Lisbon). Her research interests have focused on the area of media literacy, particularly on the relationship between transmedia skills, journalism, language, and communication. She has participated in several research projects in the field of communication sciences and journalism, with both internal and external funding from IPL, including coordinating the Academy of World Reading, funded by the national network of Knowledge Academies of the Calouste Gulbenkian Foundation. She represents ESCS/IPL in the national network Informal Group on Media Literacy (GILM) and coordinates the UNESCO Chair in Communication, Media Literacy, and Citizenship at the Polytechnic Institute of Lisbon/ESCS.

INTRODUCTION

The relationship between art and technology plays a central role in the evolution of electronic literature in Portugal, opening new pathways for the creation and reception of literary works in a digital environment. From the early experiments with computers in the 1950s to the present day, electronic literature reflects the convergence of emerging technological tools and artistic practices, offering multimodal and interactive experiences that challenge traditional forms of reading and writing. This inherently digital phenomenon invites reflection on its cultural, media, and technological implications.

This chapter aims to explore Portuguese electronic literature through three interconnected axes: chronologies, archaeologies, and symbologies. These axes provide a comprehensive perspective that allows for the mapping and understanding of creative practices and the challenges related to the preservation of electronic literature in a context of constant technological evolution.

In the first axis, chronologies, we present and describe the three generations of electronic literature, following Leonardo Flores' proposal. These generations span early experiments with mainframe computers, the global expansion of the web, and the collaborative platforms and social networks of today. In the archaeologies axis, we discuss strategies for preserving these digital works, emphasising the importance of considering the specificities of each generation's creations. Finally, in the symbologies axis, we use the metaphor of water to illustrate how technological transformations and flows shape the evolution of electronic literature, from the rigidity of ice to the volatility of vapour.

Drawing on a diverse corpus of works, we highlight examples that showcase the media richness and cultural depth of Portuguese electronic literature. These works enable an understanding of both the technical aspects and the symbolic meanings associated with this hybrid form of literary expression. We also argue that electronic literature holds significant potential to promote digital literacy, offering new ways of interacting with texts and fostering essential digital skills in the post-digital era.

Thus, this chapter seeks not only to portray the evolution of electronic literature in Portugal but also to reflect on its role as a pedagogical tool and a cultural element in constant adaptation.

1. *Electronic Literature: dialogue between art and technology*

The dialogue between art and technology has a prolific and diverse history. Packer and Jordan (2001), when framing and defining multimedia, suggest that to understand the integration of languages in immersive and interactive environments, we must go back to the multisensory experiences of the cave paintings in Lascaux, dating back approximately 17,000 years. Much later, though still before digital technologies, the authors identify other origins of multimedia in opera, seen as a total work of art (*gesamtkunstwerk*) by Richard Wagner in the 19th century.

Indeed, technology has always played a fundamental role in the development of artistic expression, opening up possibilities for artists to explore new mediums and techniques. In the transition to the 20th century, with the expansion of the phonograph and photography, and their subsequent integration into cinema, the combination of artistic forms and technologies into hybrid forms of expression (Packer and Jordan, 2001) became even more relevant. More recently, the emergence of the computer and the internet has provided a set of tools that have profoundly altered the creation and circulation of art. It is within this context of ongoing dialogues between art and technology that electronic literature (hereafter, e-literature) emerges.

The field of e-literature is vast and dynamic, evolving as authors creatively explore and adopt new technologies. In this sense, e-literature challenges and transcends definitions, which must be constantly renewed to capture and reflect this transformation.

Pedro Barbosa (1977, 1980, 1988) is one of the first authors to reflect in a sustained way on the new textual forms that emerged from the creative symbiosis between humans and machines, initially referring to them as cybernetic literature and later as cyberliterature¹. For Barbosa, texts generated with the computer are indeterminate, involving "dynamic, automatic, variational, reticular, or interactive generative structures" (Barbosa, 2006, p. 16). In 1996, Pedro Barbosa founded CETIC - Center for Studies on Computer Text and Cyberliterature (CETIC, n.d.) at the Universidade Fernando Pessoa in Porto. This transdisciplinary research center, focused on Computer-Generated Literature, led Barbosa to conclude that cyberliterature involves using the computer as an "open machine" or "semiotic machine," causing "a profound alteration in the entire communicational circuit of literature, from the creation to the circulation of the message" (Barbosa, 1998).

Espen Aarseth (1997) examined these forms of cybertext as ergodic literature, explaining that certain texts are structured through mechanisms that allow the reader to configure various pathways. The ergodicity of cybertext defines and circumscribes the majority of e-literature works. However, its material and aesthetic antecedents can be identified in concrete and visual poetry from the 1950s onwards, or even in the Baroque labyrinths of the 17th and 18th centuries, among others², according to Aarseth (1997).

¹ In the 1950, Max Bense (1950), Alan Turing (1950), Christopher Strachey (1954), and Theo Lutz (1959) wrote about generative aesthetics, computing, thinking machines, and stochastic texts, respectively. In the following decade, Nanni Balestrini (1962), António Aragão (1963), Theodor Holm Nelson (1965), E. M. de Melo e Castro (1965), and Joseph Weizenbaum (1966) explored the concepts of hypertext and hypermedia, combinatorial poetry, and artificial intelligence. However, it was only in the 1970s, with Robin Shirley (1972), James Richard Meehan (1976), and Pedro Barbosa (1977), that a theory of computational text truly close to what we now consider e-literature was developed.

² This view supports the approach of the Digital Archive of PO.EX (Torres, 2005), which identifies and recognizes as the antecedents of digital poetry a series of remote idealizations and realizations ranging from the Baroque to Futurism. In its proposed taxonomy, the Archive includes Digital Poetry as a genre of experimental literature, defining it as a "[f]orm of poetry that uses the potential of the computer as a creative machine, thus promoting a symbiosis between the artist and the machine, and based on the construction of combinatory, random, multimodal, or interactive algorithms." This open-access repository collects, classifies, and preserves hundreds of works of Portuguese e-literature: <https://po-ex.net/tag/poesia-digital/>.

At the close of the 20th century, the foundation of the Electronic Literature Organization (ELO) in 1999 by Scott Rettberg, Robert Coover, and Jeff Ballowe marked a significant development, aiming "[to] facilitate and promote the writing, publishing, and reading of literature in electronic media" (ELO, n.d.). The ELO provides a comprehensive definition that highlights the dialogues and symbioses mentioned earlier: "work[s] with an important literary aspect that takes advantage of the capabilities and contexts provided by the stand-alone or networked computer" (ELO, n.d.). This definition, requested by the ELO from a committee led by Noah Wardrip-Fruin, was later revisited by N. Katherine Hayles in "Electronic Literature: What is it?", where she explains that an e-literature work is "a first-generation digital object created on a computer and (usually) meant to be read on a computer" (Hayles, 2007). Thus, e-literature is natively digital: it is created and read within a technological context necessary for its existence and replication.

Aligned with these definitions are the proposals by Bouchardon (2016), Heckman and O'Sullivan (2018), Rettberg (2019), Flores (2021), and Berens et al. (2022a).

Serge Bouchardon distinguishes between digital literature and digitized literature, emphasizing that "[d]igital literature uses the affordances of the computer to dynamically render the story. (...) Digital literature is algorithmic. It changes as the reader engages it" (Bouchardon, 2016, p. 3). This distinction highlights the interactive and mutable nature of digital literature, contrasting with traditional literature, even when digitized, and underscores the importance of algorithms in creating unique experiences for each reader. Additionally, Davin Heckman and James O'Sullivan remind us that "[e]lectronic literature, essentially, must be electronic and literary" (Heckman & O'Sullivan, 2018).

This definition emphasizes that e-literature must integrate and balance different elements, ensuring that technology enhances the literary experience without compromising its poetic and/or narrative essence.

Scott Rettberg proposes that "electronic literature is most simply described as new forms and genres of writing that explore the specific capabilities of the computer and network – literature that would not be possible without the contemporary digital context" (Rettberg, 2019, p. 2). Thus, e-literature not only utilizes technological capabilities but also depends on them, creating genres and forms that would be unthinkable outside the current digital context.

In comparison, Leonardo Flores defines e-literature as "a writing-centered art that engages the expressive potential of electronic and digital media" (Flores, 2021, p. 27).

This definition values the exploration of the expressive potential of digital media within a writing-centered art form, expanding the creative possibilities of the media.

Additionally, the editors of the fourth volume of the Electronic Literature Collection (Berens et al., 2022a) propose that in e-literature, literary qualities are co-produced by human and algorithmic interaction. For the authors, the formal innovation triggered by technology is related

to conceptual innovations that result in transformative experiences for readers. This approach reinforces the co-production between humans and algorithms.

As evidenced by this brief initial overview³, e-literature encompasses a broad range of aesthetic forms, fostering a convergence that transcends traditional conceptions of textuality. There is a dialogue between two layers: a computational layer and a cultural and literary layer. This transcoding (Manovich, 2001) involves the sophistication of cultural and media codes through computational codes, and vice versa.

For all these reasons, e-literature presents strong educational potential. Focusing on educational approaches and principles, it serves as a tool that can aid in the development of interdisciplinary teaching practices, promoting digital literacy. It can be seen as a critical device that engages readers with the materiality of media, raising awareness of the current distributed media ecology.

2. Approaches and Methods

2.1 Chronology: Generations and History

To identify distinct moments in the evolution of e-literature and how each moment invokes different archeologies and symbolisms, we turn to Leonardo Flores (2021), who proposes three generations of e-literature. In his proposal, Flores highlights how each generation reflects the interaction between art and technology in a unique way, redefining the literary experience in different historical contexts.⁴

The first generation corresponds to a phase of experimentation with electronic media from the 1950s until the popularization of the World Wide Web (c. 1993), during a period when access to computers was limited, resulting in a small number of practitioners. As Flores (2021) notes, e-literature distribution during this phase primarily occurred through physical media such as floppy disks, CD-ROMs, and paper prints, which limited the audience reached. This generation produced experimental works generally based on specific hardware and software, including genres like computational poetry, algorithmic and generative art, and computer-generated literature.

Flores (2021) explains that the advent of the World Wide Web marked a paradigm shift and facilitated growth in the creation and dissemination of e-literature, initiating what he terms the

³In addition to the pioneering studies by Aragão, Melo e Castro, Barbosa, and Pestana, mentioned throughout the article, it is important to highlight that other authors also wrote about the subject, even if only in brief notes such as prefaces and reviews, including Salette Tavares, Herberto Helder, Fernando Namora, and Ana Hatherly. Additionally, more developed studies have been conducted in doctoral theses by Pedro Reis, Álvaro Seça, Fernanda Bonacho, Diogo Marques, and Ana Marques; in books and monographs by José Augusto Mourão and Manuel Portela; and in articles by Rui Torres, Daniela Côrtes Maduro, Diogo Marques, Bruno Ministro, and Sandra Guerreiro Dias. The following readings are recommended, which include notes on the evolution of cyberliterature in Portugal: Reis (2011), Portela (2013), Funkhouser (2014), Seça (2015a), Torres and Marques (2020), and Torres and Ministro (2021).

⁴Flores' (2021) proposal on the generational division of e-literature aligns well with the concept of generational trends described by Nick Montfort (2018), which includes the phases of Pre-Web, Web, and Post-Web. Workworks generally based on specific hardware and software, including genres like computational poetry, algorithmic and generative art, and computer-generated literature.

second generation. This generation began around 1995 and continues to the present. Programs such as Flash and Director, now discontinued or obsolete, as well as open languages like HTML and JavaScript, were essential tools for e-literature creation by this generation of authors and artists, allowing the development of customized interfaces. The second generation contributed works specifically for the web, utilizing its interactive capabilities, which led to genres such as hypermedia poetry and fiction, multimedia and interactive narratives, interactive webcomics, and computer-animated poetry (Flores, 2021).

Finally, starting from 2005, Flores (2021) suggests the onset of a third generation, with e-literature works based on widely adopted platforms and applications, as well as mobile apps and social web API services, resulting in massive production and audience engagement. Multimedia authoring software has migrated to platforms that allow near-instant editing of texts, images, sounds, animations, and videos, as well as facilitating the sharing of these contents. Flores (2021) argues that these third-generation works align with the poetics of contemporary digital culture, shifting focus from originality and difficulty to circulation in the form of remixes and derivations within participatory culture logic. The genres of e-literature that emerged with this generation include literary forms that use games, bots, GIFs, and memes to convey literary content, exploring the capabilities of social networks and collaborative platforms.

2.2 Archaeology: Preservation and Documentation

Each of the historical forms of e-literature mentioned, with its specific genres, presents distinct challenges in terms of preservation. The e-literature landscape—networked computing—is in constant transformation, resulting in a phenomenon of continuous metamorphosis and instability. Therefore, strategies for preserving digital information are essential to prevent technologies from becoming obsolete or discontinued.⁵

Digital preservation refers to the activity of creating a copy of specific digital information to a new medium when that information becomes obsolete and inaccessible (Lee et al., 2002, p. 94), ensuring that the information can be updated and processed in the future (Lee et al., 2002, p. 95).

The ELO has an initiative called PAD - Preservation, Archiving, and Dissemination, whose first report, "Acid-Free Bits," prepared by Nick Montfort and Noah Wardrip-Fruin and published as open access (Montfort & Wardrip-Fruin, 2004), presents the author and research community with a set of best practices aimed at keeping e-literature readable and accessible. The authors consider three main preservation strategies—technology preservation, emulation, and migration—which we will summarize.

Preservation – In this strategy, original hardware and software are maintained to run old programs. While effective, this option is costly and complex due to the need to conserve equipment and systems without updates. This method allows visitors to interact with works as they were originally presented.

⁵ For a detailed analysis of these processes, see Torres (2011), where specific proposals for the preservation and dissemination of Portuguese e-literature are presented.

Emulation – This approach reproduces old programs on modern hardware through emulators, using virtualization tools to run obsolete software on current computers. However, the continuity of emulators depends on ongoing interest in the original platforms and also requires the preservation of the emulators themselves.

Migration – In this approach, old programs are converted to modern formats, preserving, as much as possible, the original data. This technique can result in varying degrees of fidelity and may introduce new problems, functioning as a translation or adaptation. However, migration can also stimulate innovative solutions to the challenges that arise during the process.

Although this model remains operational and aligned with best practices, its formulation without consideration of the third generation of e-literature necessitates an updated proposal. Thus, we propose three preservation mechanisms tailored to each generation: Hardware Preservation, Digital Preservation, and Network Preservation.

Hardware Preservation – This strategy corresponds to Montfort and Wardrip-Fruin's (2004) proposal, involving the maintenance of original hardware and software. The examples of e-literature we will present include two distinct subcategories: the first subcategory includes mainframes where old programming languages can run, as well as all related physical apparatus—punched cards, reels, program descriptions, and printed results on paper. The second subcategory covers works developed for home computers, such as those created for the ZX Spectrum and their respective cassette tapes.

Digital Preservation – What Montfort and Wardrip-Fruin referred to as emulation can be understood here as digital preservation. We should consider two distinct forms of digital preservation: Web Archiving, which includes capturing snapshots of web pages and interactive interfaces, incorporating services like the Internet Archive and Webrecorder; and Web Environment Emulation, which uses old browser emulators to run web works on modern browsers, such as Oldweb.today, mimicking old versions and maintaining the original experience.⁶

Network Preservation – This category is necessary because third-generation works adopt proprietary networks and platforms, whose source code is not available and is rarely documented. This strategy involves using forms of Social Media and Platform Capture, recording data and interactions on social networks through tools like ArchiveSocial, Twarc (for Twitter), and Archive-It; Containerization, with tools like Docker and Kubernetes, which encapsulate digital works in containers with all necessary dependencies; and Automated Migration, which allows the automation of the migration process to contemporary formats and environments, ensuring ongoing compatibility and accessibility.⁷

Additionally, Montfort and Wardrip-Fruin (2004) recommend adopting a holistic perspective, which involves a systematic approach to proactively document and archive works. This includes

⁶ For information on digital preservation, archiving, and web environment emulation, see Pennock (2013) and Kaltman et al. (2014).

⁷ For information on digital preservation, archiving, and web environment emulation, see Pennock (2013) and Kaltman et al. (2015).

the distribution of source code and the comprehensive recording of the creation process. Therefore, the preservation of e-literature requires a pedagogical approach that encompasses knowledge of metadata and essential information to assist future archivists in the interpretation and proper storage of works. We highlight this complementary strategy as extensive documentation, which creates conditions for the future recreation or emulation of the works.

In this vein, it is important to consider recontextualization strategies that allow for the adaptation or simulation of old works, such as the retextualizations carried out by the PO.EX Digital Archive on the works of Pedro Barbosa, E. M. de Melo e Castro, and Antero de Alda. Although recreation does not represent the original work in a strict sense, it serves to preserve the essence and content of the works, making them accessible to new audiences. Thus, we might argue that remixing acts as a complementary form of preservation.

2.3 *Symbology: Metaphors and Meanings*

A third approach to organizing the selected e-literature corpus involves analyzing the symbologies of water.⁸ We believe this approach facilitates understanding the different generations of e-literature and reflects distinct preservation practices. Additionally, the themes of the selected works are also associated with water.

Water transitions between solid, liquid, and gaseous states, symbolizing transformation, metamorphosis, and regeneration (Chevalier & Gheerbrant, 2010, p. 41). These fluid characteristics can be used to address the generations and methods of e-literature preservation, reflecting the continuous evolution and adaptation of works over time. Given its transient nature, water represents a paradox of permanence: despite constantly changing and transforming, it is still perceived as water. This paradox of simultaneous impermanence and permanence metaphorically reflects the transient and emergent condition of e-literature.

Therefore, let us consider the three states of water—solid, liquid, gaseous; or ice, liquid water, vapor—and their symbolic meaning to understand the relationships and dialogues between art and technology, between culture and code, in e-literature.

Ice, as the solid state of water, symbolizes rigidity and stillness (Chevalier & Gheerbrant, 2010). It represents stability and permanence, serving as a metaphor for conservation. It preserves water in an immutable state, temporarily maintaining its integrity.

In the context of e-literature, ice can be seen as a metaphor for the preservation of hardware and software from the first generation of e-literature, kept unchanged to ensure the authenticity of the original experience. Just as ice preserves water in an unaltered state, hardware preservation seeks to maintain the integrity of digital literary works.

⁸ Torres and Ferreira (2022) analyze the project *O homem que queria ser água* by António Abernú, focusing on the work's transpositions that blur the boundaries between different media. The authors use the different states of water as a metaphor to explore how transmedia narratives traverse various states. This approach adopts and expands on that model, reusing it to deepen the analysis of other examples of Portuguese e-literature, now articulated with the three generations and three distinct forms of preservation mentioned.

In its liquid form, water symbolizes the ability to travel and transport. According to Zygmunt Bauman (2000), the liquid state characterizes modernity, reflecting the role of the ephemeral and momentary in human experience, which is dynamic and ever-changing. Thus, liquid water represents adaptability and transition.

The fluid state of liquid water characterizes the second generation of e-literature, where interactive and multimedia works are navigated on the web, providing a dynamic and ever-changing experience. Liquid water symbolizes adaptability and transition, reflecting the nature of digital works that mold to customized interfaces and emerging technologies. Thus, liquid water relates to the digital preservation of works from this generation.

Finally, we observe a transition from the liquid to the gaseous state, as evidenced by metaphors related to cloud computing, which provides ubiquitous access to distributed network resources. Water vapor, being volatile and unstable, reflects the ephemeral and distributed nature of the digital age, marked by adaptability and constant transformation. Mist and fog symbolize doubt, the unknown, and indeterminacy (Chevalier & Gheerbrant, 2010, p. 470), representing the complexity and uncertainty of contemporary times, where boundaries become increasingly blurred.

3. Electronic Literature through its Corpus

Before analyzing the exemplary works of each generation and exploring how they integrate and transcend these metaphors, as well as addressing the discussed technological and archaeological challenges, we will present a table that synthesizes and organizes these relationships.

Table 1 | Chronology, Archeology, Symbology (Examples)

Chronology	Archaeology	Symbology	(Examples)
1 st Generation (1950 - 1993)	Hardware Preservation	Ice	Pedro Barbosa, <i>Porto (trovas eletrônicas)</i> and <i>Aveiro (elegia minimal repetitiva)</i> , 1977 Silvestre Pestana,
2 nd Generation (1995 - present)	Digital Preservation	Liquid Water	<i>Computer Poetry</i> , 1981 Antero de Alda, <i>Oceanografias (a memória da água)</i> , 1986
3 rd Generation (2005 - present)	Network Preservation	Vapor	Rui Torres, <i>Mar de Sophia</i> , 2005 André Sier, <i>MathX (Poemário)</i> , 2015 d1g1t0 indivíduo coletivo, <i>MOIRA</i> , 2022 Álvaro Seïça & Sindre Sørensen, <i>aimisola.net/hymiwo.po: a poemtrack for a yet-to-be-written dance piece</i> , 2015 Liliana Vasques, <i>robot.sorridente</i> , 2020 Luís Lucas Pereira, <i>humaninarium</i> , 2024

3.1 First Generation: Hardware Preservation (the solidity of the past)

As previously mentioned and explained in various studies (Torres, 2011; Torres & Marques, 2020; Torres & Ministro, 2021), Pedro Barbosa's work with e-literature, both theoretically and creatively, is pioneering and spans all the technological transformations it has undergone. In 1976, at the LACA - Laboratory of Automatic Calculation at the University of Porto, he collaborated with engineer Azevedo Machado using first-generation languages COBOL and Fortran. These languages can be considered classic examples from the pre-Web experimentation era (1950 - 1993), both being widely used in mainframes and large computers of the time.

Among the many other works by Pedro Barbosa that could be mentioned here, *Porto (electronic ballads)* and *Aveiro (repetitive minimal elegy)* are particularly significant as they reflect a set of transitions that reveal how e-literature is intersected by chronological, archaeological, and symbolic dimensions. From these works, the punched tapes containing the data of the poems have survived, as well as the *Permuta* and *Texal* programs, along with printed sheets with textual variations, both on paper and in book form (Barbosa, 1977). These first-generation works are suited for physical preservation as both the NCR Elliott 4100, where they were initially programmed, and the mentioned materials, are still available.

However, it is important to note that these works have also adapted to various other forms of preservation through retextualization processes. Representative of this are the multiple versions created over time:

- 1) In 1996, a version was produced in MS-DOS and distributed on floppy disk, using Sintext by Barbosa and Abílio Cavalheiro (Barbosa, 1996b), programmed in C++.
- 2) In 2001, a Java version for CD-ROM and web was developed, using Sintext-W by José Manuel Torres (Barbosa, 2001).
- 3) In 2014, a version of these poems was created in JavaScript, using poemario.js by Rui Torres and Nuno Ferreira, which was later improved and published in 2016 in the third volume of the Electronic Literature Collection (Barbosa, 2016).

The combinatorial variations of the terms present in *Porto* ("A SAUDADE DA PEDRA NO GRANITO DA HISTÓRIA [THE LONGING FOR STONE IN THE GRANITE OF HISTORY]") and in *Aveiro* ("Uma água sem ria na tristeza da alegria [A Water Without a Ria in the Sadness of Joy]") seem to reflect the inherent instability of the permutational text itself, characterized by the constant mutation of meanings.

In *Porto*, the stone and granite confront saudade and history, while in *Aveiro*, water and ria are placed in dialogue with sadness and joy. These elements, which define the experience of life in these cities, can be interpreted as representations of the demand for physical preservation (stone/granite as ice), while also carrying a dynamic potential that allows for reinterpretation in new technological contexts (water/ria as liquid).

⁹ For a more in-depth analysis of these works by Silvestre Pestana, see Seíça (2015b) and Seíça (2017b).

In addition to the use of mainframes, as exemplified by Pedro Barbosa's work, it is also relevant to highlight works created with the Spectrum range, which is a representative example of 1980s home computers. Although the ZX Spectrum falls within the chronological range of the first generation of e-literature (1950 - 1993), it represents a significantly different technology in terms of accessibility and usage context compared to mainframes and languages such as COBOL and Fortran.

Silvestre Pestana, an artist associated with Portuguese experimental poetry and interactive art, explores expanded poetic forms. Pestana was the first author in Portugal to publish, starting in 1981, a series of three poems programmed in BASIC language, titled *Computer Poetry*. The author dedicates the three program-poems in the series to E. M. de Melo e Castro, Henri Chopin, and Julian Beck, who work in very different fields:

Melo e Castro with videopoetry and visual poetry, Chopin with sound poetry, and Beck with theater. Pestana's poems reflect certain characteristics of concrete and visual poetry, such as the spatialization and constellational organization of signifiers, now expanded into a dynamic medium, bridging to the computer-animated poetry that followed.

Pestana elucidates that the audience for works created with the "new techno-visual writing machines" (1985, p. 203) "is no longer the traditional audience of literary and bookish culture but rather the audio-techno-visual crowds" (p. 205). Moreover, Pestana's non-linear and expansive works demand a new analytical terminology, as he noted: "The dynamic nature of techno-industrial societies compels us to reassess concepts, practices, preferences, and to rethink cause-and-effect relationships" (p. 204).

Like Barbosa's work, Pestana's creations circulate in various forms:

- 1) The code for two of the poems/programs, dedicated to Julian Beck and Henri Chopin, was published in a box titled "A poética dos anos 80" (Pestana, 1987) in the Domingo! magazine of the *Correio do Porto* newspaper.
- 2) The code for the three poems was published in the volume *Poemografias* (Pestana, 1985), accompanied by screen captures, and later in the catalog of the Tecnoforma exhibition (Pestana, 2016).
- 3) Video recordings of the work, which the author made available on his personal webpage and shared in the ELMCIP knowledge base, should also be considered. The videos, which include BASIC code in the early frames, are part of the Fundação de Serralves — Museu de Arte Contemporânea collection in Porto, donated by the artist in 2022, and are featured in various traveling exhibitions.

Pestana's poems explore, in a minimalist fashion, variations based on the word/concept OVO, which is recurrent in his work. From this concept arise the words P_OVO and N_OVO. All of them are dynamically designed and redistributed on the screen. Each new configuration of these words traces a unique path, reflecting the ongoing evolution and transformation of the identity

of a people and of e-literature. Just as ocean waves constantly sculpt and redefine the coastline, the poem/program also shapes and transforms the identity of the Portuguese people, illustrating the fluidity and continuity of its evolution.

A third example of a first-generation work is *Oceanografias (a memória da água)* by Antero de Alda, which is based on linear numerical correspondences between semantically and phonetically similar signifiers (Alda, 2015). Words were assigned numbers from 1 to 24 and randomly combined to create new poems, constrained by specific variables.

As with the other first-generation works mentioned, this one was also presented through various versions and adaptations, each offering a new interpretation of the original ideas:

- 1) Initially titled *Conjeturas da Água* in 1986, it was developed in BASIC for the Sinclair ZX Spectrum microcomputer. At that stage, the code and examples of generated poems remained unpublished.
- 2) In 2015, Alda published the code with examples in the book *Oceanografias (a memória da água)*.
- 3) In 2016, the work was retextualized in JavaScript, using the poemario.js by Torres and Ferreira, revitalizing it for the digital age. This version, available in the PO.EX Digital Archive (Torres, 2016), reflects a transition between generations of e-literature.

The updating of the code from COBOL or BASIC to JavaScript or other modern languages can significantly alter the original spirit of the works. This process illustrates the importance of hardware preservation strategies to ensure faithful access to the original material. At the same time, it highlights how combining different preservation strategies can help maintain the continuity of e-literature works, offering a model for future digital conservation practices. However, it also underscores the difficulty of adopting a single approach to preservation.

3.2 Second Generation: Digital Preservation (the fluidity of technologies)

A work from the second generation, now obsolete and unavailable, is *Mar de Sophia*, a textual and sonic engine developed by Rui Torres in Flash and Actionscript, XML, PHP, and Python, with contributions from Nuno Ferreira and Filipe Valpereiro in programming, Sérgio Bairon and Luís Aly in sound textures, and Nuno M Cardoso in voice. The texts were written and programmed based on poems by Sophia de Mello Breyner Andresen and the lexicon of Lewis Carroll.

Mar de Sophia challenges traditional linearity by providing a non-hierarchical reading experience. The poem's structure echoes the rhizome concepts proposed by Deleuze and Guattari (2016). The rhizome, as a philosophical metaphor, is characterized by its non-linear, interconnected, and expansive nature, making a fixed interpretation impossible and promoting an approach with multiple entry and exit points. Just like a rhizome, this work, as with e-literature in general, does not follow a predefined order, allowing readers to choose their reading paths, continuously exploring and creating meanings.

The work served as an interface for possible didactic approaches to e-literature, being utilized by researcher and lecturer Sandra Guerreiro Dias in a pedagogical proposal for introductory linguistic and literary studies (Portuguese I and II). Guerreiro Dias (2020) promotes a performative research attitude that fully incorporates the literary object into student training, aligning with a pedagogy that values interaction and participation.

For the author, this work, “herança do experimentalismo *verbivocovisual* e da literatura programada pós-moderna [a legacy of verbivocovisual experimentalism and post-modern programmed literature]” (Guerreiro Dias, 2020, p. 113), stimulates co-creation and experimentation, challenging readers to participate in the construction of poems through interactions that reflect the complexity and multiplicity of the text.

Mar de Sophia facilitates educational activities including free exploration of the text, guided analysis of its interactive operations, and reflection on the linguistic principles involved (Guerreiro Dias, 2020). These approaches are fundamental to fostering a critical and metacognitive attitude towards language and literature, developing critical thinking skills, and the ability to interpret and create meanings—essential skills in the digital age.

The hypermedia poem is accompanied by intense sound design and incorporates various multimedia elements, constituting a tribute to Sophia’s literary universe. The poems were generated from a statistical study of the lexicon of 450 poems by the author available online. After lexical and syntactic filtering, a list of words was created based on the frequency of use in the author’s original discourse. This list allowed the textual engine to create virtual combinatory poems. Various combinations of words, sounds, and movements can be experimented with, adjusting the speed at which words and their respective sounds appear on the screen or selecting word lists (Bonacho, 2013).

The theme of water is evident in the title itself and refers to the liquid dimension pointed out by Bauman (2000). Regarding this work and its relationship with liquidity and the rhizome, researcher Vinicius Carvalho Pereira writes: “elementos semióticos presentes nos textos da poetisa portuguesa são relidos em uma estética da deriva e da liquidez no software-poema (...), o qual põe em deslize na tela os sintagmas de Andresen – flutuação do signo poético algo análoga à da navegação no cyberspaço [Semiotic elements present in the texts of the Portuguese poetess are re-read in an aesthetics of drift and liquidity in the software-poem (...), which places Andresen’s phrases in slide on the screen—similar to the poetic sign’s fluctuation to navigation in cyberspace]” (Pereira, 2017, p. 13).

MathX (Poemário), by André Sier in collaboration with Rui Torres, is also a second-generation work that combines texts and algorithms to create an interactive and three-dimensional poetic experience. Through a digital environment programmed by Sier, which presents itself as a vast sea open for exploration by readers, they are invited to interact with a varied and fragmented collection of poems, charting paths, capturing images of the environments, and restarting the navigation experience.

The work uses digital processing and voice synthesis to explore new possibilities for poetic expression. Interaction is achieved through keyboard commands, requiring the installation of specific libraries and voice synthesizers for full functionality.

Including poems by Pedro Barbosa and E. M. de Melo e Castro, it constitutes a revisitation and reinterpretation of historical texts from Portuguese experimental and digital poetry, circulating them in renewed forms and through different audiences. Situated within the chronological context of second-generation works, its code is available, allowing for recreation through digital preservation. However, the work also connects with third-generation works, as it is a playable object that can be exhibited in physical spaces, shared, and acted upon collaboratively.

Finally, *MOIRA*, by *digito individual_collective*, is a second-generation work that invites the reader to explore the universe of the Enchanted Moiras. The interface simulates the waters of a digital well, where a web of words is found. The work presents the voice of a Moira as a liquid whisper, recombined with words that intertwine, aligning with the theme of water in its liquid state, associated with second-generation e-literature works. Developed in JavaScript with HTML and CSS, languages that enable web interactions, *MOIRA* requires the participation of its readers, transforming them into co-creators, as their choices directly influence the unfolding of the narrative and the potential liberation of the Moira.

Inspired by the Moiras, figures of destiny in Greek mythology, the work links the mythological past with the digital present through the retelling and reinvention of these stories, creating a timeless narrative that serves as an educational tool concerning intangible heritage and digital preservation. This fusion of mythology and technology exemplifies the dialogues between art and technology that define e-literature.

Described by its creators as a project of “investigAÇÃO artística [artistic investigACTION]” (Marques & Gago, 2023, p. 37) and “participatory art,” *MOIRA* has a significant community and activist concern, recognizing the goal of “promover o envolvimento da comunidade, enquanto agente fundamental para o questionamento e (re)criação artística do (seu) património [promoting community involvement as a fundamental agent for questioning and (re)creating artistic (its) heritage]” (Marques & Gago, 2023, p. 44).

The authors clearly highlight the educational dimension of e-literature: “se pensarmos nas aplicações didáticas que [a e-literatura] proporciona, a partir da literacia processual, para a literacia linguística e, por fim, para a literacia artística, a utilização de meios tecnológicos digitais acaba por contribuir para aumentar níveis de literacia digital (...) [if we think about the didactic applications that [e-literature] provides, from processual literacy to linguistic literacy, and finally to artistic literacy, the use of digital technological means ends up contributing to increasing levels of digital literacy]” (Marques & Gago, 2023, p. 55). Although in different forms, all three second-generation works require digital preservation strategies to ensure their long-term readability. Despite being currently unavailable, *Mar de Sophia* remains subject to digital preservation, as, like the others, its code has been shared with the community and extensively described and commented on by its authors.

3.3 Third Generation: Network Preservation (the volatility of the digital age)

The collaborative project *HYMIWO.PO* (*HYmn to imMIgrant WOmEn, a Poem*), created by Álvaro Seiça and Sindre Sørensen, explores the conditions faced by African immigrant women in Spain from their perspective (Seiça, 2017a). Within this project, Seiça and Sørensen developed an interactive and playable poetic structure to offer an immersive and reflective experience on immigration: *aimisola.net/hymiwo.po: a poemtrack for a yet-to-be-written dance piece*.

The work *aimisola.net/hymiwo.po* is not just a digital poem. Through the creation of a wiki, the authors established a digital archive with audio, video, and images, documenting interviews with immigrant women, language learning workshops, professional training, and social meetings organized by a Spanish NGO (Seiça, 2017a). In line with other third-generation works, a notable feature of *aimisola.net/hymiwo.po* is its playability.

However, unlike conventional games where speed is crucial for “leveling up,” *aimisola.net/hymiwo.po* adopts a contemplative approach. For this purpose, the word “silence” acts as a sort of player avatar (Berens et al., 2022), moving slowly from left to right across the screen. It encourages the reader to interact with the words and emoticons that appear and disappear on the screen, which are aggregated from Twitter hashtags (Seiça, 2017a).

aimisola.net/hymiwo.po demonstrates how digital poetry can be used as a tool for artistic expression, linguistic experimentation, and social awareness. The interactive and multimodal approach of this poem-game also contributes to digital literacy strategies, encouraging a deeper understanding of the relationship between technology and culture, and between code and art. By engaging readers in a creative and critical exploration of media, such as real-time use of Twitter, the project suggests a navigation and interpretation of the digital world that is more effective.

A second work within the chronological scope of the third generation is *robot sorridente* by Liliana Vasques. This piece challenges our expectations of what poetry can be on a platform like Instagram. Using this social media platform, Vasques presents her robot as a nearly conscious entity that creates space for various poetic formats and strategies in the digital realm, including visual and concrete forms, animations, and short videos. By appropriating the typical web interface layout of Instagram (three images per row, creating a kind of dynamic mosaic of poems), the work, when viewed as a whole, provides a visual rearrangement of the images, giving them a strangeness that can be meaningful in educational contexts.

robot sorridente does not yield to the easy comprehension that sometimes characterizes third-generation e-literature works. Indeed, most approaches are ironic and opaque, and Vasques aesthetically plays with glitches, blurring, and misalignment.

The work also functions as a feminist critique of the trend among Instapoems to simplify narratives (Berens et al., 2022c), thus encouraging a deep reflection on feminine identity and experience in the current web environment.

Finally, we highlight the creative work of programmer Luís Lucas Pereira, particularly how he uses the social platform Instagram through the profile *@humaginarium* to complementarily showcase his multiple programmed poems. Recalling our previous note on the limitations of using images

and videos to capture a digital work, and recognizing that these techniques only partially address the complexity of generative works, Pereira's use of Instagram prompts reflections that can be applied in educational contexts addressing the chronological, archaeological, and symbolic issues we've discussed.

Indeed, Instagram is not used by the author merely as a publishing medium, since all the works featured on his profile page have their own independent and autonomous space. Instead, the platform is used as a space for the reconstruction and repositioning of partial elements of the works themselves.

The neologism *humaginarium*, combining the words "human" and "imaginary," suggests a space or entity where human imagination is explored, preserved, and possibly expanded. This concept is directly related to the themes we've been discussing, as in e-literature, technology serves as a means for new forms of artistic and literary expression. The idea of *humaginarium* resonates with various previously discussed works, which allow poetic imagination to be continuously explored and reinvented through new technologies.

Based on the examples presented, extracted from a broader and still developing corpus, we can conclude that e-literature provides a dynamic space where human imagination can be continually reconfigured. The "humaginarium" can also be seen as a digital environment where poetic navigation experiences are organized and preserved, allowing us to address, explore, and confront contemporary social issues. Thus, the neologism "humaginarium" encapsulates the essence of the projects and works discussed, offering a powerful metaphor for the digital space and its relationship with e-literature.

Finally, it is important to note that third-generation works present significant complexity in terms of future preservation. Network preservation involves the need to encapsulate and maintain social networks and collaborative platforms, which are often not open or provide available code. This represents a substantial challenge, as these platforms are volatile and constantly evolving, requiring adaptive preservation strategies to ensure the longevity and accessibility of the works.

4. Reflections on Digital Literacy

The socio-cultural profile of digital natives (Gen-Z, born between 1997-2010, and Gen Alpha, born after 2010) is significantly linked to the third generation of e-literature. This generation, as proposed by Flores (2021), should be understood through the lens of participatory cultures. According to Henry Jenkins (Jenkins et al., 2009), a participatory culture fosters artistic expression and civic engagement. In a participatory culture, individuals believe that what they do is meaningful, leading them to feel a certain degree of social connection and closeness with others.

Participatory cultures, like many of the e-literature works mentioned, point to the need for policies and pedagogical interventions (Jenkins et al., 2009). Various multinational models outline the values, attitudes, skills, and knowledge necessary for an active and responsible citizen to fully exercise their citizenship in a networked society. Among these models, the one from

the European Commission (Council of Europe, 2019) stands out, with a particular emphasis on digital competence, highlighting the importance of developing citizens' digital literacy (Vuorikari et al., 2022). Other models include "global competence" (OECD, 2018) and "education for global citizenship" (UNESCO, 2015). Additionally, the Council of Europe model defines a digital citizen as someone who demonstrates competence and positivity when dealing with the constant evolution of digital technologies, participating actively, continuously, and responsibly in civic and social activities, and committing to the ongoing defense of human rights and dignity (Council of Europe, 2019).

E-literature contributes to the development of essential skills such as digital literacy, critical thinking, and creativity. It offers a playful dimension, creating experiences that encourage exploration, improvisation, and discovery.

Moreover, it stimulates digital natives to interpret and build dynamic models to understand the real world. E-literature requires navigation, analysis, evaluation, and orientation within the texts; without these skills, navigation can become aimless due to a lack of a clear understanding of the path. Attention and critical thinking are crucial in digital literacy, as digital texts are often democratic, promoting open participation and contribution in virtual environments, with an almost total absence of authority in sources. Besides the challenge of dealing with the lack of authority in a frequently tumultuous and noisy digital space, the issue of choosing and selecting the reading path arises, which translates into a semiotic sequence of selective movements. An ergodic text, as defined by Aarseth (1997), demands significant effort to be read and interpreted.

The teaching of e-literature can significantly contribute to developing a range of essential skills. According to Artur Matuck, electro-writing offers the possibility of reconfiguring texts as potential material, serving as "matrizes para reedição, recombinação e processos de análise, investigação, transformação, tradução e reprocessamento [matrices for re-editing, recombination, and processes of analysis, investigation, transformation, translation, and reprocessing]" (Matuck, 2011, p. 63). Additionally, within the realm of e-literary objects, the reader transcends the role of a passive and solitary recipient, adopting an active and collaborative stance in the creation and realization of the literary project. This reader acts as an active, creative, and manipulative participant, capable of filling gaps, finding answers, and defining paths in open, available, and flexible proposals.

The Digital Literacy Action Plan (2021-2027), developed by the European Commission, identified digital literacy as an essential competence for the 21st century. The priority is to promote the development of an effective digital education ecosystem. The second priority focuses on strengthening the digital skills and competencies necessary for digital transformation, recognizing the importance of working with more creative, interactive, and available digital educational content in various formats. Using the approaches and methods discussed—such as the relationships between chronology, archaeology, and symbolism—we can adopt a series of strategies to highlight the educational potential of e-literature.

At a chronological level, e-literature enables reflection on generational differences, promoting an understanding of history and technological evolution, as well as changes in ideas and human

practices associated with these transformations. The dematerialization of e-texts requires a robust technical apparatus, which not only reflects but also reveals the evolution of communication forms, supported by ever-changing technological media and signs. Digital writing, as a communicative technique driven by technological advancement, is characterized by continuous mobility that dematerializes and challenges its original meaning, resulting, as described by Maria Augusta Babo, in a “desterritorialização que a transforma num puro objeto nômade [deterritorialization that transforms it into a pure nomadic object]” (Babo, 1996).

At an archaeological level, e-literature promotes an aesthetic of care and curation, adopting methods of attentive reading. The breakdown of material text boundaries in the virtual environment encourages the reader to actively participate in a process akin to writing, where reception is integrated with production due to the performativity inherent in discourse. In a context where the text loses its unique corporeality, e-textuality facilitates the understanding of this dematerialization, allowing discourse to transition between different languages and multimedia devices. Reading, as a process of meaning construction, also assumes the responsibility of fixing the text, image, sound, or other signifiers. The technique used in e-literature acts as a mediator of reality, functioning as a mechanism of knowledge about the world. It offers not only the possibility to enrich awareness of the current world but also to understand the context, memory, and history of the past. This memory is updated by human digital competence, while the record of past events, or inorganic memory, allows the eternalization of human experience beyond physical death through its inscription in archives or external technological memory devices (Babo, 2004).

At a symbolic level, e-literature aligns with various themes and objectives of the UNESCO Sustainable Development Goals (SDGs), such as promoting well-being, quality education, gender equality, reducing inequalities, responsible consumption, climate action, peace, and social justice. The 21st century is characterized by unprecedented digitalization of communication. Although the benefits of digital media are undeniable, their indiscriminate and uncritical use has generated misinformation, hatred, and intolerance, threatening the sustainability of tolerant, inclusive, and democratic societies. E-literature can act as an ally in digital literacy, helping to develop essential digital competencies and skills to ensure that everyone has equal opportunities to thrive and engage as active citizens. Additionally, it promotes a critical process that fosters a culture of open and inclusive communication, grounded in respect for human rights and democracy, significantly contributing to human development.

CONCLUSIONS

The proposed triangular approach, which integrates chronological, archaeological, and symbolic perspectives, provides an effective framework for understanding the different generations of e-literature in Portugal. The chronological perspective, as identified by Flores (2021), outlines three distinct generations of e-literature, ranging from early experiences before the World Wide Web to contemporary uses of social networks and mobile applications. The archaeological perspective, based on Montfort and Wardrip-Fruin (2004), focuses on the challenges and strategies of digital preservation, aiming to ensure the accessibility and readability of works over time. Finally, the symbolic analysis, supported by Chevalier and Gheerbrant (2010), uses the metaphor of water to

illustrate the continuous transformations and flows in e-literature practices.

By integrating these three perspectives into the analysis, we can demonstrate how the works not only incorporate the proposed metaphors but also address the technological and archaeological challenges discussed. This theoretical foundation contributes not only to the preservation and understanding of e-literature but also ensures that these works remain accessible and relevant for future generations. Thus, e-literature stands out as a dynamic and essential field for digital literacy, playing a crucial role in promoting inclusive and critical communication in the digital age.

The selected works illustrate the media, cultural, and technological diversity of e-literature, highlighting its value both as a pedagogical tool and as a means of promoting digital literacy. Its capacity for continuous reconfiguration and adaptation emphasizes e-literature's potential to enrich the literary and educational experience.

BIBLIOGRAPHY

- Aarseth, E. J. (1997). *Cybertext: Perspectives on ergodic literature*. Johns Hopkins University Press.
- Aragão, A. (1963, August 7). A arte como «campo de possibilidades». *Jornal de Letras e Artes*.
- Babo, M. A. (1996). *Ficcionalidade e processos comunicacionais*. Conferência proferida na Faculdade de Letras da Universidade de Lisboa. *Biblioteca on-line de Ciências da Comunicação*. <http://bocc.ubi.pt/pag/babo-augusta-literatura-ficcionalidade.html>
- Babo, M. A. (2004). Do corpo protésico ao corpo híbrido. *Revista de Comunicação e Linguagens*, 33, 25-35.
- Bailey, R. W. (1973). *Computer Poems*. Potagannissing Press.
- Balestrini, N. (1962). Tape Mark I. In *Almanacco Letterario Bompiani* (pp. 145-151).
- Barbosa, P. (1977). *A literatura cibernética 1: autopoeias gerados por computador*. Edições Árvore.
- Barbosa, P. (1980). *A literatura cibernética 2: um sintetizador de narrativas*. Edições Árvore.
- Barbosa, P. (1988). *Máquinas pensantes: Aforismos gerados por computador*. Livros Horizonte.
- Barbosa, P. (1996a). *A ciberliteratura: Criação literária e computador*. Edições Afrontamento.
- Barbosa, P. (1996b). *Teoria do homem sentado* [Book and diskette]. Com a colaboração de Abílio Cavalheiro. Edições Afrontamento.
- Barbosa, P. (1998). A renovação do experimentalismo literário na literatura gerada por computador. *Revista da UFP*, 2(1), 181-188. <https://po-ex.net/taxonomia/transtextualidades/metatextualidades-alografas/pedro-barbosa-renovacao-do-experimentalismo-literario/>
- Barbosa, P. (2006). Aspectos quânticos do cibertexto. *Cibertextualidades*, 1, 11-42. <http://hdl.handle.net/10284/863>
- Barbosa, P., & Torres, J. M. (2001). *O motor textual. Livro virtual / infinito* [Livro e CD-ROM]. Universidade Fernando Pessoa.
- Barbosa, P. (2016). Cyberliterature (1977-1993). In S. Boluk, L. Flores, J. Garbe, & A. Salter (Eds.), *Electronic Literature Collection*, Volume Three. *Electronic Literature Organization*. <https://collection.eliterature.org/3/work.html?work=cyberliterature>
- Bauman, Z. (2000). *Liquid modernity*. Polity Press.
- Bense, M. (1950). *Literaturmetaphysik: Der Schriftsteller in der technischen Welt*. Deutsche Verlags-Anstalt.
- Berens, K. I., Murray, J. T., Skains, L., Torres, R., & Zamora, M. (2022b). Editorial Statement. In K. I. Berens, J. T. Murray, L. Skains, R. Torres, & M. Zamora (Eds.), *Electronic Literature Collection* (Vol. 4). Electronic Literature Organization. <https://doi.org/10.7273/vpk5-ww24>
- Berens, K. I., Murray, J. T., Skains, L., Torres, R., & Zamora, M. (2022b). Editorial Statement of "aimisola.net/hymiwo.po: a poemtrack for a yet-to-be-written dance piece." In K. I. Berens, J. T. Murray, L. Skains, R. Torres, & M. Zamora (Eds.), *Electronic Literature Collection* (Vol. 4). Electronic Literature Organization. <https://doi.org/10.7273/vpk5-ww24>
- Berens, K. I., Murray, J. T., Skains, L., Torres, R., & Zamora, M. (2022c). Editorial Statement of "robot sorridente." In K. I. Berens, J. T. Murray, L. Skains, R. Torres, & M. Zamora (Eds.), *Electronic Literature Collection* (Vol. 4). Electronic Literature Organization. <https://doi.org/10.7273/vpk5-ww24>
- Bonacho, F. do R. F. (2013). *A Leitura em Ambiente Digital: Transliteracias da Comunicação* (Ph.D thesis). Faculdade de Ciências Sociais e Humanas da Universidade Nova de Lisboa. <http://hdl.handle.net/10362/10379>
- Bouchardon, S. (2016). Towards a Tension-Based Definition of Digital Literature. *Journal of Creative Writing Studies*, 2(1). <https://repository.rit.edu/jews/vol2/iss1/6>
- Bouchardon, S., & Heckman, D. (2012). Digital Manipulability and Digital Literature. *Electronic Book Review*. <https://electronicbookreview.com/essay/digital-manipulability-and-digital-literature/>
- CETIC. (n.d.). *Centro de Estudos sobre Texto Informático e Ciberliteratura*. Universidade Fernando

- Pessoa. <https://web.archive.org/web/20131105194748/http://cetic.ufp.pt/>
- Chevalier, J., & Gheerbrant, A. (2010). *Dicionário dos símbolos*. Teorema.
- Council of Europe. (2019). *Recommendation CM/Rec(2019)10 of the Committee of Ministers to member States on developing and promoting digital citizenship education*. COE Publishing. https://search.coe.int/cm/Pages/result_details.aspx?ObjectID=090000168098de08
- Deleuze, G., & Guattari, F. (2016). *Rizoma* (Sousa Dias, Trans.). Documenta.
- Digital Preservation Coalition. (2015). *Digital Preservation Handbook* (2nd ed.). <https://www.dpconline.org/handbook>
- ELO. (n.d.). *Electronic Literature Organization*. <https://eliterature.org/>
- European Commission. (2019). *Key competences for lifelong learning*. Directorate-General for Education, Youth, Sport and Culture: Publications Office. <https://data.europa.eu/doi/10.2766/569540>
- Flores, L. (2021). Third-Generation *Electronic Literature*. In J. O'Sullivan & Dene Grigar (Eds.), *Electronic Literature as Digital Humanities: Contexts, Forms, & Practices* (pp. 26–43). Bloomsbury Academic. <https://doi.org/10.5040/9781501363474.ch-002>
- Funkhouser, C. (2014). Representations in digital poetry, beginning in Portugal. In J. L. Antonio & D. Silva (Eds.), *Cibertextualidades, 6, "Interação de Linguagens e Convergência dos Média nas Poéticas Contemporâneas"* (pp. 55–60). Ed. UFP. <http://hdl.handle.net/10284/4685>
- Guerreiro Dias, S. (2020). Ensino multimodal do português: Uma proposta pedagógica a partir da obra experimental-digital de Rui Torres. *MATLIT: Materialidades da Literatura*, 8(1), 105–127. https://doi.org/10.14195/2182-8830_8-1_6
- Hayles, N. K. (2007). *Electronic Literature: What is it?* Electronic Literature Organization. <https://eliterature.org/pad/elp.html>
- Heckman, D., & O'Sullivan, J. (2018). Electronic Literature: Contexts and Poetics. In K. M. Price & R. Siemens (Eds.), *Literary Studies in a Digital Age*. Modern Language Association. <https://doi.org/10.1632/lstda.2018.14>
- Jenkins, H., Purushotma, R., Weigel, M., Clinton, K., & Robison, A. J. (2009). *Confronting the challenges of participatory culture: Media education for the 21st century*. The MIT Press. <https://doi.org/10.7551/mitpress/8435.001.0001>
- Kaltman, E., Wardrip-Fruin, N., Lowood, H., & Caldwell, C. (2014). *A unified approach to preserving cultural software objects and their development histories*. UC Santa Cruz: Center for Computational Experience. <https://escholarship.org/uc/item/owg4w6b9>
- Lee, K., Slattery, O., Lu, R., Tang, X., & McCrary, V. (2002). The state of the art and practice in digital preservation. *Journal of Research of the National Institute of Standards and Technology*, 107(1), 93–106. <https://doi.org/10.6028/jres.107.010>
- Lutz, T. (1959). Stochastische Texte. *Augenblick*, 4(1), 3–9.
- Manovich, L. (2001). *The Language of New Media*. The MIT Press.
- Marques, D., & Gago, A. (2021). «As florestas não brotam, não se multiplicam, não suspiram»: Ciberliteratura e educação ambiental. Entreler, 1. Plano Nacional de Leitura 2027. https://www.pnl2027.gov.pt/np4/entreler/entreler_florestas.html
- Marques, D., & Gago, A. (2023). MOIRA: Literatura Digital na (Re)criação de Património. *Revista de Comunicação e Linguagens*, (58), 37–60. <https://rcl.fcsh.unl.pt/index.php/rcl/article/view/252>
- Matuck, A. (2011). Um manifesto pela re-informação: Reescrevendo direitos intelectuais no contexto digital. *Revista de Comunicação e Linguagens*, 42, 59–74.
- Meehan, J. R. (1976). *The Metanovel: Writing Stories by Computer* (PhD thesis). Yale University.
- Melo e Castro, E. M. (1965). *A proposição 2.01: poesia experimental*. Editorial Ulisseia.
- Montfort, N. (2018, August 26). A web reply to the post-web generation. *Post Position*. <https://nickm.com/post/2018/08/a-web-reply-to-the-post-web-generation>
- Montfort, N., & Wardrip-Fruin, N. (2004). *Acid-free bits: Recommendations for long-lasting*

- electronic literature*. Electronic Literature Organization. <https://www.eliterature.org/pad/afb.html>
- Nelson, T. H. (1965). *Complex Information Processing: A File Structure for the Complex, the Changing, and the Indeterminate*. In ACM National Conference 1965 (ACM '65). Association for Computing Machinery (ACM).
- OECD. (2018). *Preparing our youth for an inclusive and sustainable world - The OECD PISA global competence framework*. OECD Publishing. <https://www.oecd.org/pisa/Handbook-PISA-2018-Global-Competence.pdf>
- Packer, R., & Jordan, K. (2002). *Multimedia: From Wagner to Virtual Reality*. Norton.
- Pennock, M. (2013). *Web-Archiving. DPC Technology Watch Report 13-01 March 2013*. <https://doi.org/10.7207/twr13-01>
- Pereira, V. C. (2017). Uma estética da deriva digital em Mar de Sophia, de Rui Torres. *Navegações*, 10(1), 12–22. <https://doi.org/10.15448/1983-4276.2017.1.25206>
- Pestana, S. (1985). Computer Poetry. In F. Aguiar & S. Pestana (Orgs.), *Poemografias: Perspectivas da poesia visual portuguesa* (pp. 203-205). Ulmeiro.
- Pestana, S. (1987, March 29). A poética dos anos 80. *Domingo! Revista, Correio do Porto*, 10-11.
- Pestana, S. (2016). *Tecnoforma* (Catálogo de exposição). Fundação Serralves / Edições Asa.
- Plano de Ação para a Educação Digital (2021-2027). Retrieved from <https://education.ec.europa.eu/pt-pt/focus-topics/digital-education/action-plan>
- Poesia Digital – Arquivo Digital da \PO.EX. (n.d.). *Po-ex.net*. Retrieved from <https://po-ex.net/tag/poesia-digital/>
- Portela, M. (2013). *Scripting reading motions: The codex and the computer as self-reflexive machines*. MIT Press.
- Reis, P. (2011). Primórdios da poesia em computador - anos 60, 70 e 80 do século XX. *Romance Notes*, 51(3), 293-304. <https://doi.org/10.1353/rmc.2011.0036>
- Rettberg, S. (2019). *Electronic Literature*. Polity Press.
- Seiça, Á. (2015a). Um feixe luminoso: uma leitura da coleção de literatura eletrônica portuguesa. *Texto Digital*, 11(1). <https://doi.org/10.5007/1807-9288.2015v11n1p387>
- Seiça, Á. (2015b). Computer poetry by Silvestre Pestana. *I Love E-Poetry*. Retrieved from <https://web.archive.org/web/20150815064827/http://iloveepoetry.com/?p=11858>
- Seiça, Á. (2017a). Who emigrates departs with #words in their pockets@aimisola.net/hymiwo. *po. Cibertextualidades*, 8, 41-56. <http://hdl.handle.net/10284/6007>
- Seiça, Á. (2017b). *setInterval(): Time-Based Readings of Kinetic Poetry* (PhD thesis). University of Bergen. <http://hdl.handle.net/1956/17267>
- Shirley, R. (1972). *Poet and Program*.
- Strachey, C. (1954). The 'Thinking' Machine. *October*, 25-31.
- Torres, R. (Coord.). (2005). *Po-ex.net – Arquivo Digital da Literatura Experimental Portuguesa*. Universidade Fernando Pessoa. <https://po-ex.net>
- Torres, R. (2011). Preservación y diseminación de la literatura electrónica: Por un archivo digital de literatura experimental. *Arizona Journal of Hispanic Cultural Studies*, 14, 281-298. <https://doi.org/10.1353/hcs.2011.0420>
- Torres, R., & Marques, D. (2020). Diálogos e metamorfoses na ciberliteratura portuguesa, dos anos 1960 ao presente. *Romance Notes*, 60(1), 145-153. <https://doi.org/10.1353/rmc.2020.0016>
- Torres, R., & Ministro, B. (2021). Literatura na rede ou literatura como rede? Simbiose e mediação na ciberliteratura portuguesa. *e-Letras com Vida — Revista de Estudos Globais: Humanidades, Ciências e Artes [e-LCV]*, 7, 115-126. https://doi.org/10.53943/ELCV.0221_08
- Torres, R., & Ferreira, R. (2022). Narrativas diluídas: Educación ecológica y transposición narrativa en «O homem que queria ser água» de António Abernú. In D. Sánchez-Mesa & J. Alberich Pascual (Eds.), *Transmedialización y Crowdsourcing* (pp. 61-73). Editorial Tirant lo Blanch.
- Turing, A. (1950). Computing Machinery and Intelligence. *Mind*, 49, 433-460.

- UNESCO. (2015). *Global citizenship education: Topics and learning objectives*. UNESCO. <http://unesdoc.unesco.org/images/0023/002329/232993e.pdf>
- Vuorikari, R., Kluzer, S., & Punie, Y. (2022). *DigComp 2.2: The Digital Competence Framework for Citizens - With new examples of knowledge, skills and attitudes*. Publications Office of the European Union.
- Weizenbaum, J. (1966). ELIZA — A Computer Program For the Study of Natural Language Communication Between Man And Machine. *Communications of the ACM*, 9(1), 36–45.

WORKS OF E-LITERATURE

- Alda, A. de. (2016). *Oceanografias. A memória da água*. GALÁPAGOS — fábrica de poesia. Retrieved from http://www.aterodealda.com/publicacoes_oceanografias.htm
- Barbosa, P. (1977). *Aveiro (elegia minimal repetitiva)*. Retrieved from <https://po-ex.net/taxonomia/materialidades/digitais/pedro-barbosa-aveiro-elegia-minimal-repetitiva/>
- Barbosa, P. (1977). *Porto (trovas electrónicas)*. Retrieved from <https://po-ex.net/taxonomia/materialidades/digitais/pedro-barbosa-porto-trovas-electronicas/>
- digito indivíduo_coletivo. (2022). MOIRA. Retrieved from <https://wreading-digits.com/moira/>
- Pereira, L. L. (2024). @humaninarium. Retrieved from <https://www.instagram.com/humaginarium>
- Pestana, S. (1981). *Computer Poetry*. Retrieved from <https://elmcip.net/creative-work/computer-poetry>
- Seiça, Á., & Sørensen, S. (2015). *aimisola.net/hymiwo.po: A poemtrack for a yet-to-be-written dance piece*. Retrieved from <https://aimisola.net/hymiwo.po>
- Sier, A., & Torres, R. (2015). *MathX (Poemário)*. Retrieved from https://s373.net/x/mathx_poemario/
- Torres, R. (2005). *Mar de Sophia (O link para a aplicação em Flash está obsoleto)*. Retrieved from <https://telepoesis.net/mardesophia>
- Torres, R. (2016). *Oceanografias (a memória da água) [retexualização]*. Retrieved from <https://po-ex.net/taxonomia/materialidades/digitais/atero-de-alda-oceanografias-a-memoria-da-agua/>
- Vasques, L. (2020). @robot.sorridente. Retrieved from <https://www.instagram.com/robot.sorridente/>

SÃO TOMÉ AND PRÍNCIPE



VIDEO



DIGITAL MEDIA CONTRIBUTION TO ENTREPRENEURSHIP AND DEVELOPMENT IN SÃO TOMÉ AND PRÍNCIPE

José Manuel Simões (USJ)

Abstract: In São Tomé and Príncipe, digital media possesses the potential to catalyze and facilitate communication among a diverse array of development agents. International stakeholders are pivotal in this landscape by supporting emerging media producers engaged in planning, overseeing, and evaluating activities related to information dissemination, television production, online digital media creation, community radio channels, and other communicative endeavors. This support is poised to enhance internal and external credibility, foster sustainable growth and resilience, and cultivate robust commercial and cultural ties. This article aims to delve into the transformative power of effective digital media in propelling development within this African nation, shedding light on the indispensable role played by international stakeholders, particularly China, in this dynamic ecosystem.

Keywords: São Tomé and Príncipe, International Relations, Stakeholders, Entrepreneurship, Development, Digital Media

José Manuel Simões

He received a Postdoc in Communication Science from the Portuguese Catholic University (2017) and a PhD in Global Studies from the University of Saint Joseph (USJ), Macao-China (2011). He is Associate Professor and Coordinator of the Master in Communication and Media at USJ. He published worldwide and participated in conferences and academic committees on three continents. Before being a professor and a cultural journalist, he worked mainly on cultural themes at the best sellers of Portuguese newspapers. He published ten books (three academic books, two novels, one musical book, and four biographies). He has several academic papers published in England, Portugal, the United States of America, Japan, Thailand, Brazil, and Macao.

He has a Master of Arts in Communication and Journalism from the Faculty of Letters of Coimbra University, Portugal, and a Bachelor's Degree in International Journalism from Superior School of Journalism, Porto, Portugal, where he taught for seven years. His most recent publications include "Journalist Ethics of Common Good and the Formation of Values for Harmonious Societies", "Rhizomatic Creativity: Exploring the Uncharted Territories of AI-Generated Imagery", "Disrupting the Conventional: The Impact of Generative AI Models on Creativity in Visual Communications" and "Fostering Dialogue: The Power of Communication in Cultivating a Community of Awareness, Ethical Solutions, and a Strong Code of Conduct". Dr Simões published extensively in international academic journals and media outlets, especially about Ethics, Artificial Intelligence, Communication and Media, African studies, and Ethnic minorities.

ORCID: 0000-0002-0730-7780 || **WEBSITE:** <https://jmsimoes.wixsite.com/my-site/publications>
e: jmsimoes@usj.edu.mo

INTRODUCTION

Entrepreneurship is a cornerstone in the growth of companies and nations, playing a pivotal role in economic and social advancement. Over the past two decades, the significance of entrepreneurs has amplified, particularly in sectors such as digital media, broader media landscapes, and the creative industry. In São Tomé and Príncipe (STP), many new, albeit often small-scale, ventures have emerged in sectors like digital media. However, a significant portion of these initiatives has faltered due to financial constraints, with many founders prioritizing creativity over market acumen. It is paramount for media entrepreneurs to not only nurture their creative side but also cultivate a keen understanding of market dynamics to thrive in this competitive arena.

The digital media realm is increasingly shaped by myriad factors that introduce heightened uncertainty and complexity into organizational and project management within creative and cultural spheres. Given this backdrop of micro-sector entrepreneurship in STP, a comprehensive analysis of market trends, industry competitive forces, and crucial success factors like strategies, management practices, marketing approaches, social responsibility initiatives, innovation strategies, internationalization efforts, funding mechanisms, business models, talent management, leadership styles, and interpersonal skills is imperative.

Before embarking on their entrepreneurial journeys, individuals must grasp the concepts of entrepreneurship, intrapreneurship, leadership, and the business environment within the media and creative sectors. Understanding the internal and external variables influencing business operations, management practices, and market dynamics is foundational. Subsequently, entrepreneurs should delineate the specificities and significance of their business endeavors and leverage knowledge of organizational environments to inform decision-making processes, particularly in media and creative product development.

Whether focusing on strategic or operational aspects, entrepreneurs should acquaint themselves with management, marketing, and leadership principles tailored to creative industries and media organizations. Gaining a holistic view of business operations, financing strategies, and market landscapes for innovative products and identifying critical managerial functions and competencies are essential before project initiation.

To fortify the local entrepreneurial ecosystem, it is advised that entrepreneurs engage in reflective analysis and knowledge-sharing with experts, researchers, and seasoned entrepreneurs familiar with the local market landscape. This collaborative approach bolsters entrepreneurial spirit, business model efficacy, leadership practices, funding mechanisms, project management methodologies, innovation strategies, strategic planning efforts, internationalization processes, funding source exploration, strategic analysis frameworks, and interpersonal skill development. Moreover, entrepreneurs should comprehend the significance of the Industrial Organization Model (IOM), internal and external business environment factors, entrepreneur characteristics, leadership styles, talent management approaches, business model decisions, funding strategies,

and strategic planning methodologies. Proficiency in leadership cultivation, project ideation and coordination, marketing tactics, communication strategies, distribution and sales channels, digital and traditional business model management, international business expansion strategies, market access methodologies, and business plan refinement are crucial for entrepreneurial success.

Current and prospective entrepreneurs should delve into the nuances of media, creative industries, companies, and products to enhance theoretical knowledge and practical competencies in entrepreneurship, management strategies, business model innovation, leadership practices, marketing approaches, and financing mechanisms.

Ventures led by entrepreneurs that focus on developing business ideas and management strategies in the media and creative industry (e.g., press, radio, TV, books, cinema) within a robust business plan have significant potential for success, exceptionally when equipped to navigate the dynamic shifts in media and creative landscapes. A hands-on approach involving applying management best practices, strategic thinking, and operational insights tailored to media and creative sectors can foster sustainable growth and innovation.

International stakeholders can cultivate entrepreneurial mindsets, leadership skills, and interpersonal development in STP by promoting entrepreneurial activities through an analytical, conceptual, cognitive, and empirical lens, encouraging a culture of innovation and strategic thinking within the entrepreneurial community.

1. Next Steps

Optical fiber has revolutionized the world of telecommunications, offering the potential for global connectivity and new avenues of communication. In São Tomé and Príncipe, entrepreneurs and aspiring professionals have a unique opportunity to advance the digital media landscape, mainly through regional and community radios that can foster citizenship participation.

The spoken word has significantly advanced human communication, facilitating the transmission of knowledge and the development of diverse cultures and languages. Locally, the spoken language holds immense potential as an irreplaceable mode of communication. These communication tools in São Tomé and Príncipe are invaluable assets promoting authentic dialogue, citizenship, and overall development. “Media development entails nurturing independence and diversity across various media sectors, including private, state-owned, and community media outlets. While private media, like tabloid newspapers, may sometimes lack proficiency and ethical standards, their messages can swiftly disseminate across Africa. State-owned media, mainly broadcasting services, possess the broadest reach and potential influence, aiming to serve all population segments (...). Most community media entities are privately owned, operating to serve their audiences without charge. Many view this segment of African media as advancing developmental goals, amplifying community voices, and empowerment. However, sustaining non-profit community media remains challenging due to financial constraints” (GSDRC, 2010).

The media landscape in São Tomé and Príncipe remains rudimentary, especially in digital media. The industry is predominantly male-dominated, lacking even a single female director.

Financial constraints prevent media companies from investing in essential equipment, and media professionals often receive inadequate compensation.

Media practitioners require specialized training in culture, politics, society, economics, and sports, necessitating continuous and systematic educational programs. Although training opportunities are limited, initiatives like the investigative journalism courses offered by the Higher Institute of Education and Communication (ISEC) at the University of São Tomé and Príncipe, supported by the US Embassy and the FONG, are making strides in addressing these gaps.

Esterline Género, a professor and ambassador, emphasizes the importance of comprehensive training encompassing various development factors in media, digital media, communication, journalism, and related fields. “It should be a comprehensive training program that allows for the combination of different development factors. However, the selection criteria (expected to be maintained) center on students committed to journalistic causes, both at a media and vocational level. Keeping all this idealized, I believe that good results will be repeated to strengthen the journalism taught in STP” (Género, 2010).

Proficiency in languages like English, French, or Spanish remains underdeveloped. Media management often lacks well-trained individuals who deeply understand their roles, necessitating improved operational effectiveness through clear editorial guidelines and directives.

To improve the efficiency of the operation, some media companies have established some editorial standards and guidelines, but these guidelines are not always applied. Non-compliance with these guidelines is due to a lack of relevant knowledge.

According to an academic paper entitled “From the Right to Inform to the Promotion of Citizenship: A Diagnostic Study of the Media Landscape in São Tomé and Príncipe”, given the situation in the country, many media actors have started to avoid expressing themselves freely, fearing possible retaliation from different sectors, especially public/state sectors. One example: “To obtain answers closer to the genuine opinion of the interviewees, we opted not to make identification mandatory in the questionnaires, leaving it up to the respondents. As a result, no more than 20 participants put their names on the questionnaire. The majority identified the media organization to which they are affiliated. This detail indicates that professionals have yet to assume their roles and responsibilities and, even worse, the courage to assume that professional pride should be above all else. Many are afraid of their “tomorrow” (Menezes, 2019, p. 28).

According to the same study, “most respondents believe that the media fulfill their functions, although those who agreed that they should improve, as they still don't fully respond to requests” (Menezes, 2019, p. 28).

One of the priorities would be for the media to have a greater influence on society, informing, training, getting closer to citizens, responding to their needs, reflecting, and giving a voice to those who don't have one. On the other hand, society needs to see itself in the media and feel represented by them, becoming more participatory and active in media and digital publications.

One of the priorities would be for the media to have a greater influence on society, informing, training, getting closer to citizens, responding to their needs, reflecting, and giving a voice to those who don't have one. On the other hand, society needs to see itself in the media and feel represented by them, becoming more participatory and active in media and digital publications.

2. Build Connections

Due to the economic constraints faced by many citizens of São Tomé and Príncipe, including entrepreneurs, in establishing their own companies, seeking corporate sponsorship deals becomes a viable option. “These mutually beneficial agreements offer advantages to both parties involved. Small businesses gain the extra financial support they require, while corporations benefit from increased brand promotion opportunities. Finding a suitable corporate sponsor may pose a challenge, but a small business owner can find the right match with adequate preparation and persistence” (McQuerrey, 2011). Entrepreneurs should carefully select a corporation with a similar professional focus to align values such as target market or shared goals, fostering mutual support and enhancing reputations.

We recommend that entrepreneurs develop a detailed action plan and a comprehensive proposal outlining how the business intends to promote the corporation and what results the corporation can anticipate. It is crucial to incorporate additional benefits to facilitate exchanges that positively impact lives, offer advantages to sponsors, highlight specific media coverage, provide sponsor incentives, utilize data to substantiate the proposal, and cultivate a lasting relationship over time.

2.1 Bilateral Cooperation Agreement

International stakeholders, particularly from China, have the potential to contribute significantly to the development of the digital media landscape in São Tomé and Príncipe. In 2017, China entered into a five-year cooperation agreement with São Tomé's Prime Minister, Patrice Trovoada, formalizing a renewal of bilateral ties during his visit to Beijing. This agreement included a substantial US\$146 million in Chinese financing allocated to infrastructure projects, tourism, technology, agriculture, fisheries, student scholarships, and medical assistance, solidifying China as the primary aid provider to STP.

Trovoada's meetings with President Xi Jinping and Premier Li Keqiang of the People's Republic of China signaled a readiness to usher in a new phase of bilateral relations with the archipelago. Trovoada affirmed STP's commitment to align with Chinese international policies, including the 'One Belt One Road' initiative. “While the potential for Chinese investment presents economic opportunities, there are concerns that actual commitments may fall short of initial promises” (EIU, 2017).

Nine months later, in January 2018, CNBC reported that China's Foreign Minister Wang Yi concluded his annual African tour with a visit to the “small island nation of São Tomé and Príncipe”. The experts CNBC spoke to suggested that São Tomé and Príncipe could serve as strategic transport centers for the superpower. Beijing's interest in the archipelago, with a population of around 200,000, may seem unusual.

According to the World Bank, STP has no economic activity to serve as an engine of growth. In 2002, the BBC reported that the US was considering building a naval base on the island to safeguard its oil interests in the region. However, little has been heard of this project since then. "Daniel de Blocq van Scheltinga, the managing partner of Hong Kong-based consultancy Polarwide, told CNBC by email that Wang's visit centered on the West African region because of "geopolitics and oil". Wang was in Angola and Gabon, members of OPEC, which represents a significant change from China's previous focus on East Africa" (Crabtree, 2018).

Despite the foreign investment pledges and the anticipated slowdown in China's economic growth in 2018, commitments have not matched initial promises, mainly because of the pandemic. Nevertheless, China welcomes STP's recent engagement in the joint construction of the 'Belt and Road Initiative,' aiming to bolster the country's development. São Tomé and Príncipe have formally expressed their intent to participate in the Chinese initiative, emphasizing collaboration on trade, infrastructure, job training, economic aspects, and cultural matters to deepen engagement and foster mutual development. "The "One Belt, One Route" initiative is expected to lead to greater Sino-São Tomé collaboration and exchanges, stimulate the social and economic development of São Tomé and Príncipe and improve the lives of ordinary citizens of the archipelago", states the Chinese official announcement.

Both countries have established robust bilateral relations with notable agriculture, healthcare, and infrastructure achievements. However, significant challenges remain, including widespread poverty, malnutrition, and socio-economic development constraints that necessitate sustained efforts for improvement.

"Being the second smallest economy in Africa, São Tomé and Príncipe covers two islands and several islets - most uninhabited - in the Gulf of Guinea. About a third of just over 215,000 inhabitants live on less than US\$1.9 per day, and more than two-thirds are poor, based on a poverty threshold of US\$3.2 per day. Eradicating extreme poverty, malnutrition, and limitations to socioeconomic development continue to be the country's biggest challenges" (Sao Tome and Principe, n.d.).

The need for a more skilled workforce poses a barrier to meeting market demands for goods and services, exacerbated by high unemployment rates hindering national food production to meet population needs. São Tomé and Príncipe's positioning as the second smallest economy in Africa underscores the urgency to address pressing issues, such as poverty alleviation and enhancing socio-economic conditions for its inhabitants.

"Ranked 137th out of 189 countries in the 2019 Human Development Index (HDI), São Tomé and Príncipe falls within the medium human development category. The country's 2019 Gender Inequality Index (GII) ranking of 132nd highlights the significant obstacles in providing equitable opportunities for women and girls, who face a high unemployment rate of 42 percent. Challenges like early marriage, teenage pregnancy, and high child mortality rates persist, underscoring the need for targeted interventions to improve access to education, employment, and overall well-being for vulnerable populations" (Sao Tome and Principe, n.d.).

3. *The New Digital Media Platforms*

In such a context, being an entrepreneur or sponsor is difficult. One area with favorable conditions for improving corporate sponsorship deals in communication media, mainly digital media. These sectors can contribute to the development of São Tomé and Príncipe (STP), promoting participation and fostering citizenship. “Effective participation through the media is a way for society to exercise citizenship, broadening the understanding of rights and responsibilities for the benefit of individuals, communities, and society” (Menezes, 2019, p. 29).

An example of this impact was seen in the television program “Tela Non, Omali Non”, which focused on the country's economic, cultural, and social development. By uniting these different sectors, the program provided a valuable public service and significantly contributed to the country's sustainable development. “Such programs facilitate information dissemination, boost agricultural production, protect endangered marine species like turtles, and foster a sense of citizenship” (Vera Cruz, 2022).

Despite the success and recognition of the “Tela Non, Omali” program, funding from a private entity ceased, leading to its discontinuation. This incident underscores the necessity of establishing well-structured organizations supported by financial backing to ensure the sustainability of media companies. “It is crucial to appoint capable managers to steer television programs, individuals who can present clear management plans with defined objectives. Being a skilled journalist does not automatically translate to being an effective media manager.” (Nascimento, 2021). “There is a need for training, management, monitoring and evaluation based on results” (Bruzaca, 2021) emphasizes Aires Bruzaca, the former rector of STP University.

These issues must resonate more with the local citizens of São Tomé and Príncipe. “With many grappling with escalating poverty levels, citizens must be encouraged to engage in developing their nation” (Bruzaca, 2021). Media platforms should focus on creating programs that facilitate public debates akin to RSTP (São Tomé and Príncipe Radio), fostering informed discussions and active citizenship. “To provide a better public service, the media should create programs with public debates, similar to RSTP (Rádio de São Tomé and Príncipe)” (Vera Cruz, 2022).

Education plays a pivotal role as a catalyst for societal change. “By disseminating knowledge, education ensures the transfer of wisdom across generations” (Toppr-Guides, 2019). However, the rector expresses concerns about the repercussions of an uncontrolled society, highlighting the importance of education and governance to steer the nation towards progress (Bruzaca, 2021).

4. *Decision Maker's Consensus*

In São Tomé and Príncipe (STP), the nexus between traditional media outlets such as radio, television, and newspapers and the populace, particularly the youth demographic, is profoundly shifting. Professor Nascimento asserts, “Radios and newspapers exhibit negligible influence on young individuals, while television, albeit more impactful, pales in comparison to the ubiquitous allure of the internet through social platforms.” (Nascimento, 2021).

The disconnect between mainstream media and the public, especially the youth, is widening. Interestingly, media entities show little interest in bridging this gap. They seem more inclined towards cyberjournalism and content disseminated via social networks, content that local journalists or professionals fail to produce and circulate. “A pressing imperative exists to enhance the quality of education and civic training across society, commencing at an early age” (Bruzaca, 2021). As a prevailing sentiment goes, “political powers are yet to harness the full potential of these communication tools” (Brazuca, 2021). It falls upon the government's shoulders not to stifle the dissemination of information for the betterment of the nation's progress.

Media practitioners must undergo continuous and systematic training, imbued with technical expertise and ethical scrutiny. Moreover, it is crucial to recognize that pluralism, dissent, and tolerance should not be misconstrued as licentiousness or extremism.

Media entities must exercise prudence in granting platforms, ensuring that the power of communication is not exploited to trample upon the universally recognized rights of citizens enshrined within the laws of the Republic.

“Reflecting on São Tomé's history, the appointment of the MLSTP Political Bureau by the Representative Assembly of the São Toméan People to steer the societal direction in securing autonomy and national unity resulted in a catastrophic outcome.” (Bruzaca, 2021).

The Central Committee's decision to endorse national progress through organized forces toward modernization faced skepticism. Former rector of São Tomé and Príncipe University, Aires Bruzaca, sarcastically noted, “In São Tomé and Príncipe, such efforts are deemed treasonous to the nation” (Bruzaca, 2021) in correspondence with the authors of this piece. A critical concern arises: “The judicial system remains ineffective and politicized” (Nascimento, 2021).

In STP, media practitioners operate within a legal framework stipulated by legislation, yet lacking regulation. Urgent measures are essential to furnishing the country and the media community with legal instruments facilitating ethical and honest journalistic endeavors. “Uncovering signs of maladministration or corruption and “fostering discourse on issues pivotal to the nation's progress should constitute an integral facet of the media's engagement strategy” (Menezes, 2019, p. 37).

The practical implementation and evolution of the established legal framework stand paramount. “Without consensus among decision-makers, progress remains elusive, rendering subsequent actions mere theatrics with no tangible outcomes” (Nascimento, 2021). Administrator Adelino Vera Cruz advocates “establishing an external consultancy to identify genuine needs” (Vera Cruz, 2022) and garnering increased support from developed nations and international stakeholders, notably China.

“Amidst escalating global humanitarian needs, despite heightened worldwide generosity, the prevailing disparity continues to widen exponentially. It is imperative to cautiously address this widening gap, acknowledging the evolving needs and the inadequacy of current philanthropic efforts to meet them comprehensively. The phenomenon underscores the necessity for information

entities and corporations to adhere to economic principles, navigating governmental and group dynamics with prudence. The issue of informational freedom looms large, as objectivity risks dilution in alignment with governmental or corporate interests” (Kuwono, 2016).

In São Tomé and Príncipe, media and digital media stakeholders—editors, publishers, and proprietors—rein in regulating and overseeing media practices. However, abuse of this intermediary role between society and power persists. The absence of stringent regulations should not embolden a disregard for respect toward adversaries or the truth-seeking prerogative. An efficiently organized media landscape, supported by robust economic and financial structures, is indispensable for sustainable development contributions.

In São Tomé and Príncipe, social communication channels contend with multifaceted constraints. The journalistic community must strive for independence from patronage and interference, impartially, objectively, and rigorously dissecting facts and realities. Media professionals can bolster sustainable human development by amplifying the role of voicing civil concerns, contributing to societal well-being, fostering consensus, and upholding cultural and traditional values. Citizens, in turn, must engage critically with the news, discerning truths and dispelling rumors, falsehoods, and unverified information.

Professionals are encouraged to pursue truth rigorously within the Editorial Statute of any media enterprise committed to upholding ethical standards and prioritizing accurate information dissemination. Information sources must be meticulously vetted, authenticated, and presented with precision. While source confidentiality may be warranted in exceptional circumstances, the imperative remains to distinguish between facts and opinions, ensuring that facts retain their sanctity while opinions remain accessible.

In echoing the sentiments of Aires Bruzaca, “it becomes evident that in São Tomé and Príncipe, a significant portion of individuals identified as communication professionals may necessitate reevaluation due to substandard professional practices and ethical lapses” (Bruzaca, 2021).

Entrepreneurs in the media industry, especially students studying communication, media, and journalism, are not just individuals with cognitive abilities but also moral agents. They possess the freedom to act according to the standards imposed by the world they inhabit. Through practical reasoning, they grasp the weight of human responsibility as moral beings endowed with freedom and self-determination.

Morality is the foundation upon which individuals position themselves as integral members of the intelligible world, transcending phenomenological determinism and embracing self-determination akin to Kant's emphasis on practical reason. Human destiny unfolds within the context of history and a specific framework, not solely confined to what exists but extending to what ought to be. Moral consciousness evaluates actions not exclusively based on outcomes, as these are sometimes beyond control, but on the intentions driving them and the person one aspires to become.

To act morally is to recognize the duty of respecting others. Genuine moral conduct involves

acting with this respect as a guiding principle rooted in conformity to the moral law. All actions should align with this universal moral law inherent in every conscious being, compelling adherence through a sense of duty. As Kant defines it, this obligation necessitates action out of reverence for the law while also viewing it as an embodiment of values such as integrity and truthfulness. The Categorical Imperatives encapsulate this ethos: "Act as if the maxim of your action could be made a universal law of nature" and "Always treat humanity, whether in your person or the person of any other, as an end in itself, never merely as a means."

The philosophical underpinnings of "Know Thyself" and the "Examined Life" from Delphic and Socratic traditions underscore the quest for ethical self-awareness among individuals. This pursuit entails a balanced interplay of reason, will, and emotions, purifying the spirit and guiding the realization of ideas toward the collective good, fostering unity across diverse backgrounds, cultures, and beliefs. Recognizing our interconnectedness, Descartes' notion emphasizes how individual interests intertwine with the broader interests of society and humanity.

5. Towards an Authentic and Coherent Ethical Approach

In cultivating an authentic and steadfast ethical approach, one delves into deontology, the study of professional responsibilities. Derived from Greek roots, deontology combines "duty" and "science," representing systematic knowledge of what is just and fitting for human conduct. "Deontological codes guide professional conduct, delineating limits and enforcing obligations essential for ethical practice in various fields, including media" (Correia, 1997).

We are facing the precariousness and difficulties of media deontology. "A first formal difficulty is the diversity of codes: it is not a single 'handrail', but several, and is more or less adapted to the information regime operating in each country. The effect of this dispersion is greatly attenuated by the numerous convergences between the various texts concerning the dominant worries of professionals: the role of information in society, its freedom and independence, the search for truth, respect for certain limits ... The second formal difficulty is the absence of real control bodies with sanctioning powers" (Cornu, 1998).

To understand these notions, media and digital media entrepreneurs in STP should be aware that codes of ethics were born at the beginning of the century, when it became clear that media practice and its repercussions go beyond the individual sphere and that, since information is a common good of social need and use, it must be guarded and adequately regulated. Therefore, these codes aim to raise awareness and deepen the social responsibility of those involved in the media in the exercise of their profession and, consequently, demand a moral, intellectual, and technical level called "codes for a free and responsible press". Kant's maxims, "only act by a maxim in such a way that you can at the same time will it to become a universal law" and "act in such a way that you use humanity, both in your person and in the person of anyone else, always and simultaneously as an end and never simply as a means" (Kant, 1960), are fundamental behavioral principles for all citizens, students, journalists, as well as owners and managers.

Entrepreneurs, future communicators, and media players need to know that the code of ethics, which is consensually approved and has inspection mechanisms, is the most critical professional

guardian and the holder of the self-regulation exercise. And in STP, we believe they are unaware of this. By avoiding pressure, media actors, in fulfilling their professional duties, know that they cannot become agents or instruments of vested interests. "There are sources (and many...) who take advantage of the media's desire to obtain first-hand information, which is why they are often led to accept the rules imposed by the source.

Reporters on the same subject must use various sources to provide information on events, preserve their integrity, and help the company see its status respected by the public.

This is a code of duties and obligations that must be fulfilled.

Although there is a media course in STP, graduates are not entitled to a media license, and no specific official training is required to practice this profession.

As a consequence of the need to be correctly representative, this data allows us to make inferences about how the new generations view communication and information. Without necessarily colluding with ethical non-compliance, the report indicates that students and young journalists are unaware of their profession's code of conduct. On the other hand, even if hierarchies may lead them to commit outrages circumstantially, it can be said that people prefer to be okay with their boss's wishes rather than their conscience and duty.

As we can see, the code of ethics raises questions since media actors are not obliged to comply formally and legally.

Let's suppose that the code of ethics comes to be understood not only as an instrument designed to establish standards of honest and professional behavior but also as a repository of corporate rules designed to guarantee the effectiveness of media work at the cost of the individual sacrifice of some media players. In that case, it will have entered the tortuous realm of opportunity and convenience and lost any moral orientation or authority.

"Certain media players seem to want to turn the code of ethics into a grossly totalitarian device that, rather than being an instrument containing basic moral standards for the professional practice of journalism, becomes a corporate primer for defending what has been called the 'prestige' and 'credibility' of the profession" (Pina, 1996).

By taking on simple rights as duties that make the profession responsible, the code of ethics is an indispensable instrument for the credibility of current media players and future communicators and for sustaining the fragile and precious architecture of information in STP.

This set of standards (there are many different names for the same thing: codes of ethics, codes of honor, declarations of duties and rights, codes of conduct, declarations of principles, codes of practice, or rules of conduct) and the common good they serve, show that codes of ethics have a special significance and relevance in the field of professional public services and the harmonious development of society.

Information ethics, as formulated in such codes, while having the merit of defining the relationships at stake in information and clarifying journalists' relationships with their audience, their sources, colleagues, or company, also "shares the weakness common to all moral statements: it is vulnerable to declinations, according to situations and needs, which can pervert the meaning" (Cornu, 1998).

The basis at stake in these codes is the question of truth (which is never given as an absolute value but is related to the public's right to know it) and respect for the dignity of every human person. These fundamental values or aspects pave the way for an authentic and coherent ethical approach. The challenge is to put ethics into practice as a normative and critical tool for communication and information services.

5.1 Ethical, Inclusive, and Comprehensive Solutions

To foster and contribute to the ethics of the common good, the formation of values, and the defense of fundamental values crucial for harmonious societies, it is imperative to establish connections, emphasizing precision and objectivity. Media and digital media entrepreneurs must push beyond boundaries to adapt to the evolving technologies of the modern era, prioritizing efforts in the digital realm, a global trend. This commitment entails upholding the ideals of their profession, engaging with them, and leveraging ethical principles while positioning themselves as custodians of evidence.

Communicators and media practitioners, like all individuals, exhibit a sometimes fragile conscience, questioning values, norms, and principles, engaging in analysis, reasoning, and learning to address ethical issues of individual responsibility. Are the media practical tools for critical thinking? Do they enable us to contribute to overall well-being and the common good? How can we foster consensus and adhere unswervingly to ethical imperatives?

In his philosophy, "Plato assigns significant importance to the concept of justice, using the Greek word 'dikaisyne,' closely related to 'morality' or 'righteousness,' encapsulating the entirety of human duty. Communicators and media practitioners, like all individuals, make choices and proceed from them" (Bhandari, 1996).

The fundamental aspect of ethical deliberation revolves around the notions of the Good and the Just. "Defining what is Good poses not a moral dilemma for individuals in specific cases but a broader theoretical inquiry falling within the purview of moral investigation, i.e., ethics" (Vásquez, 1969).

Excellence in guiding actions through rationality and engaging the senses embodies human virtue, a quality honed and exalted by reason and will. In ethical considerations, the crucial question pertains to the timing, recipients, circumstances, motivations, and action methods. It is incumbent upon entrepreneurs and communicators to reason and make voluntary choices that uphold virtue and merit. They must contribute to citizens' proper education and training, tailoring their approaches to situations, nurturing virtue, comprehensively addressing realities, and fostering common sense and justice.

5.2 *Placing Objectivity on the Horizon*

All STP entrepreneurs, communicators, media, and digital media professionals should strive to prevent or minimize harm to others, society, and nature, eschewing slander and misinformation. By contextualizing facts and seeking balanced messaging that approaches truth, they can holistically serve humanity and the common good.

Dominique Wolton suggests a counterintuitive approach: “slowing down instead of speeding up, organizing and rationalizing rather than inundating with information, reintroducing intermediaries instead of eliminating them and regulating rather than deregulating” (Wolton, 1997).

Communication should once again serve as a conduit for openness and reconciliation of ideas and people, avoiding becoming a source of discord.

Given the prevalence of subjectivity and conflicting interpretations of reality, entrepreneurs and media practitioners in STP, like all individuals, must delve into self-understanding to facilitate better mutual understanding. This process of understanding oneself necessitates being understood by others, fostering mutual comprehension.

Despite Wolton's apprehensions about the future dominance of mediated communication over direct human interaction, there is room for optimism. The primary challenge may not be expression but the ability to deny mediated communication to facilitate genuine, direct, and meaningful human interaction (Wolton, 1997).

5.3 *More Fruitful Dimensions of Human Life*

An emerging facet of the media landscape is its potential to cultivate prosocial behaviors, as highlighted by Sophie H. Janicke in “How Positive Media Can Make Us Better People.” (Janicke, 2016) This research in media psychology underscores the power of positive messages, selfless narratives, and stories promoting virtues and human excellence, ultimately fostering a more optimistic reality. By promoting universal core values and embracing spiritual dimensions, the media can create a more compassionate and generous society, encouraging actions aligned with the common good.

Studies in media psychology, like the work of Sophie Janicke and Mary Beth Oliver, suggest that selecting inspiring content in the media not only uplifts individuals momentarily but also nurtures compassion and kindness, values intrinsic to European culture but not yet prominent in STP. Adherence to deontological principles, professional codes, and personal constraints can aid in reshaping this new media ethics landscape.

As Ward (2010) suggested, a horizontal and vertical layers scheme for media ethics offers a framework for exploration, yet numerous questions remain unanswered. The evolving landscape of journalism is giving rise to new ethical paradigms across all platforms, accompanied by uncertainties regarding the economic models of both traditional and emerging media.

To achieve transparency effectively, individuals must eschew superficial appearances and express themselves candidly. They should forge sincere and trusting relationships among individuals, groups, and communities, fostering a new, open, and authentic movement toward understanding others.

This can only be accomplished through the mechanisms at their disposal: the ability to identify, verify, synthesize, confront, gather, and integrate sources of humility, thereby adopting a more constructive approach to facts. Fairness, honesty, accuracy, and balance are crucial to establishing our proposed media ethos. Media practitioners must uphold ethical standards and demonstrate intellectual integrity, remaining above reproach. The media should strive to reach a wider audience by diversifying their content offerings, exploring different approaches to news dissemination, and always striving for the most objective representation of reality—avoiding sensationalism.

In the digital media landscape of São Tomé and Príncipe, a departure from ignorance is crucial. Digital platforms should contribute to fostering new currents for societal betterment by consistently reporting constructively. This involves an ongoing process of fact-checking, utilizing diverse sources of information to draw closer to the truth of these matters.

Prudence, or Practical Wisdom (*phronesis*), equips us to discern the "right thing," making practical judgments to navigate the possibilities. It involves learning from mistakes—a continual task that requires consciously honing our rational abilities. Prudence is deeply intertwined with human flourishing and well-being, enabling us to attune ourselves to reality and strive for a fundamental sense of contentment and well-being (Ess, 2020, pp.262-263).

Prudence is also linked to attentive and truthful listening: "For example, attentive listening and honest, open, caring, compassionate and humble engagement with difference create the necessary conditions for welcoming and understanding the Other on his or her terms" (Makau, 2011, p. 511). Prudence is also profoundly linked to human flourishing and well-being. "By understanding reality correctly, we as human beings can 'tune in' to that reality - that is, we can know better both what to expect from it and how to behave towards it and about it, to achieve what the Greeks called *eudaimonia* - often translated as 'happiness'. This concept can be understood as a fundamental sense of well-being and contentment" (Ess, 2020, pp. 261-262).

Justice, the second Cardinal Virtue, builds upon prudent decisions and is essential for professionals in communication and media. It shapes proper relationships within communities and society, fundamentally relying on prudence. "Objectivity is central to justice, as a lack of objectivity can lead to injustice" (Pieper, 2012, p. 18).

Pursuing social and environmental justice demands courage, the third Cardinal Virtue, which is vital for communication and media professionals facilitating necessary transformations based on prudent understanding and just principles.

Cultivating virtuous habits is foundational for entrepreneurs and media professionals, with the Cardinal Virtues serving as guiding principles on this journey.

The book "Meditations" by Marcus Aurelius underscores the importance of virtues such as justice, truth, temperance, and fortitude. It emphasizes the significance of self-satisfaction derived from acting under the right reason and assigned roles without compromising integrity or resorting to hypocrisy (Holiday, 2018).

These principles can aid future entrepreneurs and communicators in crafting authentic, truthful speeches, sharing convictions honestly, addressing contemporary ethical dilemmas, and navigating the complexities of communication and information. Urgent ethical reflections are needed on the role of communication and information not only in São Tomé and Príncipe but also in the broader global context.

6. Optimistic Perspectives for the Future

To bridge gaps, entrepreneurs like Elton Fábio Guadalupe from São Tomé and Príncipe have established an audio-visual production company, an independent television channel (Zunta TV), and a magazine (Revista Zunta Cloçon), distributed online via platforms like YouTube and Facebook.

"Our aim as a company is to offer the best service and quality to companies in São Tomé and Príncipe, with our client segment being international businesspeople and organizations" (Guadalupe, 2022), explains the company's CEO. This company aims to open doors for a group of young people who have graduated in Social Communication from the University of STP. "The initial idea was to set up Zunta TV, but over time, we decided to proceed with commercializing audiovisual production and communication services" (Guadalupe, 2022).

Entrepreneurs must be persistent, resilient, and hardworking in such a small, underdeveloped market where finding sponsors is difficult. The lack of technicians and advanced techniques sometimes makes the organization's evolution arduous. To survive, "75 percent of the working capital comes from me and 25 percent from the producer's income" (Guadalupe, 2022).

During the months of the pandemic, the company experienced a significant increase in demand, so a Chinese company based in STP would be a great solution to meet future challenges. The company's CEO has not explored this situation due to a lack of opportunity. However, he will be pleased if he finds a Chinese sponsor interested in supporting the structure's internal growth and development and promoting the culture, environment, and customs of São Tomé and Príncipe.

Despite the laborious growth phase, the main objective is to continue promoting the country. The audiovisual production area in STP has not made notable gains due to the scarcity of the market. However, young local entrepreneurs believe that it is possible to create jobs, develop technology, particularly in the area of editing, and train new professionals. The objectives are also to provide work opportunities for young people completing their university studies in communication, to build solid foundations in the area of digital media, to master the audiovisual market, to create quality websites, to create promotional and educational content, and to promote and publicize São Tomé and Príncipe.

CONCLUSION

Facilitating communication among diverse development stakeholders in São Tomé and Príncipe, particularly entrepreneurs, is crucial. Digital media can be pivotal in promoting collaboration, with regional Chinese companies serving as essential sponsors for emerging media ventures. This article aims to guide entrepreneurs in building comprehensive strategies to bolster local entrepreneurship, leadership, strategic planning, and funding sources.

After reading this article, entrepreneurs and aspiring business leaders can gain insight into the media landscape, enabling them to develop projects centered around media, especially digital platforms. International stakeholders must explore ways to stimulate entrepreneurial endeavors and support emerging digital media enterprises catering to all society segments.

Local media, especially digital platforms like community radios and private TV channels, have the potential to influence and engage local communities effectively. By embracing participatory approaches, media organizations can enhance their impact and relevance in today's society.

Furthermore, fostering connections and establishing corporate partnerships are essential for entrepreneurs looking to thrive in the competitive media industry. The recent collaboration between São Tomé and Príncipe and China, focusing on infrastructure, tourism, technology, and education, presents promising opportunities for growth and development.

Education and the proliferation of digital media platforms are pivotal drivers of societal change. Media professionals must receive ongoing training, cultivate technical expertise, and engage in ethical and deontological studies to uphold honesty and consistency in their work.

This paper aims to enrich human life by promoting objectivity in media and empowering entrepreneurial citizens to create a brighter future. By fostering optimism, bridging gaps, and leveraging digital media effectively, there is potential to promote societal development, educational content creation, and job opportunities for the youth, thereby laying a solid foundation in the digital media domain.

BIBLIOGRAPHY

- Azevedo, C. F., & Neves, A. das. (2020). *São Tomé and Príncipe. National accounts statistics: Main aggregates and detailed tables 2019*. <https://doi.org/10.32388/w9hzt7>
- Bhandari, D. R. (1996). *Plato's concept of justice: An analysis*. Retrieved April 8, 2022, from <https://www.bu.edu/wcp/Papers/Anci/AnciBhan.htm>
- Clickr 力嘉-clickrweb.com. (n.d.). 中葡論壇. 中葡論壇. [Forum of China and Portuguese-speaking countries]. Retrieved October 28, 2024, from <https://www.forumchinapl.org.mo/sao-tome-and-principe-signs-up-for-belt-and-road-initiative/>
- Cornu, D. (1998). *Journalisme et la vérité*, Autre Temps. Retrieved April 8, 2022, from https://www.persee.fr/doc/chris_0753-2776_1998_num_58_1_2041
- Correira, F. (1997). *Os Jornalistas e as notícias*. Editorial Caminho.
- Crabtree, J. (2018, January 17). *The island paradise that could be China's next strategic transport hub*. CNBC. <https://www.cnbc.com/2018/01/17/china-transport-hub-could-be-the-african-island-of-sao-tome.html>
- EIU Digital Solutions. (2017). *São Tomé signs a five-year co-operation agreement with China*. Eiu.com. <http://country.eiu.com/article.aspx?articleid=1235375707&Country=S%C3%A3o%20Tom%C3%A9%20and%20Pr%C3%ADncipe&topic=Economy&subtopic=Forecast&subsubtopic=Economic+growth>
- Ess, C. (2020). *Digital Media Ethics* (3rd ed.). Polity Press.
- GSDRC. (2010, May 5). *African media development initiative: Research summary report*. Governance, Social Development, Conflict and Humanitarian Knowledge Services. <https://gsdrc.org/document-library/african-media-development-initiative-research-summary-report/>
- Holiday, R. (2018, February 14). *Meditations by Marcus Aurelius: Book summary, key lessons, and best quotes*. Daily Stoic. <https://dailystoic.com/meditations-marcus-aurelius/>
- Janicke, H. S. (2016, April 27). *The Science of a Meaningful Life, "How Positive Media Can Make Us Better People"* [积极的媒体如何让我们成为更好的人]. Greater Good. Retrieved on April 8, 2022, from https://greatergood.berkeley.edu/article/item/how_positive_media_can_make_us_better_people
- Kant, E. (1960). *Fundamentação da metafísica dos costumes* (Trans.). Editora Atlântida.
- Kuwonu, F. (2016, August 5). *Let's close the gap between humanitarian needs and resources*. Africa Renewal. From <https://www.un.org/africarenewal/magazine/august-2016/let%E2%80%99s-close-gap-between-humanitarian-needs-and-resources>
- Makau, J. M. (2011). Response, and Conclusion: A Vision of Applied Ethics for Communication Studies. In G. Cheney, S. May, & D. Munshi (Eds.), *The Handbook of Communication Ethics* (pp. 494-515). Routledge.
- McQuerrey, L. (2011, August 7). *The Advantages of Corporate Sponsorship Funding*. Houston Chronicle, from <https://smallbusiness.chron.com/major-corporation-sponsor-73990.html>
- Menezes, T. P. (2019). *Do direito de informar à promoção da cidadania: Estudo diagnóstico sobre o panorama dos media em São Tomé e Príncipe* (pp. 28-37).
- Pieper, J. (2012). *The Christian Idea of Man* (J. Haldane, Preface; D. Farrelly, Trans.). St. Augustine Press.
- Pina, M. A. (1996, June 21). *"Três jornalistas em pecado mortal"*. Jornal de Notícias.
- Sánchez Vásquez, A. (1969). *Ética*. Grijálbo,
- Sao Tome and Principe. (n.d.). *São Tomé and Príncipe*. World Food Programme. <https://www.wfp.org/countries/sao-tome-and-principe>
- Toppr-Guides. (2019, July 23). *Essay on the importance of education in life and society (500+ words)*. Toppr-Guides. <https://www.toppr.com/guides/essays/importance-of-education/>
- Ward, S. J. A. (2010). Ethics for the New Mainstream. In P. Benedetti, T. Currie, & K. Kierans (Eds.), *The New Journalist: Roles, Skills, and Critical Thinking*. Emond Montgomery Publications.

Wolton, D. (1997). *Penser la communication*. Flammarion.

INTERVIEWS

Bruzaca, A. (2021, December 29). Interview with Aires Bruzaca, Professor, former rector of the University of São Tomé and Príncipe.

Género, E. (2021, February 21). Interview with Esterline Género, PhD in Social Sciences and specialised in Socioeconomic Development at ISCSP - University of Lisbon, with a career in diplomacy and professor of international relations at the University of São Tomé and Príncipe and Ambassador of São Tomé and Príncipe in Portugal.

Guadalupe, E. F. (2022, March 28). Interview with Elton Fabio Guadalupe, founder and CEO of STP digital companies.

Nascimento, J. C. (2021, December 17). Interview with João Carlos Nascimento, Assistant Professor at the University of São Tomé and Príncipe, Post-Doctorate in Education Sciences, PhD in ICT in Education.

Vera Cruz, A. (2022, January 8). Interview with Adelino Vera Cruz, former administrator of the Higher Institute of Education and Communication at the University of São Tomé and Príncipe.

EAST TIMOR



VIDEO



THE MEDIA SYSTEM AS A LEVERAGE FOR DEMOCRATIC DEVELOPMENT IN EAST TIMOR

Paulo Faustino (FLUP; CITCEM)

Rui Alexandre Novais (UCP; CEFH)

Abstract: East Timor is a very young nation-state (located in the island region of Southeast Asia), and, as in any consolidated or emerging democracy, the media plays a fundamental role, as it is a key instrument for strengthening civic participation and transparency in political decision-making, as well as for combating - and denouncing - inequalities and political agendas that are not in line with the general interests of society. Not exclusive to countries with developing democracies, East Timor has a weaker media ecosystem with more limited resources than consolidated democracies. From an economic perspective, it can be said that the media market in East Timor is small and limited in resources (namely advertising investment, purchasing power, and literacy levels). But is such a scenario that is evolving and has the potential to grow. It can also be said that positive impacts can be expected on the media system in this country. In this context, this chapter deals with the importance of the media in countries with developing democracies, but with a total focus on the case of East Timor. Thus, the main purpose of the work is, on the one hand, to characterise the media situation in East Timor and, on the other, to understand to what extent the media system is contributing to strengthening democracy in the territory. The chapter addresses various aspects related to the media system and the context in which journalistic activity takes place, including aspects of regulation, the market, and other social, economic, political, and technological dynamics.

Keywords: Media System, Market, Politics, Democracy, Journalism, Market and Regulation Development, Digital Media

Paulo Faustino

He has a European PhD from the Complutense University of Madrid (in cooperation with Jonkoping University, Sweden). He has post-doctoral studies at the Faculty of Social Sciences and Humanities - Nova University of Lisbon. He is an integrated researcher at the Centre of Investigation of Transdisciplinary of Culture, Space and Memory (Porto University) and a senior fellow at the Columbia Institute for Tele-information (Columbia University). He is co-founder and Director of the master's in communication and management of creative Industries, at Porto University. Paulo Faustino is a member of the Executive Commission of the Opinion Council of Radio Television of Portugal Public. He is co-director, with Terry Flew, the JOURNAL OF CREATIVE INDUSTRIES AND CULTURAL STUDIES – JOCIS. Paulo Faustino was Chairman of the International Media Management Academic Association (IMMAA). He was a board member and co-founder of the European Association of Media Management Education (EMMA).

ORCID: 0000-0003-4131-5909

e: jfaustino@letras.up.pt

Rui Alexandre Novais

(Ph.D in communication, University of Kent-UK) He is a Researcher and Invited Auxiliary Professor at Universidade Católica Portuguesa/CEFH. His interests lie in the broader fields of communication and journalism studies and has recently published on journalism safety (Journal of Applied Journalism & Media Studies), journalistic roles (Brazilian Journalism Research, Media & Jornalismo), press independence and autonomy (Pauta Geral), and media and populism (Revista Portuguesa de Filosofia, Palavra Clave, International Journal of Applied Philosophy, Springer), as well as co-edited both the Representations of Refugees, Migrants, and Displaced People as the 'Other' (Springer) and the Palgrave Handbook on Populism and Otherness in Global Perspective (in press). He is the PI of the project 'Mapping risk and uncertainty for journalism in Lusophone countries: An intercontinental study' (2021-27) and the coordinator for Portugal and Cabo Verde of the Project Worlds of Journalism.

ORCID: 0000-0002-0282-7234

INTRODUCTION

The media in emerging democracies play a doubly important role in (i) shaping public opinion, (ii) strengthening institutions, (iii) promoting pluralism of opinion, and (iv) promoting civic participation. However, in many circumstances, the media in these countries face unique additional challenges - because the institutions and structure of society are not consolidated on democratic principles - including political pressures, lack of press freedom, limited resources, and insufficiently prepared human resources.

In this context, press freedom can be limited, with governments exercising total control over the media, anchored in autocratic laws, censorship, and intimidation of journalists, for example. In these circumstances, the media system is fragile and unable to leverage the existence of pluralistic journalism and impartial information - unfiltered by the state. Directly or indirectly related to this aspect is the *concentration of media ownership* - in other words, media ownership is often concentrated in a few owners, something that can lead to a monolithic editorial orientation and a lack of diversity of approaches to the social, political and cultural dynamics of these countries.

However, some of these problems can also occur in countries with more consolidated democracies, but the negative impact on society may be less because there are other institutions (regulators, courts, universities, associations, etc.) with the critical capacity to alert citizens to bad practices that may be observed in journalistic activity. Of course, the influence of commercial and political interests on the media can condition the practice of independent and objective journalism, but it is important to emphasise that these problems can also occur in more consolidated democracies - and this is why media funding, including the role of the state in this process, is a recurring issue in the debate on public policies.

The role of the media, and particularly journalism, cannot be dissociated from the quantity and quality of the infrastructure and technologies available in a given country or region. In some emerging democracies, media support infrastructures are underdeveloped and outdated, with limited access to the Internet and modern information and communication technologies in rural areas or more peripheral territories.

This can create difficulty in accessing knowledge, as well as creating greater disparities in the dissemination of information and access to the media by citizens.

The spread of disinformation - and media manipulation - are potentially more pronounced and common problems in emerging democracies, as political actors and other interest groups more often use the media to promote agendas with specific interests, as well as to promote rumors aimed at damaging the reputation of political opponents or other institutions that could call into question some of the political decisions of the installed power.

Despite the increased challenges in emerging democracies, the media play a fundamental role in galvanising and mobilising civil society. This includes from monitoring government activity and decisions to providing *accountability* for decisions taken.

It is also in this context that new forms of communication and public intervention (digital media, social activism, and citizen journalism) have emerged all over the world, including in emerging democracies, initiatives from journalistic projects and digital activism whose main purpose is to alert society to the existence of *fake news* and other disinformation initiatives that limit the diversity of opinion and inhibit a broader discussion of the debate in the public space. In this context, this work is divided into two main parts. The first highlights the role of the media, including the emergence of digital projects, in East Timor, with a historical background on the relationship and cooperation with Portugal. The second part focuses on the analysis of various fundamental aspects that are pillars of the media system (regulation, laws, market, policies, technologies, political regime, infrastructure, etc.) and that influence, positively or negatively, the exercise of journalistic activity in East Timor and, therefore, in any country.

1. Timor and Portugal: cooperation, history, diplomacy and the media

East Timor has cultural and historical ties with Portugal that go back 400 years to the colonial period and subsequently played a significant role in the long struggle for self-determination of the territory, which was abandoned to its fate in 1975 and, to a certain extent, to Indonesian hands. East Timor would later become the 'cause célèbre' of Portuguese foreign policy after Portugal joined the European Economic Community (EEC) in 1986, and would benefit from the simultaneous occurrence of certain political and economic contingencies in both Indonesian domestic politics and the international community, which facilitated the dramatic change in the territory that would culminate in the 1999 independence referendum (Novais, 2014). Finally, Portugal unconditionally supported the different UN missions during periods of political instability and violent conflict in the aftermath of the referendum, which culminated in the formal declaration and international recognition as an independent country in 2002 (Público, 2002; Centeno & Novais, 2006).

1.1. New Projects and Dynamics on the Media Scene in East Timor

Since 2002, more than two decades of bilateral relations between the two countries have covered various areas, including trade, economic cooperation, education, and technical assistance. One of the main cultural "bridges" between Portugal and Timor is through Rádio e Televisão de Portugal (RTP). Firstly, RTP's international reach through its online and satellite broadcasts, which can include programming accessible in East Timor. RTP has also contributed, over time, to audiovisual production on themes related to Timor - in 2022, for example, it produced the film "Abandonados", which deals with the Japanese invasion of the Timorese island during the Second World War. The film, in turn, gave rise to an RTP series, which was shown simultaneously in Portugal and Brazil. Although RTP has no delegation or correspondent in Timor, it does cover it by sending journalists to the Southeast Asian country - mostly whenever there are official trips or events related to cooperation with Portugal.

Another cultural bridge of interest worth mentioning is the cooperation between the East Timorese government and the Camões Institute in promoting the Portuguese language and ensuring the production of news content in Portuguese. As a result of this cooperation, the first native Timorese digital media outlet whose news content is produced exclusively in Portuguese was born in early 2023 - *Diligente* (UCCLA, 2023). The *online* project brings together young Timorese journalists who have completed their training at the *Language Consultancy for Journalists*, a project supported by the Camões Institute to strengthen Portuguese language skills, specifically in the media sector (Sapo, 2023).

In addition to its importance in terms of affirming the Portuguese language in the territory, which will be analyzed later, the appearance of *Diligente* reveals several dynamics taking place in the media landscape in East Timor that deserves more detailed analysis. Firstly, it shows the change in journalism management models. The self-creation of their own business or brand is an alternative in a precarious job market, something that has been encouraged by the reduction in the cost of producing and distributing journalistic content and by the environment of digital platforms. Associated with this is the need for *Diligente*, like other digital natives, to diversify his form of financing.

To overcome the so-called sustainability crisis of the traditional media business model based on dependence on advertising, *Diligente*, resorted to the formula of *crowdfunding*, or collective financing and dissemination on social networks, without neglecting the other possibilities of subscriptions, associations, and philanthropy through grants or patronage (Antelava, 2018; Birnbauer, 2019; Lusa, 2023; Sapo, 2023). Despite the generalist orientation of the title, it ends up being located in a nano-niche market due to the low penetration of Portuguese in the territory, despite it being one of the country's official languages. Therefore, what *Diligente's* entrepreneurial journalists are aiming for at this embryonic stage, rather than profit, is to keep the project running so that they can "offer quality content" (*Diligente*, n.d.).

Secondly, and although closely related to the previous one, the case of *Diligente* is also illustrative not only of the reorganization of news production work environments but also of the progressive fragmentation or erosion of sizeable institutional newsrooms (Deuze & Witschge, 2016). The seven journalists who make up the editorial staff will be required to have multiple skills to carry out the most diverse tasks associated with news production, as well as those related to managing the media title itself. And it is curious to note that this is not an isolated case if we look at what is happening in parallel with the other news portal - *Hatutan* (<https://www.hatutan.com/>) - whose coverage has been achieving increasing prominence, despite the relatively small number of journalists (Sapo, 2023).

As a result, however, information professionals can be expected to feel more committed and responsible in the production of content, to the extent that they can participate in strategic editorial decisions and are only under the scrutiny of the public.

This is evident when *Diligente's* editorial team sets out to "disseminate impartial information" with "easy-to-understand content" capable of "explaining complex issues simply" to help people face "all social and economic issues with critical thinking", so that "everyone is aware of what is going

on in the country" (Diligente, n.d.). Thirdly, being an alternative media outlet implies a certain obligation to offer a differentiated discourse. The alternative facet can manifest itself, on the one hand, in the news approaches and perspectives in contradiction or diverging from the dominant discourse of the traditional media (Bailey et al., 2008). By taking a critical stance on reality that challenges the hegemonic channels, these media form a third voice between state media and *mainstream* commercial media, with potential benefits for the information system and, in addition, for civil society. On the other hand, the alternative orientation can be manifested by the experimental and innovative nature of its news presentation (Holt, 2018, p. 51).

This willingness to transcend the filters of the media monopoly and the growing focus on new media is evident when *Diligente* journalists say they are "eager to improve the media industry in East Timor ", aspiring to be "an innovative project", betting on "investigative work, reports, *podcasts* and other news content" that gives citizens a voice and promotes debate, while showing "the world the cultural richness of East Timor and the aspects that make it unique" (<https://www.diligenteonline.com/>). Of particular note in this area of innovation, in terms of news dissemination support, is the SMNews project, which uses Facebook directories as its main form of coverage (Sapo, 2023).

Finally, the emergence of new titles in the digital space and on social networks, the growing process of digitisation of existing ones - with particular emphasis in this area on Rádio e Televisão de Timor-Leste (RTTL) - and the progressive democratic maturity have also promoted epistemological reflection around the reconfiguration of journalistic roles (Carlson, 2020; Ekström & Westlund, 2019). Rather than a purely deterministic approach focused on technological potential, the core of the discussion in the next section of this chapter concerns journalists' conceptions of the functions or roles associated with their professional practice.

1.2 Journalism in East Timor: from resistance to transition and affirmation

Previous studies indicate that journalists emphasise different professional roles in the context of different types of democracy (Hanitzsch et al., 2019). Assuming that the discourse of journalistic roles is the central arena where journalistic identity is reproduced and contested or the place where actors fight for the preservation or transformation of journalism's identity", the different levels of democratic maturity that occur at a given historical moment in the country where they work force journalists to periodically rethink the way they conceive and perceive their roles (Hanitzsch & Vos, 2017, p. 129; Lewis & Westlund, 2015; Peters & Broersma, 2013).

Whatever happens in East Timor's future, the country already has a place in history as the first new nation of the 21st century. Journalism and media institutions, in turn, are inextricably linked to the territory's past, present, and future, albeit with constant adaptations to the different contexts over the last almost 50 years, in an ongoing struggle by journalists to affirm their work and legitimise their role. In a preliminary phase, they contributed to the survival of the Timorese national identity in the troubled period between the declaration of independence from Portugal at the end of 1975 - but which would result in the invasion by Indonesia the following year and the subsequent occupation consummated in the annexation of the territory as the 27th province - until the longed-for self-determination and effective constitution as a sovereign state

in May 2002 (Centeno & Novais, 2006). During this period, the media and journalism helped to create a latent culture of resistance (Novais, 2010), both during the long years of Suharto's strict dictatorship (until 1998) and his short-lived successors: Jusuf Habibie (1998-1999), Abdurrahman Wahid (1999-2001) and Megawati Sukarnoputri (2001-2004).

This role was ironically played by the unsuspecting *Suara Timor Timur* newspaper, founded in 1993 to be "the voice of East Timor", even under the aegis and tight control of the Suharto regime's press rules (Steele, 2007). Like its Indonesian counterparts, or even more so because it was an area of conflict and contestation, *Suara Timor Timur* indexed or subordinated its content to the service of the nation's development rather than the local interests of the proclaimed 27th province. Consequently, positive news about economic and social progress prevailed, to the detriment of any signs of ethnic, religious, racial, or class conflicts that did not merit approval in the tight sieve of official censorship, unless they were concealed (Romano, 2003, pp. 37-52).

It is also only fair to mention that, as well as keeping East Timor on the Indonesian national news agenda, East Timorese journalists at the time were able to discreetly leak information to the international media about the resistance activities in the territory of the Revolutionary Front of Independent East Timor (FRETILIN) or its armed wing, the Armed Forces for the National Liberation of East Timor (FALINTIL).

In the post-independence period, the press in the territory faced a decisive new challenge: that of "allying" itself with the new authorities in the pursuit of national goals and interests, taking on functions and roles usually associated with the conventional model of development journalism. In this new context, rather than breaking the bonds of Indonesian traditionalism, and replacing it with modern values and practices, the role of the media would be to forge national identity and unity, foster economic development, and promote literacy and social education (Melkote, 1991, pp. 24-29). In addition, Timorese society was required to make an effort towards national reconciliation to deal with the territory's violent past (Parahita et al., 2020). As was the case in other countries, including some Portuguese-speaking countries in the post-colonial period, the critical function of the press was softened or superseded by the ideals of national development (Novais, 2019; Wilcox, 1975, p. 24).

More than two decades after independence, however, there are signs of a transition from the development model of journalism to a model prevalent around the world, which endorses professional roles and values that emphasize neutrality, objectivity, and scrutiny by those in power (Donsbach & Patterson, 2004; Hanitzsch et al., 2011; Novais, 2019; Patterson & Donsbach, 1996; Weaver & Willnat, 2012).

By focusing on "free and rigorous information" and investigative and reportage journalism, *Diligente* aims to play this role by critically examining some of the country's most pressing problems, without social constraints and in the public interest, guaranteeing editorial independence from government interests (Stier, 2015). "We are aware that the social reality, 20 years after the restoration of independence, still falls far short of what would be expected," according to Eduardo Soares, "and democracy privileges some groups to the detriment of others" (Sapo, 2023).

Although Timorese journalists are generally free to report the news - being the only Southeast Asian nation considered 'free' by Freedom House - this freedom "does not correspond to reality" due to some structural limitations. A "culture of deference and respect for hierarchy" continues to permeate Timorese journalism, to the extent that some editors "are content to reproduce" press conference announcements" or "accept being paid" to be present (Robie, 2023).

In addition to "news treatment criteria", the 2021 Study of the Training Needs of East Timorese Journalists, drawn up as part of the Language Consultancy for Journalists project, highlighted other of the main difficulties journalists face in practicing their profession in East Timor: "the lack of critical thinking among active professionals", "awareness of the mission and practice of their profession", as well as the inability "to investigate and propose new topics for news content" (Observador, 2022).

Exposure to some forms of external pressure also limits the freedom of Timorese journalists and encourages self-censorship (Santo, 2023). A paradigmatic example is the lack of correspondence between the authorities' theoretical support for press freedom and its practical implementation. The same Study of the Training Needs of Journalists indicated difficulties "in the relationship with sources" and in access to information resulting from the "strong politicization of the news" and the "proximity between journalists and the political class" which, being often of a family nature, is a conditioning factor "taking into account the cultural value of the family in East Timor" (Observador, 2022).

Another external source of pressure on the media and journalists is related to the issue of criminal defamation (Parahita et al., 2020; Steele, 2007). Although freedom of the press is constitutionally guaranteed (Article 41), the exercise of journalism is overshadowed by the phantom Article 285 of the Penal Code, on false defamatory information (or "slandorous denunciations"), which has been used by politicians and authorities in East Timor to retaliate against journalists involved in reporting on corruption cases in public and private institutions (Oki, 2022). Back in 2017, for example, two journalists, Oki Raimundos and Lourenço Martins, faced the spectre of imprisonment for defamation for their articles about Prime Minister Rui Maria de Araújo, published in 2015 (IFJ, 2022).

More recently, Francisco Belo, editor-in-chief of local news portal Hatutan.com, was the target of a lawsuit by East Timor's Minister of Parliamentary Affairs and Media, Francisco Martins da Costa Pereira Jerónimo, over a report that exposed the minister's involvement in a corrupt deal for a Beijing-funded project to digitise the country's largest broadcaster (IFJ, 2022). Incidentally, the same journalistic work earned him the "International Anti-Corruption Champions" award from the US State Department for his work in the fight against corruption, accountability, the rule of law, and freedom of the press (Platform, 2023). The dependence on government advertising in a country without a strong media industry further increases the scale of the significant challenge for the media to assume the role of "watchdog" of power. This often results in the diagnosis of "uncritical journalism that doesn't bother, doesn't raise problems, and doesn't compromise the country's position in the international ranking" of press freedom (Santo, 2023).

Finally, in addition to pressure from government authorities, the Timorese media also face the dominant influence of other institutions with socio-cultural weight, such as the Catholic Church (whose religion is professed by the overwhelming majority of the population), which tries to prevent or stop journalists from covering certain topics that are considered socially sensitive. They can also discourage journalists from covering certain sensitive issues, such as the emancipation of women, the right to abortion, or pedophilia in the clergy (Robie, 2023). "In these few months of work, the most effective pressures we have felt have been concerning articles involving the workings of the church," says *Diligente* journalist Nicodemos Espírito Santos (Martins, 2023).

In January 2022, *Tempo Timor* was subpoenaed for its coverage of a Roman Catholic priest's report on abuse, which openly identified the victims. In June, journalist Raimundos Oki was placed under investigation for violating judicial secrecy after interviewing girls who said they had been abused by Father Richard Daschbach, who was convicted of child sexual abuse in 2021 (Freedom House, 2023).

In short, the effort to promote "quality, impartial and taboo-free information about East Timor, addressing issues that are normally silenced in the Timorese media" has earned "a lot of praise" but also "incomprehension, some insults, pressure, and even death threats" (GoFundMe, 2023).

2. *Challenges of the Timorese Media Ecosystem, Market Potential*

Southeast Asia's youngest democracy is an island nation whose population has increasing access to the media, both traditional and digital.

In this sense, and to better understand the media ecosystem in Timor, it is important to identify and describe some of the main dimensions that are fundamental to leveraging the sustainability and plurality of the media, namely (i) the media companies operating in the market, (ii) the context in which they carry out their activity; (iii) the system, institutions, and regulatory model; and (iv) the market structure and environment.

In the context of media companies in general, they all face similar challenges concerning management strategies and practices, which fall into a panoply of categories: either focusing on value creation and covering innovation in production practices, the creation of new products and the diversification of revenues; or related to management, involving investment in technology, cooperation with companies, as well as the management of brands, projects, and portfolios; sometimes related to communication, namely promotion and publishing, multi-platform content, audience engagement, and production synergies, such as branded content and native advertising; sometimes related to operational efficiency, which includes reorganising work, reducing costs, talent management and continuous training (Faustino & Noam, 2019).

2.1 Media Companies Operating in the Market and the Regulatory System

In East Timor, the media play a critical role in disseminating information and shaping public opinion. One of the characteristics - of each type of media - that is often associated with countries with emerging democracies is the important role that radio plays because it is the medium that usually has the greatest territorial capillarity - in other words, it is the medium that best covers the territory and partly mitigates some of the gaps in the available telecommunications infrastructure, including, of course, the Internet and the quality of existing broadband.

At the national level, there are three main telecommunications providers and a developing fibre optic infrastructure, so the digital infrastructure is still insufficient. Most Timorese access the Internet via cell phone, but face major barriers, such as the high cost and limited network, especially in rural areas (ABC International Development, 2024). In this context, the main means of communication operating in East Timor are presented below, as well as a brief description of their relevance in the territory:

Radio: Radio is one of the main sources of information and entertainment in East Timor. Radio Timor-Leste is the country's public radio station and plays an important role in covering news and broadcasting cultural and educational programs.

Television: Television is also a popular source of news and entertainment in East Timor. TVTL (Televisão Timor-Leste) is the national television station and offers a variety of programs, including news, dramas, documentaries, and educational programs.

Newspapers: Although the number of printed newspapers is limited in East Timor, some publications provide news and analysis on local and international issues. Some of the best-known newspapers include "Suara Timor Lorosae" and "Timor Post".

Internet and social media: With increased access to the internet, many Timorese also get their information online. Social networks such as Facebook and Twitter play a significant role in the dissemination of news and social interaction.

News agencies: National and international news agencies, such as Agência Lusa and Agence France-Presse (AFP), also provide news coverage in East Timor, helping to report on local and global events.

The ABC International Development (2024) report presents a detailed analysis of the media situation in East Timor in 2024. Through some tables, which we reproduce below, the media development unit offers a comprehensive view of the different types of media, highlighting some characteristics.

Table 1 shows that local broadcast television has a more limited reach because it is limited to terrestrial transmission, unlike the multiple forms of transmission of national broadcast television (RTTL and GMN-TV), which use analog terrestrial and satellite transmissions.

Table 1 | Television

Media type	Examples	Notes
National broadcast TV	RTTL	State-owned company, radio & TV. Terrestrial analog terrestrial digital, satellite broadcast
	GMN-TV	Commercial company, radio & TV. Terrestrial analog satellite broadcast. GMN Group also includes newspapers
Local broadcast TV	TVE	Commercial company. Dili coverage, terrestrial analog broadcast

Source: ABC International Development, State of the Media: Timor-Leste 2024

The following table shows the main radio stations in East Timor, where it can be seen that there is a diversity of forms of transmission and that the online presence stands out.

Table 2 | Radio

Media type	Examples	Notes
National broadcast radio	RTTL	State company. Terrestrial analog and digital broadcasting with an <i>online</i> presence
	Radio National	Commercial company, part of GMN Group. Terrestrial analogue broadcast with online presence
	Radio Maubere	National terrestrial broadcast during the election period with an <i>online</i> presence
Radio transmission based in Dili	Radio Liberdade	Operates with Fundasaun Media Development Centre, providing training with an online presence
	Radio Timor Kmanek	Owned by the Catholic Church, Dili Diocese with an online presence
	Radio Vox	Commercial company with an <i>online</i> presence
	Radio STL Radio M3	The commercial company, together with STL print newspaper with an <i>online</i> presence Commercial company with an <i>online</i> presence
	Radio Metro	Run by the government department SECOMS with an online presence
	Radio Rakambia	Community radio with <i>online</i> presence, member of ARKTL
	Radio Lorico Lian	Community radio with <i>online</i> presence, member of ARKTL
Radio transmission based outside of Dili	Afoni Lifau, Radio Comunidade Maliana, Cafe Ermera, Rai Husar, Ili Wai, Radio Popular Colelemai Bucoli, Lian Matebian, Radio Comunidade Los Palos, Radio Povu, Don Boaventura, Radio Mauloko, Lian Tatamailau, Cova Taroman	Community radio, members of ARKTL. See the map for locations. While the majority of the stations outside of Dili have an online page and/ or a social media page, not all are active.
	Radio Comunidade Lian Manu Koko, Lian Proklamador Francisco Xavier do Amaral	Community radio, not members of ARKTL

Source: ABC International Development, State of the Media: Timor-Leste 2024

In addition to television and radio, East Timor has national daily newspapers, as shown in Table 3, which invest in training and printing infrastructure.

Table 3 | Print Media

Media type	Examples	Notes
Print	Timor Post	Commercial company. Provides training, own printing press
	Diário Nacional	Commercial company. Own printing press
	STL	Commercial company. Provides training (inactive)
	Jornal Independente	Commercial company. Provides training
	Dili Post	Commercial company

Source: ABC International Development, *State of the Media: Timor-Leste* 2024

Table 4 illustrates some of the exclusively *online* media, with details on the nature and financial support of each. The number of examples presented is a reflection of the growing presence of the Internet not only in Dili but also in other regions.

Table 4 | Average exclusively online

Media type	Examples	Notes
Online only, based in Dili	Tatoli	Government national news agency
	DiliGente	Support from Camões Institute
	Lafaek News	Self-funded. Includes video
	Neon Metin	Established by RENETIL. Includes video podcast
	Timor News	Commercial company
	Naunil Media	Commercial company
	Tempu Timor	Commercial company
	Oekusi Post	Commercial company (inactive)
Online only, based outside of Dili	Liquiça Post	Supported by the UNDP innovation grant. Based in Liquiça
	Mambae Television	Voluntary YouTube channel. Based in Aileu
	Lian Orluli	Based in Ainaro

Source: ABC International Development, *State of the Media: Timor-Leste* 2024

The aforementioned report, *State of the Media: East Timor 2024*, also presents the results of a survey - Tatoli Public Perception Survey 2023 - regarding the sources of information used.

Table 5 | Most frequently used sources of information

Media type	Media access (Tatoli 2023 N=3,754)
Television	65%
Radio	32%
Print	NA
Social media	Facebook: 32% YouTube: 15%

Source: ABC International Development, *State of the Media: Timor-Leste 2024*

The data shows that television is the most used medium, information that is corroborated by the data in Table 6. Radio continues to be the public’s preferred platform in some rural areas, where access to television is limited or non-existent. It can be said that the predominant use of certain communication platforms is related to urban and rural areas, although the absence of data on the press somewhat limits this conclusion since this medium was not included in the survey.

Table 6 | Tatoli Public Perception Survey 2023: Most used media sources

	Television	Radio	Facebook	YouTube
Urban	74%	25%	44%	25%
Rural	60%	35%	26%	11%

Source: ABC International Development, *State of the Media: Timor-Leste 2024*

Concerning the percentage of use of Facebook and YouTube, it can be seen that these social networks are used more in urban areas than in areas where digital infrastructure is limited.

Table 7 | The reach of the media

	Tatoli 2022 (N=2,451)
Television	50% of respondents indicated they watch television every day, while a further 17% reported they watch television a few times a week. RTTL (90%) GMN (69%) TVE (5%)
Radio	19% of respondents indicated they listen to the radio every day, while a further 21% reported they listen a few times a week. RTTL (77%) Community radio (52%, aggregated for all stations) Radio Maubere (22%) GMN (17%)
Print	4% of respondents indicated they read a newspaper every day, while a further 15% reported they read a newspaper a few times a week. 65% indicated they do not read newspapers. NA
Social media	75% of respondents indicated they use social media less than 1 hour per day, while a further 10% reported they use social media more than 3 hours per day. Facebook (Dili 98%, municipalities 95%) YouTube (62%)
Online-only news	NA

Source: ABC International Development, *State of the Media: Timor-Leste* 2024

Based on Table 7, it is possible to identify patterns in media consumption among the Timorese. Television stands out, with 50% of respondents saying that they watch television daily, with public television being the most popular. It should be noted, however, that the rate of daily newspaper reading is quite low - only 4% - and contrasts with the high rate of use of social networks, albeit for short periods.

As has already been mentioned, it should be noted that although there is a variety of media outlets in East Timor, this does not mean that access to them is easy - in other words, access to information may present some constraints in more peripheral and rural areas. In addition, it is not unreasonable to consider that issues such as freedom of the press, pluralism of information

and opinion, as well as the existence of a context adverse to the independence of journalistic activity, can pose additional challenges in emerging democracies because they are not leveraged by sufficiently robust media systems, including from the point of view of regulation.

Although the regulation of the media in East Timor is essentially undertaken directly by the government, the participation of some organisations representing civil society, as well as other entities, is not prohibited.

According to Brinca (2021),

"East Timor's Media Law has 54 articles, divided into eight chapters, one of which is specifically dedicated to the activity of journalists, another to the media, one to the right of reply and rectification, another to forms of liability and one that provides for the creation of the Press Council and establishes its duties and powers and defines its general mode of operation, in addition to the chapters dedicated to the fundamental and final provisions, respectively" (p. 29).

In this context, the following laws and institutions that makeup East Timor's media system can be highlighted.

Press and Media Law: East Timor has laws governing the media, including the Press and Media Law. This law establishes the rights and responsibilities of the media, as well as the sanctions for violations such as defamation or incitement to hatred.

Press Council of East Timor (CI): The Press Council of East Timor is an independent body that works to promote press freedom and to ensure compliance with ethical standards in the media. The CI can receive complaints from the public about the conduct of the press and carry out investigations.

Government bodies: The government of East Timor also plays a role in regulating the media, through bodies such as the Ministry of Social Communication. These bodies can establish media-related policies and ensure that the media operates within legal limits.

It can be said that East Timor has a relatively free and pluralistic press, with a variety of news sources, including newspapers, radio, television, and online media. Media liberalisation has been supported to promote diversity of opinion and access to information. Despite efforts to promote press freedom, East Timor still faces challenges such as a lack of resources and technical capacity, as well as political pressure on the media. In addition, defamation and censorship issues can still be a matter of concern on some occasions. Overall, media regulation in East Timor reflects efforts to balance freedom of expression with the need to guarantee ethical standards and responsibility in the media. In this regard, Brinca (2021) states that.

"Essentially, the priority will be to equate the role that is intended to be given to the state in the sector, and in particular to the government in office at any given time, or the possible empowerment of civil society and media professionals as watchdogs of the established power and, therefore, in need of broad guarantees of freedom and independence, which are compromised in the current model" (p. 68). As Baldwin, Cave and Lodge (2012) point out, "it has become accepted not only that regulation is necessary for the functioning of a market economy, but also that regulatory oversight remains essential in the management of public services, especially those involving naturally monopolistic elements such as networks" (pp. 9-10).

2.2 Context of Journalistic Activity, Support, and the Market

As has already been suggested, the media situation in East Timor is characterised by many challenges, but there has also been some progress.

Because East Timor is a young nation, that achieved independence in 2002, it does not yet have a consolidated media system, a circumstance that contributes to the existence of added challenges in the development of its media and pluralism of information. For example, in terms of *freedom of the press*, East Timor has a relatively free press, with several active media organisations covering various subjects. In addition, the presence of international organisations (Freedom House, Reporters Without Borders (RSF), International Federation of Journalists (IFJ), U.S. Agency for International Development (USAID), United Nations Development Program (UNDP), The Asia Foundation) can directly or indirectly exert some pressure for the adoption of good journalistic practices. However, this does not mean that cases and accusations of political pressure and self-censorship can be identified - albeit more occasionally.

For example, last year, the *Diligente* newspaper team was the target of offensive comments and threats on social media, especially on Facebook, after publishing a report revealing alleged mistreatment of young people at the Nossa Senhora de Fátima Minor Seminary (Diligente, 2023). In addition to reports of digital bullying and possible influence by the Catholic Church, others involve prominent state figures. During a press conference on the Anti-Corruption Commission (CAC), Prime Minister Xanana Gusmão threatened a professional from the newspaper *Independente* (Noano, 2024). In another incident, journalist Desy Reis, from *Rádio Liberdade*, was assaulted by the security team while covering the Becora market, after which she was expelled from the premises (Noano, 2024).

Recently, in the Cómoro market in Dili, one of the journalists trying to cover an allegedly forced and illegal eviction process carried out by the state was arrested by the security forces (Lusa, 2024). This incident was decisive for the East Timor Press Council to denounce the existence of threats to press freedom in the country (e-Global, 2024; Lusa, 2024).

The examples mentioned above show a worrying pattern of repression, especially of female professionals, and reflect a worsening of episodes of censorship and intimidation of journalists. This alarming picture is corroborated by the result of the 2024 press freedom ranking drawn up by the NGO Reporters Without Borders (RSF), in which East Timor dropped ten places compared to 2023 (Noano, 2024).

It should be noted that “the phenomenon of media concentration constitutes one of the most important and liveliest discussed trends of the media industry related to the pluralism of information (including in Portugal)” (Faustino, 2018, p. 128). In any case, it can be said that there is pluralism and diversity of media outlets in East Timor, namely newspapers, radio, television, and online platforms. This circumstance fosters a relative diversity of voices and perspectives in the country’s media sphere, whereas economic and financial sustainability is also a structural problem that significantly conditions future developments in the media sector in East Timor. Thus, not being a situation exclusive to emerging democracies, and in particular East Timor, both the independence and relevance of the media sector are related to the structure and conditions of the market. The economic challenges in the media in East Timor are significant and are faced with economic weaknesses resulting from the scarcity of human and material resources, especially funding. And, as already mentioned, the infrastructure is precarious and, in some of the more peripheral - and rural - areas, access to the media is conditioned by the existence of inadequate infrastructure. In many cases, there is a lack of electricity and internet.

On the other hand, media literacy is a structural problem in East Timor, which is why it is imperative to organise and promote initiatives aimed at educating and making the public/citizens aware of the need to ensure the practice of independent journalism and promote a society with critical capacity, which contributes to strengthening democracy and civil society in general. Although the Timorese media cover a variety of fundamental topics aligned with democratic principles (including issues related to politics, the economy, culture, and society), certain topics can be sidelined due to the lack of financial resources or structuring public policies that leverage a consistent media system.

The media in East Timor operate in a context of relative freedom compared to countries with emerging democracies, or even in analogy with countries in the Asian region. The continued development of the media, induced by international policies and support, is crucial to strengthening democracy and society in East Timor. They still face significant challenges, including financial constraints, as the media market is relatively small, but with potential for development. Still, the Timorese have had relatively easy access to the media, both *online* and *offline*. In this context, the following fundamental aspects characterise the media system in East Timor:

Media Market and Challenges: Despite the challenges facing the media system, the media market in East Timor has potential for growth, especially with the increase in Internet penetration and the growing interest in the democratisation of information and freedom of the press. The media market faces several challenges, including limited resources, as well as an underdeveloped infrastructure, and an evolving regulatory environment. Financial sustainability is also challenging for many media organisations that are dependent on state revenues, which have direct implications for press freedom,

impartiality, and the plurality of voices in the country. GMN-TV is the only media outlet that is self-sustainable in commercial terms. To this end, it has a specific unit dedicated exclusively to the production of paid content (ABC International Development, 2024).

Traditional Media: Before East Timor's independence in 2002, the media was highly controlled by the political power and limited in terms of supply. After independence, there was significant growth in traditional media, including newspapers, radio, and television. The main newspapers include "Suara Timor Lorosae" and "Timor Post".

Radio and Television: Radio is one of the most popular media in East Timor, due to its accessibility in rural and remote areas. Television also has significant coverage, with national and international channels available.

Digital Media: With the increase in Internet connectivity, digital media is becoming increasingly important in East Timor. People consume online news, social media, and video content through platforms such as Facebook and YouTube.

As a result, the media market in East Timor is small but developing considerably - given the dominant culture in the region and also because it is a young nation-state. Despite these constraints, journalistic projects can be identified in both traditional and digital media. It is to be hoped - with continued support from the international community (USAID, Freedom House, for example) - that the media system can continue to develop and that the Timorese population will have progressively easier access to more and better information and entertainment. It is also to be hoped that the economy can further develop and create better conditions to finance the media market and, in this way, leverage the emergence of more journalistic projects and provide the Timorese population with more diverse and plural information and entertainment content.

CONCLUSIVE SUMMARY

Strengthening press freedom, promoting diversity of voices, as well as developing infrastructure and technological capacities, are key to ensuring that the media contribute to strengthening emerging democracies. In turn, it is important that any form of support for the media is implemented transparently and respects the principles of press freedom and editorial independence. In this context, in general, it can be suggested that the media system in East Timor has similar characteristics to other countries with developing democracies, namely:

- (i) Radio is one of the most important media, as it penetrates rural and remote areas more easily;
- (ii) Television is also widely watched, with national and international channels available;
- (iii) With the growth in Internet penetration, digital media are becoming more important as informational, educational, and entertainment media, through social networks and video content on platforms such as Facebook and YouTube.

As is also characteristic of emerging democracies, the development of the media system in East Timor faces some challenges. Firstly, due to the multilingual nature of the territory, which goes far beyond the predominant Tetum, Portuguese, and even English. On the other hand, the fact that the infrastructure supporting the media sector is underdeveloped - with limited access to the Internet and low penetration of modern communication technologies in rural or marginalised areas - can represent some constraints for the exercise of journalistic activity in a more consistent and transversal way across Timorese society.

Such circumstances of infrastructure limitations and weaknesses - can lead to asymmetries in the production and dissemination of knowledge and information to different segments of society. Similarly, another aspect that can create constraints on the existence of a plural media system is the excessive concentration of ownership, a problem that also extends to other Asian countries and Western democracies). Although there is no automatic relationship between the concentration of ownership and the reduction of information pluralism, there are significant risks of this happening. It may lead to a monolithic perspective in the approach and discussion of issues and, therefore, condition information pluralism and the diversity of voices.

Despite the existing challenges and limitations, the media market in East Timor has growth potential, especially with the increase in Internet penetration and the growing interest in the democratisation of information and freedom of the press, a prospect that seems to be valued and discussed by Timorese society. In this context, it is worth highlighting the existence of new projects emerging in the digital space of the media landscape in East Timor in recent years.

For their part, foreign or foreign-language media also play an important role in disseminating international information and diversifying news sources for the Timorese. However, it is essential that the Timorese also have access to local news sources to better understand the problems and events affecting their country. In this context, as recommendations, the following challenges and opportunities for leveraging the media system based on public policies are presented, namely through the following interventions:

i) *Legislation and regulation.* Laws and regulations can be developed to protect press freedom and ensure a more favorable environment for the media to operate in. This can include laws that protect journalists, guarantee access to public information, and promote transparency and informational pluralism.

ii) *Training and projects for the media.* Training and capacity-building programs aimed at journalists and other professionals (including management, marketing, and commercial professionals) in the media can be strengthened, to improve their skills and knowledge. The Government partnered with civil society organisations and international institutions, can implement projects and programs to strengthen the media system in East Timor, including the development of media support infrastructure, as well as support for content production and the promotion of diversity and plurality of voices in media companies.

iii) *Funding and support for the media.* The government can provide direct or indirect funding to the media through subsidies (direct and indirect), government advertising, or other forms of financial support. The media can receive support in terms of access

to resources, such as equipment, technology, and infrastructure. The key to the success of this type of support will depend on the creation of transparent criteria and truthful information.

As in other emerging democracies, the media in East Timor is fundamental to (i) shaping public opinion, (ii) strengthening democratic institutions and (iii) encouraging the participation and emancipation of civil society. The media market in East Timor is very limited in its size and available resources, so it faces some demanding challenges, namely (i) improving the infrastructure supporting the media system and (ii) improving the regulatory environment. And in a more economic approach, financial sustainability is a key challenge for news organisations, especially privately owned ones.

Given East Timor's recent fall in the world press freedom rankings and the cases of censorship mentioned before, it is pivotal to mitigate the state's influence on the media. Possible solutions include transparent administration of public funds and strict application of well-defined criteria. In addition, more efficient audience segmentation could allow for more targeted content, contributing to an increase in revenue and, consequently, to the sustainability of the media. A detailed review of current and future laws would also be relevant, to strengthen the legal framework supporting the media and guarantee their independence and pluralism.

To sum up, despite the adversities observed in the territory, there have been some appreciable developments. East Timor may even set an example for other emerging democracies, in that the effort made to adopt democratic principles seems to be moving in the right direction and can be expected to be consolidated. Furthermore, awareness of the importance of the role of the media in this process of social construction also seems to be being acknowledged by Timorese institutions and society.

BIBLIOGRAPHY

- ABC International Development. (2024). State of the Media: Timor-Leste 2024. The Asia Foundation. https://asiafoundation.org/wp-content/uploads/2024/05/State-of-the-Media-Timor-Leste_ENG.pdf
- Antelava, N. (2018). In-depth crisis reporting. In O. Hahn, & F. Stalph (Eds.), *Digital investigative journalism* (pp. 217–229). Palgrave Macmillan.
- Bailey, O. G., Cammaerts, B., & Carpentier, N. (2008). *Understanding alternative media*. Open University Press.
- Baldwin, R., Cave, M., & Lodge, M. (2012). *Understanding regulation: Theory, strategy, and practice* (2nd ed.). Oxford University Press.
- Birnbaumer, B. (2019). *The rise of nonprofit investigative journalism in the United States*. Routledge.
- Brinca, P. (2021). *Regulação da comunicação social em Timor-Leste: As especificidades de um contexto cultural diferente no universo da CPLP* [Master's thesis, Universidade Nova de Lisboa]. Repositório da Universidade Nova de Lisboa. https://run.unl.pt/bitstream/10362/131262/1/Disserta%3a7%a7%a3o_a28692_Pedro%20Brinca_Regula%3a7%a7%a3o%20da%20Comunica%3a7%a7%a3o%20Social%20em%20Timor-Leste.pdf
- Carlson, M. (2020). Fake news as an informational moral panic: The symbolic deviancy of social media during the 2016 US presidential election. *Information, Communication & Society*, 23(3), 374–388. <https://doi.org/10.1080/1369118X.2018.1505934>
- Centeno, R., & Novais, R. (2006). *Timor-Leste – da Nação ao Estado*. Afrontamento
- Deuze, M., & Witschge, T. (2016). O que o jornalismo está se tornando. *Revista Parágrafo*.
- Diligente (2023, June 19). Diligente é alvo de ameaças depois de denunciar maus-tratos no Seminário Menor. <https://www.diligenteonline.com/diligente-e-alvo-de-ameacas-depois-de-denunciar-maus-tratos-no-seminario-menor/>
- Diligente (s.d.). Sobre nós. <https://www.diligenteonline.com/sobre-nos/>
- Donsbach, W., & Patterson, T. E. (2004). Political news journalists: Partisanship, professionalism, and political roles in five countries. In F. Esser, & B. Pfetsch (Eds.), *Comparing political communication: Theories, cases, and challenges*. Cambridge University Press.
- e-Global (2024, September 4). Timor-Leste: Conselho de Imprensa denuncia ameaças a jornalistas. <https://e-global.pt/noticias/lusofonia/timor-leste/timor-leste-conselho-de-imprensa-denuncia-ameacas-a-jornalistas/>
- Ekström, M., & Westlund, O. (2019). The dislocation of news journalism: A conceptual framework for the study of epistemologies of digital journalism. *Media and Communication* 7(1), 259–270. <https://doi.org/10.17645/mac.v7i1.1763>
- Faustino, P. (2018). Television market, ownership concentration, and management strategies in Portugal. *International Journal of Digital Television*, 9(2), 125–146. https://doi.org/10.1386/jdtv.9.2.125_1
- Faustino, P., & Noam, E. (2019). Media industries' management characteristics and challenges \ in a converging digital World. In M. Deuze, & M. Prenger (Eds.), *Making media – Production, practices, and professions*. AUP – Amsterdam University Press. https://www.academia.edu/37835043/Making_Media_Production_Practices_and_Professions
- Freedom House (2023). *Freedom in the World 2023: M Marking 50 Years in the Struggle for Democracy*. Freedom House. https://freedomhouse.org/sites/default/files/2023-03/FIW_World_2023_DigitalPDF.pdf
- GoFundMe (2023, December 15). O Diligente precisa da sua contribuição. <https://www.gofundme.com/f/o-diligente-precisa-da-sua-contribuicao>
- Hanitzsch, T., & Vos, T. P. (2017). *Journalism beyond democracy: A new look into*

- journalistic roles in political and everyday life. *Journalism*, 19(2), 146-164. <https://doi.org/10.1177/1464884916673386>
- Hanitzsch, T., Hanusch, F., Mellado, C., Anikina, M., Berganza, R., Cangoz, I., ... Kee Wang Yuen, E. (2011). Mapping journalism cultures across nations: A comparative study of 18 countries. *Journalism Studies*, 12(3), 273-293. <https://doi.org/10.1080/1461670X.2010.512502>
- Hanitzsch, T., Hanusch, F., Ramaprasad, J., & Beer, A. (2019). *Worlds of Journalism : Journalistic cultures around the globe*. Columbia University Press.
- Hatutan. <https://www.hatutan.com/>
- Holt, K. (2018). Alternative media and the notion of anti-systemness: Towards an analytical framework. *Media and Communication*, 6(4), 49-57. <https://doi.org/10.17645/mac.v6i4.1467>
- IFJ- International Federation of Journalists (2022, May 30). Timor-Leste: Journalist sued over a report alleging ministerial corruption. <https://www.ifj.org/media-centre/news/detail/category/press-releases/article/timor-leste-journalist-sued-over-report-alleging-ministerial-corruption>
- IFJ- International Federation of Journalists (2022). IFJ Killed List Report – 2022. https://www.ifj.org/fileadmin/user_upload/IFJ_2022_Killed_List.pdf
- Lewis, S. C., & Westlund, O. (2015). Actors, actants, audiences, and activities in cross-media news work: A matrix and a research agenda. *Digital Journalism*, 3(1). <https://doi.org/10.1080/21670811.2014.927986>
- Lusa (2023, December 21). Diligente angaria fundos para manter "informação imparcial e sem tabus" em Timor-Leste. RTP. https://www.rtp.pt/noticias/mundo/diligente-angaria-fundos-para-manter-informacao-imparcial-e-sem-tabus-em-timor-leste_n1538414
- Lusa (2024, September 4). Conselho de Imprensa de Timor-Leste denuncia ameaça a jornalistas. RTP Notícias. https://www.rtp.pt/noticias/mundo/conselho-de-imprensa-de-timor-leste-denuncia-ameaca-a-jornalistas_n1597516
- Martins, J. (2023, June 19). Diligente – Hato'o informasaun mak prezisa. ESEV. <https://www1.esev.ipv.pt/dacomunicacao/?p=17579>
- Melkote, S. (1991). *Communication for development in the third world*. Sage Publications.
- Noano, D. (2024, May 3). Timor-Leste cai dez posições no ranking da liberdade de imprensa e fica em 20º lugar. Diligente. <https://www.diligenteonline.com/timor-leste-cai-dez-posicoes-no-ranking-da-liberdade-de-imprensa-e-fica-em-200-lugar/>
- Novais, R. A. (2010). News factors in international reporting. *Media XXI*.
- Novais, R. A. (2014). From failure to success: Portuguese foreign diplomacy towards East Timor. In L. C. Ferreira-Pereira (Ed.), *Portugal in the European Union: assessing twenty-five years of integration experience* (pp. 160-171). Taylor & Francis.
- Novais, R. A. (2019). Inforpress(ão): as disfuncionalidades da agência cabo-verdiana de notícias. *Pauta Geral: Estudos em Jornalismo*, 6(1), 112-130. <https://doi.org/10.5212/RevistaPautaGeral.v6.i1.0007>
- Observador. (2022, May 3). Estudo mostra dificuldades e desafios de jornalistas e média em Timor-Leste. <https://observador.pt/2022/05/03/estudo-mostra-dificuldades-e-desafios-de-jornalistas-e-media-em-timor-leste/>
- Oki, R. (2022, May 23). 'Ghost articles return to haunt journalists in Timor-Leste'. The Oekusi Post. <https://www.oekusipost.com/en/justice/1385-ghost-articles-return-to-haunt-journalists-in-timor-leste>
- Parahita, G. D., Monggilo, Z. M. Z., & Wendratama, E. 2020. The future journalists of Timor–Leste: Job expectations, knowledge and skills in multimedia journalism. *Pacific Journalism Review*, 26(1), 264–278.
- Patterson, T. E., & Donsbach, W. (1996). News decisions: Journalists as partisan actors. *Political*

- Communication, 13(4), 455-468. <https://doi.org/10.1080/10584609.1996.9963131>
- Peters, C., & Broersma, M. J. (2013). Rethinking journalism: Trust and participation in a \ transformed news landscape. Routledge.
- Plataforma (2023, December 14). Jornalista timorense premiado pelos Estados Unidos por combate à corrupção. <https://www.plataformamedia.com/2023/12/14/jornalista-timorense-premiado-pelos-estados-unidos-por-combate-a-corrupcao/>
- Público (2002, May 19). Timor-Leste é independente. <https://www.publico.pt/2002/05/19/mundo/noticia/timorleste-e-independente-144094>
- Robie, D. (2023, May 3) Timor-Leste makes the top ten in World Press Freedom Index 2023. Café Pacific. https://davidrobie.nz/2023/05/timor-leste-makes-top-ten-in-world-press-freedom-index-2023/?trk=article-ssr-frontend-pulse_little-text-block
- Romano, A. (2003). Politics and the press in Indonesia: Understanding an evolving political culture. Routledge.
- Santo, N. E. (2023, janeiro 19). Timor-Leste: Entraves à liberdade de imprensa no país que o jornalismo libertou. Diligente. <https://www.diligenteonline.com/timor-leste-entraves-a-liberdade-de-imprensa-no-pais-que-o-jornalismo-libertou/>
- Sapo (2023, January 20) Nasce Diligente, primeiro órgão de comunicação social timorense em português. <https://eco.sapo.pt/2023/01/20/nasce-diligente-primeiro-orgao-de-comunicacao-social-timorense-em-portugues/>
- Steele, J. (2007). The Voice of East Timor: Journalism, Ideology, and the Struggle for Independence. *Asian Studies Review*, 31(3), 261-282. <https://doi.org/10.1080/10357820701559071>
- Stier, S. (2015). Democracy, Autocracy, and the News: The Impact of Regime Type on Media Freedom. *Democratization*, 22(7), 1273-1295. <https://doi.org/10.1080/13510347.2014.964643>
- UCCLA - União das Cidades Capitais Luso-Afro-Americo-Asiática (2023, January 20). Timor-Leste tem primeiro órgão de comunicação social em português. <https://www.uccla.pt/noticias/timor-leste-tem-primeiro-orgao-de-comunicacao-social-em-portugues>
- Weaver, D. H., & Willnat, L. (2012). The global journalist in the 21st Century. Routledge.
- Wilcox, C. H. (1975). Scattering theory for the d'Alembert equation in exterior domains. Springer-Verlag.

