Audiovisual archiving in mainland Southeast Asia

Analog and digital preservation challenges of Thai and Vietnamese film heritage

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Audiovisual Archiving in Mainland Southeast Asia:

Analog and Digital Preservation Challenges of Thai and Vietnamese Film Heritage.

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Summary

Audiovisual Archiving in Mainland Southeast Asia: Analog and Digital Preservation Challenges of Thai and Vietnamese Film Heritage.
by Martino Cipriani

This dissertation examines the shift from analog to digital technologies in Southeast Asia, focusing on the cases of the Thai Film Archive and the Vietnam Film Institute.
In my research, I analyze the interplay of climatic, technological, and human factors in the long-term preservation of analog and digital audiovisual materials, addressing the practical challenges encountered by audiovisual archives in Southeast Asia and discussing how these tangible concerns relate to the broader conceptualization of film heritage.

Focusing on the dynamics between distinct cultural contexts and technological processes within and around film archives, I investigate how specific social groups acknowledge the significance of archival materials and how the recurrent conceptual negotiations influence the establishment of archival practices.

The study is structured around three primary categories of critical concerns affecting archives in the region: the climatic factors contributing to the material decay of artifacts, the technological challenges related to rapid innovation and hardware obsolescence and the human actions jeopardizing film heritage, such as destruction, neglect, and malpractice.
In the introductory chapter, I articulate my reasoning by formulating three comprehensive research questions that explore the relationship between global technological transformation and the specificities of Southeast Asian countries. These questions specifically focus on three key areas: the impact of the digital rollout on the two film archives, the influence of the Thai and Vietnamese contexts in shaping local archival practices, and the role of digital technologies and practices in addressing significant challenges related to the preservation of Southeast Asian film heritage.

To address key questions and develop a coherent perspective on how technological transformations and the adoption of digital practices are intertwined with cultural and societal values, the study employs a methodology based on Actor-Network Theory (ANT) and Giovanna Fossati's Archival Theoretical Frameworks. This approach enables mapping

interactions between human and non-human participants in a non-teleological manner that aligns with the interpretative flexibility of the theoretical frames, acknowledging that archival practices are inherently hybrid and transitional and that the conceptualization of film artifacts varies according to the stakeholders involved.

Toward the conclusion of the dissertation, I present several practical recommendations for film archives to implement more sustainable and effective practices for the long-term preservation of analog and digital materials. I argue that digitization should not be viewed as a universal solution to all problems but rather be evaluated case-by-case, considering the specific contexts of archives across Southeast Asia and beyond. My closing marks emphasize the importance of promoting digital access to raise awareness and fostering innovative initiatives and models based on collaboration and mutual support among regional and global archival community members.

Samenvatting

Audiovisuele archivering in het vasteland van Zuidoost-Azië: Uitdagingen bij de analoge en digitale conservering van het Thaise en Vietnamese filmerfgoed
door Martino Cipriani

Dit proefschrift onderzoekt de overgang van analoge naar digitale technologieën in Zuidoost-Azië, met een focus op de het Thai Film Archive en het Vietnam Film Institute.

In mijn onderzoek analyseer ik de wisselwerking tussen klimatologische, technologische en menselijke factoren bij de langdurige conservering van analoge en digitale audiovisuele materialen. Daarbij richt ik mij op de praktische uitdagingen waarmee audiovisuele archieven in Zuidoost-Azië worden geconfronteerd en bespreek ik hoe deze tastbare kwesties verband houden met de bredere conceptualisering van filmheritage.

Met een focus op de dynamiek tussen verschillende culturele contexten en technologische processen binnen en rondom filmarchieven, onderzoek ik hoe specifieke maatschappelijke groepen de betekenis van archiefmateriaal erkennen en hoe de terugkerende conceptuele onderhandelingen de inrichting van archiefpraktijken beïnvloeden.

De studie is opgebouwd rond drie primaire categorieën van kritische aandachtspunten die archieven in de regio beïnvloeden: de klimatologische factoren die bijdragen aan de materiële achteruitgang van objecten, de technologische uitdagingen met betrekking tot snelle innovatie en hardware-veroudering, en de menselijke handelingen die het filmheritage in gevaar brengen, zoals destructie, verwaarlozing en misbruik.

In het inleidende hoofdstuk formuleer ik mijn redenering door drie uitgebreide onderzoeksvragen op te stellen die de relatie tussen de wereldwijde technologische transformatie en de particulariteiten van Zuidoost-Aziatische landen verkennen. Deze vragen richten zich specifiek op drie kerngebieden: de impact van de digitale uitrol op de twee filmarchieven, de invloed van de Thaise en Vietnamese contexten op de vormgeving van lokale archiefpraktijken en de rol van digitale technologieën en praktijken bij het aanpakken van belangrijke uitdagingen in het behoud van Zuidoost-Aziatisch filmheritage.

Om deze kernvragen te beantwoorden en een samenhangend perspectief te ontwikkelen over hoe technologische transformaties en de adoptie van digitale praktijken verweven zijn met culturele en maatschappelijke waarden, gebruikt de studie een methodologie gebaseerd op Actor-Network Theory (ANT) en Giovanna Fossati's

Archivarische Theoretische Kaders. Deze aanpak stelt mij in staat om interacties tussen menselijke en niet-menselijke deelnemers in een niet-teleologische manier in kaart te brengen, in overeenstemming met de interpretatieve flexibiliteit van de theoretische kaders. Daarbij wordt erkend dat archiefpraktijken inherent hybride en overgangsachtig zijn en dat de conceptualisering van filmvoorwerpen varieert afhankelijk van de betrokken belanghebbenden.

Aan het einde van de scriptie presenteer ik verschillende praktische aanbevelingen voor filmarchieven om meer duurzame en effectieve praktijken te implementeren voor de langetermijnconservering van analoge en digitale materialen. Ik betoog dat digitalisering niet als een universele oplossing voor alle problemen moet worden gezien, maar dat deze per geval moet worden geëvalueerd, rekening houdend met de specifieke contexten van archieven in Zuidoost-Azië en daarbuiten. Mijn afsluitende opmerkingen benadrukken het belang van het bevorderen van digitale toegang, het vergroten van het bewustzijn, en het stimuleren van innovatieve initiatieven en modellen gebaseerd op samenwerking en wederzijdse ondersteuning binnen de regionale en mondiale archiefgemeenschap.

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1 Introduction

This thesis explores the transition from analog to digital technologies, focusing on the relationships with surrounding cultural contexts and the critical concerns that have emerged regarding audiovisual preservation practices within two Southeast Asian audiovisual archival institutions, the Thai Film Archive,[1] and the Vietnam Film Institute.[2]

My interest in Thai and Vietnamese audiovisual heritage and archives stems from my experience as a film scholar based in Southeast Asia (SEA). Over the past ten years working in universities across the region, I noticed on several occasions that despite the existence of renowned and operational archival institutions, regional film heritages remain hardly accessible to the most and rarely intersect academic discourses locally as internationally. While the limited written accounts on Southeast Asian film history consistently report on the rich and diverse cinema produced all over the region, and while media scholars involved in the field show an increasing interest in the subject,[3] I observed that the exchanges between academia and audiovisual archives are still extremely scarce and that degree programs or courses dedicated to audiovisual preservation and, more broadly, to the study of national film heritages are still very limited.[4]

As a European scholar fascinated and engaged with SEA audiovisual cultures and heritage, the lack of information and accessibility to film collections sparked my curiosity: What currently survives of the local film heritages? Are those films in danger? What are the criticalities threatening it? What do film archives do to overcome those concerns? But also, how do local film archives organize their operations and policies? Do they operate independently or follow international standards? How do specific cultural contexts affect these processes? Do Asian archives operate differently from their western counterparts?

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[1] Film Archive (Public Organization), Film Archive background and history *https://www.fapot.or.th/* accessed on 02/04/2020

[2] Viện Phim Việt Nam/Vietnam Film Institute https://vienphim.org.vn/accessed on 10/05/2025 (previously http://vienphim-vfi.org.vn/ accessed on 02/04/2020)

[3] Among others, two recent publications are especially notable for tracing the historical backgrounds of the largely overlooked national cinemas in the region: *Silver Screens and Golden Dreams: A Social History of Burmese Cinema* (2024) by Jane M. Ferguson and *Faded Reels: The Art of Four Cambodian Filmmakers: 1960-1975* (2022) by LinDa Saphan.

[4] Noteworthy recent publications are Professor Bliss Cua Lim's 2024 book, *The Archival Afterlives of Philippine Cinema*, where the author analyzes the crisis-ridden history in the Philippines' archives and how archival practices can inspire alternative theoretical and historical approaches to cinema, and *Keeping Memories: Cinema and Archiving in the Asia-Pacific* (2022), edited by Nick Deocampo and recently co-published by the Ateneo de Manila University, Film Development Council of the Philippines, Southeast Asia-Pacific Audiovisual Archive Association (SEAPAVAA), and Vietnam Film Institute.

As my interest in the subject grew, I started visiting and better understanding archival institutions across the region and promptly became aware that the limited access to collections was indeed the result of an array of critical concerns that, in most cases, directly affect the physical viability of film artifacts and the long-term preservation of materials, core mandate and practice of AV archives, ultimately threatening the survival of a rich, diverse and largely unknown audiovisual heritage. While researching, I also grasped the extent and complexity of the matter, as audiovisual archives participate in vast and vibrant relational networks involving individuals, institutions, federations, technologies manufacturers and infrastructures, with different agendas and objectives that in a multitude of ways interact with film heritage and in some cases threaten its viability. Besides, I understood how these complex dynamics had been concurrently enhanced and undermined by the introduction of digital means in both film industries and archival institutions, providing an innovative, promising and highly versatile set of tools but also raising concerns on the implementation of digitization practices into archival analog film workflows.

Intrigued by the complexity of this fascinating and yet unexplored field of study and inspired to devise innovative strategies and models to overcome the criticalities affecting the preservation and access of film heritage, I thus decided to study with greater commitment the role, practices and hardships of two exemplary Southeast Asian archival institutions and to pursue this doctoral research.

Whereas audiovisual archives find a central place in this field, it is relevant to acknowledge at this point that I am not an archivist, nor do I have previous experience working in Asian or European film archives. Instead, I am a film scholar and film practitioner; besides my academic commitment, I have been working internationally as a film colorist and digital workflows consultant, gaining over time substantial knowledge and practical experience in the digital movie-making pipeline but also an overall understanding of how Southeast Asian institutions, broadcasters, and audiovisual infrastructures are organized and operate within the contemporary film industries. My technical expertise and direct involvement in the field influenced my approach to frame the scope of the study, and notably, I became primarily interested in the practice of digitization, alias the process of converting analog photographic material into digital files for public access (Cherchi Usai 252). Digitization thus represents a central term in this study, and it is strictly related to another pivotal concept for the research, the digital rollout, the transition from analog to digital technologies and infrastructures for film distribution and projection that has occurred over the past twenty years within cinema industries worldwide (Fossati 14). The initial queries are

thereby originally posed in consideration of the impact of the profound technological transformation on the cinema industry, the digital rollout, and its repercussions over regional audiovisual archives and their collections, including digitization. If on the one hand, the quasi-sudden and likely irreversible obsolescence and disappearance of analog technologies in film production, distribution and projection unsettled the mandates and technological practices of audiovisual archives, on the other hand, the digital rollout changed the role of film archives making of them the preeminent and arguably the only body to fill the gap between obsolete cinema practices and future digital workflows and thus the firm ground where to investigate causes, developments and issues of the transition from analog to digital.

How do regional archives face this momentous digital transformation? Are archives equipped to assimilate digital practices? Does digitization represent a viable preservation strategy? Does it effectively serve to improve collection access? Where do archives get the knowledge to implement digitization practices? Does digitization serve to overcome critical archival issues? Or does it represent an additional cause of concern? But also, is it ultimately urgent or necessary for Southeast Asian archives to digitize their heritage? Why so?

This set of questions closer matches my skills and interests and helped me in the very initial phase of the study to more confidently determine the field of inquiry. However, since the very beginning, I felt that my study should not focus uniquely on analyzing technical processes but must embrace a broad perspective that would allow me to potentially include in the research also those elements apparently not directly involved in archival or cinematic activities but that still have leverage over the comprehensive picture. In other words, my scope is to investigate digitization as a technological process within specific cultural contexts and to inquire about the impact of the transition from analog to digital technologies within archival institutions and related infrastructures by mapping the interaction consequential social groups operating within and around the archives.

Focusing on the mutual influence of societal and technological instances, I undertake the study by adopting established frameworks that could support the analysis from the theoretical and methodological points of view and that can help me to shape a coherent perspective where technological transformations and the assimilation of digital practices are interrelated with the cultural and societal values of a given context.

In determining a reliable theoretical framework and methodology able to conjugate culture and technology with the specificities of audiovisual archiving, the essential premise is that film heritage should be addressed in both its material and conceptual being: films as material artifacts, prone to physical decay, technological transformations and human action,

and films as conceptual artifacts, shifting their ontological paradigm accordingly to the diverse social contexts and to the theoretical framework adopted to interpret them.
The dichotomy of film as material and conceptual artifacts is borrowed from Giovanna Fossati's archival theory as proposed in *From Grain to Pixel* (2009 and 2018), which represents the primary framework inspiring and guiding my study. I employ and probe Fossati's theory throughout the research with different objectives. Initially, it serves to highlight critical concepts and arguments surrounding the current debate on film artifacts in their hybrid archival life. Subsequently, I apply the four theoretical frameworks proposed in *From Grain to Pixel* as a methodological tool to support my reasoning, clarify the selection of the Thai and Vietnamese archives as case studies and substantiate the critical concerns affecting archival institutions. Lastly, I employ Fossati's theoretical framework to interpret the findings traced with the analysis of the criticalities and backgrounds of the case studies.

Regarding methodology, the analysis of the two case studies is mainly conducted through the comprehensive and flexible tools provided by the Actor-Network Theory (ANT). The social theory elaborated by Bruno Latour and peers provides a series of conceptual instruments and practical insights that I employ to map the involvement and interactions of all those entities revolving around films in their archival life. To effectively map the overall dynamics within and surrounding archival institutions, I utilize ANT constitutional concept of Networks, Agency and Actants, methodologically attributing equal significance to human, technological, and environmental elements. This approach enables me to analyze the relationships between archival institutions and their cultural contexts without relying on teleological premises and deterministic interpretations.

The study is structured around several tangible critical concerns affecting audiovisual heritages and archives in the region that can be inscribed into three categories: environment (material decay), technology (obsolescence) and human (war, destruction, disregard). These macro-categories are investigated through the methodological tools of ANT and interpreted via Fossati's frameworks, aiming to establish a solid foundation for further theoretical development of digital practices in film archives and to derive potential pragmatic initiatives to address archival challenges in Southeast Asia and globally.

1.1 Key Questions, Objectives, Arguments

The premises and queries outlined in the introduction stressed how the primary focus of this study is to investigate the dynamics between cultural contexts and technological processes within audiovisual archives. To begin, I thus reframe my reasoning by formulating three comprehensive research questions that tackle the dynamics between a global technological transformation and the cultural specificities of the Southeast Asian countries.

The key questions are:

How did the digital rollout impact the Thai and Vietnamese film archives?

How do the Thai and Vietnamese social contexts affect and shape local archival practices?

Which critical concerns affect SEA film heritage, and how does digitization serve to overcome such challenges?

The three questions fit into a precise hierarchy, whereby the third question functions as the research pivot and encapsulates the study's main objectives, attempting to relate digital practices, critical concerns and distinct contexts. The other two research questions are predominantly employed to methodologically lay the groundwork for the analysis and the conclusive arguments by examining the relational networks occurring within specific socio-political-economic contexts. Although the research questions do not strictly determine the study's structure, they serve as guidelines throughout. The first research question is primarily addressed in Chapter 5, the second question is explored in Chapter 6, and the third and main question is discussed directly in Chapter 7.

I formulate the questions with a broad and flexible approach, allowing me to initially present the matter in both practical and conceptual terms and progressively narrow it down toward the formulation of my final arguments: firstly, by drafting the overall cinematic backgrounds concerning the analog-to-digital transformations, secondly, by analyzing the process of digitization within archival institutions in relation to their respective cultural

specificities and historical backgrounds, and finally, by critically reassessing the role of digitization as an instrument to overcome the distinctive archival criticalities.

The first research question focuses on the impact of the digital rollout on the Thai Film Archive Public Organization (FAPOT) and the Vietnam Film Institute (VFI).

The inquiry around the technological transformation in audiovisual archives has been closely investigated by Fossati, especially in her seminal publication *From Grain to Pixel*, and by other authors such as Caroline Frick, who examined US film archives in her work, *Saving Cinema: The Politics of Preservation,* and Maral Mohsenin, who presents a comprehensive PhD dissertation on European audiovisual institutions. Focusing on the impact of the digital rollout in European and North American archives, these studies provide a clear understanding of how specimen western institutions dealt with technological transformation and identify key concepts of this distinct field of studies.

The term "digital rollout" refers to the transition from analog to digital technologies across all segments of global film industries. Historically, the years 2011 and 2012 marked a significant turning point, as the number of films produced digitally exceeded those shot on analog film stock (Fossati 14). However, the timeline for this digital rollout involved gradual technological advancements across different segments of the film industry, from production to exhibition at various stages.

The integration of digital technologies into film practices was not abrupt or unexpected, and before reaching the pinnacle in 2012, audiovisual workflows remained hybrid, a mix of analog and digital practices, for over thirty years. Since the early 90s, film industries across the globe have been progressively integrating a range of technologies in film production, post-production, distribution and screening. For example, post-production non-linear editing software have been part of the film pipeline since the late 80s, and digital cameras were employed in productions way before the rollout, coexisting for several years with the analog film practices traditionally required and employed in film distribution such as developing and printing movies (Fossati 55). By 2012, cinema lost its tie to its traditional physical medium, and the three major wings of the industry -production, distribution, and exhibition- transitioned to digital. No longer recorded, stored and displayed on strips of celluloid, movies become “encoded strings of ones and zeroes” (Bordwell 703) that could be efficiently distributed globally.

At the turn of the century, film distribution and projection were still mainly analog, and most films, including those digitally post-produced, were printed on film rolls and

shipped to movie theaters for projection. In 2012, Digital Cinema Packages (DCP) replaced film stocks as the primary carrier of film content, marking the conversion to digital distribution and screening (Fossati 46). Within a couple of years, digital files became the standard for consumption, and film industries worldwide adopted them as the shared norm. As a result, analog film stocks quickly became obsolete, leading to the discontinuation of optomechanical technologies, film processing infrastructures, and the extensive set of specialized skills and knowledge that had characterized cinema's workflows for over a century. Suddenly, films were no longer physically on film.

As Fossati explains, the digital rollout posed a series of concerns for the audiovisual archival community, prompting questions about the future of traditional analog film practices and the archives' role amid technological disruption. The digital rollout has significantly reduced the production of film stocks, resulting in the downsizing of film manufacturing, the disappearance of most kinds of film stock, and the closure of many film laboratories. Consequently, the main worry within the archival community became that practices, tools, and expertise related to film post-production would disappear (Fossati 43). The disposal of the polyester film stocks as the primary carrier for audiovisual contents in favor of digital files marked several new challenges for film archives. The digital rollout initiated the progressive disappearance of skills and expertise necessary to handle film reels. It accelerated the irreversible obsolescence of those technologies that, for decades, have been pivotal for archival operations. It forced archivists to rapidly adapt and learn to deal with new machines and knowledge. Additionally, it led to significant financial concerns that many archives are still grappling with today.

Alongside audiovisual archives and artifacts, this study examines the role and decline of film infrastructures in Thailand and Vietnam, particularly focusing on film laboratories. Unlike Europe and North America, where state interventions and planned strategies promoted the studios, the impact of the digital rollout was largely anticipated (Fossati 42), mainland Southeast Asian countries have not implemented specific centralized initiatives to assist their national film industries and archives in moving from analog to digital. This has led to the swift decline of analog technologies, infrastructure, and specialized knowledge necessary for processing, screening, and handling film stocks, raising ongoing concerns for SEA archives.

The second research question examines how the unique contexts of Thailand and Vietnam influence the establishment and development of archival practices in each country.

Focusing on the dynamics between culture and technology, the question is formulated to identify relevant socio-political-economic participants of the networks and analyze their role in archival operativity, mandates and analog/digital practices. The question broadens the perspective to encompass external forces that, although not directly involved in film practices, still significantly influence the development of the two SEA institutions.
The external forces influencing archival institutions include local entities, such as cinema stakeholders and government officials, as well as international bodies like foreign countries and archive-related associations like FIAF[5], AMIA,[6] and SEAPAVAA[7] are identified by tracing the historical backgrounds of the two archival institutions and the timelines of local cinema industries, infrastructures, and technologies.

The second research question addresses the diverse intellectual conception of film artifacts by focusing on the peculiar cultural components of the Thai and Vietnamese contexts. To this end, I argue that the conceptualization of film artifacts is an unsettled, fluctuating and negotiation process and that the viability of film heritage strictly relates to the diverging understanding and interpreting of audiovisual collections among the participants involved, notably archivists, financing governmental bodies and film industry stakeholders. Drawing on Fossati's theoretical frameworks, film artifacts in their archival life are examined as materially hybrid— analog and digital—and conceptually unstable items whose understanding shifts accordingly to distinct social groups, ultimately influencing preservation, digitization and collection management practices.

Furthermore, as the conceptualization of film artifacts touches upon the broader theoretical debate on film artifacts ontology, the insights provided by this research question aim to contribute to bridging the gap and fostering dialogue between academia and local film archives, as advocated by Fossati. Film archivists often lack the time to reflect on the nature of the film, the implications deriving form new technologies and researchers examining the ontology of film theorize about future scenarios at a pace that outpaces practical developments in the field, "leading to an increasing estrangement between theory and practice" (Fossati 23). A significant additional objective of this study is, therefore, to facilitate access to the collection and establish a foundation for other scholars to further explore the rich and diverse Southeast Asian audiovisual heritage.

[5] International Federation of Film Archives, https://www.fiafnet.org/ accessed on 12/09/2020
[6] Association of Moving Image Archivists https://amianet.org/ accessed on 12/09/2020
[7] Southeast Asia Pacific Audiovisual Archives Association https://seapavaa.net/ accessed on 12/09/2020

The third question stands at the center of the study, as it encompasses most of the elements examined and addresses both the practical and theoretical objectives of my work. The research question examines the role of digitization, inquiring how it relates to the core archival practices of preservation and access and if it represents a reliable means to overcome film archives' criticalities or if its assimilation into the Thai and Vietnamese archives constitutes a source of additional concerns. By formulating the query and grounding the analysis around tangible concerns, I indirectly attempt to target a broader argument: whether audiovisual heritage needs to be digitized and why.

The digitization of film collections has become a pressing duty for film archives worldwide, an urgency dictated by the rapid technological development and the fast-paced changes in the audiovisual industry. However, while digitization seems to be mandatory for audiovisual archives, its deployment still retains numerous uncertainties within the archival community. Considering digitization as an imperative "misunderstands the complexities wrought by the changing paradigm, requiring not only the expansion of skills, technology and budgets but exacerbating the divide between those archives that can and cannot adapt to the changes" (Edmondson V). "The challenge is not only to migrate analog heritage in danger, but also to keep pace with the flood of born-digital productions while preserving the technology and skills of the analog era" (Edmondson V).

The digital rollout has imposed on worldwide film archives a broad range of new challenges and commitments regarding analog film collections and digital-born audiovisuals. Collections digitization is a multifaceted process that archival institutions are progressively implementing to target a variety of objectives, from long term-preservation to restoration to access. While in many respects, archives are undeniably benefitting from the pliability of digital technologies, the embedding of digital workflows into traditional analog practices also presents several conundrums. Long-term preservation, for example, remains a concern for digital archives as "the rapid obsolescence of digital hardware and software, the lack of knowledge and experience with the digital within film archives, and the high costs of data storage mean that digital is not yet sustainable for high-quality preservation of film collections" (Fossati 88-89).

As film archivist and curator Paolo Cherchi Usai asserts, the term digitization encompasses three distinct processes/objectives, achievable with different technological means: digital restoration, the set of technical and curatorial procedures aimed at making the moving image appear as close as possible to what it was at the time of its original release. Digitization, the process of converting analog photographic material into digital files for

public access; and digital preservation, the technological infrastructures capable of making the digitized moving image permanently available for viewing (Cherchi Usai 252).[8]

While all aspects of the digital pipeline are relevant to my reasoning, this dissertation focuses on the long-term viability of audiovisual heritage in SEA archives and examines the tangible initiatives undertaken by the two archival institutions concerning analog and digital preservation, emphasizing the criticalities associated with digital storage systems.

Examining digitization in its material and conceptual being, my arguments are hence concurrently theoretical and pragmatic.

Concerning archival theorization, I argue that the establishment of digital archival practices and models results from recurrent intellectual negotiation between contextual social groups involved, operating within and outside the archives, which acknowledge the importance of audiovisual preservation based on distinct societal values of their respective communities. The divergent understanding of film artifacts in their archival life results in ongoing tangible concerns, such as the lack of support from central institutions and industry stakeholders and, under extreme circumstances, the destruction of artifacts.

The elaboration of interpretative models and methods of analysis, notably those argued with the second research question, are grounded on theoretical frameworks that merge Fossati's archival theory, the non-deterministic premises of media archaeology and the cultural specificities of given territories mapped via ANT, as explained in chapter two.

From a pragmatic point of view, I question the role of film digitization in film preservation and access. I argue that digitization must not be regarded as an ecumenical all-problem-solving technical innovation and that, on the contrary, it should be evaluated on a case-by-case basis, considering the specific needs and goals of different archival practices. By examining the contexts and backgrounds of the Thai and Vietnamese film archives, the third research question aims to contextualize archival practices and ultimately seeks to clarify the practices involved and ultimately determine where digitization serves as a practical solution, a necessary requirement, an external pressure, or an additional source of concern.

This broad research question aims to develop a comprehensive understanding of the causes, origins, and impact of critical issues in tangible archival practices with the final objective of envisioning digital solutions, models and initiatives that can be implemented in audiovisual archives across Southeast Asia, or any territory facing similar critical challenges.

[8] Cherchi Usai, Paolo. *The Conservation of Moving Images, Studies in Conservation*, Vol. 55, No. 4, pp. 250-257, Abingdon-on-Thames: Taylor & Francis, 2012.

1.2 Literature, Sources, Structure

As several aspects of this study have not been academically examined before, I conducted interviews with key stakeholders in the film industry, local institutions, audiovisual archivists, and international experts to support and corroborate the existing literature. Worth noting is that the research has primarily been conducted in non-democratic or semi-democratic countries (especially Vietnam, Laos, and Myanmar),[9] and while several interviewees consented to meet and respond to my inquiries openly, many other significant interlocutors requested anonymity and preferred not to be explicitly identified in the dissertation. In a few instances, several informal talks were required to establish trust prior to conducting the formal interviews, and some of the interviewees consented to meet and be acknowledged but requested that they not be recorded or explicitly cited. Besides, in the five years I have been involved in this study, I have participated in numerous regional and global film heritage-related conferences, events and talks and become engaged with ancillary preservation initiatives and studies, as well as ongoing conversations with key participants like Karen Chan and Ray Edmondson, all of which have significantly influenced the results of the study and enhanced my overall understanding of this evolving field.

The written sources are detailed below, providing an overview of the study's structure.

Chapter 2 sets out the theoretical debate to position my reasoning within the broad landscape of film and media studies and looks at a selected corpus of academic contributions that focus on films as technological artifacts in transformation, inquiring about their hybrid being in both material and conceptual terms. Considering that, to date, the conceptual debate that arose in reaction to the digital rollout primarily regards film ontology, I outline below those fundamental texts that highlight the two main semi-divergent lines of thinking, equally significant and influential to the formulation of my arguments. On one side, there are those texts produced by scholars that, to different degrees, conceive the transition to digital means and practices as an ontological fracture, such as *The Virtual Life of Film* (2007) by David N. Rodowick and *The End of Cinema?* (2015) by Andrè Gaudreault and Philippe Marion,

[9] Democracy index, 2024 *https://ourworldindata.org/grapher/democracy-index-eiu?time=latest* accessed on 12/06/2023

although the most radical stance representing this school of thought is Paolo Cherchi Usai with uncompromising texts such as *The Death of Cinema* (2001).

The opposite stance, which contemplates analog and digital films concurrently participating in a broader media landscape and thus in ontological continuity, is delineated with essential writings, such as Siegfried Zielinski's *Deep Time of the Media* (2006), where he proposes an alternative approach to media history that would reject any teleological and linear view of technological progress, and Thomas Elsaesser's *New Film History as Media Archeology* (2016), where he attempts to broaden the theoretical perspective on interpreting film artifacts in the digital age in a non-deterministic manner and prompt me to include in the reasoning the contributions of scholars inquiring media archaeology, such as Jussi Parikka with writings like *Media Archaeology: Approaches, Applications and Implications* (2011) and *A Geology of Media* (2015). The non-teleological stance is further supported by other authors' publications like Benoît Turquety's *Medium, Format, Configuration: The Displacements of Film* (2019) and William Uricchio's *Storage, simultaneity, and the media technologies of Modernity* (2004) where he argues how the history of 'old media' developments should be freed from the teleological determinism accompanying retrospective considerations and adopt a new perspective to provide alternative concepts (Uricchio 128).

Deliberately leaning toward the non-deterministic stance, my theoretical outlook attempts to adopt a comprehensive and flexible analytical approach similar to the one suggested by media archeologists and concurrently focus on the circumscribed field of film heritage and archival studies, making the Fossati's *From Grain To Pixel* (2009/2018) the paramount text informing my overall view on media studies and guiding my work. The publication, first, serves to temporarily put aside the ontological debate, but most importantly, it directly addresses the theorization of film archives and provides a series of theoretical frameworks on film artifacts in their archival life that are employed, adapted and revisited throughout the thesis to conceive initial arguments and premises, structure the analysis of the case studies and draw conclusions.

Lastly, I also reflect on Walter Benjamin's Opus Magna, *The Work of Art in the Age of Mechanical Reproduction* (1935), which, explicitly influencing the reasonings of Elsaesser, media archaeologists and Fossati, still stands as a benchmark for discourse that regards culture and technology in the contemporary media landscape. As Benjamin's reflection on the authenticity and originality of reproducible artifacts closely resonates with

key arguments of my analysis, I directly address its seminal contribution in Chapter 6.3, where I delineate my overall conclusions on films' ontology debate.
In Chapter 2.2, I clarify the rationale for employing the Actor-Network Theory as the primary methodology, explaining its conceptual tools and applications. I rely on the ANT social theory to map the extensive networks surrounding film artifacts in their archival life, tracing the active involvement (Agency) and relationships with distinct social contexts of those key stakeholders (Actants) that have either contributed to or sought to resolve audiovisual preservation' concerns within Southeast Asian archival institutions. ANT's flexible set of tools enables me to trace the Agency of human and non-human participants in and around film archives. This comprehensive approach emphasizes environmental, technological, and societal factors, shaping the overall structure of the study and facilitating a thorough analysis of critical archival concerns. The findings identified through ANT's networks are then analyzed using Fossati's theoretical frameworks. I primarily rely on Bruno Latour's chief publication, *Reassembling the Social* (2005), and on other books and articles of other prominent ANT social theorists, like Michel Callon and John Law's *Mapping the Dynamics of Science and Technology* (1986) and *Material Semiotics* (2019). Besides, I also draw analytical elements and inputs from those rare studies that similarly apply ANT key concepts to media studies, above all Marijke de Valck's *Film Festivals: From European Geopolitics to Global Cinephilia* (2007). As I aim to build a consistent discourse that bridges the methodology employed and the theoretical framework, I trace similarities and discrepancies between ANT and Fossati, which substantiates her analysis through SCOT, the Social Construction of Technologies. By briefly reviewing the key concepts of SCOT through Bijker, Hughes, and Pinch's *The Social Construction of Technological Systems* (1989) and comparing them with the main conceptual instruments provided by ANT, I explain the rationalities of employing ANT rather than SCOT.

The analysis of the two film archives' backgrounds, features, and criticalities constitutes the dissertation's core and is structured into three chapters that correspond to the distinct types of critical concerns affecting the archives: Chapter 4 focuses on environmental concerns, Chapter 5 on technology, and Chapter 6 on human-induced challenges. Additionally, in the introductory Chapter 3, I outline the shared backgrounds of the archives and the rationale for selecting the Thai and Vietnamese film institutions as case studies. These chapters draw on the extensive and heterogeneous corpus of literature and significantly rely on the interviews conducted with consequential stakeholders. The primary texts consulted include informative

works on regional contexts and history, manuals, handbooks and whitepapers on audiovisual preservation practices and publications on the histories of cinema in Thailand and Vietnam.

The most significant publication to trace commonalities and backgrounds among SEA archival institutions in Chapters 3 and 3.1 is Ray Edmondson's *Audiovisual Archiving Philosophy and Principles* (2016). This foundational handbook, published by UNESCO, along with other works by Edmondson, helped me understand the major challenges facing the audiovisual archives community. Considering Edmondson's long involvement with SEAPAVAA and thorough understanding of Southeast Asia contexts, his work supports me to frame the peculiar challenges and criticalities affecting the two SEA film institutions. Additionally, the identification of contextual archival challenges and social dynamics is underpinned by two publications. The first is Caroline Frick's *Saving Cinema, the Politics of Preservation* (2010), which, although not explicitly formulating a consistent theorization of archival film practices, sheds light on the fundamental aspects, guidelines and concerns that Western archives have been facing since their early days and elaborates on the matter in conceptual terms, reasoning for instance on ethical aspects of film preservation. The second is Bliss Cua Lim's *The Archival Afterlives of Philippine Cinema* (2024), where she examines the precarious conditions of several state-run film archives in the Philippines and frames a broader discussion on the challenges of archival practice in the country. Suggesting that unpredictability and instability are inherent and unavoidable features of audiovisual archives, especially in non-democratic contexts, she underlines relevant concepts that inform my understanding of heritage institutions in Thailand and Vietnam.

Moreover, the literary contributions from international archival associations like FIAF, AMIA, SEAPAVAA and FIAT/IFTA,[10] along with transnational organizations like UNESCO and EU, non-profit organizations like NFPF,[11] and trade associations of international relevance like AMPAS,[12] offer valuable insights for framing and addressing the key archival challenges, especially in Chapters 4 and 5. These resources effectively highlight and clarify the tangible difficulties faced by the archival community on a daily basis, as well as the standards and solutions that have been globally adopted to address these acknowledged concerns. The comprehensive category of publication includes film preservation manuals and white papers like the various FIAF technical handbooks and NFPF's *The Film Preservation*

[10] FIAT/IFTA: Fédération Internationale des Archives de Télévision / The International Federation of Television Archives, https://fiatifta.org/ accessed on 12/06 2021
[11] NFPF: National Film Preservation Foundation, https://www.filmpreservation.org/ accessed on 12/06 2021
[12] AMPAS: The Academy of Motion Picture Arts and Sciences better known as "the Academy" https://www.oscars.org/ and https://academydigitalpreservationforum.org/ accessed on 12/06 2021

Guide (2004).[13] Sector studies like *The Digital Dilemma* (2007) by AMPAS[14] and UNESCO's *Recommendation for the Safeguarding and Preservation of Moving Image* (1980). Articles from specialized film journals as *The Moving Image*[15] and FIAF's *Journal of Film Preservation.*[16] Online materials like FIAF, AMIA and AMPAS forums and resources and international audiovisual archives associations bulletins, conference minutes, and official documents. This type of written output, although predominantly produced within European (FIAF, FIAT/IFTA) and American (AMIA) contexts helps track the current and historical circulation of analog and digital knowledge and practices in SEA and the two archives' international involvement.[17]

The central part of the thesis provides an analysis of the Thai Film Archive Public Organization (Chapters 3.2, 4.1, 5.1, and 6.1) and the Vietnam Film Institute (Chapters 3.3, 4.2, 5.2, and 6.2). This analysis examines the backgrounds, structures, and operations of both organisations, with a focus on three key challenges: environmental, technological, and social, as well as their impacts on the archives. To present a comprehensive overview of both contexts (Chapters 3.1 and 6), I reference several fundamental texts on Southeast Asian history, including *The Cambridge History of Southeast Asia* (2008) by Nicholas Tarling et al. and works by historian Antony Reid, such as *A History of Southeast Asia: Critical Crossroads* (2015). To explore the specific cultural contexts of the two countries, I draw on several texts from the extensive literature, including David Wyatt's *Thailand: A Short History* (2019) and Christopher Goscha's *Vietnam: A New History* (2016).

The literature regarding the Thai film industry, its features and its backgrounds is relatively scarce and fragmented,[18] and thus, for these sections, I compare and merge the

[13] National Film Preservation Foundation https://www.filmpreservation.org/ accessed on 12/06 2021
[14] Academy of Motion Picture Art and Science https://www.oscars.org/ accessed on 12/06 2021
[15] The Moving Image: The Journal of the Association of Moving Image Archivists. The essential source for new thought on preservation, archiving, and restoration of film, video, and digital moving images. https://www.upress.umn.edu/journal-division/journals/the-moving-image accessed on 24/08/2021
[16] International Federation of Film Archive, Journal of Film Preservation https://www.fiafnet.org/pages/Publications/About-the-JFP.html accessed on 12/06/2021
[17] "Audiovisual archiving has traditionally followed a largely Euro-American agenda which has given little attention to realities in developing countries. Facilities, standards and skills available in the former may not exist in the latter, where simpler, cheaper and sustainable solutions must be found. Crossing that divide, sharing resources, and sharing skills and insights in both directions, are major challenges for the profession. Standards, rules and recommendations developed in Europe and North America are relevant to other countries and where possible are adopted by them, but as with professional literature, language is a problem. Unless they are translated, they cannot be used." (Edmondson 4)
[18] The historiography of Thai and Vietnamese Cinema is limited and predominantly written in the respective local languages; however, through texts in English and French and thanks to the translation of a few essential papers in Thai and Vietnamese, I was able to draw an overall chronology of the two Cinema histories, especially in terms of film aesthetics and mainstream cinematic output. By contrast, the technological and market aspects

pieces of information reported in articles and texts with oral accounts of significant film industry stakeholders, archivists and scholars. In this regard, seminal written sources are *The Rise and Fall of the Film Industry in Thailand, 1897-1992* (1992) by Boonrak Boonyaketmala and *A Century of Thai Cinema* (2001) by Dome Sukwong; additionally, several journal articles are noteworthy, including *Royalty Shapes Early Thai Film Culture* by Anchalee Chaiworaporn and *Cinema and the Nation: Dilemmas of Representation in Thailand* by Annette Hamilton. Concerning oral interviews, I can mention among others the contributions of Sukwong (film scholar, Pioneer archivist and founder of the Thai Film Archive), Panu Aree (film producer and distributor), Sittiporn Srisangvasankul (CEO of Golden Duck, cinema technology distributor), Lee Chatametikool (film editor and Director of post-production at Netflix SEA) and Pornchai Wongsriudomporn (CEO of M picture). The interviews proved particularly helpful since most of the recent events mapped on these pages have been rarely recorded, especially those regarding technological transformations of the audiovisual industry after the digital rollout.

To inquire about the structure, policies and practices of the Thai film Archive, I draw from the previously mentioned written outputs of international organizations, but mainly, I rely on additional oral interviews with prominent members and technicians of the archives, such as Chalida Uabumrungjit (Director of the archive and member of the FIAF executive committee), Sanchai Chotirosseranee (Deputy Director of the archive) and Kong Rithdee (Deputy Director of the archive, film scholar and critic).

The history of Vietnamese cinema has been recorded by national institutions, such as the Vietnam Film Institute itself since the formal foundation of Vietnamese cinema in 1953 and thus represents a consistent and valuable body of texts to draw upon; however, being markedly biased by the socialist propaganda, it predominantly accounts for cinema matters until 1986 and omits keeping track of non-aligned local cinematic expressions such as the 1954-1975 Saigon film industry. For these reasons, besides the valuable texts on Vietnamese socialist cinema that I have been able to access, such as *Modernity and nationality in Vietnamese cinema* (2005) by Ngô Phương Lan and *Vietnamese Cinematography: a research journey* (2008) by various Vietnamese scholars, the history and backgrounds of Vietnamese

of the local film industries almost entirely lack written records and data gathering; for instance, in both cases, I struggled to chart in terms of numbers aspects that would have been significant to track the circulation of technological artifacts and related knowledge, such as the number of cinemas in the countries, number of screens and even the number of film produced by year that, with the exception of the early decades of early Vietnamese cinema (1953-1986), have never been officially recorded or are reported inconsistently and with contrasting and thus non-reliable data.

cinema from the '90s onward are predominantly mapped based on oral sources. Among the interviews conducted, can be mentioned here the precious contributions of Ngô Phương Lan (current chair of the Vietnam cinema Association and former Director of the Vietnam cinema Department), Phạm Ngọc Quang (motion picture engineer and former chief technician at Vietnam Film Technology center), Lê Hồng Lâm (film critic and south Vietnamese cinema scholar) and Đặng Nhật Minh (veteran film director and critic). In regard to the archival organization, policies and practices of the Vietnam Film Institute, also in this case, I rely on oral contributions from prominent members of the archive, such as Trần Luân Kim (former Director of the VFI between 1994 and 2000), Nguyễn Hồng Hạnh (Vice president of the VFI southern branch) and Lê Tuấn Anh (vice-head of the technical department at VFI).

The comprehensive analysis of the Thai and Vietnamese film institutions supported by the broad and heterogenous corpus of texts throughout the study led to addressing the second research questions in Chapter 6.3, where I discuss the conceptual dynamics between Thai and Vietnamese archives and their respective contexts, and Chapter 7, where I examine the role of digitization to overcome critical archival concerns. Based on the insights traced via ANT methodology and theoretically framed with Fossati's theoretical tool, these conclusions aim to provide a comprehensive outlook that concurrently addresses climatic, technological, and societal concerns, along with a series of practical recommendations outlined in Chapter 7.

2 Theoretical Debate, Analog to Digital beyond Film Ontology

In framing the current theoretical debate about films in their technological transformation, the first essential factor is that while the global film industry rapidly assimilated digital technologies and practices in its workflows, the digitization of audiovisual heritage remains an ongoing and evolving process. The transition from analog films to digital formats, for many archival institutions, arguably will represent a significant concern in the coming decades, not only because the vast majority of the collections they hold are yet to be digitized but also because digital technologies and workflows are constantly unfolding. Even though certain standards for digital practices in audiovisual archiving have been roughly established, numerous aspects of digital pipelines remain unsettled and problematic, including digital preservation, which relies on transient and overall unreliable carriers and machines, and digital access, which has yet to be structured into efficient and sustainable models. For instance, the Thai and Vietnamese film archives, which hold two of the most extensive Southeast Asian film collections, are still in the early phases of assimilating digital skills and knowledge or developing proper strategies for audiovisual digitization, preservation and access, and are constantly puzzled by the unrelenting and pricey hardware changeover demanded by digital technologies.

Contextually to the material transformation of practices and pipelines, the switch to digital technologies impacted the theoretical debate as media scholars and archivists soon realized that the rapid replacement of analog film stocks with digital binary codes did not only imply a material transformation but also allegedly imposed a conceptual shift as "films" suddenly ceased being on "film".

The disruption of analog filmmaking practices and the radical and seemingly irreversible loss of film reels as primary carriers of cinematic content in favor of digital files re-ignited the debate around the ontology of film, opening arguments that mostly question the role and essence of digital practices in cinema and that often embrace more extensive frameworks on culture and technology. Within this broad landscape, the theoretical debate about the specificities of film heritage and archives in the technological transition, however, still represent an emerging field of study, an apparent niche sector that could reveal critical understandings on the matter as audiovisual archives have ultimately become the main if not the only locus unveiling the contradictions and discontinuities of the digital rollout.

In these pages, I lay out the most relevant arguments and contributions that are overall consequential for my reasonings, while in Chapter 2.1, I illustrate in greater detail the core frameworks of film heritage and archive theorization introduced by Fossati and clarify how I employ and adapt it in my analysis and arguments.

Over the past few decades, the theoretical debate around the impact and consequences of transforming film artifacts and infrastructures to digital means has primarily focused on the ontological fracture between analog and digital, tracing and reflecting on elements of continuity and discontinuity between the two technological paradigms.

The debate can be schematically summarized in two divergent views, one that conceives the shift from analog to digital as a profound and irreversible change in the essence of the media itself, an ontological fracture with the past, and the other that considers films as a participant of a broader media landscape in transition, revealing elements of continuity between analog and digital paradigms (Fossati 24).

The first standpoint assumes that the ceasing of opto-mechanic and photographic practices marks a radical breaking edge, an endpoint that one of its leading advocates, film historian and archivist Paolo Cherchi Usai, defined as "the death of cinema."[19] Cherchi Usai argues that decay, obsolescence and, ultimately, the disappearance of film as material are inherent features of cinema, and digital technologies by no means can overcome the material impermanence of the medium, if not even accelerate the process as archives increasingly are moving their focus and resources toward digital domains. The hazard somehow lies in misinterpreting and over-trust of digital technologies as, in his words, "The digital revolution has quickly shifted towards a subtle yet pervasive ideology; there is something inherently reactionary in how worldwide consensus has been gathered around this new myth of scientific progress" (Cherchi Usai 2).

The ontological fracture between analog and digital technologies in cinema has also been argued by other authors, such as David N. Rodowick, who agrees with Cherchi Usai on cinema's inherent structural impermanence and reflects on how a digital ontology is displacing the photographic ontology of films. For Rodowick, digital images provoke a sort of ontological strangeness that disturbs the perceptual defaults of the chemically based analogical image by looking like it without being it, but also continuing to serve many of its cultural functions (Rodowick 98) and, ultimately, "the digital images should be regarded as

[19] Paolo Cherchi Usai, *Death of Cinema: History, Cultural Memory and the Digital Dark Age*, BFI, 2001.

an expressive, rather than a reproductive medium" (Rodowick 106), a representation of physical reality that is not inferior or a replacement of the photographic media "but rather a fully coherent expression of a different reality, a new ontology" (Rodowick 176). In his reasoning, Rodowick further argues that cinema is in constant technological transformation, and it is currently reinventing itself to adapt to digital technologies (Rodowick 30), but also to external purposes such as creative innovation and market differentiation (Rodowick 37), ultimately also acknowledging elements of continuity in the transition from analog to digital and the importance to extend the discourse to a larger cultural landscape, beyond the materiality of films.

A similar stance may be observed in André Gaudreault and Philippe Marion's work *The End of Cinema?* While the two scholars openly argue that cinema is no longer what it used to be and cinema dispositifs before and after the digital rollout are essentially two "distant relatives", they also point out that cinema, subject to technological transformation, has already died several times. What we are observing with the digital rollout represents a decline of analog media within a broader media evolution. (Goudreault/Marion 13-14). Moreover, they explain that in the recurring transformations, factors of continuity and discontinuity exist in different proportions in the production, exhibition and receptors spheres, or those belonging to the preservation or archiving, or even in the distinct sphere of textual and iconic systems (Goudreault/Marion 8-9), remarking the essential truth that these processes unfold along different directions when contextualized into specific frameworks (modes of production, textual analysis, spectatorship or archival practices).

If, to some extent, these scholars and archivists all interpret the digital rollout as an ontological rupture, by contrast, the other theoretical standpoint rejects the idea that the transition from analog to digital film technologies represents a disruptive turning point. Academics embracing this second assumption by and large, agree on the need for a less teleological and more comprehensive approach that could identify and interpret elements of both continuity and discontinuity within the more extensive media landscape, without placing at the center of the discourse the analog-to-digital rapture.

Among others, this is the viewpoint of Thomas Elsaesser, which, building upon Michel Foucault's deconstruction of linear causality and distrust of the teleological interpretation of historical processes (Elsaesser 34), proposes to adopt an archaeological model that would conceive cinema's past and future "firmly embedded in other media practices, other technologies, other social uses" (Elsaesser 19). According to Elsaesser's media archaeology stance, the transition from analog to digital technologies does not

represent an irreversible ontological disruption; instead, digitization practices should be seen as one relevant element of the long chain of technologies defining cinema history.

Film is a hybrid concept that inextricably incorporates analog and digital artifacts and procedures, and thus the rollout does not represent an ontological fracture between photographic and post-photographic cinema, nor digital technologies provoke the discussed "death of cinema" (Elsaesser 102). Elsaesser's interpretation of film history as media archaeology does not insist on cinema's uniqueness as an art form and its specificity as a distinct medium and, on the contrary, entails a broader and far less deterministic stance.

The theoretical orientation that Elsaesser proposes has explicitly and substantially been influenced by Michel Foucault's rejection of technological determinism in favor of historical contingency, and so it is the more recent work of those media archaeology scholars that investigate the discontinuities (and contingent linearities) of a far-reaching media landscape in constant evolution where analog and digital are non-teleologically sequenced. Prominent exponents of the media archaeology outlook are Erkki Huhtamo and Jussi Parikka, that while not directly addressing film ontology, are significantly contributing to reorienting the discourse around the materiality of analog and digital media and toward a comprehensive multidisciplinary approach that emphasize “both the discursive and the material manifestations of culture” (Huhtamo/Parikka 3).

Parikka's contribution seems to be particularly relevant to this study when he argues that the role of archives as public institutions is being renegotiated through the daily interactions of network culture (Parikka 133) and the theoretical and practical challenges faced by heritage institutions (like film archives) reflect the core issues explored by media archaeology as "the practice of archiving culture is substantially based on technical and social processes" (Parikka 115), or else conceptual and material.Besides, Parikka's media archaeology observations touch on points that, to some extent, resonate with the primary methodology adopted in this study, the Actor-Network. For instance, he reflects on the autonomous and active role of technologies, machines and materials within the overall media landscape, non-human and non-organic elements of the networks that participate in the negotiation of cultures.

The other scholar that endorses the assumption that considering the digital rollout as ontologically disruptive entails an excessive technological determinism is Benoît Turquety. He argues that cinema has never been a homogenous medium and, instead, it should be seen as “a complex layering of diverse technical and cultural practices” (Turquety 17-18). Whereas technical workflows have inevitably been transformed, the film industry has been

highly attentive in adjusting, adapting and creating digital standards that would preserve the essence of the spectatorship experience, alias the fruition of film in movie theaters. That is to say, to remain "cinema", digital standards and formats have been elaborated on traditional analog film practices and aesthetics, preserving certain aspects of the apparatus while converting others to digital systems. In adopting an archaeological stance, Turquety implicitly stresses the importance of tracing both elements of continuity and discontinuity, focusing on the heterogeneity and constant transformation that inherently characterize cinema. The unchanged cinema viewer experience in times of technological revolution is essentially very close to what Elsaesser defines as "business as usual", alias the view of certain preeminent academics, such as David Bordwell and Kristin Thomson, that suggest that the film industry has almost invariably been delivering the same core product by progressively embedding and adapting the latest technological innovations. In these terms, digital technologies merely represent a step further, and “cinema in the digital age is alive and well” (Elsaesser 254), a stance markedly opposite to Cherchi Usai's death of cinema. Furthermore, Turquety's work is particularly interesting in its reading of the French philosopher Gilbert Simondon's thoughts. Simondon, reasoning around the existence of technical objects, proposes to examine technological artifacts as part of networks rather than in their individuality, networks that could only be comprehended in relation to the social and geopolitical context in which they are inscribed (Turquety 45). If, on the one hand, the technical network devised by Simondon allows Turquety to broaden the perspective and overcome the rigid juxtaposition of analog vs digital, on the other hand, it asserts the relevance of mapping the relations between culture and technology, avoiding drawing opposition between the two terms (Simondon 9).

The above-discussed theoretical contributions are all relevant to the overall discourse and present arguments that, to some extent, are all valid and influential to my reasoning.

On the one side, I acknowledge that the digital rollout represents a fracture, an element of discontinuity that, if not ontologically, at least on practical terms, entails tangible criticalities and potentially disruptive fallouts in archival practices and future viability.
For instance, I tend to agree with Cherchi Usai's mistrust of digital technologies when he addresses the issue not as ontological speculation but rather as a series of pragmatic conundrums that audiovisual archives inexorably must reckon with.
In a 2011 interview, Cherchi Usai states "I think the problem is that most archives are, in a way, slaves of new technologies instead of driving technological changes. Because the

technology is there if they want to survive, they feel compelled to do something digital, even if it is not the solution; technology is always behaving like a dictatorship."[20] Bitterly criticizing the undue reliance on technological innovations of which boundaries and criticalities are yet to be understood, he aptly points out the excessive emphasis that part of the archival community gives to the digital domain and solutions.

In my view and according to my findings in Southeast Asian contexts, the embedding of digital technologies and practices currently poses additional puzzlements to local archival institutions rather than providing clear-cut and trustworthy solutions. To some extent, the advent of digital practices in archival workflows can be intrinsically disruptive as it implies radical shifts in essentially every aspect and operation of film preservation and restoration, and for those archives operating in precarious financial and socio-political conditions, like the ones in SEA, the challenge might be monumental.

In these terms, Cherchi Usai's concerns are legitimate: digital technologies are something other than analog film, a different set of tools and brand-new practices yet to be fully comprehended, and, as I argue, a whole new territory to explore warily by adopting a renewed mindset and a more comprehensive theoretical stance.

Hence, I believe that the definition of a far-reaching theoretical framework necessitates overcoming the rigid contraposition of analog-digital and focusing on the actual and tangible critical challenges that the analog and digital spheres concurrently and similarly pose, tracing elements of continuity between the two paradigms but also those of discontinuity in order to frame the dynamics between the technological transformation and the cultural context where it takes place. The theoretical premises of my study are hence close to media archaeology, and I regard its non-teleological stance and its interpretation of films as participants of a broad media landscape in transformation as conceptual tools that allow me to temporarily put aside the juxtaposition of analog vs digital and focus on the hybrid nature of films. Rather than concluding that digital technologies represent an absolute disruption in film history, the initial assumption is that with the digital rollout, some parts of cinema changed, some others remained the same, and overall cinema practices essentially became hybrid, centered on artifacts that exist simultaneously as analog bodies and digital data. In addition, media archaeology is particularly influential in shifting the focus of this preliminary theoretical outline toward what should be seen as the truly constitutional

[20] Eksta, Viktorija. *Past, Present, Future - Interview with Dr. Paolo Cherchi Usai*, Riga, Mansards, 2011.

dichotomy: films as material and conceptual artifacts. When mutually conceived as material artifacts and/or conceptual beings, analog film and digital productions share numerous frameworks. The digital rollout, in fact, challenged the nature of films in both their tangible and conceptual essence, transforming their physical being from film stock to binary digital data and allegedly mutating their role within a given cultural context, but also suggesting that the dichotomy of material/conceptual might reveal crucial angles to frame the discourse.

The juxtaposition of analog vs digital is undoubtedly significant when drawing the overall theoretical framework, but if not directed toward a specific, tangible field of study, it is likely to remain on a speculative level, and thus in this study, it is not strictly regarded as a rigid ontological conundrum. As also suggested by both Turquety and Gaudreault, the "death" or not of cinema is too broad of a query as it could be tackled from many different angles (industry, spectatorship, language). The formulation of a theoretical framework that aims to target tangible concerns should therefore narrow down the scope and pivot around the locus where such criticalities materially occur: audiovisual archives.

More than ten years after the digital rollout, it has become clear that the film industry and most of its infrastructures have abandoned analog film processing and embraced the digital. Archival institutions, on the contrary, inevitably maintain their mandates to preserve analog film reels and are also increasingly pressured to embed digital in their activities. Audiovisual archives currently serve as the only space where analog and digital technologies not only coexist but also become concurrently foundational and mutually influential.

In the two Southeast Asian audiovisual archives, for instance, the practice of digitization and the theoretical debate around it are deeply intertwined as it is not merely a question of implementing new technologies in their practices (which per se stands as an overwhelming challenge), but it still is a matter of establishing if digitization practices are required and beneficial for film archives and if such technological transformation would actually remodel mandates and tasks of the institutions. Thereby, the transition from analog to digital also allegedly implies a redefinition of the role (cultural and practical) of AV archival institutions in the society and context they operate, posing several questions between archives and other bodies/institutions, such as governments (what does the archive represent for central rulers in the digital age? Why should governmental agencies financially support them?) and production companies (are digital-born productions properly stored? should private film enterprises submit their digital productions to archives?). These questions stand as factual concerns for the Thai and Vietnamese archival institutions and, representing inherent facets of my key research questions, are thoroughly examined later in the study.

Analog and digital are hence equally significant when investigating the practical challenges and criticalities encountered by audiovisual archives, but rather than univocally focusing on the ontological query that poses analog and digital in opposition, I aim to adopt a more comprehensive stance and acknowledge the material/conceptual dichotomy as the leading theoretical assumption of my work.

While the schools of thought all suggest between the lines that, on top of the dispute of analog vs digital, the material and the conceptual being of films might represent two separate and equally relevant paradigms, the leading academic that directly addresses the dichotomy material/conceptual and constructs a solid archival framework based on such premise is Giovanna Fossati. In *From Grain to Pixel*, the archivist and scholar lays the groundwork for a more coherent and constructive debate around audiovisual archival theorization and broaden the scope of the debate beyond the juxtaposition analog/digital. In her words, "Film, as I would like it to be intended, is a broader concept that transcends the technological differences between the analog and the digital. Film heritage includes all the elements that inform and form film culture" (Fossati 16). Fossati explicitly suggests moving on from the polarized debate that contraposes analog and digital and focusing on the middle ground, the process of transformation that regards both expressions of film artifacts, an approach that considers the notion of transition and hybridity as inherent properties of the media. In her view, the ontological discourse does not ultimately determine that digital and analog represent two different media (Fossati 27), and film nature is transitional, ontologically uncertain and not univocally affected by technological changes (Fossati 181-182). Fossati's stance clarifies that the technological paradigms of analog and digital do not represent a juxtaposition in terms of material vs immaterial. On the contrary, the hybrid nature of films entails elements of continuity between the two terms, particularly when embedded in actual archival practices and discourses. The materiality of digital films is often overlooked, and digital images should not be seen as immaterial beings as they continue to exist on physical carriers and devices (Fossati 22), thus revealing criticalities and practical concerns very similar to those acknowledged about analog films. Changing throughout time, films are inherently transitional (Fossati 182).

What Fossati proposes is to inquire about archival practices and roles within a broad theoretical landscape where analog and digital are studied in continuity in their material and conceptual transition. Films as material artifacts are concurrently analog and digital and, at least within archives, will maintain this liminal status for years to come. Films as conceptual

beings are both the historical artifact (e.g. the nitrate reel) and its historized version (e.g. the digitized copy) (Fossati 146).

Building upon Fossati's assumptions, I argue that the elaboration and application of an archival theory necessarily entail a pragmatic approach that, as a first step, focuses on factual criticalities and concerns of film as material artifacts and based upon that, formulates a structured theoretical framework that can help overcome the detected concerns. While material and conceptual should be regarded as complementary and reciprocal, I propose prioritizing the investigation of material concerns to reveal and understand the conceptual and subsequently apply the conceptual to devise archival practices and policies to safeguard the material. The matter is thus still markedly methodological and in the following chapter, I further elaborate on Fossati's theoretical frames to illustrate how her theories are an integral part of the methodology employed for this study and represent foundations to elaborate both innovative models for audiovisual preservation and reliable methods of analysis.

2.1 Fossati's Archival Theoretical Frameworks

Within the broad landscape of film and media theories, film archives and heritage represent relatively new fields of study.[21] Even though the debate around archival film practices started some years earlier to the establishment of FIAF in 1938,[22] until recently, the focus mainly remained on technical and ethical aspects of film preservation and restoration.

The theorization of film archives and archival film practices emerged only in recent years, particularly with Giovanna Fossati's contribution, conjugating practices of film preservation with the elaboration of a dedicated theoretical framework, focusing on the questions raised in audiovisual archives in consequence of the digital rollout. As she states, "Formulating a theory of archival practice in a time of transition to digital technology is particularly challenging as there are no existing theories of archival practices, not even for analog films." (Fossati 150). Fossati's pioneering and unique contribution represents a trailblazer for audiovisual archival studies and is adopted as the primary benchmark for my study, however, it is also challenged as I question and apply Fossati's framework far from the territories where it was initially envisioned. Similarly to most of the literature on audiovisual archiving, Fossati's theorization has been, in fact, devised within a western context and has been taking as examples and case studies archives and institutions located in Europe or North America.[23] In this study, I employ Fossati's theories to examine film artifacts in their archival life within non-western contexts, notably Thailand and Vietnam, and challenge the frameworks she proposes to determine if they can represent universally valid and viable theoretical and methodological tools. Throughout the analysis, I do not adopt a stance that rigidly juxtaposes nor compares western institutions and practices with "non-western" ones,

[21] In the 1980s, and particularly after the 1978 FIAF congress held in Brighton, a new wave of film heritage studies was inaugurated. The meeting of film historians and archivists that took place in that event represents the turning point in placing the study of film into a new historical and analytical perspective and stands as the beginning of what later Thomas Elsaesser will define as the New Film History. (Fossati 17)

[22] "FIAF's official date of birth is generally recognized as 17 June 1938, as confirmed by the date of the *Agreement for the International Federation of Film Archives* signed in Paris by its four founder-members -the Cinémathèque française, Germany's Reichsfilmarchiv, the British Film Institute, and the Museum of Modern Art Film Library. However, the seeds of this project of international cooperation had been planted several months, if not years, before, and the Federation did not become a fully operational organization for many more months." (Dupin, Journal of film preservation issue 88,43)

[23] Fossati's main publication *From Grain to Pixel*, reflects her experience as curator at Amsterdam's Eye film museum, but it also presents and discusses practical examples of film restoration, archival activities and theoretical contributions solely taken from western contexts. Among others, she examines works conducted by the Academy of Motion Picture and Arts, New York-based Cineric film Laboratory, La Cinémathèque Francais.

but rather, I apply the guiding principles of the four archival frameworks on specific cultural contexts to inquire about the impact of shared archival criticalities like digital transformation and analyze how film artifacts' materiality and conceptualization are ultimately negotiated among consequential participants.

In other words, Fossati's theory is used to interpret what film heritage represents for the archival institution preserving it and the socio-political-economic context that produced it. The key concept I borrow from Fossati's theory is the identification of four elemental frameworks devised to describe and interpret archival film practices, which are: "Film as Original", "Film as Art", "Film as Dispositif" and "Film as State of the Art".[24]

As Fossati explains, the theorization of archival practices primarily serves to provide flexible tools for both archivists and academics to recognize the conceptual dangers interwoven with film artifacts and their restoration (Fossati 149). Significantly corroborated by her practical experience and aiming to bridge the dialectical gap between archives and academia, Fossati's theory for the archival life of film is thus formulated around the essential practices that characterize archive's activities and discussion, namely preservation, restoration and access; practices all equally relevant for the discourse as with the advent of the digital, they are all transforming their status (Fossati 151).

The frameworks are constructed around the core assumptions previously outlined: films as hybrid artifacts in transition and material/conceptual as constitutional dichotomy.

[24] In the last edition of *From Grain to Pixel*, 2018, Fossati proposes the formulation of a fifth framework, Film as performance, which, in my view, slightly diverges from the comprehensive theory and the scope of my study. The framework places the performative dimension of screening practices at the center of the discourse and is particularly relevant for those archives holding early cinema collections, and as Fossati suggests, it is particularly relevant to tackle specific questions concerning early, avant-garde and experimental films and the practices implemented by archives to present, restore and present such films. (Fossati 178) While I acknowledge the significance of the framework in interpreting peculiar types of audiovisual artifacts and collections, I believe it is less consequential to my study overall. Firstly, because, differently from the other frameworks, it targets a very specific cinema era that, in certain instances, might have even been virtually non-existent. For example, official accounts report that Vietnamese Cinema officially started in 1953, and there is no record of silent film production in the country; similar discourse can be done about Thailand, which officially started film production only in the late 30s and thus nearly had no silent film output. Secondly, Film as Performance somewhat intersects the scopes of Film as Dispositif by addressing the projection of artifacts and the dynamics established with the audience during the screening, focusing on the modalities and context surrounding the projection rather than on the technological process. Given that my primary interest is the technological transition from analog to digital, I address the discourse around film projection and the formulation of related arguments within the Film as Dispositif rather than with the performative framework. Ultimately, I interpret the framework in a broader sense, addressing the idea of performance as the act of sharing and exhibiting an artistic creation in front of an audience. In this respect, in my study, I do not directly consider the framework separately but embed the discourses it proposes within the other four frameworks, bearing in mind the significance of inquiring film artifacts in their performative mode and their historical evolution.

In the formulation of the frames, Fossati hence does not place analog and digital in opposition nor give priority to the ontological debate. Instead, she proposes a comprehensive theoretical toolbox to examine archival practices as inherently hybrid and transitional.
In Fossati's theory and exemplary case studies, film artifacts and archival practices are placed at the center of the discourse. In my view, the comprehensive frameworks enable to broaden the scope of the analysis to all those bodies that show significant Agency toward the viability of film heritage, within and beyond the archival institutions. While the reasoning still orbits around film artifacts, archives and archival practices, I employ the interpretative flexibility of the frameworks to map and fathom the wide network of relationships around film artifacts in their archival life and beyond.[25] In other terms, while Fossati envisioned the frameworks as potential scenarios into which distinct archives can operate, in my work, they become an instrument for analysis built around the specificities of film archives, an intellectual tool to inquire about the negotiation of pragmatic resolutions and understandings between archival institutions and other participants, whether human or non-human, organic or inorganic, analog or digital, individual or collective.

Holding Fossati's pragmatic yet conceptual perspective, the theoretical frameworks serve as methodological tools that support charting the overall picture rather than inquiring about distinct archival practices. While audiovisual preservation remains central to my reasoning, I seek to interpret the broader dynamics around film heritages in their Southeast Asian archival life, tracking technological processes and socio-political-economic instances.

Furthermore, the interpretative flexibility constitutes an additional essential premise of my work insofar as films are envisaged as conceptually complex and shifting artifacts. This assumption entails that not only distinct archives interpret film artifacts differently, but such processes could also be extended to the contexts that produced the artifacts, implying a negotiation of film artifacts' conceptuality between audiovisual archives and relevant external stakeholders. Occurring independently from the material expression of the artifacts, distinct social groups attribute diverse significance to film heritage, influencing the definition of analog/digital policies and practices, which thus largely depend on the negotiated attribution

[25] Fossati borrows the concept of interpretive flexibility from the Social Construction of Technology, SCOT, to examine how the technological complexity of film artifacts different social groups perceive films in distinct ways, assigning their significance to cinema artefacts. For instance, film producers may see them as commercial products, while filmmakers view them as artistic expressions; manufacturers consider them a marketplace, archivists see them as cultural heritage, and engineers may regard them as practical applications. In the realm of audiovisual archives, multiple meanings can exist for the same film artifacts, even among members of the same social group. This diversity of meanings leads to different approaches to archival film artifacts, which can coexist within the same archive without necessarily contradicting each other. (Fossati 197/204).

of manifold significant concepts to film artifacts. After all, “the entire history of the medium and the critical thought that has accompanied it has returned incessantly to film's uncertain status” (Rodowick 12), emphasizing how films are inherently ontologically flexible artifacts of which conceptualization varies among disparate social groups and especially between scholars and archivists, from which the ontological debate ultimately originates.

The conceptual negotiation of film artifacts represents a key notion for my overall reasoning, as it does not simply imply the theorization of archival practices, but it unfolds in a variety of human-driven activities with tangible consequences on film heritage's viability.

In Fossati's theorization, the materiality of film artifacts is hybrid and provisional. Films are inherently transitional, and the shift from analog to digital represented a momentous transformation in their material being but not on an ontological level, and films in their analog, digital or hybrid forms remain essentially the same media. While I endorse Fossati’s view that the material transformation has not entirely disrupted audiovisual ontology, I also suggest that it is so because the conceptualization of film artifacts has never been fixed and rigid, and the transitional materiality of films, beyond practical implications, allegedly represents an additional layer in the process of conceptual attribution and negotiation within given cultural contexts.

The digital rollout inaugurated a new phase of ontological reflection, highlighting how the conceptualization of film heritage among various social groups is neither neutral nor fixed. While engaged in the same media landscape as archivists and film scholars, other influential non-archival societal stakeholders (governments, film industries, audiences) often overlook or misunderstand the significant implications of the transition from analog to digital and how this affects the long-term preservation of film artifacts.

This ontological discrepancy has already been addressed by the above-referenced film scholars, particularly concerning the audience's role and cinematic experience.

When discussing the digital revolution, Goudreault and Marion reject the idea that such a revolution affected all its participants equally, and the audience continued to consume film images and frequent movie theaters whether the projection system has been digitized or not (Goudreault/Marion 52) which essentially represents the "business as usual" stance of those academics like Bordwell and Thompson that claim that the classic mode of distribution and reproduction has never really changed (Elsaesser 254), especially regarding the audience's experience, who continue consuming films regardless of the material form. This stance is further endorsed by film scholar John Belton when he addresses the digital rollout as a false revolution: digital projection, as it exists today, does not transform the

nature of the motion-picture experience, and audiences viewing digital projection do not experience the cinema differently, as what is being offered is essentially equivalent to 35mm film projection (Belton 104). A view shared by Frick when she describes the digital revolution as merely a step in a broader technological progression that sees digital means simply as the current phase in media production, distribution, and exhibition (Frick 154).

Substantially, the digital rollout entailed technological transformation, but film language and audience experience have mostly stayed the same. Analog films have become obsolete, but cinema continues as the dominance of the digital image has had little to no impact on the narrative standards of theatrical fiction films, which still fulfil most of their traditional cultural functions (Rodowick 98-100).

As spectators worldwide enjoy movies more than ever, thanks to online digital distribution and the rise of digital screens, most film consumers have hardly noticed the disappearance of analog machines and infrastructure. Besides, even online distribution does not constitute a significant novelty, as from a film consumption perspective, it did not engender a paradigm shift comparable to that brought about by the introduction of television in the 1950s, which marked a fundamental transformation in the relationship between audiences and society (Thorburn/Jenkins 12). Technological transformation ultimately does not yield the same repercussions and outcomes for all participants. Most spectators around the globe keep consuming films regardless of their materiality, most often without even questioning the technological transition from analog to digital. After all, the explicit aim of all the technical requirements developed by the Digital Cinema Initiative was aesthetic to ensure that digital cinema would have the capability to present to the spectator a theatrical experience better than with 35mm prints (Turquety 42).

In contrast, the material and conceptual shift has been plainly recognized by archivists and curators, the social groups directly involved in the "afterlife" of film artifacts. Film archives are not only tasked with addressing critical material concerns that may go unnoticed by other significant stakeholders, but they also represent the group that best understands and grapples with the ontological conundrum, as explained by Fossati's frameworks, "Film as Original" above all. Film artifacts re-acquire their status as original once they are re-territorialized by entering the film archive, acquiring their archival originality and becoming the original physical objects to be preserved as heritage (Fossati 207). Despite films having started being considered part of our cultural heritage with the film archive movement (Fossati 6, 2017), “the preservation of national or state heritage is not and never has been, a neutral concept,

although it is presented as such by politicians, intellectuals, and archivists" (Frick 20).
In archives, the authority of the object is restored, and the film copy is re-territorialized (Fossati 163), and thus the originality is also re-conceptualized according to the socio-political and economic context where such re-territorialization occurs and on the distinct conceptual understanding of film artifacts by local society, communities or governors.
The conceptualization of film artifacts hence occurs both within the archives, where "Film as Original" becomes the main frame of reference and beyond the archives, where the conceptualization involves a wider range of participants for whom the originality of film artifacts may not be significant. The understanding of archival frameworks is not fixed and requires deliberate attribution by archivists, curators and scholars and negotiation with consequential external stakeholders like audiences and governments, that do not axiomatically recognize equal conceptual significance to the same technological art objects but still have tangible leverage on archives operations, especially financing bodies such as governments and central authorities.

On the premise that films in their archival life are regarded as materially hybrid and conceptually flexible artifacts, I outlined below the four main frameworks of Fossati's theory, further explaining how I use them for framing and analyzing key archival challenges and outlining the key arguments that arise from this application.

Each framework focuses on a specific aspect of archival artifacts in conceptual and material terms, often without distinguishing between the two spheres. However, in formulating my arguments, I specify which sphere is more relevant to the framework and my discourse, and, in some instances, I address the material and the conceptual queries independently. In chapters 6.3 and 7, I reassess the key concepts outlined within the theoretical debate and apply the frameworks to analyze how archival institutions, and their socio-political contexts establish and assign distinct cultural values to technological artifacts and audiovisual heritage.

FILM AS ORIGINAL addresses films as unique historical artifacts in both their material and conceptual beings and places authenticity as the primary value of the artifact. The framework entails preservation practices as a critical mandate for archival institutions and stresses the priority of preserving the best original physical copy.
Placing at the center of material and conceptual discourses the nature of film artifacts, it is the framework most heavily affected by the transition to digital (Fossati 166).

Film as Original poses conceptual disputes since the concepts of originality and authenticity are not fixed and can vary according to interpretations attributed by distinct archives. The questions about the originality of films originate from Walter Benjamin's renowned discourse about the reproducibility of audiovisual materials, inherent feature of the photographic media that allows it to exist in multiple copies. Benjamin's work is undoubtedly influential to Fossati's theorization, but while the German philosopher sees no ontological difference between the original negative and the successive prints, ultimately disputing that mechanically reproducible media are never authentic as their presence in time and space is never unique, Fossati argues that films gain authenticity and thus conceptually become the original at the moment they reach the archive (Fossati 162).

Film as Original thus does not simply stand for the material unicity of the Film stock negative or its copies but represents a fluctuant conceptual framework within which distinct archives can operate to determine their preservation, collection and restoration policies and practices. I endorse Fossati's view that it is the archival life of the Film artifact to determine its being, in this case, its originality. Films as materials with a shifting conceptual nature gain their status when allocated from outside, by archivists or curators, and while the material embodiment of audiovisuals remains a stable feature, their conceptual being requires renegotiation.

Focusing primarily on film artifacts materiality, the framework is instrumental in inquiring about the constitutional archival practice of preservation in regard to both analog films and digital files. However, in my view, the framework can also be employed to identify and elaborate on those material criticalities that directly threaten the viability of physical carriers, thus the safeguarding of original film artifacts. In my work, "Film as Original" is initially associated with the environment challenge, the material decay that equally affects film stocks, magnetic tapes and or any other physical carriers under the action of environmental factors such as air humidity, fungus and molds. Particularly severe in SEA's warm-humid tropical climate, this challenge presents similar characteristics worldwide and has been known and addressed by the international archival community since the early days of film preservation, and while film archives, collectively and individually, have developed efficient methods and strategies to tackle the material deterioration of analog film reels, with the digital rollout new questions have started to arise. However, representing most archival institutions' main frame of reference, the query around originality is also examined within the technological and social challenges.

Whereas my research questions pivot around digital practices in film archives and their capability to overcome critical concerns like physical decay, I draft below two central arguments that separately address the material and the conceptual spheres.

From the material point of view, I argue that the current standards used for the long-term preservation of digital-born and digitized films do not yet represent a fully reliable and feasible substitute for analog film stock. Equally prone to decay and obsolescence, the magnetic tapes currently used to store digital data, despite being widely considered an obliged choice for archival term preservation practices, still entail similar (if not worse) hazards and concerns than film stock. Moreover, as I demonstrate through the analysis of my findings in Southeast Asia, archives operating in difficult contexts are not able to fully implement digital domains in their practices and despite their efforts to catch up with the new internationally accepted standards, for these archives, digital technologies do not yet practically stand as a feasible nor sustainable tool for long-term preservation strategies.
In concrete terms, Cherchi Usai's digital technology dictatorship clashes with the actual challenging circumstances that archives in developing countries deal with daily.
Supported by practical instances, I argue that analog film stock does not simply hold a central position in archival discourses but also still represents the most viable solution for long-term preservation, while digital technologies, despite being indispensable to granting access to film collections, have not yet reached a stable and reliable level of development and hence require the elaboration of more feasible and sustainable preservation models. This ultimately implies that the disappearance of the remaining film laboratories and related skills should be regarded as a critical concern for SEA archives, as detailed in the following framework.

From the conceptual point of view, the framework “Film as Original" can help reassess the authenticity and uniqueness of analog films in digital times. I argue that, given the divergent and fluctuating conceptualization of artifacts, the historicized material properties of films in their archival life become a conceptual tool for archivists, scholars and curators to deliberately negotiate the cultural significance of film heritage with non-archival social groups. The acknowledgement of analog films in their archival life as unique and culturally relevant artifacts can be ironically seen as another consequence of the digital rollout, a cultural change that necessitates being recognized, shaped and embedded into a given social context by the archives themselves.

"Film as Original" directly addresses the ontological discourse, and while I do not aim to find closure with film ontology between analog and digital, I still believe that Benjamin's "Loss of the Aura" theorization can help me outline my overall theoretical stance and further

frame the conceptual negotiations of analog film artifacts in digital times. Benjamin's core assumption is that the "here and now" of the work of Art measures its authenticity and originality. The unique existence of the artifact in a given place and the individual experience of the work of Art ultimately determines the so-called Aura (Benjamin 21). On the one hand, Benjamin underlines the irreproducibility of the work of art as a sine qua non to constitute its primary value, and on the other hand, he remarks that the authenticity value manifests itself as Aura with the viewer's experience (Benjamin 24), assuming that the mechanical reproduction of films diminishes or even nullifies the Aura.

In contrast with Benjamin, I argue that audience participation and artifacts' conceptual charge should be observed independently, as the absence of the first does not necessarily imply the lack of the second. The broad and vague Aura identified by Benjamin represents the unstable ontology of the work of art capable of establishing intellectual/emotional relationships with its observers. However, the observers are heterogeneous, and manifold and the Aura could be regarded no less than the fluctuant and unsettled whole of conceptual values that shift according to the social group engaged, embedded in both the content and the materiality of the artifacts and hence existing also in the absence of an audience. The general public becomes only one participant in these dynamics. As discussed above, despite the switch to digital, audience participation remained essentially the same, and SEA spectators continue to consume and enjoy film screenings almost identically as in the past without substantially perceiving a change in Aura in a "business as usual" continuity between analog and digital. This is to say that for non-archival social groups, the originality of film artifacts might not be as consequential as it is for archivists, curators, and scholars who, with a clear understanding of film artifacts' archival life, place the preservation of the best original physical copy at the center of the relationship.

Ultimately, I argue that the Aura epitomizes the broad and flexible whole of conceptual values that archives could acknowledge and negotiate with the socio-political context that produced the work of Art, including the historicized material originality gained after the digital rollout, which could hence be regarded as an externally attributed value capable of elevating film heritage to a superior cultural status by broader segments of society.

FILM AS ART focuses on the artistic intentions in producing the film artifacts, the archive interpretation of the artistic process and the practices of preservation of film Art. As Fossati explains, the framework is primarily associated with two main aspects: medium specificity and authorship (Fossati 168). This means taking into account the creative intent of

the author/director but also the specificities of the technological pipeline involved in the creative process, from production to exhibition, to preserve the artist's intention from creation to screening. Archives embracing this framework focus on preserving the film material artifacts as the medium-specific manifestations of different phases of an art form in transition (Fossati 169) as explicitly indicated by the author of the films or by the Archive's understanding of it. Meaning that the Archive participates in attributing artistic values to the artifact, not aesthetically reshaping it but acknowledging the audiovisual artifact as a work of Art created by employing specific technological processes and preserving such quality in all its terms. The framework ultimately stresses the importance of the Archive to preserve and restore the artifact avoiding altering the original vision of the artist and the media specificities involved in the creative process.

For Fossati, the framework has a bond with the concept of originality and authenticity via the medium specificity argument as much as "Film as Original", and as such, it also conceptually leans toward the ontological discourse. Overall, in this frame, the emphasis is more on the conceptual elements than on the materiality of film artifacts (Fossati 170), as so it is my interpretation and arguments regarding it. The framework predominantly addresses film artifacts in their conceptual beings, transcending their material form and, with it, the opposition of analog vs digital. "Film as Art" still entails an ontological discourse, but in this framework, the essence of films is discussed in terms of artistic and cultural values rather than material expression. Archives operating in this framework preserve films regardless of physical carriers, and while still concerned with adopting suitable technical preservation strategies and workflows, they chiefly focus on the conceptual sphere of the artifacts and the cultural value embedded. In this framework, the conceptual sphere is constructed and theorized according to cultural values externally attributed, and archives participate in these processes by acknowledging the author's intentions and the creative/technical pipeline.

Stressing the relevance of the artistic and authorial intentions in producing film artifacts, "Film as Art" places the artistry of films at the center of the mission of collecting, preserving and promoting the Art of Film in most film archives (Fossati 167-168) and thus places human participation at the center of archival theorization and hints that the conceptualization of film artifacts begins outside of the archive, with the deliberate attribution of significance to the technical objects. In my study, the framework is thereby associated with the human challenge, the broad tier of criticalities that include all those threats to the physical viability of audiovisual heritage caused directly by human action. By

this, I mean to trace a connection between the conceptualization of film collections and the decisions taken or imposed by external stakeholders, institutions and legislative authorities. Stemming from the idea that films are not just expressions of individual creativity but products of collective creation, my interpretation and application of "Film as Art" differs significantly from Fossati's theorization. I adopt a theoretical approach that examines the conceptualization of film heritage as a whole rather than the single texts produced by an individual and contemplates the broader socio-political-economical context that produced the artifact beyond its artistry. I ultimately employ the frame as the main instrument for examining the influence of contexts and the Agency of non-archival Actants. However, this implies interpreting "Film as Art" more comprehensively than how it was initially conceived.

In my analysis, as Frick emphasizes, film heritage preservation is viewed as a socially structured practice instead of being a linear and natural process of integrating artistically and historically significant moving images into contemporary life (Frick 7) and thus requires being interpreted and negotiated by all the participants involved. Film archivists, critics and academics justify the study and preservation of motion pictures based on cinema's public function as art, history, and cultural heritage (Frick 5); however, these attributed values might not be equally perceived by non-archival stakeholders. As later demonstrated, the establishment and development of the Vietnam Film Institute are profoundly tied to the revolutionary socialist values promoted by the single leading communist party, so it is the concept of monarchy, key component in Thai national identity, that had a decisive role in the foundation of the Thai Film Archive.

I hence argue that the artistry encapsulated in film artifacts is not universally recognized as a foundational value, and in numerous instances, the cultural significance of film heritage collections is associated with concepts that transcend aesthetic expressions and individual creativity. Instead, eternal participants might conceptualize and attribute significance to the artifacts in artistic terms but also political, religious, economical, ideological or any other identitarian expression of a given community.

Besides, the conceptual negotiation also entails practical repercussions as the long-term viability of audiovisual heritage largely depends on the acknowledgement from different social groups and societies that produced them, particularly from governments and central authorities, that, with their financial and political clout, can empower archival practices but also potentially constitute a threat to audiovisual archives and collections. This is particularly relevant in authoritarian and non-democratic contexts like those studied here, where archives must negotiate their existence and operativity with central rulers.

Drawing from my findings, I ultimately argue that interpreting these dynamics in terms of negotiating conceptual values and cultural identity would probably necessitate formulating a new, independent framework of reference, rather than reshaping "Film as Art."

Moreover, similarly to “Film as Original”, I also argue that the conceptual negotiation of film artifacts closely relates to access, the archival practice that functions as an ideal bridge between archives and external stakeholders, being those governors, civic society or general audiences. Granting access to non-archival human participants becomes crucial not only in terms of public screening, commercial re-distribution or scholarly research but also as the setting of an ideal ground where all the participants converge and, by experiencing the audiovisual content, negotiate and acknowledge film artifacts' significant conceptual elements. In short, granting access to collections, audiovisual archives prove their existence and the significance of their work and establish those intellectual relationships with external Actants that can lead to conceptual re-negotiation.

FILM AS DISPOSITIF focuses on exhibition and screening practices, stressing the importance of the site and the technologies to project films. The framework emphasizes the centrality of the relationship between screens and spectators (Fossati 174) and the role of diverse historical technological dispositifs in determining such dynamics.
“Film as Dispositif” matches the comprehensive debate around the Apparatus theory and offers a way to examine films “from a broader (technological) perspective rather than seeing them as abstract objects of analysis” (Fossati 171).

The framework takes primarily into account the role of screening technologies and sites and significantly resonates with the conceptualization of the dynamics between spectators and cinematic representation dispositifs and apparatus introduced in the 1970s by structuralists like Jean-Louis Baudry and Christian Metz. As I deliberately shape my reasoning, avoiding deterministic readings of the social and technological spheres, my interpretation of the framework moves away from the ideological effects of film projections on audiences and does not look at dispositifs in terms of psychoanalysis (Baudry 39), as for the French theorists. Instead, I primarily look at the frame as a practical tool to extend the analysis to entities and infrastructures external to the archive with substantial technological influence and consequentiality on archival operations, film laboratories above all.
As Fossati explains, the framework is particularly significant about safeguarding analog film screening practices and authentic viewer experience, and archives embracing this stance have

the responsibility of preserving films and making them available for traditional projections as well as new, not yet imaginable, dispositifs (Fossati 173).

While I still acknowledge that "Film as Dispositif″ entails the centrality of the reenactment (Fossati 99), my pragmatic application of the framework look at dispositifs with a broader outlook that comprises all the technological items and infrastructures that participate in the establishment of archival practices, workflows and critical challenges, hence including those participants that do not directly relate with screening practices but that still engage with the technological sphere such as photochemical laboratories, film manufacturers and machinery suppliers. In my study, the framework is indeed consequential in its material scope as it stresses the urgency of preserving the rapidly disappearing set of skills, knowledge, infrastructures and technological devices that marked the analog film era. Film as Dispositif matches the concerns I emphasize through the "technology challenge", obsolescence above all, the discontinuance and disappearance of hardware and machines employed to store, manage and reproduce audiovisual contents.

As explained, the digital rollout wiped out analog film practices and infrastructures, posing a series of practical criticalities to audiovisual institutions that suddenly lost essential interlocutors, suppliers and technical partners for their operations. Besides, obsolescence also represents a concern for digital technologies and future practices since the swift pace of technological advancements and the financial burdens that it implies pose new but equally concerning threats to archival activities. Within the framework, my arguments are thereby concurrently material and conceptual.

From the material point of view, I endorse the framework's inherent intent to preserve knowledge, practices and technologies involved in analog film exhibitions, and I trace initiatives of this kind within the two case studies. However, I primarily focus on other infrastructures, namely film laboratories, as at this historical juncture, safeguarding the last surviving pieces of technology, infrastructures and photo-chemical skills represents a more critical task for SEA film archives. The framework "Film as Dispositif" became crucial with the digital rollout as the knowledge and skills necessary to handle and reproduce analog films began to disappear rapidly and if archival institutions do not aptly intervene in preserving processes and hardware, no one else will. The preservation of obsolete machines and related knowledge is thus a priority in practical terms, as their disappearance would significantly undermine other aspects of archives' workflows, including preservation and access.

From the theoretical point of view, I argue that the preservation of obsolete film dispositifs also depends on the attribution and negotiation of distinct concepts to analog

technologies. The arguments outlined with "Film as Art " applied also to analog dispositifs, infrastructures and practices as their viability depends on their social acceptance. Acknowledging the obsolete film technologies and practices as historically and culturally significant is not neutral and needs to be deliberately constructed and endorsed by curators, archivists and scholars. While several renowned Western archival institutions have focused on the preservation of historical dispositifs and practices since their establishment (e.g. the Museo Nazionale del Cinema di Torino in Italy,[26] Eye Filmmuseum in Amsterdam),[27] such mandate remains hazardously marginal for archives in Southeast Asia.[28] The loss of analog film processing technologies, knowledge and practice is an impending criticality for SEA archival institutions, because of practical reasons but also for the sake of the film art itself.

FILM AS STATE OF THE ART examines film technologies' boundaries, capabilities and developments. Based on the assumption that "one of the driving forces in filmmaking is the search for pushing the limits of technology" (Fossati 174), the framework places technological innovation at the center of its reasonings. Focusing on market-driven technological innovations and their impact on archival practices chiefly from a pragmatic point of view, the framework has a stronger relationship with filmmaking practice than with the theoretical discourse (Fossati 174), and thus it does not directly address a distinct theoretical argument nor pose questions related to the ontological query.

From the material perspective, "Film as State of the Art" is the frame that better addresses the role of the latest technologies and the impact of the digital rollout on archival practices, digitization and digital access above. The framework stands as an effective instrument for inquiring about the dynamics between film archives and the cinema industry. While not exclusive to commercial archives, this framework is primarily associated with archives that have a direct connection to film productions, as well as manufacturers and suppliers in the audiovisual industry (Fossati 175).
In line with Fossati's stance, I address the framework in its practical aspects, employing it to investigate the specificities of the digital rollout in the two SEA countries and tracing the

[26] Museo Nazionale del Cinema di Torino, *https://www.museocinema.it/it* accessed on 21/10/2021
[27] Eye Filmmuseum Amsterdam *https://www.eyefilm.nl/en* accessed on 21/10/2021
[28] As detailed in later chapters, the efforts of the Thai Film Archive Public Organization are a notable example of safeguarding obsolete apparatus and practices and an exception in the region. For instance, in 2017, FAPOT purchased an entire film laboratory comprising the equipment to develop and print 35 mm and 16 mm films from a shutting-down post-production facility and is currently implementing analog film workflows.

relationships between archives and other relevant stakeholders involved in technological developments (manufacturers, suppliers, theater chains).
In my reasoning, "Film as state of the Art" primarily relates to the Technological Challenge as I identify obsolescence, rapid technological development and constant hardware changeover as leading criticalities of digital technologies with significant repercussions over archival practices. Remaining within the material sphere, my arguments are relatively straightforward and serve to counterbalance but also uphold the assumptions expressed with the previous frameworks. I indeed argue that digital technologies, but more generally speaking, the push toward technological advancements, are crucial for archival institutions, whereby archives avoid technological determinism and implement innovative practices and models based on tangible procedural needs.

With the digital rollout, audiovisual archives are steadily pressured to embrace the epochal transformation and move to digital domains and practices. While certain practices are beneficial, if not indispensable, others still need to be critically reassessed in consideration of the specificities of individual archives and the tangible concerns inherent to digital means.

On the one hand, I argue that the digitization of film heritage, its restoration and further distribution through digital dispositifs and platforms is essential as it contributes to the acknowledgement and negotiation of the significant concepts embedded into film artifacts among diverse social groups. Digitization becomes imperative to grant access to wider audiences and to establish or maintain relationships with relevant components of the surrounding society, an ideal continuous dialogue about the cultural significance of local film heritage and the archive's role. On the other hand, I argue that for long-term preservation practices, digital carriers and hardware still disclose structural and technical flaws and thus do not yet represent a feasible nor reliable solution, especially for archives with limited resources as in numerous instances across Southeast Asia.

2.2 Research Methodology: Actants, Networks, Agency

To map and analyze the backgrounds, interrelations and challenges between the Thai and Vietnamese archival institutions and their surrounding contexts, this study primarily employs the Actor-Network Theory (ANT) and its core concepts of Networks, Actants and Agency. The flexible approach provided by ANT encompasses societal, natural, and technological instances, enabling me to interpret the broad array of archival criticalities through Fossati's theoretical frameworks, with the overarching objective of devising archival practices to preserve film artifacts throughout their analog and digital archival lifecycles.

The social theory developed in the 1980s by scholars Bruno Latour, Michel Callon, John Law, and peers, is grounded on a few significant theoretical assumptions that not only match the overall non-deterministic stance that I intend to adopt but can also be regarded as an effective and practical tool to untangle the intricate relations between technological artifacts and the societies that construct them, both in pragmatic and conceptual terms, as I aim to trace both the practical outcomes of the participant's Agency and the diverse understanding and conceptualization of film artifacts by distinct social groups.

Albeit the term "theory" in its acronym, ANT's premises reveal how it should be regarded as a method of analysis rather than a clear-cut theory. As stated by one of its leading scholars, John Law, "the Actor-a approach is not a theory. Theories usually try to explain why something happens, but actor-network theory is descriptive rather than foundational in explanatory terms, which means that it is a disappointment for those seeking strong accounts" (Law 3). In my approach, ANT is hence adopted as an instrument to observe the reality of things instead of a theoretical system to explain them. Taken as a tool for the analysis rather than the study's focus, I employ ANT as a loose and flexible method to regard and chart the essential relations between the significant forces involved in a network without imposing predetermined structures or interpretation.

The Actor-Network Theory has only recently encountered media studies, and only in a few cases has it been programmatically used as a research method to study processes and phenomena related to audiovisual media. ANT focuses indeed on networks, and cinema as a collective and transnational phenomenon can be regarded as a fluctuant, sophisticated and ever-transforming network into which countless interdependent Actants interact and constantly negotiate their Agency and roles. In these respects, the network of relationships in

and around Film archives is also extensive and intricate, as it includes a broad range of human stakeholders with diverging scopes and understanding of moving images (e.g. archivists might focus on film preservation and restoration, technology suppliers on financial gain, political leaders on strengthening their influence) and non-human Actants of which Agency equally affect practices and viability of film archives (e.g. obsolete pieces of hardware, molds eroding film stocks, and in some instances, even unique film artifacts that proved to be consequential to archives establishment and development).

The work of Marijke de Valck on European film festivals is an excellent example of how the ANT methodology can be applied to inquire a specific field of the media industry. In her publication *Film Festivals, from European Geopolitics to Global Cinephilia*, she combines the conceptual debate around audiovisual media with Latour's idea of networks and examines complex local/global phenomena that find their establishment in the interrelations between the various components that constitute them. The appliance of ANT as a method of analysis allowed de Valck to widen the standpoint of traditional film studies and to map the relations between the numerous Actants involved by connecting modalities and manifestations that would typically be studied separately.[29] The ANT analysis method employed by de Valck does not solely imply interdisciplinarity, but it discloses what Latour defines as keeping the *social flat:* avoid describing the social in terms of hierarchical schemes but study it by exploring its relations, connections and displacements. As evidenced by de Valck's study, ANT's highly flexible and non-hierarchical stance proved to be significantly beneficial and effective for media studies. I adopt a similar approach and methodologically use several ANT tools to deconstruct the relational networks around archival film artifacts and analyze their material and conceptual being without any teleological initial standpoint.

Employing ANT as a research method implies a simple but pragmatic approach to analyzing the social: draw the relational map (Network) starting from the linkages (Agency) that connect relevant nodal points (Actants) by flattening the relations and avoiding preconstructed hierarchical schemes. This means that at the outset, the relevant elements composing the net should be regarded as all equally significant in establishing power

[29] "According to Latour, academia is undergoing a crisis because it seems to be unable to connect various forms of criticism. In cinema studies, these separate critical reflections have, for instance, taken the form of textual analysis, such as the formalistic readings of a body of selected films (discourse), or consisted of quantitative-empirical research using film industry statistics (nature), or they have concentrated on representations of of the power relations of race, gender, and ethnicity (society) or tried to grasp the ontology of the cinematic image (being). Latour acknowledges that these forms of criticism are powerful in and of themselves, but at the same time he criticizes them for being inadequate in the attempt to understand phenomena that depend on interrelations between various constituencies" (de Valck 33).

relationships. According to ANT premises, the Actants and the Network are not entirely distinguishable since their relational interdependence implies no hierarchical opposition between the actors and the network. Instead of concentrating on the structure of the net or its distinct elements, ANT focuses on processes, movements and interactions between the various entities that circulate in these relation networks (de Valck 34), prioritizing examining the relations and the interactions between Actants rather than the single elements of the net.

The socially flat approach proposed by the ANT ultimately entails that in drawing relational maps, everything potentially matters, and by virtue of this comprehensive viewpoint, the versatile notion of Actants results as a particularly valuable instrument for my analysis. Actants, conceptualized as entities equally possessing consequential Agency, are analyzed homogenously, neglecting distinctions in scale (bigger/smaller),[30] kind (human/non-human) and power (more/less powerful) (Teurling 103).

In other terms, Actants are not simply relevant individuals or collectivities of humans but can belong to any of the three macro spheres examined in the research: environment, technology and human. For instance, in the case of Southeast Asian audiovisual archives, significant Actants are those pioneers that initiated conservation practices in the region or the national administrators that financially sustain the institutions (human) but are also climate-induced factors, such as the molds and fungus eroding film stocks (environment), and essential hardware, like the disappearing pieces of machinery to handle analog film stocks or rapidly turning obsolete digital data carriers (technology). ANT's flexible interpretation of Actants also entails avoiding distinctions between the local and the global,[31] and as such, I equally take into account those forces that operate in close proximity to the archives and those geographically distant from them, such as the international organizations that contribute

[30] As Latour recommends, any distinction in terms of power or based on the size of the Actant must be avoided; micro and macro do not define the relevance of an Actant within the network and avoiding their opposition means maintaining the network and the Actors composing it on the same flat level, as a non-hierarchical and indistinct ever changing dynamic aggregate. "Macro no longer describes a wider site in which the micro would be embedded like some Matryoshka doll, but another equally local, equally micro place connected to many others through medium transporting traces. No place can be said to be bigger than any other place" (Latour 177).
[31] "No place dominates enough to be global, and no place is self-contained enough to be local" (Latour 204). Although throughout the analysis, I differentiate between forces and criticalities that affect archives on a global or local scale, the dichotomy Local/Global must not be intended as a rigid juxtaposition of two opposite concepts. According to Latour, the mapping of relational networks should not be based on rigid hierarchical distinctions but on the connections between the two. The local and the global are connected, interwoven, merged, and they must be seen as flexible interpretative categories that constantly overlap and, when adopted, provide different angles on the same matters. “What counts is the possibility for the enquirer to register that kind of 'network' shape wherever possible, instead of cutting off data in two heaps: one local, one global. To tell an actor-network story is to be able to capture those many connections without bugling them from the start by some a priori decision over what is the 'true size' of an interaction or some social aggregate." (Latour 178).

to the circulation of technical knowledge or those foreign enterprises that manufacture (or cease manufacturing) essential technologies like film stocks and digital hardware.

For ANT scholars, follow the Actant represents the prime and central instruction as these entities actively shape society and contribute to the development of scientific knowledge or technological systems (Callon and Law 5). The notion of Agency is hence pivotal in my approach, and despite the ANT not providing a clear-cut definition of Agency itself, to identify the specific and relevant types of interactions between Actants involved, I follow Latour's basic directive of giving relevance only to those processes that manifestly cause transformation and leave traces of their action. As the scholar indicates: "If you mention an Agency, you have to provide the account of its action and to do so, you need to make more or less explicit which trials have produced which observable traces" (Latour 53). Moreover, I also endorse Latour's indication to avoid tracking and examining Agency uniquely in terms of power and domination, as they could be easily and erroneously accounted as "the mysterious container that holds inside of it which that makes the many participants in the action move" (Latour 83). As I understand it, the detection of significant Agency must be kept flexible to avoid any causal and predetermined interpretation, given that certain Actants interact with the network in terms of power (e.g. non-democratic central governments), while many others participate in the dynamics and create transformation without intentionality and deliberate objectives (e.g. a piece of technology suddenly becoming unavailable). To some extent, the analysis's initial focus should be on the effects, the detectable traces left by the Agency of (then significant) Actants, rather than the causes that might have guided their movements in the networks.

In my study, Agency is thus methodologically charted starting from three essential premises:

The Networks are mapped around film artifacts.

The Agency is identified based on the impact of relevant Actants on film artifacts.

The Agency is traced to interpret the conceptualization of artifacts by distinct social groups.

While the Actor-Network Theory does not directly recommend placing at the center of the net any specific node but rather describe with neither fear nor favor what it is the Actants do (Callon, Law 6), the method still indicates that the networks are constructed around distinct technical objects that must be seen as the result of the shaping of many “associated and heterogeneous elements” (Callon, Law 23). Hence, the study places film artifacts at the center of the relational maps and the overall reasoning. I ideally map the networks starting from film artifacts in their archival life (the distinct technical object), giving equal

significance to their analog and digital material expressions, and I trace the Agency of relevant Actants seeking the traces they leave when interacting with film heritages.

The Agency and the relations between film artifacts and other Actants are methodologically charted by focusing on those actions and movements that affect or undermine the viability of film heritage and thus influence archival operations, practices and policies. That is to say that I acknowledge Agency as two kinds of traceable transformations: on the one hand, those interactions that directly threaten film collections' viability, namely those dynamics addressed in the environment, technology and human challenges chapters (4, 5 and 6). On the other hand, those initiatives deliberately aim to overcome the criticalities and thus primarily human related. It is important to clarify that methodologically, I do not prioritize the charting of archival practices (e.g. preservation, restoration, access) occurring within the archives, but rather, I structure the analysis of the Thai and Vietnamese archives by identifying those actions with significant impact on the viability of film heritage, namely those threats to film heritage long-term survival formulated in terms of critical challenges. While archival practices still can be regarded as significant expressions of Agency, I do not take them into account separately when initially drawing the relational maps but rather regard them as inherent elements of film artifacts in their archival life and inquire their consequentiality through the lens of Fossati's archival theory. In other words, film heritage is initially placed at the center of the map as both collections of artifacts and the complex whole of processes encountered in their archival life, while archival practices are analyzed by extending the interpretation of the relational maps to Fossati's theoretical frameworks.

The comprehensive and flexible approach of the Actor-Network theory overall matches several foundational principles of the theoretical contributions influencing my reasoning. In the following paragraphs, I add a few considerations about affinities and divergences between ANT and the two main stances that influence my work, Fossati and media archeology.

To begin, the comprehensive and non-deterministic standpoint of the Actor-Network theory discloses affinities with that of media archaeology. Echoing Foucault's post-structuralism, media archaeology and ANT equally conceive reality as a complex phenomenon where nature, humans and technology interact without predetermined linearity or causality. Specifying the importance of its non-hierarchical approach, ANT postulates that nature, society and technology are “associated with one another in a heterogeneous manner and cannot be distinguished one from the other” (Callon, Law 33), seemingly also rejecting any beforehand teleological interpretation. In turn, despite media archaeology not precisely

addressing the discourse of the relational networks, it still suggests regarding the history of audiovisual media “as something along the lines of 'Family relations', belonging together but neither causally nor teleologically related” (Elsaesser 87).

Besides, while media archaeology proposes identifying significant "topoi", broad ideological discourses and themes across different cultures (Parikka/Huhtamo 24), rather than focusing on the Agency of more circumscribed and distinguishable Actants, the two theoretical stances likely entail similar analytical approaches based on tracing trajectories of significant elements and exploring the cultural circumstances where they occur. Like Latourian Actants, Huhtamo's topoi should be treated as a node in a complex network of references and determinants (Parikka/Huhtamo 34). And when media archaeology, rather than suggesting a unifying perspective of the imagined and the realized (conceptual and material media), recommend to methodically clarify the historical context in which certain notable case examples arose, tracing the network of material practices they are embedded (Kluitengber 54),[32] it essentially describes the way that my study adapts ANT into a methodological tool to trace practices in and around film archives.

Moreover, in *A Geology of Media,* Jussi Parikka further broadened the scope of media archaeology and elaborated on the materiality of media and culture by emphasizing the importance of non-organic elements in constructing media. In his reasoning, Parikka expressly employs ANT terms to assert that the materialism of media culture should also focus on raw materials rather than solely on machines or networks of technologies as non-human agencies (Parikka 3), remarking how raw materials like rare earth minerals (and thus allegedly also nitrate and acetate elements of obsolete film stocks) should also be accounted as autonomous and significant Actants. In his discourse, geological Actants (that I more broadly read as environment) matter to the same level of technological and cultural one, widening the extent of networks and influencing my methodology, as at the outset of the analysis I postulate that inquiring archival criticalities begin with acknowledging three broad spheres of Actants: environment, technology and human.

Then again, explicitly aligning his reasoning with Latour's, Parikka writes: "Only once things fail, then you start to see their complexity. In our case, that failure might come on such a scale that it is planetary: the depletion of resources, from fossil fuels to rare earth minerals" (Parikka 98), remarking on two key concepts: first, that the debates and the

[32] Kluitenberg Eric in Huhtamo, Erkki and Parikka, Jussi. *Media Archaeology: Approaches, Applications and Implications,* University of California Press, 2011.

formulation of theoretical frameworks on archival practices arise from the inherent fragility and unavoidable decay of film materials, whether analog or digital; and second, that digital means might soon reveal additional critical concerns due to the increasing scarcity of those rare earth minerals necessary to manufacture digital hardware. This last consideration is relevant and worrying, and likely will become an additional concern for archives and any other digital technology-related activity in the near future, further demonstrating how natural elements, technological advancements and human cultures are inextricably tied and networked.

Regarding Fossati's theory, a significant difference between her work and mine is that her archival theorization finds its primary analysis method in SCOT, the Social Construction of Technologies, instead of ANT. As in this study, I essentially merge ANT methodology and Fossati's theoretical frames, it is important to underline that although the two approaches diverge on several key concepts, they are also not contrasting nor opposed, and as detailed below, still can be used in combination to provide a broader outlook than SCOT's.

Similarly to the Actor-Network Theory, SCOT derives from the sociology of science and technology and, in opposition to technological determinism, attempts to define how relevant social groups accept and assimilate a given technological artifact into a culture. Both SCOT and ANT investigate the social relations between humans and technology by focusing on the context and tracing maps of the complex dynamics between the two spheres. However, contrary to ANT, SCOT does not acknowledge technologies and technical processes as autonomous Actants and attributes Agency uniquely to human collectivities. Although it rejects deterministic assumptions, SCOT still postulates a marked distinction between social players and artifacts and identifies human action as the leading force behind a semi-linear process capable of determining how technologies are embedded in society. SCOT poses a clear-cut distinction between human action, which has an active role in the relations, and passively constructed technologies, and it practically investigates the embedding of technological artifacts into society, focusing entirely on relevant social groups' Agency.
The subtle but significant divergence between Fossati's Theory (and SCOT) and ANT ultimately lay in how the two schools of thought attempt to interpret social and technological processes. As mentioned above, in formulating the film artifacts frameworks, Fossati borrows and largely relies on SCOT's interpretative flexibility, the idea that scientific findings should be approached with the understanding that they can have multiple interpretations (Pinch, Bijker 26). The postulate entails that while different interpretations are available to scientists, it also means that nature alone does not provide a determinant outcome to scientific debate

(Pinch, Bijker 40), ultimately implying that only humans have Agency and thus rejected by ANT when Latour argues that there is indefinite flexibility in interpreting the Actants' course of actions, but it is not uniquely determined by the social, nor can its interpretation be individualized into human Agency (Latour 244).

Fossati's work originates and chiefly pivots around the theorization and definition of distinct archival practices, so her choice of employing SCOT as the primary methodology is appropriate and coherent. However, considering that I aim to map and examine archival technological practices through a broad outlook that comprehensively acknowledges the autonomous role of both human and non-human elements, SCOT's contraposition of human and technology and its socially driven process of technological construction appear to be excessively rigid and consequential, and I ultimately find in ANT a more extensive and pliable analysis method where its flexibility does not simply refer to the human capability to diversify the interpretation of the same phenomenon but refers to "a way to register the vast outside to which every course of action has to appeal in order to be carried out, not only for human action but for every activity" (Latour 245).

While I acknowledge that the two distinct social theories employed by Fossati and myself to conduct the respective analysis diverge in overall premises and interpretations, I believe that ANT and Fossati's theorization still share common conceptual traits and intentions. For instance, the material-semiotic approach of ANT resonates with the overall material/conceptual dichotomy guiding Fossati's reasoning and her formulation of archival theoretical frameworks. As Law explains, material semiotics should be seen as a set of tools for exploring how elements created by social practices are simultaneously semiotic (because they are relational and carry meanings) and material (as they concern the physical items, technological and scientific, constructed in those relations) (Law 1). As I understand it, for both theoretical stances, the relational processes and the intersections between the trajectories marked by the multitude of Actants occur and must be interpreted in both material and conceptual terms, stressing how Fossati and ANT ultimately attempt to read complex social and technological processes with equally flexible and non-teleological stances.

3 Archives: Critical Challenges and Essential Backgrounds

The challenges examined in the following three extensive chapters are identified starting from the wide-ranging practical concerns affecting the long-term preservation of audiovisual heritage in mainland Southeast Asia. While environmental, technological, and human challenges equally affect analog and digital means, I examine the two technological spheres independently, elaborating on the distinct, tangible concerns affecting their materiality, describing how the challenges unfold within the Thai and Vietnamese context, outlining how the Thai Film Archive and the Vietnam Film Institute tackle such critical concerns and lastly reframing the reasoning in regard to Fossati's theoretical frameworks.

In the three broad central chapters of the dissertation, I construct the analysis by focusing on critical concerns affecting archival institutions in their transformation from analog to digital by methodologically identifying those forces that pose tangible threats to audiovisual archives across the region and differentiating between those that mutually affect archives on a global scale and those that represent more circumscribed and localized sources of concern. The identification of consequential Actants also further maps the networks binding regional archives with local and international partners. Considering that criticalities like material decay caused, have long been acknowledged and addressed by the global archival community, these pages also consider the role and involvement of international organizations like AMIA, FIAF and SEAPAVAA and chart the underlying connections among local archival institutions and significant transnational Actants.

It is important to remark at the outset that hazards and concerns affecting archival institutions around the globe are diverse, manifold and range from financial constraints to technical difficulties to ethical questions to organizational uncertainties and oftentimes considerably vary according to the archives' features (size, juridical status, financial status). Critical hazards and concerns can theoretically affect every aspect of archives’ operations, including those practices not referenced so far, such as restoration and cataloging. Among the many potential sources of concern, this study focuses on those apparently more critical and widespread, deliberately identified around one crucial type of concern: the long-term viability of film artifacts. The material survival of film heritage stands as the "sine qua non" for any archival operation and initiative, if not for the existence of archives themselves, as it determines the core mandate and practice of every archive: preservation.

Because of climatic, technological and human factors, this practice is still problematic in developing countries such as those in mainland SEA, and it has been further challenged by the advent of digital technologies. In each chapter, I reframe the identified challenges by examining their impact on archival practices, seeking to understand whether implementing digital technologies in archival workflows serves as a sustainable solution to overcome critical issues, or if they instead introduce additional concerns.

The critical challenges have been identified through the heterogenous literary output of the mentioned archival associations and similar sources, always cross-referenced via oral interviews with eminent archivists and other significant stakeholders.
FIAF and SEAPAVAA conference minutes, bulletins, technical commission reports, manuals and journal articles have been instrumental in determining the overall common criticalities that affect the global archival community. For these sections, I draw from the referenced publications, such as Ray Edmondson's *Audiovisual Archiving: Philosophy and Principles* and *The FIAF Disaster Handbook* edited by David Walsh. As these pages focus on the critical issues concerning the material properties of film artifacts, I also significantly tap into technical whitepapers, reports and online material dealing with the topic from a more strictly technical point of view, such as those divulged by Kodak,[33] and the Ultrium LTO consortium,[34] or influential study sectors such as *The Digital Dilemma*, published by the Academy's Science and Technology Council.[35]

In short, the challenges chapters cover the following aspects:

The environment challenge (chapter 4) regards the material properties of film artifacts and their deterioration under non-human organic/inorganic natural Actants, such as humidity, rain, floods, molds and fungi. Entailing material concerns and discourses about different social groups' diverging understanding of film authenticity, the challenge is examined via the "Film as Original" framework.

The technology challenge (chapter 5) addresses the disappearance and obsolescence of critical hardware and machinery traditionally employed to manage and handle analog film artifacts, including celluloid stocks, the primary type of physical carriers universally employed before the digital rollout. The chapter is examined via the frameworks "Film as

[33] Eastman Kodak Company *https://www.kodak.com/* accessed on 19/08/2022
[34] LTO Ultrium: Reliable and Scalable Open Tape Storage Format *https://www.lto.org/* accessed on 22/08/2022
[35] The Digital Dilemma | Academy of Motion Picture Arts and *Sciences https://www.oscars.org/science-technology/sci-tech-projects/digital-dilemma* accessed on 21/09/2022

Dispositif" and "Film as State-of-the-Art" and addresses the first research question: How did the digital rollout impact the Thai and Vietnamese film archives?

The human challenge (chapter 6) concerns all the deliberate or unintentional human-caused threats to heritage viability and examines the dynamics between archives and peculiar socio-political-economic contexts and the divergent conceptualization of film artifacts. More closely focusing on human Agency, the chapter is analyzed via the framework "Film as Art" and addresses the second research question: How do the Thai and Vietnamese contexts affect and shape local archival practices?

3.1 Rationalities, Backgrounds, Commonalities

Based on Fossati's frameworks, I clarify the rationale for selecting the Thai Film Archive and the Vietnam Film Institute as exemplary case studies, examining shared backgrounds of the archives operating in mainland Southeast Asia, such as their affiliations with regional and international organizations and essential features, structures and mandates of the two chosen institutions.

The preliminary research for this study took into account five countries – Thailand, Vietnam, Laos, Cambodia and Myanmar – as I initially intended to examine the circulation and integration of digital means in audiovisual archives across the extensive area conventionally defined as Indochinese peninsula,[36] the Mekong subregion,[37] or Mainland Southeast Asia.[38] Despite Southeast Asia's overall marked heterogeneity, the five countries are not simply associated by topographic elements but also share deeply intertwined socio-political, historical and cultural backgrounds that often influence archival developments and operations. The history of archival practices across mainland Southeast Asia has, on several occasions, brought together two or more SEA archival institutions; for instance, the entire Laotian film heritage has been for decades preserved in the vaults of the Vietnam Film Institute and was finally moved back to Vientiane only in 1998 when the National Library of Laos set up a properly standardized infrastructure (Ngô Chí Hiếu 12), once again with the assistance of Vietnam (notably the only other Socialist country in Southeast Asia).

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[36] The name "Indochina" was first used by the Danish French geographer Conrad Malte-Brun and the Scottish linguist John Leyden. In 1804, Conrad Malte-Brun referred to the area as *Indo-chinois,* while in 1808, John Leyden used the term "Indo-Chinese" to describe the area's inhabitants. Externally attributed to the region by British and French colonialists and commonly used in the 19th and 20th centuries to define the vast land between China and India, the term "Indochinese" reveals further common aspects of the countries: on the one hand, it stresses the historical influence of two major civilizations, the Indian and the Chinese; on the other hand, it reminds of the region's recent colonial past and the prolonged imposed dominance of external nations. While the role of colonial forces is addressed in this study, the term itself still carries a Eurocentric point of view, and, in my view, it is inadequate to describe the cultural richness and diversity of the region; as such, I do not further employ it in my writings when addressing the region.

[37] The area surrounding the Mekong River basin is officially referred to as "The Greater Mekong subregion" and primarily determines an economic entity based on the topographic element.
"The Greater Mekong Subregion (GMS) Economic Cooperation was created by six countries sharing the Mekong River: Cambodia, Lao PDR, Myanmar, Thailand, Vietnam, and the Yunnan Province of the People's Republic of China." (Kongkaew 977) Besides the five countries contemplated in this study, the Greater Mekong subregion includes Yunnan, the southwestern most province of China. Even though China had, and still has, a profound cultural influence over the entire area, this research does not include its extensive audiovisual heritage in the study, and to avoid confusion, I do not further employ GMS in my writings when addressing the region.

[38] Throughout the dissertation, when addressing the five countries, I mainly employ "Mainland Southeast Asia" or, often, more generically, the acronym SEA (Southeast Asia), implying that the discourse could be extended to other countries and archives in the region (namely Malaysia, Philippines and Indonesia).

Thereby, I originally envisaged studying and including in the analysis five selected diverse archival institutions or associations representing each of the mainland SEA countries, namely The National Library of Laos for Laos PDR,[39] Bophana Film Center for the Kingdom of Cambodia,[40]and Save Myanmar Film for the Republic of the Union of Myanmar,[41] besides of course the two institutions ultimately elected as case studies of this dissertation: the Thai Film Archive Public Organization (FAPOT) for the Kingdom of Thailand and The Vietnamese Film Institute (VFI) for the Socialist Republic of Vietnam.

While eventually the study focuses uniquely on the Thai and the Vietnamese archives, throughout the dissertation, I occasionally mention archival initiatives in Laos, Cambodia and Myanmar and address issues that also concern their film heritages. Specifically, the following sub-chapters about archival critical challenges have been written based on features, hardships and practical concerns of audiovisual archives across the entire mainland Southeast Asia region, always bearing in mind that the primary scope of this study is to devise sustainable models and practical initiatives to support archives operating in complex and precarious conditions such as those in Laos, Cambodia and Myanmar.

Before analyzing the critical challenges that transversally affect archives across the region and beyond, I briefly explain the practical reasons, rationalities, and distinct criteria inspired by Fossati's frameworks behind the selection of the archives.

The practical reasons are relatively straightforward and involve two unforeseeable, disruptive events that occurred in the early months of the preliminary research: the global COVID-19 pandemic that began in March 2020 and the outbreak of an ongoing civil war in Myanmar in February 2021. Unable to travel across the region and adequately conduct field research, I decided under duress to narrow the scope of the study and focus uniquely on the two countries and their respective archival institutions. Despite the unfavorable odds and several logistical difficulties, I have been able to consistently and successfully conduct field research in Thailand and Vietnam for an uninterrupted period of four years.

As to rationalities, the election of the Thai and Vietnamese archives as dissertation case studies has been ultimately taken through two methodological steps.

As a preliminary step, I cross-check the literature produced by international archival organizations and interviews conducted with knowledgeable stakeholders (notably Ray

[39] National Library of Laos, collections. *http://www.nationallibraryoflaos.org/* accessed on 15/05/2020
[40] Bophana Audiovisual Resource Center, about. *https://bophana.org/* accessed on 15/05/2020
[41] Save Myanmar Films, about us/history. *https://www.savemyanmarfilm.org/* accessed on 15/05/2020

Edmondson, founder and former president of SEAPAVAA and Karen Chan, executive director of the Asian Film Archive and current SEAPAVAA's president), to determine which archives are and have been significantly involved in regional and international discourses and that therefore are to some degree formally recognized as legitimate institutions.
The transnational organizations probed in this initial enquiry are AMIA, FIAF and SEAPAVAA. Despite acknowledging the existence of other associations operating in Asia, such as the International Association of Sound and Audiovisual Archives (IASA),[42] and the International Federation of Television Archives (FIAT/IFTA),[43] these organizations are not directly included in the analysis mainly because their presence and operations in the region are still relatively limited but also because their mission and agendas overall diverge from the scope of this study (although television archives preserve analog film prints and thus encounter similar practical concerns).

AMIA, FIAF and SEAPAVAA differ in structure, admission criteria and missions. FIAF, for example, does not accept for-profit institutions as full members. AMIA and SEAPAVAA are open to nonprofit and for-profit bodies (Edmondson 35). Moreover, while AMIA and SEAPAVAA are open to individual membership,[44] FIAF gathers solely archival institutions.[45] The cross-examination of the organizations' divergent affiliation guidelines and the actual list of registered members promptly reveals that only the Thai Film Archive and the Vietnam Film Institute had been consistently and significantly involved with the international archival community since their foundation. FAPOT and VFI are long-standing members of SEAPAVAA and the only FIAF full members in SEA.[46] Concerning AMIA, FAPOT is currently the only SEA member, while the VFI figures as a past subscriber.

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[42] The International Association of Sound and Audiovisual Archives (IASA) *https://www.iasa-web.org/* accessed on 25/06/2021
[43] FIAT/IFTA, International Federation of Television Archives *https://fiatifta.org/ accessed* on 25/06/2021
[44] SEAPAVAA's constitution (2019 version)
[45] "Members shall be institutions with legitimate and primary responsibility for the preservation of an original moving image collection" (FIAF statute, chapter 2, Article 4, April 2021 Edition)
[46] As specified in the FIAF statute, "Members must satisfy the following conditions: they shall be bound in all official activities by the Code of Ethics, which implies that they must not make any commercial use of their films; the preservation of films must be one of the Archive's main activities, which requires specialized equipment and facilities, and specialized professional staffing, as well as the holding and the creation of preservation masters. Furthermore, the Federation encourages them to pursue all activities which provide a real cultural dimension to their institution: projection and viewing of films, using copies specially made for this purpose; running a cinema library; publishing books, periodicals, and programs; and collecting and exhibiting museum objects relating to the cinema." While associates "are non-profit institutions that have significant preservation programs in areas related to film preservation (moving image museums, television and video archives, documentation centers, etc.) or non-profit institutions that hold collections of prints and support the goals of film preservation but may have limited or no film preservation programs." Besides those mentioned, other archives include Southeast affiliates of FIAF, The Asian Film Archive (Singapore) and the Film

By contrast, this preliminary overview showed that the other three mainland SEA countries have very limited involvement in international archival discourses. Laos PDR figures only as a SEAPAVAA member with the National Library of Laos (under the Department of Cinema). Cambodia's convoluted audiovisual archives situation shows that the Bophana Film Centre is officially a FIAF associate, while only the National Archive of Cambodia is affiliated to SEAPAVAA.[47] Lastly, Myanmar is not represented in any of the international archival organizations and the only name involved in international discourse that emerged via interviews with sector experts is Save Myanmar Film, an independent NGO that struggles to safeguard what remains of Myanmar Film heritage.

Furthermore, the preliminary enquiry also discloses the presence of numerous other well-established and noteworthy archives across the region, such as the "Documentary and Scientific Film Studio" of Vietnam and the archive of the "Government Public Relations Departments" of Thailand. However, while I acknowledge the existence of a variety of audiovisual collections preserved throughout the region (national libraries, TV broadcasters, production companies, private collections, government bodies, and military sites), this study aims to specifically focus on those archives engaged with media artifacts produced within cinema industries and thereby are conventionally defined as "Film Archives".

Given that "Film archives" stand as a relatively vague and unsettled epithet and do not per se provide a clear description that could help narrow down the scope,[48] the second

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Development Council of the Philippines (Manila, the Philippines). However, these three institutions are FIAF Associates, not Full Members.

[47] National Archives of Cambodia *https://www.nac.gov.kh/* accessed on 20/07/2021

[48] Edmondson (2004) provides a detailed list of reference points to determine where and how any archive might be positioned; however, he does not define clear-cut principles or descriptors to strictly categorize the broad range of organizations gathered under the umbrella of Audiovisual Archive, nor does he give a precise and detailed formula to determine what more specifically a "Film Archive" should be in terms of collections, policies and mandate. As the archivist and scholar states, "Audiovisual archives embrace a plurality of institutional models, types and interests and any typology is to a degree arbitrary and artificial" (ibid 34).The label "Audiovisual Archive" ultimately does not point to a distinctive type of institution as even the statutes of the leading international organization, FIAT/IFTA, FIAF and IASA (and AMIA) describe many characteristics and expectations of such bodies as members but provide no such definition for the institutional type itself (Edmondson 28), and so the epithet "Film Archive" per se does not specify a distinct category of Audiovisual Archives. The uncertainty in determining what essential features characterize a Film Archive from other AV archival institutions is also brought on by the ambiguity of the signifier "Film", which hints at multiple signified according to the diverse social group employing the term: a chemical-based photosensitive material, a type of physical carrier, a work of art, the motion picture industry, a cultural product, a piece of heritage or the medium in its entirety (Kuhn 390). When taken solely in relation to its material, the term "Film" would not be able to reveal the definite mandate and constitution of a given audiovisual archive as it does not determine the specific type of collection held by the Archive itself. After all, the collections held in Southeast Asian archives, as else in the world, do not uniquely collect analog Film material. Films intended as nitrate, acetate or polyester rolls of various formats (8mm, 16mm, 35mm) can be found in audiovisual archives with very different mandates and purposes; tv broadcasters' archives, for example, often store analog film reels of different formats and the same can be said about university libraries, private collections and others. Vice versa, other types of audiovisual

methodological step broadly assesses archives' mandates and practices based on four criteria elaborated under Fossati's theoretical frameworks.

The first criterion is that the Archive should represent the primary and prominent recipient of original audiovisual content produced and distributed within the country. This principle implies that preservation practices and safeguarding the best original copy stand as critical mandates for the archival institutions. As detailed in the framework "Film as Original", the idea of originality is fluid and not directly determined by the materiality of the Film's artifacts, which, despite on average being predominantly celluloid-based analog stocks, should be preserved in the best possible copy and beyond the material status of film artifacts. The criterion emphasizes that the core mandate of archival institutions considered is to preserve the artifacts regardless of the physical carriers and their potential deterioration, but still possibly in their best original form. This also means that the archive should be actively engaged in preservation and restoration practices and related discourses with the international archival community.

Accordingly, the Thai and Vietnamese film archives are eligible under this analysis as they equally exhibit the core mandate to preserve national film heritage and match the criterion. On the contrary, the same principle would exclude the Bophana film center as the association mainly holds digitized copies of original artifacts recorded in Cambodia but disseminated throughout the globe, and most importantly focuses on access and education rather than on preservation and restoration practices.

The second criterion, elaborated under the "Film as Art" framework, is that the archival institutions should safeguard those film artifacts with inherent artistic values and primarily produced by the local film industry. This means that the chosen archives primarily focus on preserving "movies", fictional audiovisual products embedded into the unique network of exhibitions and distribution practices of cinema, and relying on the distinct technological dispositifs and infrastructures of the motion picture industry.

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carriers, such as magnetic tapes or DVDs, are very much present in most AV Archives. As detailed later in the study, Archives in mainland SEA tend to collect any format or carrier they have access to, and it is not uncommon that contents initially recorded on analog prints (feature films, above all) nowadays survive uniquely in duplicated formats such as Betacam, VHS or DVDs; It is the case, for example, of Myanmar film heritage that, after being telecined to intermediate formats (predominantly Betacam and VHS), analog film prints have been lost, or the south Vietnamese independent cinema of the '90s that was directly recorded on VHS tapes unfortunately survives only in fragmented YouTube' clips. Archival collections worldwide have thus been inherently hybrid long before the digital rollout, and whereas the materiality of film artifacts does not describe the nature of the collection nor the labeling of specific Film archives, the matter should be thereby addressed in conceptual terms, and Fossati's theory seems to provide the suitable means to do so.

While the concept of "artistry" can also be extended to other forms of audiovisual production (e.g. documentaries most definitely do have artistic values), this criterion aims to narrow the scope of the study by focusing uniquely on those archives that participate in relational networks that characterize the film industry, locally as internationally, and thus accordingly exclude from the study all those others archives that primarily focus on other types of audiovisual content, such as documentaries, newsreels and other forms of TV production. This criterion more closely identifies and distinguishes between the broad category of “audiovisual archives” and the more specific yet vague “film archives” accordingly, ruling out several noteworthy archives in Thailand and Vietnam, including the mentioned Documentary and Scientific Film Studio in Hanoi and various television archives scattered throughout the region.

Elaborated under the "Film as Dispositif" framework, the third criterion extends the preservation mandate of the archives to safeguard analog film equipment, practices and technical knowledge. This criterion emphasizes that film archives are not simply repositories of obsolete audiovisual material but also represent institutions with a wider scope that further includes preserving, maintaining and, whenever possible, granting access to films in their original) analog form. This means that archives should ideally give greater attention to safeguarding screening practices and, most importantly, preserving the extensive corpus of knowledge to handle analog films, including the specialized knowledge that traditionally belonged to film laboratories. Considering the rapid disappearance of analog infrastructures in the region, this aspect is particularly critical, and the only institutions in mainland SEA engaged in preserving analog film knowledge are the Thai and Vietnamese film archives. Notably, in the past five years, FAPOT has paid great attention to the matter and purchased equipment from dismantled cinema theaters and film laboratories. On the contrary, despite significant past efforts to preserve analog knowledge and machines, VFI is currently hazardously underestimating the importance of the safeguarding the rare analog dispositifs that still survive within the country.

The fourth and last criterion regards digitization practices and is elaborated under the framework "Film as State of the Art". It addresses the capability of archives to implement digital practices and, broadly speaking, push the boundaries of technological advancements. This criterion regards the actual practices rather than the mandates of given archives as digital means have become pressing for the archival community only in recent years, and most archives are still elaborating strategies to tackle the monumental challenge and evaluating how to implement digital technologies in their pipelines and statute guidelines.

Moreover, the criterion concerns digitally born material and the archives 'efforts to preserve these, revealing not only their technological efficiency but also significant aspects of their engagement with the contemporary film industry. For instance, FAPOT and VFI have the official mandate to preserve films produced in the country but, due to a series of problematics between the local film industry and the archive itself, they rarely receive digital born films.

In terms of eligible archives, the criterion would then rule out both Save Myanmar Films and the National Library of Laos, as they are equally unable to independently implement digitization practices nor have the means to do so; it is important to note that, for both instances, the lack of financial support represents the main constraint, and they both attempted to digitize part of their collection with third, non-national parties.

Based on the criteria and rationalities outlined above, the study proceeds by focusing predominantly on the Thai Film Archive and the Vietnam Film Institute and electing the two institutions as case studies. Nevertheless, throughout the thesis I also keep track of the mentioned Laotian, Cambodian and Burmese institutions as they provide relevant insights on shared and unique critical archival challenges.

3.2 The Thai Film Archive Public Organization

This chapter inquiries about the establishment, essential backgrounds and affiliations of Thailand's Film Archive Public Organization (FAPOT). The following pages are based on the information gathered from two sources; the first are bulletins, conference minutes, and reports drafted by representatives and affiliates of FIAF and SEAPAVAA, the two transnational organizations of which FAPOT is currently a member and has been actively involved since its foundation. The second sources are interviews with archivists, curators and technicians working in the institution, among others: Dome Sukwong (Founder and former director of FAPOT), Chalida Uabumrungjit (Deputy Director of FAPOT), Sanchai Chotirosseranee (Deputy director of FAPOT and treasurer at SEAPAVAA), Kong Rithdee (Deputy director of FAPOT and Film Critic), Ketsuda Jina (Head of Conservation Department at FAPOT) and Nutchanart Chinpong (Head of Digital Department at FAPOT).

The Thai Film Archive was initiated by Dome Sukwong, who, in the early 1980s, as a young and independent film scholar, started to research the history of cinema in Siam.[49] In his attempt to gather audiovisual material, Sukwong soon discovered no official written records about Thai film history nor any national Agency responsible for collecting and preserving Thailand's audiovisual heritage. Sukwong understood the urgency of preserving what still could be saved of Thai films, and he promptly became a crusading pioneer who dedicated his life to creating a national film institution to preserve and value Thai audiovisual heritage. With a small group of volunteers called “The Thai Film Group”, he officially began searching and collecting every film reel surviving in the country to create a national repository while simultaneously campaigning through the press to raise public awareness of the necessity of creating a state-funded department. From the beginning of archival operations, raising institutions' attention and obtaining their support proved to be the main hurdle. Throughout their research, Sukwong and fellow archivists realized that film conservation had historically been overlooked within Thailand, with prior administrations demonstrating evident neglect in preserving Thai films as national heritage (Sungsri 272).

[49] The terms “Siam” and “Thailand” are often used as synonyms, but they define two separate moments in the history of the Kingdom. Siam was the name officially employed until 1932, when, because of the revolution, the country moved from an absolute monarchy to a constitutional monarchy. The government officially changed its name to “Thailand” in 1939 by the nationalist dictator Pleak Phibunsongkhram.

As detailed later, the fourth era of Thai cinema that began around 1976 was characterized by the dominance of a few local oligopolies and Hollywood-imported films. The film industry was practically self-regulating under the guidance of these private enterprises, and the Thai government manifested little or no interest toward the movie sector scarcely implementing film policies of any sort. While the initial awareness campaigns received logistic support from universities and helped convince a few private collectors to donate films, Sukwong and his team struggled to gain institutions' recognition and assistance and to impact public opinion on a larger scale (Uabumrungjit 36). However, the situation took a turn when Sukwong discovered two extremely significant and consequential collections of reels.

The first discovery occurred in 1981, with the finding of 290 nitrate reels in the warehouses of the former Tropical Film Agency under the Royal State Railways Department, the government Agency created in 1922 by King Rama VI to oversee film production in the country.[50] In conducting his research, Sukwong recognized the Tropical Film Agency as a leading force in early Thai cinema and its infrastructures, and could be a fruitful source to investigate; his intuition proved correct as he discovered an invaluable but practically abandoned collection of nitrate reels filmed in the early 1930s by King Rama VII himself, [51] marking a phenomenal historical discovery and the first batch of films for the collection held at FAPOT to date (Uabumrungjit 37).

The second major discovery occurred in 1983. While traveling to Sweden to attend the 39th FIAF-FIAT joint technical symposium in Stockholm, Sukwong discovered the existence in the Swedish Film Institute of a reel shot in 1897 recording the official visit of King Chulalongkorn Rama V to the Swedish capital. Sukwong promptly understood that the reel had immense historical value for Thailand. Not only did it feature the first Thai ever to be recorded on film, but that person was King Chulalongkorn himself, Thailand's most celebrated and beloved monarch.[52] Sukwong obtained a copy of this reel and immediately exploited this extraordinary visual record as a powerful tool for his awareness campaign. The discovery and disclosure of King Rama V footage finally got institutional attention, and in 1984, the National Film Archive of Thailand was officially established under the Fine Arts Department, Ministry of Education.

The finding of the King Chulalongkorn reels in the Swedish archive would profoundly influence public opinion on the importance of film conservation and, indeed, change the

[50] King Vajiravudh, *Phra Chom Klao Chao Yu Hua* Rama VI of the Chakri Dynasty, reigned 1910-1925
[51] King Prajadhipok, Somdet Chaofa Prajadhipok Sakdidej**,** Rama VII of Chakri Dynasty, reigned 1925-1935.
[52] King Chulalongkorn Rama V of the Chakri Dynasty, reigned 1868-1910

history of audiovisual archival practices in Thailand. In a 1993 interview Sukwong recalled, "The government paid attention to my project because I had a very old and rare film concerning the king. We then used this as a weapon to grab the government's attention. [...] King Chulalongkorn is like a god, and people worship the king like a god; when I received this film, an official from the Fine Arts Department called me to come to his office and told me that they would set up the National Film Archive" (Sukwong 2).[53]

Despite the institutional recognition, the archive remained a small, non-autonomous, unsubsidized and heavily underfunded body for almost twenty-five years, and it went through several stages and various inadequate facilities before reaching its current state. For many years most of the work was done voluntarily, and the limited available budget was mainly employed for film acquisition throughout the country and implementing new strategies to raise public awareness of the status of Thai audiovisual heritage and the importance of film preservation (Uabumrungjit 39).

In 1984, the Ministry of Education agreed to take on a film archive project and the National Film Archive of Thailand was established as a section of the National Archive under the Fine Art department (Uabumrungjit 38). The first location of the archive, an abandoned building in the compound of the National Gallery, did not have a proper humidity and temperature-controlled storage room, so the pioneering archivists worked to save their growing collection by gathering reels in the unequipped and unacclimatized facility.
Only in 1998 was the archive assigned to a new permanent location in the Salaya subdistrict, Nakhon Pathom province, on the outskirts of Bangkok. Equipped with a proper film vault, the new location first served as a repository archive, but it soon became FAPOT's official headquarters. Far from the city center, the Salaya location is probably not the best solution in logistical terms, but it does provide FAPOT with a stable and larger space that can eventually be expanded in the future, allowing the archive to progressively gain independence, and most importantly has a standardly climatized film vault.

The other significant date in the history of FAPOT is 2009, when, after numerous years of campaigning and petitions, the National Film Archive changed its name and institutional status to become the "Film Archive Public Organization (of Thailand)", FAPOT. According to Thai law, the Film Archive Public Organization is a specially administered entity under the Ministry of Culture. The recognition of Public Organization status established FAPOT as a semi-autonomous, non-profit national institution, which provided

[53] Sukwong, Dome. *An Interview with T. Richardson*, Ithaca: Cornell University, 1993.

greater management freedom and the ability to access funds independently. Due to the considerably higher budgets that the status of a public organization can be allotted, the Archives have seen significant changes since 2010. The infrastructure of the original Salaya location has been expanded and today includes a film museum at the front, spread across several small edifices, a central building with four screening rooms, a library and a large temporary exhibitions area, and the back building where film vaults, storage rooms and laboratories are located. Furthermore, numerous infrastructural upgrades are planned for the near future, including three additional storage rooms.

Every aspect of FAPOT bears the mark of Sukwong. As the first and foremost crusading pioneer in preserving Thai film, he has dedicated his life to the film archive's creation, and it would not be an overstatement to say that his commitment saved the audiovisual memory of the Kingdom of Thailand and actively called national attention to the value and importance of film preservation.

The organization and management of FAPOT have always followed two primary sources. The first is Sukwong himself, who, with his knowledge as a pioneering film scholar and lifelong dedication to film conservation, always represented a trustworthy source of inspiration for the archive staff and still defines the institution's guidelines. The role of Sukwong as a semi-official regulator of film heritage affairs in Thailand was formalized with the 1984 establishment of archival practices when Sukwong was hired at the National Archive of Thailand and appointed to form a committee to advise the National Archive in the preservation of old films and draft objectives and guidelines for such task (Sukwong 4).

The second source of influence on FAPOT's organization, mandates and ethics are FIAF and a few notable members of the federation that, independently or with communal initiatives, actively contributed to the assimilation of knowledge and the establishment of policies and standards adopted by FAPOT since its early days.

Sukwong attended the 1983 FIAF-FIAT symposium in Sweden as an individual representative, where he received his first film preservation training, acquired the basic knowledge of archival standards and practices, and established lasting relations with Western counterparts. The ties between Sukwong and the Swedish Film Institute, in the person of Anna Lena Wibom, strengthened the following year when the two archivists met again at the "First Asian Seminar on Developing Film Archives" organized in Pune by UNESCO, FIAF, and the Film Archive of India in 1984. The seminar represented an extraordinary opportunity for knowledge exchange between archives from different parts of Asia, and it also marked a landmark event for Thai film history. Right after the symposium Anna Lena Wibom handed

Sukwong a copy of the film reel that the Thai archivist had been inquiring about during his previous sojourn in Sweden which proved to be consequential in the establishment of the Thai film archive and archival practices in Thailand - the 1897 visit to Stockholm of King Chulalongkorn Rama V (Sukwong 14).

In 1986, the FAPOT joined FIAF as an associate member, it officially adopted the FIAF Code of Ethics and started receiving technical support from other FIAF members, namely prominent film archivists from the Swedish Film Institute and The British Film Institute, who traveled to Bangkok to train the first batch of FAPOT staff, install a film-processing machine and other basic equipment, and help set up the archive. Key contributors at this time were Anna Lena Wibom, also president of FIAF between 1985 and 1989, and Harold Brown, former head of film preservation at the British Film Institute's Archive (Uabumrungjit 38-39). After years of forging relationships and building bridges with FIAF and its members, in 2011, FAPOT formally joined the federation as a full Member. The official affiliation to FIAF ultimately enabled the still relatively young institution to achieve the remarkable accomplishment, unforeseeable a couple of decades earlier, of joining the executive committee of the FIAF. Since 2013, Chalida Uabumrungjit, FAPOT deputy director, has been a member of the FIAF executive committee, with her final mandate as vice president of the Association (2021-23), and more recently, the deputy director of the archive Sanchai Chotirosseranee replaced Chalida Uabumrungjit as FIAF vice president.
In April 2024, FAPOT hosted the 70th FIAF congress and symposium titled *Film Archives in the Global South*. Over the years, the Thai Film Archive has increasingly become an active member of the international archival community and joined AMIA, and SEAPAVAA, as a founding member hosting five general assemblies and conferences.[54]

Dome Sukwong, his colleagues and international peers like FIAF stand as distinct Actants that introduced or developed film preservation knowledge and ethical guidance in the Kingdom of Thailand and, more importantly, reshaped the conceptualization of film heritage and shifted the public understanding of film artifacts from the economic sphere to the social: films no longer viewed as low-level mass products but as cultural artifacts embedding nationally significant societal values, as explained later in the dissertation.

[54] In 2001, 2010, 2013, 2018 and 2023

3.3 The Vietnam Film Institute

These pages analyze the main features, backgrounds and affiliations of the Vietnam Film Institute (VFI). The information detailed in this chapter has been gathered through bulletins, conference minutes, and reports drafted by representatives and affiliates of FIAF and SEAPAVAA, through material accessible at the archive and with several interviews with current and former VFI managers and Archivists, namely: Prof. Trần Luân Kim (former director of the VFI between 1994 and 2000), Nguyễn Huy Hoàng (Deputy director of VFI), Hoàng Thị Mai (International Relations at VFI), Lê Tuấn Anh (Vice Head of Technical Dept at VFI), Trần Thu Thuỷ (Head of Collection department at VFI) and Nguyễn Thị Hồng Hạnh (Deputy director of the Ho Chi Minh City Archive Center).

Film preservation practices in Vietnam began with the foundation of the Democratic Republic of Vietnam. In 1946, a few months after gaining independence from foreign occupiers, president Ho Chi Minh signed a series of documents that, among other directives shaping the newly established state-owned socialist cinema apparatus, explicitly mentioned the importance of preserving audiovisual materials. Two decrees of that time respectively state that "destroying archival material is forbidden" and that "all the cinematic works must be submitted to the archives" (Đào Xuân Chúc 248),[55] initiating audiovisual conservation practices in Vietnam. However, despite cinema immediately becoming an integral part of the socialist revolution, creating a proper archival facility would take another thirty years.
The beginning of film practices in Vietnam coincided with the initiation of the Indochina wars,[56] three conflicts fought on Vietnamese ground during which audiovisual material was preserved without proper technical knowledge and in highly precarious conditions.

During the early decades of Vietnamese cinema, the conservation of film

[55] Đào Xuân Chúc in Phạm Vũ Dũng et al. *Vietnamese Cinematography: A Research Journey,* Hanoi, 2008.
[56] The first Indochina war (1946-1954), the recently formed Democratic Republic of Vietnam, DRV, fought for independence against France. It ends with the legendary battle of *Đien Biên Phu,* and the Geneva accords that sanctioned the country's division into two parts: the north under DRV with Hanoi as Capital and the south controlled by the RVN, the Republic of Vietnam, with the support of France and the USA with Saigon as Capital. The second Indochinese war (1955-1975) was officially fought between DRV and RVN backed by the USA. Commonly referred to as “The Vietnam war”, It slowly escalated after 1955 and ended with the defeat of RVN and the USA, the fall of Saigon, and the country's reunification under the Communist Party of Vietnam. The third Indochina war (1975-1991) was a series of conflicts between Vietnam and its neighbors. It started with the Vietnamese invasion of Cambodia and mainly saw Chinese and Vietnamese troops face each other along the border of North Vietnam.

material took place alongside military operations and was purely tentative as revolutionary filmmakers did not gain any skills, knowledge or infrastructure from the overthrown colonial regime and had not yet established fundamental relations with Eastern bloc allies such as the USSR or East Germany that in the early '60s would provide training on photochemical film processes. Stored in military bases across north Vietnam, film reels remained exposed to the treacherous sub-tropical warm-humid climate for years.

With the 1954 independence of North Vietnam, state-owned film studios based in Hanoi began producing a higher number of reels, including the first long-format feature films, and new regulations were imposed to manage and preserve archival films; a 1963 decree declared that "Films made by the state bodies are archival material and film studios and broadcasting stations must have archiving departments equipped to preserve films. Although the governmental decree made plain the relevance of preserving audiovisual material, it did not provide clear indications on how such processes must take place nor instructions regarding handling film materials (Đào Xuân Chúc 251).

During the '60s and early '70s, films were stored in disparate studio facilities around Hanoi and often moved back to hidden military bases in remote northern mountains to avoid airstrikes. Given the extremely harsh conditions that the early Vietnamese cinema heritage had to go through in its first thirty years of existence, the dedication of Vietnamese filmmakers was remarkably successful in saving most of the reels produced by continuously moving the entire collection from place to place. The situation started to settle with the war's end in 1975 and the country's reunification. The northern socialist government took control of the South, and with it, it acquired the entire audiovisual collection of reels produced by the Republic of Vietnam and several films produced by the Saigon film industry.

In 1978, the Ministry of Culture and Information[57] approved the decision[58] to establish a National Film Institute by merging several cinema-related departments and create a government body with the mandate of collecting and preserving films on a national scale.[59]

On 22nd September 1979, the Vietnam Film Archives was officially established[60] under the direct management of the Ministry of Culture and Information. The name would be later changed, in 1995,[61] into “Vietnam Film Institute” or VFI, a name that still holds today.

[57] The Cinema Department of Vietnam is part of The Ministry of Culture, Sports and Tourism (*Bộ Văn Hóa, Thể thao và Du lịch*)
[58] Circular N. 53/VHTT/QD, Ministry of Culture and Information of Vietnam, 28 April 1978
[59] Circular N. 83/VHTT/VP, Ministry of Culture and Information of Vietnam, 29 June 1978
[60] Resolution N 343/CP
[61] Resolution N 2808/TC-QD, 24 August 1995

Since its foundation, the VFI has been structured into two branches and separate infrastructures in Hanoi and Ho Chi Minh City.

The Vietnam Film Institute in Hanoi is a government body and the primary audiovisual archival institution of the country. VFI has the most extensive collection, functions as the decision maker for audiovisual archival practices and policies of the national film heritage, has control over archival matters and decisions in the country, and is where digitization practices are studied and implemented.

The Film Art Research and Archive Center in Ho Chi Minh City, or HCM City Archive Center, is a government institution that operates directly under the supervision of VFI. Often referred to as the Southern branch of the VFI, the HCM City Archive Centre differs from the VFI in size, capabilities and operational independence. Subordinated to the northern-based government, the HCM City Archive Center has the primary mandate of preserving film and related materials produced in the south.

The most recent and currently enforced ministerial decision specifying the archive's functions and duties was issued in 2008, determining that the VFI is a revenue-generated administrative institution under the Ministry of Culture, Sport and Tourism with the principal mandate of collecting, archiving, preserving and restoring film materials, meaning that every significant decision and budget allocation must be taken on a ministerial level and negotiated yearly, limiting the autonomy of the archive.[62]

As a governmental institution, the organization and management of VFI are closely tied to the Communist Party of Vietnam, which imposes general guidelines and mandates on the archive. However, similarly to Thailand, the primary source of knowledge and practical skills in audiovisual archival practices have been FIAF and a few notable association members that, through the years, influenced and supported VFI's operation.

Building relationships between FIAF and the VFI followed a similar path to that of the Thai Film Archive, especially in the initial phases of their affiliation.
The First relevant event marking the initiation of relationships is the 1983 39th FIAF General Meeting hosted in Stockholm by the Svenska Film Institute, when, through the efforts of Anna-Lena Wibom, the first director of the Vietnam Film institute, Trinh Main Diem, was invited by Swedish Government to attend the Symposium as a guest observer (Kula 5).

[62] Resolution N 2388/QD-BVHTTDL (28/5/2008)

For the first time since its foundation, the VFI joined a conference of Film archives, establishing relationships with the international community, gaining knowledge on mutual concerns and officially joining the federation as an observer.
The ties deepened the following year when Wibom, under the aegis of FIAF and UNESCO, visited the Thai and Vietnamese capitals to conduct a consultancy mission and provide support in developing audiovisual archives in the two countries (Wibom 1-2).[63]

The official visit initiated a productive collaboration between the VFI, FIAF and its members, most of all the Swedish film institute. In the 1992 minutes of the 48th FIAF conference Wibom reported to the assembly members about a project that her institute had been carrying out with its Hanoian counterpart to investigate the situation of film preservation in an archive operating in tropical countries and draft an action plan to improve the condition of the Vietnamese Film Institute. The same 1992 conference paper also discloses that the FIAF fundraising committee has been able to raise 50,000 USD for regional projects in Thailand and Vietnam (FIAF 13, 1992).[64]

The Swedish Film Institute was not the only FIAF member to provide knowledge and support to Vietnam, and in the subsequent years, reports mention numerous exchanges between Southeast Asian archival institutions and other FIAF members. For instance, a 1984 Vietnamese report to FIAF and a 1987 article in the 34th FIAF bulletin both mention exchanges between the VFI and audiovisual archives of the former USSR, the (East) German Democratic Republic, the Democratic People's Republic of Korea, France, Sweden and Australia. The most significant collaboration between VFI and international peers is perhaps the one achieved between 1985 and 1991 with the Národní Filmový Archiv,[65] when the Hanoi and the Prague institutions conducted a successful partnered research project on the causes and effects of mold on films in tropical environments (Trịnh Mai Diêm 6). The joint research was instrumental in safeguarding Vietnamese film heritage from material decay but also led to the VFI's official admission to FIAF in 1991 as a provisional member.

After several years of VFI regularly attending FIAF symposia and becoming increasingly involved with the federation activities and exchanges, in 2000, the Vietnam Film Institute officially became a full member of the Federation.

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[63] Wibom Anna-Lena, *Leaflet and Resume of the talk given at the First Asian Seminar on Developing Film Archives*, National Film Archive of India, Pune, February 20th-25th, 1984.
[64] Wibom Anna-Lena in *Minutes of the 48th FIAF General Meeting*, FIAF Montevideo 22 - 23 April, 1992.
[65] Národní Filmový Archiv /National Film Archive of the Czech Republic, https://nfa.cz accessed on 12/05/2022

In 2004, the 60th FIAF congress (and general assembly) was hosted by the Vietnam Film Institute in Hanoi in partnership with SEAPAVAA. The event was a further and ultimate step in establishing bridges and mutual support with the international archival community, and it represented a significant achievement for VFI; it also marked a noteworthy date for FIAF as the joint symposium took place in Southeast Asia for the first time in its history.

Since the mid-90s, The VFI has also been significantly involved in SEAPAVAA and its activities. As one of the early founders, the Vietnamese institution hosted two SEAPAVAA conferences in Hanoi (1998) and HCM City (2012), exchanging knowledge and information with regional peers and further expanding its network.

To the present day, the VFI adheres to ethics and practices indicated by international associations like FIAF and SEAPAVAA and follows the guidelines and mandates imposed by the central single-party socialist government, two distinct sources that equally affect the conceptualization of national film heritage.

4 The Environment Challenge

The environment challenge encompasses several climate-related concerns threatening audiovisual collections in archives worldwide in like manner.

Within the environment challenge, I distinguish between two typologies of hazards, with the first being natural disasters and the second being progressive deterioration of the materials. Natural disasters include all unforeseeable events caused by extreme weather conditions or other natural events, such as, hurricanes, typhoons, landslides, flooding, droughts, volcanoes and earthquakes (Walsh 24, 2024, Teygeler 46).[66]

Physical decay is the chemical transformation of film materials caused by improper moisture and temperature levels; material deterioration varies according to the film bases (cellulose nitrate, cellulose acetate, and polyester) and with different outcomes (nitrate decay, acetate decay, shrinkage, color fading and mold/mildew/fungus erosion) (Francis 8-16).

Audiovisual collections in mainland SEA are threatened by both natural disasters and material decay. Situated between the Tropic of Cancer and the Equator, the region features a warm and humid subtropical climate, along with seasonal monsoons (Teygeler 13). During the rainy season,[67] relative humidity can reach 100%, while during the dry season, it is not unusual to experience temperatures of 40° degrees Celsius.[68]

Natural hazards like floods, tropical cyclones, tsunamis, typhoons, and landslides surge to exceptional levels during the intense rainfall season (Teygeler 53). Normally occurring between June and September but often varying annually in terms of intensity and timing, monsoons stand as a recurring threat whose impact is hard to foresee and prevent, and considering that for decades, the regional audiovisual heritage has been, and partially still is, disseminated through a variety of unsuitable and vulnerable locations (attics, cellars, temporary warehouses).

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[66] From an Actor-Network perspective, it is relevant to underline that some climate-related hazards can also be caused or aggravated by human behavior and activities."Deforestation, urbanization, and industrialization can increase vulnerability to disasters, and the frequency and intensity of natural phenomena are generally accepted to be on the rise because of global warming; the impact of natural hazards is also heavily dependent on societies' choices to address risks and reduce their vulnerability" (Walsh 14).

[67] The three seasons that characterize the area are usually indicated as rain season (June to October), winter (November to February) and dry season (March to May).

[68] "Bangkok, the capital of Thailand, is not an ideal environment for film preservation because of the climate. [...] The temperature reaches a maximum of 40°C in April and a minimum of 9.9°C in January.Bangkok is very hot and humid. On a rainy day the relative humidity can reach 100% and, during the dry season in February and March, the relative humidity can drop as low as 17%." (Penpan Jarernporn, report of the FIAF- FIAT/IFTA-IASA third joint technical symposium, Ottawa 1990)

Catastrophic climatic events, like the extreme precipitations affecting the region from May to October, have already proved to be a concrete danger to the viability of regional audiovisual archives. In October 2011, a massive flood hit the Bangkok metropolitan area in central Thailand, with overflowing waters of the Chao Phraya River surrounding the facilities of the Thai Film Archive for over two months. In a race against time, Thai archivists moved film cans onto higher shelves and sealed the front door to prevent the water from reaching the collection (Uabumrungjit 40). However, water leakages damaged the institution's under-construction infrastructure, aggravating the humidity levels within the archive.

The main climate-related source of concern for film artifacts' integrity across Southeast Asia is material decay. The deterioration process caused by the tropical warm-humid weather is complex and often involves the simultaneous action of several forces, which include physical elements (heat, sunlight, dust, sand), chemical (moisture, gasses, pollutants), and biological (fungi, bacteria, insects, rodents) (Teygeler 49).

The relentless action of elevated tropical temperatures and relative humidities plays a major role in accelerating the chemical and biological degradation rate of analog film reels and has allegedly already wrecked the largest part of the regional audiovisual heritage.[69] According to Sukwong, an estimate of about 90% of Thai audiovisual heritage, predominantly feature films, has been lost forever as a consequence of chemical and physical decay, and, despite the lack of data to estimate exact percentages of surviving analog films, the situation is no better in neighboring countries like Myanmar and Cambodia, where preservation initiatives have been much more circumscribed and inadequate.

The most widespread types of material deterioration in SEA are molds/fungus erosion and acetate decay, also known as vinegar syndrome. While molds and fungus transversally affect every kind of film base, vinegar syndrome occurs specifically with cellulose acetate reels, which constitute substantial part of the regional collections.[70]

[69] "The losses of audiovisual heritage across the region have been large and tragic. [...] The survival probabilities which might operate in Europe or North America aren't valid here. For example, films and tapes stored in the tropical heat and humidity of Bangkok or Manila will last nowhere near as long as the same items stored in colder Europe." (Edmondson 150, 2000)

[70] Nitrate decay, which notoriously stands as a major concern for European and American audiovisual archives, does not represent a concern for the regional film heritage for the simple reason that historically, local film industries started to independently produce movies after World War II when nitrate film stocks were already things of the past; to date, except for 290 reels currently stored in a dedicated vault at Thai Film Archive Public Organization, nitrate film heritage is essentially non-existent in the region. Polyester films, on the contrary, began circulating in the region when preservation matters were already acknowledged and better survived.

Water, high humidity, and heat affect the plastic base of acetate film, which chemically decompose releasing acetic acid (Francis 12). The high temperatures and extreme humidity of the tropical weather of SEA significantly accelerate the acetate film reels' degradation process, especially when not properly preserved.

The severe impact of warm-humid weather on acetate film reels has long been identified by local archival institutions as a critical concern for long-term preservation practices and has been central to preservation discourses throughout the region since the early 80s also thanks to the proactive role of archival organizations like FIAF.

During the 1983 FIAF / FIAT-IFTA joint technical symposium, the event that saw for the first time significant participation of Thai and Vietnamese representatives, Trịnh Mai Diêm, former director of VFI, stated that "tropical weather is unfavorable for storing and preserving films, this is our first concern.[...] In such a climate, most films stored so far have been moldy, faded and decayed.[...] Consequently, the emulsion of these films is destroyed - they smell sour, and all the pictures on the films may be damaged",[71] explicitly addressing vinegar syndrome and the great concern it posed to Vietnamese archivists.

The symposium proved to be consequential as it led to a series of exchanges and initiatives between local film archives and other international institutions, such as the joint research on the causes and effects of film decay in tropical environments conducted by the VFI and the Národní Filmový Archiv (Diêm, FIAF 34, 1987), and construction of the film vault in Hanoi in 1990, built under the technical directions of the FIAF technical committee.

Long acknowledged by European and North American archives as the most important factor in the preservation of films, the construction of atmospherically controlled film vaults with a standardized cold temperature of 5° Celsius and dry storage environment at 35% relative humidity (FIAF 2, 2009) proved to be the most effective way to prevent or slow down the decomposition of nitrate and acetate-based films (Enticknap 27) also for those archives battling the extremely warm and humid tropical climate.[72] However, while the Vietnam Film Institute and the Thai Film Archive have been able to build standardized climatic vaults, respectively in 1989 and 1998, to date, not every country in the region is yet

[71] Report of the 1983 Stockholm joint technical symposium, FIAT/IFTA bulletin de la Fédération internationale des Archives de Télévision/ International Federation of Television Archives Newsletter 1986.

[72] "Temperature and moisture are the two key factors affecting the rate of film deterioration. New acetate film stored at 18°C and 50% RH (relative humidity) will last approximately 50 years before the onset of vinegar syndrome. Just reducing the temperature -9° while keeping the humidity at the same level delays the first signs by 150 years. Low temperature and low relative humidity levels slow chemical decay and increase the stability of motion picture film." (The film preservation guide 62)

able to implement similar long-term preservation strategies. For instance, in Cambodia and Myanmar currently there exist no acclimatized audiovisual storage facilities of any sort.

In addition, chemical and physical decay also affect non-cellulose-based archive carriers, such as videotapes and magnetic tape-based formats,[73] which are much more perishable than film, and there is not much that can be done to slow down their deterioration (Fossati 92). Magnetic tape decay is becoming an ulterior, greater source of concern since audiovisual archives employ tape-based carriers for long-term archival purposes.
A great deal of audiovisual content, especially documentaries, television productions and newsreels, have been originally recorded on videotapes and within mainland Southeast Asia, it is not uncommon to find feature films surviving uniquely on magnetic carriers. For instance, most of the surviving feature films produced in Myanmar and currently stored in the semi-inaccessible state facilities exist uniquely on magnetic tapes of various kinds, only partially cataloged and not yet digitized. But it is also the case of the feature films produced by independent companies in South Vietnam throughout the 90s, produced and distributed on VHS magnetic tapes and presumed lost.

Furthermore, the current standard carriers for storing digitized and digitally born audiovisual content pose similar concerns to those experienced with obsolete non-film-based carriers like magnetic tapes or optical disks. Over the past twenty years, the fast-paced technological progress experienced by the global film industry impacted audiovisual archives, compelling them to implement digital infrastructures, machines and workflows and concurrently introducing collateral concerns posed directly by digital technologies' inherent features, flaws and limitations.

The hybrid practices that currently characterize archival operations largely employ a variety of digital assets to restore, migrate, remaster, access and, above all, store digital data, systematically using magnetic tapes as mezzanine formats and for long-term preservation. The storage of digital files can occur via different technologies that include optical carriers, predominantly HDD, solid-state carriers (SSD),[74] and magnetic tapes like LTO, which to date

[73]A more comprehensive list of magnetic tape-based formats and carriers can be found at: https://obsoletemedia.org/video/tape/ accessed 25/06/2021
[74] HDD (Hard Disk Drive) and SSD (Solid State Drive) are widely employed storage devices that vary in terms of capability and are constantly upgraded in terms of performance. However, the expected lifespan of HDD is less than five years, while SSDs are expected to function for no longer than ten years.

represent the digital storage standard adopted by many archives worldwide,[75] as by many other intensively data-driven fields (Fossati 96).

While digital storage represents only one aspect of the digitization process, the current status of long-term digital technologies and strategies employed to preserve digitized audiovisual content represents the most critical element of the digitization chain.
The constitutional long-term preservation mandate that characterizes audiovisual archives clashes with the inherent features of the primary technology currently employed for storing digital data, LTO magnetic tape, which, for lack of any better solutions, has been unofficially elected as the standard hardware for digital storage, but that is still prone to material decay and rapid obsolescence and thus poses uncertainties and unsettled variables that global archives are trying to apprehend and overcome.

Archival practices like cataloging, restoration, and access benefit overall from the fast and versatile workflows provided by digital tools. However digital preservation stands as a genuine concern as the instability and unreliability of current digital carriers directly threaten the long-term viability of audiovisual content. The unfortunate reality, recognized by both the industry and the archival community, is that digital storage assets have a relatively short lifespan and are susceptible to various forms of decay. In fact, they may be at greater risk of deterioration than film-based assets (Croft 14). Compared to film or paper, magnetic tape is a less stable information storage medium; with proper care, films can last for centuries, while magnetic tapes typically last only a few decades (Van Bogart 1).

The physical and chemical degradation of magnetic carriers is caused by the same climatic factors that affect analog film carriers, and like those, digital assets might even face ulterior complications if not adequately planned, managed and maintained.
High temperatures, humidity, dust, and corrosive elements in the air affect the physical components of magnetic tapes, potentially leading to data loss due to decreased magnetic capability and deterioration of the tapes (Van Bogart 18). The climatic challenges impacting analog carriers are also significant for digital storage, as digital assets in the physical world typically rely on media such as LTO magnetic tapes, which have a lifespan of under 30 years and are susceptible to factors like heat, humidity, and electromagnetic fields (AMPAS 35).

[75] "Most archives use a tape system for long-term conservation. They have also regularly migrated their LTO (Linear Tape-Open) magnetic tape data storage. The archives that still have older generations of LTO tapes are in the process of migrating them. Some archives also admit that they generally wait for two generations to migrate their data to reduce the cost (the price of tape drops every time a new generation is introduced)." (Celine Ruivo and Anne Gant, 2019 FIAF Survey on Long-term Digital Storage and Preservation).

LTO tapes and other magnetic-based carriers are hence threatened by climatic factors as much as analog stocks but are also hazardously prone to rapid obsolescence, as detailed in the technology challenge chapter.

Material decay unfolds similarly across Southeast Asia. With local distinctions, the subtropical warm-humid climate and its physical, chemical and biological aftermath equally affect SEA countries and ultimately stand as a collective mutual source of concern for regional archival institutions. As a result, the shared critical concern has been long acknowledged and addressed by regional archivists. The inclement impact of tropical climate on film reels and the subsequent material decay have been identified since the early days of preservation initiatives across the region thanks to exchanges with international peers and to local collaborations. I have already mentioned the role of FIAF in providing essential knowledge and support to SEA archives, but it is relevant to underline that also the sporadic exchanges between archives in the region, while rare, have still been very consequential in spreading awareness and understanding of how to tackle the critical challenge. For instance, the collaboration between Laotian and Vietnamese archival institutions led to the construction of the National Library of Laos's film vault, erected in 1998 under the supervision of VFI's head of film preservation Dr Ngô Chí Hiếu and VFI's director Tran Luan Kim (Ngô Chí Hiếu 19).[76]

From an ANT perspective, the Environment Challenge highlights two distinct categories of Actants actively influencing archival viability and operations.

The first category comprises the international associations fostering the circulation of knowledge, skills and practical solutions to the challenge. FIAF, SEAPAVAA and AMIA are sophisticated communities, aggregates of other individual Actants whose Agency transversally affect the activities of the two case studies in diverse, intermittent and heterogeneous ways; where relevant, the role and impact of international associations is further examined through the thesis on a case-by-case basis.

The second category is the broad group of physical (heat, water and humidity), chemical (moisture, pollutants, but also decaying film bases, like acetic acid or nitrocellulose)

[76] In 1998, 1,192 Laos film reels, preserved at the Vietnam Film Institute (VFI) for nearly four decades, were transferred to the Laos National Film Archive. These reels remained in Vietnam because Laos filmmakers had produced films there during the 1960s and 1970s; upon returning, only positive copies were typically retained. The films underwent restoration and preservation alongside Vietnamese collections prior to their transfer. Despite multiple technical assessments and delays—initially due to inadequate storage facilities in Vientiane—the completion of a specialized storage facility in early 1998 facilitated the transfer. The repatriation was formalized in July 1998, following supervision by officials from both institutions (Ngô Chí Hiếu 1999).

and biological (molds and fungus) climate-related Actants, of which Agency is relatively simple to trace as they cause the decay of film artifacts in a more predictable and acknowledged manner. This extensive category of non-human Actants interestingly echoes media archaeologist Jussi Parikka's stance on the importance of the non-organic (material, metal, chemical) elements in constructing media and articulating media technologies (Parikka 6). With his reasoning around the geological constituent of media, Parikka argues that the materiality of technological artifacts should be regarded not simply in terms of machines but extended to those elements that exist before the machines (resources, energy and raw materials)[77] and after the machine (waste and scraps) (Parikka 140).[78] My outlook overall matches Parikka's stance, methodologically acknowledging water, molds, acetic acid and other organic/inorganic materials as autonomous Actants and examining film artifacts by looking at their materiality beyond the ontological juxtaposition of analog and digital.

However, considering that the Agency of these non-human Actants still entails the implementation of preservation practices from archivists and curators, and given that such practices ultimately arise from specific conceptualization of film artifacts, I proceed with the analysis by contextualizing the impact of climatic factors and related archival practices on FAPOT and VFI' collections and in chapter 4.3 reframing the findings via "Film as Original".

[77] Pertaining ongoing (2024-2027) research is *CINEAGRI: Agriculture and the Global History of Celluloid Film Manufacturing*; the research project sees Dr Marek Jancovic as the principal investigator and focuses on tracing cartography of historical trade routes in agricultural materials involved in early celluloid film production, such as camphor, gelatin and nitrate, with geographical focus on the region around the East China Sea.
[78] Concerning e-waste and environmental impact, it should be indicated the work of Sean Cubitt's *Finite Media, Environmental Implications of Digital Technologies*, where the scholar examines the environmental and human toll exacted by mining and the manufacture, use, and disposal of electronic devices.

4.1 FAPOT Collections and Preservation Practices

The Film Archive Public Organization Thailand has an extensive collection of audiovisual reels, film-related printed material of various kinds (posters, showcards, screenplays, booklets) and obsolete analog machines (cameras, projectors). The collection comprises approximately 68,890 film reels in 16mm acetate and 35mm polyester. According to Chalida Uabumrungjit, the collection includes over 2,000 feature films, 12000 documentaries, home movies, and non-fictional film reels, and over 100,000 magnetic tapes.

Film artifacts are currently stored in two separate locations, the Salaya facility and an additional temporary warehouse close to the archive. The most important part of the collection is preserved in two vaults within the Salaya building. With a size of approximately 450 square meters, the main vault is located on the fourth floor of the building, and it contains all the negatives, the acetates reels, most of the 16 mm acetate reels and the main 35 mm polyesters prints, especially those that came as a unique copy. The second vault contains the nitrate collection of the archive and, for safety reasons, is placed on the top floor of the building. The nitrate vault is relatively small, roughly 10 square meters, and it solely stores the circa 300 reels filmed by King Rama VII, the first batch of films discovered by Sukwong in the early '80s, and a few other surviving nitrate reels and fragments belonging to the early decades of Thai cinema. The vaults have a controlled environment with a temperature of 4° Celsius and relative humidity of 30%. Conserved in the vaults via plastic cans, films are documented and individually labeled employing a card system that the staff of the film archive created following the recommendation of FIAF and adopting as a model the cataloging system of the National Film and Sound Archive of Australia (NFSA).

However, a large portion of the collection has yet to be catalogued and stored in two new vaults, which the archive is currently building in the Salaya facility. The new vaults will be used to conserve the collection temporarily stored in the external warehouse and to collect the analog access copies, old and newly printed, that are regularly used for screenings in the archive facilities, and all other non-film based audiovisual material amassed through the years by the institution. The material currently stored in the external warehouse constitutes almost half of the collection, and despite the warehouse's lack of standard temperature and humidity storage systems, the reels deposited in those external facilities are mostly 35 mm polyester copies and magnetic tapes, classified as in non-critical conditions.

The origin of the reels is diverse. Between 1984 and 2010, much of the work was done on a volunteer basis, with funding for the archive being significantly limited. During this time, Thai film archivists primarily concentrated on acquiring artifacts, relying on awareness campaigns or personally visiting venues that could still hold film reels throughout the country (Uabumrungjit 38). Despite film acquisition never having a dedicated budget, the awareness campaigns progressively convinced several external stakeholders to donate their material to the archive; among others, the archive increasingly received reels from production companies, governmental agencies, itinerant cinemas, private collectors and TV broadcasters like Channel 3, Channel 5 and Channel 9 constituting a substantial part of the magnetic tape and 16mm collections.

The relationship between FAPOT and these groups of contributors has evolved over time. With a lack of understanding of audiovisual archival practices in civic society, for the first two decades of its operations, the archive struggled to convince these counterparts of the importance of proper film conservation, particularly those oligopolies dominating the Thai Film Industry and private film collectors across the country.

The dynamics between these two groups and the Thai film archive significantly changed with the digital rollout. Once analog film carriers suddenly became obsolete for public screening, the stakeholders who had already established a dialogue with the archive further recognized the role of FAPOT as the primary and only site for anything concerning film artifacts and became more willing to donate analog reels. The transformations brought by the digital rollout thus apparently changed the perception that both private collectors and production companies had over the role of the film archive as they finally recognized that FAPOT would eventually become the best place to preserve old analog films.
Thanks to the awareness campaigns regularly conducted by Thai archivists across the country, most private film collectors have acknowledged over time the value of the work done by the film archive, and they continue to donate to FAPOT the last few reels they independently acquired in the past. This group of enthusiastic individuals is today also one of the primary users of FAPOT facilities, in particular the screening rooms, and should be credited for their spontaneous contribution to safeguarding Thai film heritage.

On the contrary, the relationship between the local production companies and the Thai Film Archive remains problematic and yet to be settled. The main reason is that an official agreement between production companies and the archive has never been established on a national level. The self-regulated and decentralized oligopolistic business model that characterizes the Thai Film Industry ultimately implies that the acquisition and storage of

newly produced films also lack policies and legislation between the parties and is still managed on a case-by-case basis. Notably, after the digital rollout, the leading production companies showed two distinct approaches to donating film materials to the archive, reflecting the technological disruption between analog and digital.

On the one hand, film production companies have become more willing to donate their analog film reels; most of the polyester reels stored in the external warehouse are positive copies initially used for distribution and have been donated to FAPOT by prominent production companies, such as GDH,[79] and 5 Stars,[80] right after the 2014 digital rollout. With the abrupt technological disruption that affected every industry sector, production companies realized that since they could no longer manage, copy or print their own movies independently, it would eventually be safer and cheaper to store their film reels in the one place that could properly do so. Donating analog prints to the archive came out of necessity rather than a sudden change in perspective over artistic and historical artifacts. It is essential to remark that the digital rollout occurred only a few years after the Thai film archive gained the status of Public Organization and obtained a substantial increase in budgets and capacity. Bigger and better-equipped facilities, larger and newly trained staff and the institutional recognition of FAPOT's role as the official national repository of film arguably contributed to changing the view of local production companies and ultimately acknowledging the role of the archive and the benefits of cooperating with an institution as such.

On the other hand, the archive is still facing difficulties convincing the same film companies to donate digitally native films. While most of the Thai historical film productions that survived up to the 2000s have been, at this point, saved and stored in archival facilities, the acquisition of digital-born material remains an ongoing contention between FAPOT and cinema oligopolies. Capable of implementing their own integrated storage systems in-house and concerned about potential copyright issues that may arise from disseminating digital copies of new films, local production companies do not recognize the benefits of storing digital films in the archive and are consequently much less inclined to donate new movies to it. The legislation concerning film deposit to the archive is hazy and unclear. While the 2008 "Film and Video Act" issued by King Rama IX clearly outlines the role and duties of censorship in Thailand, specifying that every film produced in the country must be submitted to the censorship board, which is also responsible for sending copies of films to the National

[79] GDH *https://www.gdh559.com/* accessed on 22/03/2022
[80] FIVE STAR PRODUCTION | Thai Movie Company | Production & Distribution *https://www.fivestarproduction.co.th/* accessed on 25/03/2022

Film Archive for preservation, the law does not establish any explicit legal framework regarding the deposit of films to the archives and lacks details about the legal basis and scope of the archive's functions. In practice, this means that films are submitted to the censorship board in various formats but are not adequately stored in the archive facilities, ultimately resulting in the majority of digital films not being actively preserved.

Regarding analog preservation practices, the archive has been equipped with a proper film vault since 1998 and has thus been able to tackle the decaying effects of environmental Actants such as humidity, molds and fungus with the most essential and effective strategy - the use of a climatized infrastructure. The preservation and restoration of film collections are today entrusted to a department composed of 14 staff members trained directly by Dome Sukwong or external consultants, such as those FIAF associates who have visited FAPOT since the early ‘80s. The Head of the department, Kestuda Jina, is the only member of the conservation department who received official training in conservation and restoration practices from the National Film and Sound Archive of Australia (NFSA). However, Sukwong and Uabumrungjit, former and current directors of the Film Archive, have received training from FIAF and regularly monitor standards and practices of the archive.

According to Jina, the critical concerns that her department encounters daily while cleaning and checking film reels are the same faced by the global audiovisual archives’ community: decay, vinegar syndrome, fungus, mechanical damage, shrinkage and film melting, criticalities worsened by the warm-humid climate of the mainland SEA.
The workflows and tools adopted by FAPOT for handling, cleaning, and restoring damaged reels adhere to international standards and follow the same guidelines that most FIAF members employ worldwide. That is to say that Thai film archivists have acknowledged climate-induced concerns since the beginning of their operations and have been proficiently implementing standard preservation practices as soon as they become financially and practically sustainable. To date, FAPOT's primary preservation strategy remains the long-term storage of film originals in standardized vaults, sustained by analog restoration practices based on knowledge primarily developed within the FIAF community and complemented by the expertise of local former film technicians and Dome Sukwong himself.

Regarding digital practices, following the example of international peers, FAPOT's digital department has begun implementing digital restoration and digital preservation practices since 2009, a few years earlier than the actual rollout.

Working closely with the conservation department, the digital team comprises six permanent members working on both analog film reels and magnetic tapes. The head of the

department, Nutchanart Chinpong, has received formal training by attending the FIAF summer school. The digitization workflows are based on the knowledge acquired by the department head and FAPOT management while attending international training and are regularly reviewed to adhere to international standards (DPX LOG file format in 4K for 35mm films, 2K for 16mm films and HD for 8mm films for restoration, and ProRes 422 HQ rec709 files for storage). After 2009, the department was able to purchase and employ three scanners (DFT Scanity, D-archiver and MWA), several DIAMANT-Film Restoration software licenses for digital restoration, and BMD DaVinci Resolve for color grading. The digital restoration of colors is realized following various references, mainly by watching the analog version of the original reels directly in the screening rooms of the facility. Since this procedure cannot be implemented for every digitization process, often the color correction of the digitized version is implemented by comparing different sources (photos, previously digitized films, properties of obsolete film technologies, online references) and final decisions are taken after consulting senior members of the archive. Ultimately, the color restoration of digitized reels is often carried out following the intuitions and assumptions of staff members, including Sukwong, although most of the digitized reels are stored on LTO without restoration. After employing hard drives and other provisional digital storage means for several years, in 2018 the archive implemented an automated tape library Quantum i6 and uses LTO-8 tapes, where both the DPX raw material and the ProRes graded Master are stored. Of the approximately 2000 Thai features held in FAPOTs vaults, 155 titles have been digitized and are currently stored as two copies for each title on 375 LTO8 tapes. Up to now, the Archive has never conducted a migration of the collection and is currently planning to update the digital storage system in 2027, embedding in its workflows the future generation of tapes, presumably LTO10, and hence attempting for the first time the migration of its digitized and digitally born films.

4.2 VFI Collections and Preservation Practices

The history of VFI's film heritage matches the convoluted and tumultuous events that affected Vietnam since the beginning of cinematic practices in the country, namely the three Indochina wars fought within national borders and the prolonged division of the country until 1975 into two separate entities: the communist-ruled Democratic Republic of Vietnam (DRV) in the north and the US aligned Republic of Vietnam (RVN) in the south.

VFI's collection comprises about 82,000 film reels (44,000 in Hanoi and about 38,000 in HCM city), predominantly in 35mm and 16mm formats. The VFI also stores an undetermined number of magnetic tapes of various formats (Betacam SP, VHS, U-Matic, DV Cam) and DVDs that, according to the VFI archivists, represent less than 10% of the total collection and mostly contain backup copies of analog materials.

The analog collection is uniquely composed of acetate and polyester films. Despite in the very early days of Vietnamese cinema, local filmmakers employed nitrate films for their productions, no nitrate reels survived to date as the content was later migrated to acetate film carriers. The circa 25,000 tiles that constitute the collection include feature films, documentaries and animations. in recent years, the VFI has become the repository of two other state-owned institutions that previously autonomously stored their productions, the National Documentary and Scientific Film Studio and the Vietnam Animation studio. The VFI collects and preserves film posters, photos, flyers and film-related printed material and has a small collection of obsolete analog machines including cameras and film projectors.

In further detail, the audiovisual collection is currently composed of:

-Most of the reels produced by the DRV during the Guerrilla film era (1945 - 1953)
-Every film produced by the DRV during the Socialist film era (1954 - 1975)
-Every film produced by the DRV in Vietnam during the Reunification era (1975 - 1986)
-Every film produced with state funds in Vietnam since the Doi Moi 1986 reforms
-Part of the films produced by independent Vietnamese companies after 1986 reforms
-An undisclosed number of reels produced by RVN between 1955 and 1975
-About 100 feature films produced by Saigon film industry between 1955 and 1975
-200 feature films donated by aligned countries (mostly former Soviet bloc nations)

The reels held in the vaults of the Vietnam Film Institute started to be collected long before the actual creation of the archive. Contrary to the Thai Film Archive, where archivists are still committed to the search for lost reels, films produced in Vietnam have been kept together since the birth of the state-controlled Vietnamese film industry in 1953, prior to the official establishment of the national archive and a properly climatized film vault.
The films produced in Hanoi underwent several displacements and relocations around the country for several decades. After being disseminated across military facilities in northern Vietnam during the first (1946-1954) and the second (1955-1975) Indochina wars, the North Vietnam film collection was gathered and stored in the ATK military resistance base in the northern city of Thai Nguyen until 1979. Then, with the escalation of the Sino-Vietnamese conflict during the Third (1978 -1991) Indochina War, the collection was moved to the central coastal city of Da Nang, far from the Chinese border. Due to the extremely high humidity level in Da Nang, the film collection was yet again moved, this time to the southern city of Thu Duc (on the outskirts of Ho Chi Minh City) where it remained until 1982. With the end of the third Indochina war, the collection was finally brought back to Hanoi and kept in unacclimatized VFI warehouses until 1989, when the currently existing vault was finally installed. Conversely, while it always stayed in Ho Chi Minh City, the southern collection was moved between different provisional state-owned facilities, like the Giai Phong film studio, before being stored in the film vault inaugurated in the Saigonese VFI branch in 1989. Since the 90s, the VFI's infrastructures have mostly remained the same.

At present, Hanoi's vault preserves originals and copies of the productions of Vietnamese Socialist cinema since the early 50s, including feature films, documentaries, and animation. The vaults in the HCM City archive center preserve copies of revolutionary socialist cinema as well, but also store the more politically sensitive, if not classified, types of materials: audiovisual reels of the fallen Republic of South Vietnam and feature films produced by the independent Saigonese film industry between 1955 and 1975.

Since 1986's reforms, the acquisition of non-state-funded produced films has taken place in two ways: voluntary handover, which seldom occurs, or by directly buying the films, which, according to VFIs managers, have been limited to the purchase of 4/5 titles per year.

Thereby, the collection as it is today does not comprise every film produced in Vietnam, but it is instead composed predominantly of those produced as part of the state-funded cinema under the directives of the ruling communist party and a few more titles produced independently after 1986. This ultimately implies that the entirety of the film produced by the Democratic Republic of Vietnam and the Socialist Republic of Vietnam has

been preserved since day one, while reels produced outside of the dominant national narrative only partially survived. Notably, the current collection does not include many of the Southern films produced before the 1975 unification, all '90s "instant noodles" (low-budget feature films produced, distributed, and screened directly on VHS tapes), and many other features independently produced after the 1986 economic reforms.

Despite Vietnam being today a unified country, the contemporary Vietnamese film industry and VFI's collection and preservation practices mirror the country's fractured, bellicose, and heavily ideological past, with a marked divide between a heavily centralized public sector in the North and the private enterprises based in the South.

The juxtapositions of North/public/Hanoi and South/private/Saigon can be observed in several segments of Vietnamese cinema and film heritage. For instance, the uneasy dynamics between the VFI, representing state cinema and central institutions based in Hanoi, and southern private film enterprises affected the submission of both analog and digital films. If in analog filmmaking times, the handover of feature films produced in the South was already limited, with the shift to digital cinema it essentially stopped. Officially, the VFI has the mandate of collecting, archiving, preserving and restoring sets of films relating to domestic and foreign cinema and monitoring and receiving the copyright applications for all films, domestic and imported (Nguyễn Thị Lan 4-5). However, worried about copyright matters and claiming to be able to independently manage the storage of their files employing various digital data storage systems, Vietnamese production companies (and Korean conglomerates financing local productions) rarely send copies of their productions to VFI, or when they do they ship encrypted Digital Cinema Packages without providing digital keys to open them. In turn, the VFI soon stopped accepting and preserving encrypted DCPs, meaning the archive is not preserving most digital films currently produced in Vietnam. In 2022, the government introduced a new Law on Cinematography No. 05/2022/QH15,[81] which states that "A cinematographic facility that has a film with the Film Rating License according to regulations shall submit a copy of the film for legal deposit to the agency that issued the Film Rating License" and that specifies that production companies are required to transfer the legal deposit film copy without passwords for both Vietnamese films produced using the state budget and independently produced.

[81] Law No. 05/2022/QH15 dated June 15, 2022, on Cinematography of Vietnam - Law Net *https://lawnet.vn/en/vb/Law-05-2022-QH15-cinematography-of-Vietnam-7FE5B.html* accessed on 08/03/2023

While the law entitles VFI to act as the mandatory recipient of national productions, in practice, production companies only submit films for censorship to the Ministry of Culture, Sports and Tourism to obtain approval for screening, but refrain from sending copies to the VFI. According to VFI representatives I interviewed, this odd and inconvenient situation arises from unsettled copyright deposit agreements and ambiguous legislation. However, I argue that it is also influenced by an underlying mistrust among film entrepreneurs, predominantly based in Ho Chi Minh City, toward the single-party central government in Hanoi and its cultural institutions, including the VFI.

Acquiring and preserving digital-born materials has ultimately presented very similar challenges in both countries. Since the open market reforms of 1986, the relationship between the VFI, representing the public sector, and the Southern-based private film enterprises has been as problematic as that in the Kingdom of Thailand, where skepticism and a lack of awareness of film oligopolies contribute to instability and uncertainty in the acquisition of newly produced films. This ongoing concern affects both institutions and many film institutions across SEA and will likely result in the loss of many digitally born films.

Regarding analog film preservation practices, since its foundation in 1979, the Vietnam Film Institute has embraced FIAF as its primary source of collection management policy and technical knowledge. As detailed, prominent FIAF members, like Svenska Filminstitutet and Národní Filmový Archiv, have been instrumental in providing the essential expertise and training of early Vietnamese archivists. The early collaborations with FIAF representatives have significantly influenced the VFI practices, and the Institute still follows FIAF standards and approaches in preservation, collection management and restoration. VFI's collection is currently stored in three film vaults, two in Hanoi and one in HCM City. The vaults, inaugurated in 1989, following FIAF standards, maintain a constant temperature of 10-11ºC and a humidity level of about 30-35% (Nguyễn Thị Lan 13).
Since 2011, the VFI has regularly assessed its holdings' condition. This assessment was first conducted for the evaluation, classification, restoration and preservation of analog prints. Films are checked and graded for technical errors such as acidity, shrinkage, molds, discoloration, and mechanical flaws like scratches and dust damage and are evaluated on a scale between 1-4, with 1 being the best state (i.e. in no need of repair or restoration) and level 4 indicating extremely deteriorated films that cannot be restored (Lê Anh Tuấn 46).

The conditions of the heritage differ significantly between the two VFI branches. Until the construction of the vaults, the Hanoian collection had been subjected to a great deal

of climatic and physical stress. For over thirty years it has been improperly stocked in unacclimated storage rooms and thus exposed to tropical high humidity and temperatures; in addition, it was moved several times via precarious means of transport all over the country enduring further damage. In the early 90s, once the vaults and the rest of the VFI facilities were completed, VFI was finally able to tackle the decay caused by molds and vinegar syndrome by first conducting a series of tests to identify the type of damage and subsequently cleaning those reels critically affected by material deterioration.

The research project was conducted in collaboration with local and international institutions, including the National Film Archive of the Czech Republic, leading on the one hand to several publications in FIAF journals and conference presentations by Dr Ngô Chí Hiếu at the time technical manager of the VFI and, on the other hand, led to remarkable practical results as the VFI developed and applied its methods to slow down the effects of vinegar syndrome and clean the film reels. Ultimately, over about ten years, the collection was entirely cleaned and restored. According to a 2019 survey, over 95% of the reels preserved in the Hanoian branch are currently at level 1 of the 1- 4 scale employed by the Institute,[82] meaning that they are no longer threatened by climatic factors nor affected by molds or significant peril of vinegar syndrome material decay. Today, Vietnamese archivists periodically assess the collection, mechanically repair damaged reels and clean the reels with ultrasonic agitation and wet cleaner (Nguyễn Minh Phương 4).

The roughly 100 titles preserved in the southern subsidiary of the VFI were gathered and documented by the southern branch deputy director Nguyễn Thị Hồng Hạnh and her team in the early years of the current century. These titles, all acetate-base, pertain to the disappeared South Vietnam film industry that operated independently from 1955 to 1975. Prior to their arrival at the VFI facilities, these films had not undergone any preservation efforts, resulting in their condition as severely damaged positive prints in advanced stages of decay. The films were then copied to new acetate and polyester bases in collaboration with the privately owned Giải Phóng Studio in Saigon. As these copies soon also showed signs of material decay, they have been digitized and are currently precariously stored in hard drives and LTO tapes. Due to the political context surrounding the origin of these films, the Vietnamese government imposes strict restrictions on the distribution and access to the films preserved in the southern branch of VFI, which are not even available to consult in the

[82] According to the 1 to 4 scale, the current conditions of the collection in Hanoi are: 95% in Level 1, 2% in Level 2, 1.3% in Level 3 and 1.7% in Level 4.

Southern Branch's library. Allegedly, for similar reasons, these analog reels did not receive the same attention as those in Hanoi and today, over 90% of the reels in HCM city are in levels 3 and 4, meaning that what remains of the Southern Vietnam film collection is in a state of decay (Lê Anh Tuấn 48).

Regarding digital practices, alternative carriers to analog films, such as Betacam tapes, were largely employed for over two decades to store telecined and digitized film content in both branches. Thanks to training and exchanges with international peers, digital knowledge started circulating in the Film Institute long before the digital rollout and independently from the local film industry trajectory.

At the turn of the century, once the entire collection had been cleaned of mold and film decay, the VFI was ready to begin testing the new digital technologies for film restoration and preservation. In 1998, the Institute purchased several pieces of equipment to save, repair and migrate the content of those reels heavily damaged by film decay. For a few years, the VFI implemented a file-to-film pipeline; images would be telecined to videotape and digitally restored via Shout software and subsequently transferred to negative film stock with an Oxberry-KODAK printing machine. Alternatively, the content would migrate to carriers diverse from the original, such as Betacam tapes or laser discs (Ngô Chí Hiếu 39).

Hybrid workflows became an integral part of the VFI practices since the early 2000s. However, until the digital rollout, when digital means were not yet fully available, VFI regularly made analog duplicates of films to facilitate access and ensure the preservation of the originals (Nguyen Minh Phoung 140). In 2005, VFI purchased a Spirit Datacine SDC 2002 Telecine system, a Da Vinci color-grading system and a Diamant digital film restoration system (Lê Anh Tuấn 49). From that date, the VFI has been technically able to conduct in-house digital restoration projects autonomously. Yet, in practice, VFI archivists mainly employed the system to migrate the content of the reels without restorations. While for a few years a few heavily damaged collection reels were still processed via a film-to-film workflow, most of the operations implemented then employed Betacam as a primary carrier for migrating and storing digitized material. Around 2014, VFI purchased its first film scanner (2K GoldenEye III), the last significant update to VFI infrastructures thus far. The VFI is committed to restoring its collections by employing the same workflow in its two branches. The digitization of films starts with scanning the reels at 2K resolution in DPX file formats. After that, every file is color-corrected with Davinci Resolve and mastered as a progress 2k file and archived on LTOs. Clips are not individually color-adjusted, but the correction is applied uniformly throughout the film. Moreover, only a minor part of the

scanned files undergoes digital restoration with Diamant software (reportedly only 20 minutes per year), meaning most digitized files are temporarily archived with color correction applied but without proper digital restoration. Soundtracks are scanned separately via the telecine machine and are not digitally restored. Until recent years, digital film restoration has been implemented exclusively in Hanoi, where the 2k GoldenEye scanner is located.
More recently, the archive has begun scanning and restoring films in 4k in both branches, through an arrangement with a private company. The only 4k film scanner in Vietnam, a BMD Cintel 4k, is owned by a private individual, Phạm Ngọc Quang, the former head engineer for the Film and Technology Center (a separate governmental-run film facility). Considering the previously discussed analog/public vs digital/private framework, the only client requiring the privately owned scanner is the VFI, and the scanner is regularly moved back and forth between Hanoi and HCM City to serve the institution.

The VFI currently uses LTO magnetic tapes for digital archiving but does not have a dedicated storage system, meaning that digitally born films and digitized material are double copied in hard drives and LTO tapes and temporarily stored alongside other magnetic tapes carriers on shelves. Currently, there are no plans nor allocated budget to deploy a proper data storage system into VFI's facilities and migrate the collection to up-to-date standard digital infrastructures. The flawed use of LTO tapes (also considering that older generations of LTOs are already obsolete) and the lack of a top-down dedicated budget allocation currently represent a crucial concern for VFI archivists

4.3 Material Decay, Conceptual Fluctuation

The material and conceptual queries arising from environment-related concerns, alongside the integration of digital technologies within Thai and Vietnamese film institutions, implicate considerations that resonate with Fossati's framework of "Film as Original."

Regarding analog preservation practices, FAPOT and VFI have accomplished, for several years, the critical objectives of establishing climatized film vaults, collecting the surviving analog film artifacts they could access, and cleaning the reels to prevent further acetate decay or other forms of deterioration. Public sector archivists typically prioritize preservation over profit, focusing on maintaining the original materiality of film and video (Horak 33), a perspective also held by Thai and Vietnamese archivists and has been fostered over the years by influential organizations such as FIAF and SEAPAVAA. Film's originality has been central for SEA archival institutions since the beginning of their operations, considerably also because of the influence of Western archival institutions and the Eurocentric models of heritage preservation that have guided the growth of film preservation practice in many Asian audiovisual archival institutions (Frick 156). Practically and intellectually, FAPOT and VFI seem to adhere to the conceptions specified by "Film as Original" and are equipped and skilled to protect what remains of their national heritage from the inclemency of subtropical weather, ultimately acknowledging authenticity as the primary value of the artifact and the long-term preservation of original copies as a core mandate.

There are, however, exceptions. Material deterioration continues to threaten reels and collections that are allegedly circulating throughout domestic territories, particularly in Thailand, where a local film industry based on private enterprises has facilitated a broader distribution of films nationwide. Despite the efforts of Thai archivists to collect analog reels from production companies, private collectors, and TV broadcasters, it is likely that many films remain scattered across the nation and improperly stored. Moreover, in neighboring countries like Cambodia and Myanmar, where no film vaults have been established, and preservation practices are minimal, film heritage that survives in unsuitable government facilities is vulnerable to subtropical weather conditions and is at constant risk of decay.

Concerning the long-term preservation of digitized and digitally born material, the situation is even more fraught with uncertainty and hazards, as the material decay of digital

carriers coincides with rapid hardware obsolescence, a critical issue yet to be fully articulated and understood.

Solutions, best practices, and technical knowledge to overcome material decay of LTOs, Hard Drives, Solid State Drives and semi-obsolete digital carriers like DVDs circulate and are indeed actively discussed within the archival community,[83] with symposiums, exchanges, articles and white papers,[84] but also beyond the film archives community, as the concerns related to digital file storage affect every data-driven industry. In practice, the implementation of digital infrastructures and workflows represents a very recent challenge that, despite transversally affecting the global archive community and every other participant of information sectors, is constantly evolving and largely unsettled, entailing that the definition of feasible solutions to overcome digital decay and of innovative models for the long-term preservation of digital material are still in their infancy and somewhat speculative.

At present, what can be observed is that FAPOT and VFI are at different early stages of developing digital infrastructures. The Thai institution is equipped with a proper digital storage system and is currently drawing up plans for future infrastructure updates and collection migration, following standards and directions adopted and suggested by international peers. On the contrary, the management and storage of digital data appear to be more problematic for the Vietnamese institution. VFI's digitized heritage seems to be more endangered as the institution utilizes a mix of the mentioned digital carriers (LTOs but also hard drives) without a proper strategy for the long-term preservation of the tapes. Lacking dedicated funds and relying on increasingly obsolete technologies, digitized Vietnamese and digital-born films are significantly at risk of loss if they are not soon migrated to more recent, up-to-date generations of LTOs. Even though climate-induced decay should be regarded as a significant concern for archives operating in hazardous climatic conditions with the concrete risk of losing digital data, the main concern affecting LTO tapes' longevity and sustainability is posed by technological obsolescence, which, more than climatic factors, is likely to shorten

[83] The concern regarding digital decay has been recurrently addressed in the past few years, often meeting discourses about environmental sustainability. For instance, the 2023 27th SEAPAVAA conference was held in Thailand with the title *Sustainable AV Archives for The Community*, where, among other topics, participants discussed criticalities regarding "green" solutions to overcome the recurring implementation and consequential fast disposal of digital hardware.

[84] Notable examples are Mick Newnham and Ray Edmondson's AV archives checklists and disaster planning/recovery articles, accessible for free on the SEAPAVAA website. Mick Newnham, former Manager of Conservation and Research at the NFSA (National Film & Sound Archive of Australia), has been extensively involved with the SEAPAVAA community since its foundation and has conducted workshops, consultancies and training on preservation and management of audiovisual collections across the region for over thirty years on behalf of NFSA, SEAPAVAA, FIAF and UNESCO.

the lifespan and viability of digitized film artifacts. As examined in the following chapter, the recurrent adoption of newer generations of magnetic tapes and the continual migration of digitized collections every few years represent a significant source of concern for organizations like FAPOT and VFI. In other words, while material decay stands as an inherent concern for digital carriers and devices, the storage systems employed for the long-term preservation of digital films currently regarded as a universal standard are more likely to be subject to rapid hardware obsolescence as the relentless pace of technological advancement, and the forced replacement of carriers and infrastructures often outstrip the deterioration caused by climatic factors. Therefore, determining feasible and sustainable digital preservation models for archives in SEA and elsewhere might likely require a simultaneous approach to tackling decay and obsolescence concurrently.

The establishment of sustainable digital archive models to ensure the long-term viability of audiovisuals closely pertains to the originality of film artifacts in both practical and conceptual terms. When considering the challenge purely in material terms, the question may be viewed as whether digital represents a feasible, and reliable long-term substitute for analog film stock. A query that essentially matches the main research question and that, as such, would need to be more thoroughly observed also within the technological and social sphere before drawing conclusions. Overall, I argue that the physical features of digital carriers and infrastructures, susceptible to climate-induced material decay and rapid obsolescence, do not yet represent a clear-cut and faultless strategy to overcome the decaying effects of environmental factors like molds and fungus on analog films. This argument, however, strictly regards digital storage systems rather than digitization in a broader sense, as examined within the ensuing technology challenge framework, where I provide additional tangible evidence on the critical concerns imposed by swift technological advancements, and in the human challenge chapter, where I reassess digitization from a social perspective.

Nevertheless, the query about originality, the priority of preserving the best original physical copies of films from material decay, and the role of digital files as a substitute for analog film stock entail conceptual implications to be remarked on here. The continuous action of climate-induced factors gradually undermines the materiality of audiovisual carriers, compelling archives to intervene with diverse strategies of preservation, restoration, digitization and migration, practices that are all questioned by "Film as Original", which thereby markedly reflect the practical concerns posed by the environment challenge. As Fossati explains, originality and transformation (or loss) of the material body represent the focal point of the discussion on the nature of archival films as both material and conceptual

artifacts (Fossati 161), an ontological outlook that suggests that certain Actants have a proactive role in defining the "being" of audiovisual artifacts. Considering that film artifacts obtain originality and authenticity just as they enter the archive (Fossati 162), the "Film as Original" frame reveals how audiovisual artifacts are inherently conceptually shifting entities requiring the deliberate interpretation of archivists and curators. This assumption reveals that although I have methodologically acknowledged the existence of consequential non-human Actants like humidity, molds and climatic factors, even within the environment challenge, the query could be better framed if considering human Agency. Environment-related Actants are indeed highly consequential in influencing and shaping archival practices, but the implementation of such practices and the solutions adopted to overcome the impact of the environment challenge are not implicit nor neutral. The Agency of non-human Actants like molds and fungus is certainly consequential but is also predictable and overall acknowledged by the archival community. The Agency of archival institutions is not pre-determined and shifts along the lines indicated by Fossati's frameworks, so it is the Agency of non-archival human Actants, who operate within the relational network in multiple and less predictable ways, highlighting the role of social and contextual components that more closely resonate with my second research question.

Ultimately, while the degradation of original analog and digital film artifacts caused by the climate represents a significant and permanent challenge to Southeast Asian archives, the formulation of innovative storage models and the conceptual inquiries raised by "Film as Original" extend beyond the action of environment-related factors and, involving the Agency of human participants, the analysis must, therefore, be expanded to encompass both technological and social dimensions.

5 The Technology Challenge

The obsolescence, instability and unreliability of technological devices stand as the second critical source of concern to archival operations and film heritage viability. The technology challenge primarily concerns technological transformation, and the disappearance and discontinuance of hardware and machines employed to store, handle, manage and reproduce film artifacts, and equally affects analog and digital infrastructures, equipment and workflows.

Technological obsolescence can be described as the continual need to replace old hardware with new and sometimes very different machines (A.M.P.A.S 2,13) and originates in the ineluctable dependency that ties archival institutions to private enterprises and technology manufacturers. This relationship is unbalanced as format and technology evolution is driven by marketing rather than archival needs or values (Edmondson 55). Predominantly motivated by financial gain, commercial manufacturers and vendors focus and invest in innovation to serve the cinema and broadcasting industry, with little or no regard for the viability of outdated image carriers and related hardware. Thus, the progressive disappearance of audiovisual hardware does not threaten the viability of audiovisual carriers per se, but it poses a series of pragmatic and alarming concerns to film archivists in terms of accessibility and future uses of AV materials. For instance, for certain obsolete audiovisual processes, obsolescence of the format arises not from the loss of image and sound information in the surviving film elements, but from the discontinuation or absence of the necessary hardware required for their reproduction (Enticknap 35). Technological developments benefit consumer end-users, who enjoy new features and cost efficiencies of new products, and manufacturers accrue economic benefits from reiterate technological development, however, for archival institutions, technological obsolescence means exponentially increasing costs, or worse, the failure to save assets (A.M.P.A.S 56).

AV archives, which often are critically encumbered by limited financial and human resources, are forced to constantly chase technological innovation and adapt preservation, restoration and access strategies to new standards imposed by the global telecommunication industry and by those vendors and manufacturers dominating the market.

Obsolescence hence stands as an alarming conundrum for archival practices, a dilemma that represents simultaneously an increasing vulnerability and a constitutive feature of audiovisual archives which are nonetheless the locus where obsolete technologies and

processes are, out of necessity, maintained so that audiovisual material can be restored and reproduced (Edmondson 44).

The issues and the consequences caused by technological obsolescence are multiple, diversified and regard every kind of audiovisual technology employed hitherto.

Obsolescence concerns analog film reels (nitrate, acetate and polyester) given that the machines employed to print, copy and project them are rapidly being dismissed and the digital rollout made this matter even more alarming: after 120 years, analog film carriers ceased to be the dominant industrial standard and swiftly started to disappear together with related infrastructures including film laboratories, analog dispositifs, opto-mechanic machinery, skilled personnel and specific expertise.

Moreover, obsolescence affects magnetic carriers and their hardware; even if media are physically intact, their usability relies on the functionality of the technology. The life expectancy of CDs, DVDs, and magnetic video tapes is uncertain compared to film stocks, as is the market viability of playback devices for magnetic media (Edmondson 53-54). Magnetic storage media are indeed no less prone to obsolescence. The use of these is further compounded by the prevalence of several obsolete media types and formats (U-Matic, VHS, S-VHS, 8mm, Betacam) and rapid technological advances (Van Bogart 1). The lack of fixed standards and the business competition between tech manufacturers certainly exacerbate the issue. “Over the years, competing vendors have fought “format wars” for market share, churning out new and better devices that users have sequentially adopted to their advantage. This has left video archives full of incompatible formats running on obsolete devices, requiring migration from old tape to new formats” (A.M.P.A.S 19).

According to a recent IASA and UNESCO joint study, magnetic audio and videotape formats are now obsolete (Pace 4). Spare parts supply and service are less readily available, replay equipment in operable condition is disappearing rapidly, routine transfer of magnetic tape documents is estimated to end around 2025 and magnetic tapes need to be urgently digitized and transferred to safe digital repositories. Professional bodies have made multiple warnings of these threats since the 1990s and have manifested in several surveys and reports. The year 2025 was identified by the National Film and Sound Archive of Australia as a threshold date by which time a number of factors will coalesce to make the digitization of magnetic media increasingly tricky and prohibitively expensive.[85] Analog video and

[85]Deadline 2025 - National Film and Sound Archive of Australia *https://www.nfsa.gov.au/corporate-information/publications/deadline-2025* accessed 19/07/2023

audiotape, as well as early digital tape formats, will be effectively inaccessible due to the practical inability to maintain playback equipment, the gradual loss of experienced analog-to-digital-transfer engineers, and the degradation of the carriers (Pace 5-7).

In *Saving Cinema*, Frick stresses that media archives have wrestled with technological obsolescence since their inception, even amid the larger sociocultural and economic contexts (North American and European archives) that witnessed the rise of cultural heritage preservation practices (Frick 154), remarking how technological obsolesce has been an acknowledged source of concern since the early days of the media. However, the phenomenon has accelerated and worsened over time as it has progressively integrated and still is integrating newer carriers and formats, with significant repercussions for audiovisual heritage disseminated in less advanced territories.

As previously noted, magnetic tapes have been commonly employed as alternative audiovisual formats to acetate or polyester film stocks for shooting documentaries and even feature films throughout mainland Southeast Asia (e.g. Saigon independent cinema of the 90s) and regional audiovisual archives are currently filled with tapes or optical discs. Besides, several institutions adopted magnetic carriers or optical disks as an early strategy for film preservation, such as for the Myanmar film heritage, which has largely disappeared in its original cellulose-based formats but still survives as telecined copies on obsolete magnetic carriers.[86] In the case of the Vietnamese Film Institute, which, until 2014, used Betacam as substitute preservation support to analog film stock and currently still stores copied versions of part of its collection on obsolete magnetic tapes without being able to retrieve that content as hardware has been progressively damaged and discontinued.

The storage of digital material is no less problematic as the inherent technical features of the technologies currently accepted as standard across the archival community represent an additional source of concern, equally challenging, if not worse, to the criticalities posed by film stocks and other outdated magnetic carriers.

The Academy has identified several technological threats associated with digital assets management, including obsolescence, data integrity, limited or no data compression, risk of encryption key loss, and human error, such as operator misdeeds and malicious actions

[86] According to Okkar, an archivist from the NGO Save Myanmar, approximately 500 telecined titles are preserved on U-Matic, Betamax and VHS tapes at the Myanmar Radio and Television Station in Naypyidaw, the capital of Myanmar. Additionally, around 100 telecined titles—likely duplicates of those housed at MRTV Naypyidaw—are stored at the Military broadcasting station in the city of Myawaddy.

(Conrad 31), remarking how the technological challenge affects both hardware and software[87] involved in the pipeline.[88]

A significant concern for archives in SEA is the short lifespan of tapes since even the most resilient LTO has a much shorter life expectancy than polyester film stocks. When properly preserved and maintained, analog film reels are expected to live for over a hundred years (Edmondson 43), while LTO magnetic tapes, as manufacturers notify, can function for no more than thirty years. As stated by the Ultrium Consortium's website about LTO generation 9: "Designed for the demanding environment of large-scale libraries, HPE LTO Ultrium media has a 30-year archival storage life when stored in recommended conditions."[89]

The durability of long-term preservation magnetic-base technologies and carriers has not yet been comprehensively determined nor accurately settled, marking an overall uncertainty around current standards and reliability of digital storage systems. Most claims by manufacturers on the projected lifespan of digital carriers, ranging from DVDs to digital tapes, is determined through accelerated aging experiments. “Real-life experience with these carriers is still too limited to draw accurate and reliable conclusions in the long term. Therefore, no manufacturer today can guarantee a precise life expectancy for its products. On top of short life expectancy, there is the problem of obsolescence of hardware, software and data formats, as upgraded products are regularly put on the market” (Fossati 89-90).

The pace of technological advancement, mainly digital means, has led to ever-shorter innovation cycles over the past two decades, with new recording formats and systems becoming increasingly sophisticated and challenging to maintain (Schuller 15), implying that technological obsolescence affects not only magnetic carriers but also tape-readers, digital restoration workstations, dedicated software and potentially any other piece of technology employed in the digitization chain.

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[87] "Digital assets are hard to maintain long-term because media, hardware and software can all become obsolete. This is commonly caused by the evolutionary loss of compatibility between data in the archive and the software applications that created the data. Sometimes, proprietary formats in an archive are simply abandoned when a company goes out of business" (A.M.P.A.S 35).

[88] In this dissertation, I address and predominantly refer to hardware obsolescence; however, is worth nothing that the formats used to code/decode digital data and software employed to handle them are also prone to Obsolescence. “Software is dependent on proprietary systems that "come and go," many studios that bought into the digital storage systems are finding that archived files are simply not playable anymore. According to the Academy, accessing the data stored on digital media requires access to the digital tools that 'go with' the archived data. It is not possible nor advisable to "store and ignore" a digital asset (Conrad 34).
Digital hardware and software develop differently but alongside each other. While tackling software obsolescence and failure entails dedicated practices, standards and solutions, in these pages, I examine the two spheres concurrently by mainly referring to hardware obsolescence.

[89] Roadmap - Ultrium LTO *https://www.lto.org/roadmap* accessed on 07/09/2023

The concerns and practical issues caused by digital technologies' obsolescence are the same that affect other disused types of analog carriers and playback machines. Though, considering the extremely fast pace of technological advancements and the financial burdens that it implies, digital obsolescence appears to be even more alarming for archival institutions. The bulk of the problem is that IT companies deliberately produce goods with very short lifespans to inflate their consumption, and planned obsolescence is central to the profitability of the IT sector (Antoniazzi 11). Since 2000, LTOs manufacturers have placed nine different generations of magnetic tape data storage on the market, the last one being LTO9 in 2021. As the Linear Open Tape consortium specifies on its site: "LTO drive generations 1-7 can read tapes from two generations prior and are able to write to tapes from the prior generation", and "LTO-9 drives will be able to read and write to LTO-8 and LTO-9 media only."[90] LTO tapes and the drives employed to read them become obsolete after every generation, and every five years or so, archival institutions using LTOs for long-term preservation (the vast majority)[91] are supposed to upscale their infrastructures and workflows to the latest version of the technology and financially sustain the costly operation.

Even though digital carriers proved to have an unprecedented storage capability and be remarkably fast and versatile in their features, the concerns posed by LTOs equal those previously encountered with VHS, Betacam and similar magnetic carriers. Obsolescence ultimately affects recent state-of-the-art digital infrastructures as much as past technologies, and most probably, maintaining the operability of advanced digital video recorders will become infeasible once the manufacturers cease providing technical support (Schuller 15).

"The corollary of digitization is the dilemma of increasingly rapid format obsolescence, with archives needing to cope with the unknowns of digital preservation on the one hand and the continuing preservation and access demands of the older legacy formats on the other as technological options diminish" (Edmondson 4).

Similarly to the climate-induced material decay, technological obsolescence stands as a shared and acknowledged source of concern. The technological challenge unfolds in like

[90] Frequently Asked Questions LTO/ULTRIUM *https://www.lto.org/faqs-about-lto/* accessed on 22/04/2021

[91] A 2019 survey by the FIAF Technical Committee, led by Céline Ruivo and Anne Gant, examined the current landscape of long-term digital storage and preservation practices among seventeen prominent international audiovisual institutions. The survey revealed that, while LTO was never officially designated as a standard, it is overwhelmingly the preferred choice. Most participating archives continue to utilize older generations of LTO tapes while regularly and independently migrating their Linear Tape-Open magnetic tape data. Additionally, some archives acknowledge that they generally wait for two generations before migrating their data to minimize costs, as the price of tape tends to decrease with each new generation introduced (Gant 2019).

manners across peninsular Southeast Asia as in the rest of the globe and, thanks to symposia, publications and initiatives fostered by the international archival community (where associations like FIAF and SEAPAVAA always play a crucial role), over the past few decades the issue has been recurrently addressed. However, the situation in SEA is particularly concerning, as few institutions have been able to sustain obsolete equipment due to shortages of spare parts and qualified technicians; many of the outdated magnetic audio and videotapes in their collections may have already reached a critical stage, with insufficient functioning machines and skilled personnel to manage them effectively (Edmondson 17).

The main aggravating factor to technological obsolescence in mainland Southeast Asia is the limited funds and resources. Contrarily to the North American and European contexts, where archival institutions usually have access to greater financial backing, archives in developing countries often struggle, or they did struggle for a long time, to obtain the necessary funds to focus on the safeguarding and maintenance of obsolete hardware and machines. For instance, the Thai Film Archive was able to address the issue only after 2009, once it officially gained the national status of 'public organization' and accessed much more consistent financial support; after that date, the Thai institution was indeed able to purchase a variety of discontinued machines and equipment from closed-down film laboratories and theaters moving to digital projection, and most importantly to hire retiring film projectionists and technicians to preserve the broad corpus of knowledge and skills required to handle film materials beyond film preservation and restoration. Unfortunately, no other institution in the region has yet been able to address the concern as effectively as the Thai Film Archive.

Although digitization as a preservation alternative is not yet fully understood by film archivists, compared to analog preservation of film stock that has been standardized and assimilated for decades by worldwide film archivists (Conrad 31), climate-induced decay and technological obsolescence of digital means have been acknowledged as critical challenges by archives worldwide and have been tackled with dedicated practices like migration, that are still predominantly non-standardized and often unsustainable.

Migration, the cyclical transfer of data from obsolete to newer carriers, typically performed once every two to five years, has become the most common solution to prevent decay and obsolescence (Fossati 383).[92]

[92] "Data migration can be motivated by a variety of factors such as physical media decay, media or media drive obsolescence, even prior to complete system obsolescence. Older media drives may face escalating maintenance costs, there may be new user service requirements, or new media formats and/or file formats are introduced that are more compatible with users' technology and application. The list of motivating factors goes on, and therefore data migration is the most widely practiced digital preservation strategy today." (A.M.P.A.S 38)

At present, migration of content and data appears to be particularly urgent for those stored in discarded magnetic tapes carriers that are alarmingly reaching the deadline of the semi-predicted lifespan,[93] such as those on obsolete formats like VHS or Betacam. However, digitizing and migrating analog content to data will not represent a permanent solution even if tackled in time. Digital carrier's decay and obsolescence means migrating collections every two to five years, resulting in a costly, risky and time-consuming procedure.[94] Data migration is necessary but not practical nor convenient, and currently represents more a compulsory effort than a preservation strategy. To some extent, reiterative migration might even appear paradoxical since audiovisual archives are forced to keep migrating their collections from an obsolete carrier to an about-to-be obsolete one, as the current status of technological advancement does not provide reliable alternatives. Besides, constant data migration requires regular capital investment for upgrading hardware and software, ongoing operational expenditures to reliably perform the data transfers and dedicated staff with specialized training; implementing this strategy ultimately becomes difficult and expensive for the large amounts of digital data generated in motion picture production (A.M.P.A.S 13).

For archival institutions in SEA and other developing territories, the practice of perpetual data migration most of the time is indeed more than just paradoxical, it is unsustainable. While most of the major film archives, particularly studio and public institutions in the Western world, have implemented digital storage strategies designed to ensure the long-term preservation of newly produced digital films and digitized titles. (Fossati 43), the institutions studied in this paper are not yet equipped with properly integrated data array systems that can migrate audiovisual content regularly. As detailed, only the Thai Film Archive and the Vietnam Film Institute are currently employing LTO tapes, but while FAPOT is just starting to devise more secure long-term digital preservation strategies, VFI employs an outdated generation of LTO tapes, does not own an integrated storage system and does not follow a specific nor standardized protocol for data migration. Besides,

[93] "All tape-based formats created in the 20th century are now obsolete. Tape that is not digitized by 2025, we risk losing forever. This creates a deadline, and a dilemma, for those entrusted with the care of these precious memories. At current rates of investment in digitization, only about 30% of magnetic tape can be saved in time, meaning tens of thousands of hours will be lost to future generations [...] There is now consensus among audio-visual archives internationally that we will not be able to support large-scale digitization of magnetic media in the very near future. Tape that is not digitized by 2025 will in most cases be lost forever as (1) Analog video and audiotape, as well as early digital tape formats, will be effectively inaccessible due to the practical inability to maintain playback systems. (2) The last generation of fully experienced analog-to-digital transfer broadcast engineers will be retired. Their practical technical skills will either have been strategically shared with the newer generations of digital engineers or lost forever" (Deadline 2025, NFSA 3-4).

[94] "A major drawback to migration is that while copying data from one physical medium to another or converting digital assets from one file format to another, some data (or metadata) might be lost" (AMPAS. 38).

most of the other archival institutions in the region are not employing LTOs nor migrating collections, meaning that the audiovisual content they are attempting to preserve is currently stored in a variety of obsolete analog, magnetic, optical and solid-state formats and hence are all equally in grave danger of soon becoming too obsolete to be accessed.
The reiterated migration of digital data from an obsolete carrier to a newer one, but more generically, the constant effort of keeping updated and integrating the latest technology into preservation practices is not yet financially sustainable for most audiovisual archives in Southeast Asia. Ensuring long-term accessibility of digital assets stored on magnetic tapes, hard drives, or optical discs cannot be reliably achieved simply by storing these digital media alongside analog film archives and maintaining appropriate humidity and temperature levels in the storage environment. “Archiving digital data necessitates a more proactive management strategy and fosters a collaborative partnership among producers, archivists, and users to fully exploit its potential benefits” (A.M.P.A.S 31), and this entails funds, equipment and knowledge that SEA archives often cannot access.
In addition to carriers and hardware obsolescence, audiovisual archives in developing countries are forced to deal with digital practices and standards mainly developed by wealthier and longer-established institutions in Europe and North America. Procedures and models that, for lack of financial support and expertise, are in most cases unfeasible.

The technology challenge highlights two distinct categories of Actants: obsolete machinery and technology manufacturers.

Obsolete machines stand as a broad category of non-human Actants that includes all those devices and equipment whose disappearance threatens archives' viability and operations. This encompasses not only discontinued devices such as players and recorders for magnetic tapes, optical discs and similar obsolete carriers, but also all the equipment traditionally used in film laboratories such as printing, copying and processing machines, and the spare parts, chemical products and other analog materials becoming increasingly scarce.

Technology manufacturers, vendors and commercial enterprises represent the second broad and heterogeneous group of technology-related Actants that operates by assisting and fostering the needs and requirements of the film industry rather than those of archival institutions but still represents a compulsory interlocutor for audiovisual archives. The array of enterprises engaged in the technological challenge is extensive, as the structures of the broadcasting and audiovisual industries are complex, fragmented, and difficult to define; any organizational schema would be somewhat arbitrary and incomplete (Edmondson 16).

Depending on the context, these Actants might thus be global corporations that operate (or used to) across the region, like Kodak or Sony, or a local distributor, such as the Bangkok-based system integrator GoldenDuck,[95] which had a preeminent role in the digital rollout of Thai cinema and providing services to all over the region.

The digital rollout ultimately played a critical role in the technological transformation of audiovisual archives with specific challenges and practical threats that often transcend the technological sphere and vary according to the contexts and the diverse dynamics between archival institutions and external stakeholders.

The following two subchapters inquire about the impact and consequences of the digital transformation in Thailand and Vietnam, further tracing the Agency of those participants that proved to be consequential over archival matters, including local cinema oligopolies and international distributors, and outlining several essential features of the contemporary Vietnamese and Thai film industries. I examine how the repercussions of the technological shift challenged the operations of the two archival institutions, essentially addressing the first research question: how did the digital rollout impact the Thai Film Archive and the Vietnam Film Institute?

[95] GOLDENDUCK GROUP Cinema System Integrator (Bangkok, Thailand) https://www.goldenduckgroup.com/about/ accessed on 07/09/2021

5.1 FAPOT and the Digital Rollout in Thai Cinema

This chapter is based on interviews with influential Thai cinema stakeholders cross-checked with the available data and statistics of film production, distribution and exhibition in the country over the past two decades. Among others, I have interviewed Lee Chatametikool (academy member film editor and current director of post-production Netflix SEA), Pornchai Wongsriudomporn (CEO of M Picture), Panu Aree (director of acquisition at Sahamongkol Film int.) and Sittiporn Srisangvasankul (owner of GoldenDuck film technologies) and Visute Poolvoralaks (CEO at GMM Thai and former Chair of MPC).[96]

As I discussed in the article *Digital Cinema in the Kingdom: The Transition from Analog to Digital Technologies in the Thai Film Industry,*[97] which I frequently reference in the following pages, one of the main characteristics of the Thai film industry since its early days has been its inherent tendency towards an oligopolistic system, with Bangkok-based Sino-Thai entrepreneurs and Hollywood distributors controlling most aspects of the film market. In 2020, the Thai film industry was dominated by a few major players: SF Group and Major Cineplex, which lead the exhibition sector. Sahamongkol Film Int stood as Thailand's main film distributor. GMM Grammy, GDH559, and 5 Stars are the three leading production companies. These companies frequently support one another and often establish agreements based on mutual needs. Notably, both SF Group and Major Cineplex also take on roles as producers and distributors (Cipriani 25).

A small group of dedicated independent filmmakers and rare stand-alone screening rooms operate outside the dominant circuit and try to counterbalance the prevalent commercial approach of the oligopolies. Independent directors and producers often find funds, distribution and credits within international networks or distribute their work making deals with one of the oligopolies. “No fledgling director in Thailand can rise to prominence without making a deal with one of the major companies that control every aspect of the business” (Chaiworaporn 158).

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[96] The National Federation of Motion Pictures and Contents Associations of Thailand *https://www.mpc.or.th/en/* accessed on 14/09/2020

[97] Cipriani, Martino. *Mapping Digital Cinema in the Kingdom: The Transition from Analog to Digital Technologies in the Thai Film Industry,* pp. 23-32, *Communication and media in the Asia Pacific, Vol.4, No. 1,* Bangkok: Chulalongkorn University, 2021.

A key example of Thai independent filmmakers is the internationally renowned and award-winning director Apichatpong Weerasetakul and his production company Kick the Machine, which notably remains largely unknown to the average Thai audience.

Despite the overwhelming presence of Hollywood products on Thai screens, the contemporary Thai audiovisual and media industry is still relatively solid and dynamic. In addition to the circa 40/50 feature-length films made annually,[98] local enterprises produce a conspicuous amount of TV series, commercials and similar formats, especially in the past couple of decades with the proliferation of international online platforms and local digital TV channels. Appealing landscapes, low taxation and skilled local crews attract numerous foreign production companies to set their movies in the Kingdom and Bangkok facilities, infrastructures and resellers are regularly used by neighboring countries companies.

By the mid-90s, Bangkok became a regional hotspot for post-production, slowly replacing Hong Kong laboratories which dominated the handling of film processing throughout the 70s and 80s (Uabumrungjit 38). Bangkok's post-production houses and film laboratories attracted feature films and TV commercials from across the region, including Vietnam, Malaysia, Laos, Singapore, and Cambodia. Most of these facilities were (and still are) part of the semi-monopolistic system, such as Kantana, while others operated more internationally, such as The Post BKK and Technicolour (Cipriani 28).

Bangkok's post-production houses functioned as a landmark for international producers and distributors operating in mainland Southeast Asia: not only could they provide skilled staff and advanced workflows, but they were also the only facilities in the region that could photochemically release prints for theatrical projections. Foreign internegative stocks would travel from abroad to Bangkok and later be redistributed in the neighboring countries as positive release prints. Throughout the three decades preceding the digital rollout, Bangkok established itself as a regional hub for the international film industry, and notably, it played a leading role in terms of technical skills and advanced analog film practices. The role of Bangkok as a regional center for analog film processing rapidly changed in 2013, with the complete conversion to digital cinema practices and the closure of film laboratories.

The Thai film industry was relatively slow to integrate digital technologies into its processes (Cipriani 28). Like many other parts of the world, editing software was the first digital innovation introduced in the country; however, except for a few productions experimenting with it in the late 1990s, it wasn't until several years later that most local

[98] Average calculation based on the data available in "World Film Market Trends" reports (2003-2023)

filmmakers began to adopt digital files and post-production software in their filmmaking practices. The first feature films edited entirely employing offline digital workflows and machines started to appear around 2004,[99] though during the following years most post-production laboratories kept working solely with analog technologies. As offline digital editing gradually became part of the workflow, high-end feature films continued to be post-produced, mastered, and printed on 35mm film stock, incorporating digital intermediate technologies only when necessary.

The three masterpieces of renowned Thai director Apichatpong Weerasethakul exemplify the progressive integration of digital practices in the Thai film industry (Cipriani 28).

Produced and post-produced entirely within Thailand, the titles can be used to illustrate the main chronological steps in the analog-to-digital transition:

Syndromes and a Century (2005) shot on 35mm film, edited/color timed analogically and distributed on 35mm prints.

Uncle Boonmee Who Can Recall His Past Lives (2010) shot in 16mm film stock, edited/colored digitally and distributed on 35mm prints.

Cemetery of Splendor (2015) entirely shot, post produced and mastered digitally.

The relatively small, underfunded, unregulated Thai film industry adapted to the radical technological shift within a few years and switched from an entirely analog workflow to a fully digital audiovisual pipeline within less than ten years. In 2005, movies were processed employing film stock from production to distribution and by the beginning of 2015, the whole film industry was operating solely with digital technologies.

As with other audiovisual industries across the globe, the turning point of the digital rollout lies in the changes that took place in the distribution and exhibition sector, notably the introduction of Digital Cinema Packages (DCP) as the new and unique carrier for film distribution and the subsequent disposal of film stock.

For nearly a century, the standard practice in Thailand for film distribution involved sending internegative stocks, which were then used to produce positive copies for distribution. Hollywood agents would send just one internegative print to Thai distributors, who would then create as many positive copies as required. After the distribution agreement expired, the

[99] The two main titles post produced with offline digital technologies in that year are Citizen Dog (directed by Wisit Sasanatieng, 2004) and Garuda (directed by Monthon Arayakhoon, 2004)

Thai operators would destroy the positive copies and send the internegative back to the United States (Cipriani 27).

This technical procedure defined the entire cinema pipeline. To comply with the requirements of American distributors, theater chains were required to operate using analog technology, and local post-production studios followed the same workflows, primarily using analog equipment for film processing. The rest of the industry, including the production sector, was also bound by these practices. This may help explain why Thai film producers were initially hesitant to shoot films using native digital technology, even as the rest of the world started to adopt digital filmmaking methods (Cipriani 29).

"Everything suddenly changed at the end of 2013 when American film agents abruptly declared that they would no longer ship internegatives and move to digital distribution by sending movies via Digital Cinema Packages" (Horak 2014).[100]
Due to the influence of Hollywood executives, the transition to Digital Cinema Package (DCP) occurred almost simultaneously worldwide. While many national film industries took nearly a decade to systematically convert their infrastructures in preparation for this change, the Thai film industry had to adapt quickly to the shifts imposed by Hollywood within a short timeframe. This transition occurred without a proper plan or sufficient support from the central government or local trade associations (Cipriani 29). In the US, the DCI (The Digital Cinema Initiative) was established in 2002 as a consortium of Hollywood executives to define and enforce digital film distribution and exhibition standards. In 2005, the DCI published the specifications for digital cinema, assuming the guiding role in spearheading the global digital transition, actively facilitating the growth of the US film industry through incentive schemes for the shift from analog to digital technology (Bordwell 709). In Europe since 2003, specific initiatives like IRIS and EURIMAGES had been implemented by the European Union to support digital cinemas' development within its member states through continuous training, technical support and direct financing.[101] By 2016, over 96% of European cinemas were screening movies using uniquely digital projectors.[102]

In Thailand, although major changes in the exhibitor sector could have been predicted at least ten years earlier, there were no centralized or coordinated initiatives of any sort. Hollywood film distributors and the local oligopolies implemented and managed Thailand's

[100] Archive Blog Series | UCLA Film & Television Archive *https://www.cinema.ucla.edu/blogs/archival-spaces/2014/01/31/paramount-all-digital-distribution* 02/12/22
[101] The biggest European countries such as France and UK, in 2008 were already equipped with 253 and 303 digital screens respectively. (European Audiovisual Observatory, Media Salles, 2009)
[102] European Cinema Journal, Media Salles, Year XVI n 1, 2016

digital rollout independently and without intervention or support from the central government, which as usual, avoided getting involved in cinema matters and let digital rollout self-regulate (Cipriani 28). Hollywood imposed the change, local film exhibitors upgraded their infrastructures with digital means, and the rest of the industry adjusted consequently, ultimately implementing in film production workflows those digital machines that had been only marginally employed in the previous decade.

Screening practices were completely revamped within a couple of years, with the two leading theater chains, SF Group and Major Cineplex, eliminating all optomechanical projectors and replacing them with digital ones (Cipriani 29).[103] The two major exhibitors were able to manage the costly switch to digital formats, but many smaller, independent cinemas could not afford the transition, leading to numerous closures, especially in rural areas. This disparity further widened the divide between independent theaters and the larger chains. The dominant companies succeeded in capturing nearly every aspect of the market by focusing on American films, effectively monopolizing audience tastes across the country. In contrast, the few independent cinemas that did implement digital projectors catered to more discerning urban audiences with a focus on art-house films. Additionally, the introduction of Digital Cinema Packages (DCPs) resulted in new taxation methods and updates to minimum screening guarantees, such as the Virtual Print Fee, which was established in 2013 to help exhibitors adapt to digital technology and was still in effect as of 2020 (Cipriani 30).
By the end of 2014, 961 of the 964 screens operating across Thailand had transitioned to digital, rendering analog film technology nearly obsolete. This significant change in exhibition practices was part of a larger transformation within the industry. The adoption of Digital Cinema Package (DCP) technologies set off a series of developments that compelled all sectors of the film industry to switch to digital workflows (Cipriani 30). This shift considerably affected the Thai Film Archive's operations, infrastructure, and policies, as well as the preservation of film artifacts. The most significant consequence was the closure of film laboratories and the rapid decommissioning of photochemical technologies and procedures.

[103] By 2010, Thailand had over 752 cinema screens, with only 82 of them digital. By 2016, however, the number had increased to 1,154 screens, all of which featured digital projection technology. Notably, in 2013, the count of digital screens rose sharply to 816 nationwide. By 2014, 961 out of 964 screens had transitioned to digital format, demonstrating a rapid and extensive shift. During this transition, more than 600 analog screening rooms either shut down or converted to digital, resulting in the closure of many independent theaters. It’s essential to note that the number of screens does not always correspond to the number of individual theatres. Despite some inconsistencies and gaps in the data, the move to digital screening has played a significant role in the decline of many independent cinemas. The peak of 1,154 screens in 2016 can largely be attributed to the growth of multiplex cinema complexes (Cipriani 28).

By 2015, every post-production facility in Bangkok had ceased operating with analog film technologies. Some facilities, such as Kantana and Post Bkk, completely abandoned analog machines, while others, like Technicolor, which primarily focused on printing copies for Hollywood films, quickly closed their local branches. As of 2022, only one company, G2D, continues to operate analog film machines privately, although this constitutes only a small part of their overall operations (Cipriani 30).

The end of analog film processing in Thailand also meant the disappearance of technical knowledge, crafts and skills to handle analog film formats and machines that have characterized cinema in the country since its early days. Once the film laboratories shut down, most of the personnel that worked in the facilities retired, taking with them the unique and specific expertise that took years to be acquired but suddenly was no longer required. The disappearance of analog skills and technologies immediately became a striking issue for the Thai Film Archive as it could no longer rely on external facilities to copy, print and occasionally screen their film.

The digital rollout of Thai cinema infrastructures also significantly affected other countries in mainland Southeast Asia. Until 2013, Laos, Cambodia, Myanmar and Vietnam relied extensively on Bangkok's post-production laboratories to photochemically color time, copy and print their movies, and distribute international productions on their national territory. For decades, the Thai capital was the reference place for international productions and brands; tv commercials and international feature films were photochemically processed in Bangkok before being released in the rest of the region. Hollywood distributors, for instance, sent internegative copies to Bangkok film laboratories (Katana or Technicolor), where the film stock was processed, and the subtitled positive copies were later distributed to neighboring countries. The digital rollout allowed the distinct national film industries to fully embrace digital practices in every segment of the pipeline, including finalizing, mastering and independently managing DCPs. The small national film industries of Cambodia, Laos and Myanmar were finally able to develop a more autonomous approach to filmmaking, and the lower costs of digital technologies allowed the inauguration of numerous local post-production houses. However, the closure of analog film facilities and laboratories in Bangkok meant that the knowledge and skills necessary to handle analog film stock disappeared throughout the region and not only in Thailand. Considering that in the past decades, countries like Cambodia or Myanmar never independently developed a structured analog film post-production sector and adequate competencies in analog film processing, they now lack the essential expertise and infrastructures to handle analog film heritage.

The Thai Film Archive proved to be very efficient in responding to the digital rollout's disruption, understanding the great technological shift that was taking place, and swiftly embedding new analog and digital strategies into its operations. Contrary to local film industry stakeholders who failed to foresee the upcoming transformation and adjust to it at the very last moment, Thai film archivists were able to meet the technological transformation in time and safeguard their mandate and operations with several initiatives and acquisitions.

Regarding analog film processing, the most remarkable effort was acquiring and setting up an entire functional film printing laboratory. Given that after the rollout, almost every film laboratory in Thailand shut down within a couple of years, Sukwong and FAPOT's management promptly understood the urgency of preserving analog machines and the critical knowledge involved in film printing and copying.

In 2017, FAPOT purchased from the post-production facility G2D, formerly Technicolor, the equipment to develop and print 35mm color negatives and 16mm B&W film negatives, and today, FAPOT is equipped with a fully functional film laboratory that occupies almost an entire floor of the Salaya building. During the acquisition, the management of FAPOT also hired former technicians from post-production laboratories that had already converted to digital workflows (G2D, Katana) to train archive staff and retain all crucial disappearing skills, such as handling film chemicals and preparation of specific printing formulas. The acquisition of the film lab and the knowledge and skills acquired by the retired lab technicians are today essential assets for long-term preservation strategies implemented at FAPOT, as numerous reels, particularly those in the worst condition, have already been reprinted and are presently stored in their original and new print versions; moreover, new copies of films are often printed as the archive still regularly screens analog film reels in its theaters. These initiatives also indicate how the archive management, always following Sukwong's guidelines, values the analog film media in its entirety and attempts to safeguard, wherever possible analog film processes, infrastructures, machinery and the unique know-how that otherwise would be irretrievably lost.

The other significant consequence of the rollout on the Archive's infrastructures and operations is the implementation of screening practices and technologies, also revealing the dedication of Thai archivists to preserving analog film media in all its aspects. The 2014 introduction of DCP caused the abrupt discontinuation of every analog film projector in the Kingdom. Between 2015 and 2019, FAPOT management seized this opportunity and invested a conspicuous portion of their annual budgets in acquiring six fully functional 35mm film projectors purchased from redundant theaters in Bangkok. The projectors are currently

installed in the three screening rooms of the FAPOT main building. Each screening room has two 35mm analog projectors, a 16mm analog film projector and a 4k digital film projector. The archive follows a strict "no cut, no trim" policy, so instead of a platter system, two projectors are used jointly when screening involves more than one reel at a time. These practices are enacted almost daily since the archive regularly screens analog film reels for the community of aficionados that, in recent years, has formed around the archive, including those private collectors that donated their films. The Thai Film Archive is the only infrastructure in Thailand to screen films in their analog format.

5.2 VFI and the Digital rollout in Vietnamese Cinema

The analysis of the digital rollout in Thai cinema highlighted several components that also characterized the transition to digital film technologies in Vietnam and the criticalities this entails. The introduction of DCP technologies in 2012 as a new distribution standard represents in both countries, practically and symbolically, the definitive moment when the turn toward digital cinema technologies irreversibly took place. However, while numerous aspects of the digital transformation developed similarly in Thailand and Vietnam, the assimilation of relevant digital audiovisual technologies from the Vietnamese film industry did not represent as disruptive and abrupt event as for the Thai film industry. As I illustrate in these pages the assimilation of digital technologies in Vietnamese cinema took place earlier and more gradually than in its Thai counterpart, starting with the profound economic changeover caused by Doi Moi economic reforms.[104]

The primary sources supporting this section of the study are a series of oral interviews with Vietnamese film industry cinema professionals cross-checked with the analysis of the available data and statistics of film production, distribution and exhibition in the country in the past thirty years. Among others, the key contributors to these sections are Dr Ngô Phương Lan (former director of the Vietnam Cinema Department under the Ministry of Culture and current chair of the Vietnam Film Development Association)[105] and Phạm Ngọc Quang, (motion picture engineer and former chief technician at Vietnam Film Technology center).

[104] "At its 6th National Congress in December 1986, Vietnam's Communist Party made a decisive step to abandon the central planning model of socialism and to adopt a "market-oriented socialist economy under state guidance" – also known as Doi Moi (Renovation). Since that declaration, the country's economy, state and society have undergone dramatic transformations. [...] After the crises of the early reform period, the decade of the 1990s was one of high GDP growth rates, rapid reduction in poverty, more political openness and an upsurge of cultural diversity. [...] In general, State Enterprises (SE) received little support from the state before 1990. Instead, the focus was on creating new enterprises, while existing ones were expected to operate with no new investment. Most SE equipment dates to when the factory was first established, usually in the 1960s or 1970s.5 Even then, much of the equipment was acquired second-hand. At the time, five years after the enterprise autonomy legislation of 1987, only a few enterprises had been able to undertake any modernization at all their plant and equipment. In practice, the main strategy adopted by the government to allow SEs to upgrade was encouraging foreign direct investment through joint ventures. Largely absent in the transition to a market economy was the government's commitment to invest in these enterprises to upgrade technology to make them competitive in an increasingly globalized market. [...] Far from using them as instruments of industrialization and modernization, the Vietnamese state allowed the priorities of the private sector, especially foreign investors, to act as the key to long-term structural change." (Beresford 2008)

[105] Vietnam Film Development Association (VFDA), About the Organization *https://vfda.vn/* accessed on 22/03/2022

The years that followed the 1986' reforms saw the disruptive consequences of privatizing the cinema sector: the number of state-funded films dropped, and foreign movies began flooding Vietnamese screens, marking an all-time low number of nationally produced films. However, the privatization of the cinema sector also allowed newcomer filmmakers to set up independent production companies and cinema businesses. The early 90's rise of the so-called *phim mì ăn liền,* "instant noodles films", low-quality movies recorded and distributed entirely with VHS magnetic tapes, marked the initiation of alternative forms of producing and exhibiting films that could be considered the forerunner of digital practices in Vietnamese cinema. Despite their amateur artistic style and poor technical quality, these unique productions are significant from a technological point of view.

Firstly, they show the prompt and smooth response of local filmmakers to embrace alternative technologies and modes of production. The high costs of analog film materials, which after 1986 ceased to be supplied free-of-charge by the central government, forced local filmmakers and film entrepreneurs to ditch film stock and instead adopt magnetic tape, an innovative and much cheaper AV technology. In the following years, independent Vietnamese filmmakers swiftly adopted every new technology they could access, moving to digital hardware and non-linear workflows as soon as they became available.

Secondly and most relevant, a new, albeit temporary, distribution model was established. The smooth assimilation of alternative technologies, at first VHS but soon after also VCD and DVD, was indeed impactful on the exhibition sector. The years between 1986 (end of the state-funded cinema) and the rise of privately owned Multiplexes in the early 2000s represent a sort of limbo for Vietnamese Theaters, a transitional period of adjustment between two radically opposed models of distribution: free-of-charge socialist state-owned stand-alone cinemas vs international profit-based multiplexes.

The beginning of the socialist-oriented market economy pushed state-owned cinemas to become profit-based entities and introduce entrance fees to access theaters. However, despite the growing interest in new foreign movies, ticket prices, easy access to VHS/VCD pirate copies, and the overall economic struggle of Vietnamese citizens in those years resulted in the bankruptcy of numerous cinemas and ceasing of other, previously established modes of distribution. To re-attract audiences and stay in business, Vietnamese cinema entrepreneurs, including newcomers distributing low-budget films, developed a business model that may be seen as the precursor of the multiplexes. Foreign movies and locally produced “instant noodles films” begin to be projected directly from VHS or VCDs, cutting

the costs necessary to process analog films and purchase or maintain hardware (Lam 95) and making the distribution pipeline faster and more efficient.

Local exhibitors established what can be defined as video-rooms, clusters of small-sized theaters with 30-50 spectator capacity and equipped with basic hardware to screen magnetic tapes or optical disks. While some of these mini-video-multiplexes were created from scratch, many others were obtained by partitioning into smaller screening rooms the existing cinemas: average-sized theater halls designed for 400-500 spectators were compartmentalized to obtain up to 8-10 smaller screening rooms. The video room model proved successful, and in the early 90s, the number of theaters uniquely screening film prints drastically dropped to less than ten nationwide.[106]

Despite the efforts of the central government, which since 1996 reintroduced subsidization for a limited number of film productions to support the suffering industry, stand-alone cinemas that until 1986 dominated film exhibition in Vietnam could never make a comeback, and by the early 2000s, video rooms and pirated tapes were Vietnam's dominant form of film distribution. By contrast, in 2005, CGV opened its first Multiplex in Hanoi, inaugurating the trend that would lead the following decades. Local and internationally owned multiscreen infrastructures appeared all over the country's main urban areas, replacing video rooms and rapidly becoming the dominant exhibition mode in Vietnam.[107]

The odd and possibly unique development of exhibition practices in Vietnamese cinema switched to non-film-based alternative distribution models much earlier than the digital rollout. While 2013 still represents the date when analog film distribution officially ceased, cinemas in Vietnam started to adopt digital formats or similar non-film-based alternatives for distribution and screening almost two decades earlier. Long before the advent of DCPs into international distribution practices, Vietnamese film entrepreneurs embedded substitute film carriers into their pipeline, starting with VHS, then moving to VCD/DVD, and ultimately to video files. When multiplexes began operating in Vietnam, 35mm was still the international standard for distribution, but the local film industry was already experiencing

[106] The 1995 VFI annual report to FIAF discloses that already in that year, only eight cinemas were operating with film projectors in Vietnam, 5 in HCM City with a total of 1062 seats and 3 in Hanoi with 360 seats.
[107]In 2009, Vietnam's cinema industry comprised 87 cinemas, generating approximately 302 billion VND (roughly 13 million USD) in revenue. By 2019, this sector had experienced substantial growth, with the number of screens expanding to 1,063 across 204 cinema complexes and total revenue reaching 4,064 billion VND (over 176 million USD). Over the decade, the number of cinema halls increased more than twelvefold while revenue grew by a factor of 13.5. When compared to the year 2000, overall revenue had increased by more than 86 times, indicating significant expansion in capacity and profitability within the Vietnamese cinema industry. (2012 article from the People's Army online newspaper *https://www.qdnd.vn/van-hoa/doi-song* accessed on 04/08/2022)

non-analog film distribution workflows and, as such, less dependent on analogically printed copies of films. In these terms, the peculiarly organized low-budget cinema industry that emerged after 1986 facilitated the subsequent assimilation of advanced digital screens and projectors and by 2013 most of the by then privately owned theaters were ready to embrace the new DCP standard. The smoother transition to digital cinema was also facilitated by the fact that more than half of recently opened multiplexes belonged to South Korean corporations CGV[108] and Lotte[109]. The considerably high level of technological development and the notable strengthening of the Korean cinema industry in the past couple of decades leads me to suppose that Korean Multiplexes established their presence in Vietnam with a clearer vision of what the audiovisual industry would become. The oral sources consulted confirmed that digital technologies had been part of the infrastructures since establishing the first multiplexes in Vietnam. For instance, when CGV/Megastar opened its doors in 2005, its facilities already had four digital screens installed, and while for a few years, it operated in a hybrid manner employing both digital and 35mm projectors, when the digital turn took over, multiplex cinemas in Vietnam seamlessly switched to digital projections.

The 2010 government's decree on cinematography law states the need "to modernize technologies and invest in technical equipment sufficient for producing films with modern technologies and up to international technical standards on image and sound [...] and invest in building and renovating modern equipment and stereophonic projectors for cinemas under the approved master plan for the cinema industry" without mentioning the coming of DCP technologies and never once employing the term "digital" within its ten pages.[110]
What emerges from official government reports has been confirmed by interviewing Ngô Phương Lan, head of the Cinema Department at the time: the central government failed to predict the upcoming 2012 conversion from analog to digital cinema and accordingly support the industry, and it was unprepared for the change as they were still expecting 35mm to be the standard for film distribution in the years to come. However, when in 2012, DCP technology was irreversibly introduced, Ngô Phương Lan proposed a new masterplan for cinema development that would consider the digital conversion of state-owned cinemas. By 2014, every cinema in Vietnam was equipped with DCP screening technologies.

[108] About CGV group *https://www.cgv.vn/en/about-cgv/* accessed on 10/07/2022
[109] Lotte Cinema *https://www.lottecinemavn.com/* accessed on 15/07/2022
[110] Decree No. 54/2010/ND-CP, Hanoi, May 21, 2010, Socialist Republic of Vietnam *https://thuvienphapluat.vn/van-ban/Van-hoa-Xa-hoi/Nghi-dinh-54-2010-ND-CP-huong-dan-Luat-dien-anh-106113.aspx* accessed on 08/07/2022

Ultimately, it is noteworthy that, like Thailand, digital transformation in Vietnamese cinema happened primarily within the private sector. From VHS “instant noodles films” to state-of-the-art digital screens in Korean Multiplexes, technological innovations, including digital practices, have been introduced by private enterprises and endorsed only later, when inevitable, by the central government. Interestingly, the critical juxtaposition of private vs state-owned characterizing Vietnamese cinema after 1986 matches the technological dichotomy of analog vs digital. Since their inception, the central government has semi-exclusively handled analog film practices within Vietnam as part of evolving national plans for cinema activities. in contrast, private film businesses found and capitalized on alternative technologies, digital above all.

The juxtaposition of public/analog vs private/digital becomes significant also when analyzing the progressive disappearance of analog film infrastructures. Whilst analog film processing after 1986 progressively became the sole preserve of state-affiliated institutions, the private sector assimilated digital workflows several years before the actual rollout. Since the foundation of national cinema, film laboratories in Vietnam have always been an integral part of the state-subsidized film industry, solely dedicated to processing and printing films produced by socialist filmmakers. After the 1986 Doi Moi reforms, when the film industry suddenly and forcibly moved to the market economy, film laboratories maintained their status as state-owned infrastructures but inevitably began providing their service to private enterprises in exchange of fees. Issues arose soon afterwards as the number of nationally subsidized films drastically dropped, and the newborn private film enterprises rarely utilized Vietnamese film labs to print their films. At first, the production of long-format feature films took shape in the previously discussed form of VHS *phim mì ăn liền*, instant noodles films, thus not requiring analog film processing, subsequently in the late 90s, when the local industry started to re-consolidate and slowly grow, the rare independent productions employing analog film stocks began regularly printing their films in film laboratories in Bangkok (faster, cheaper, technically more advanced and overall more reliable). As mentioned, international productions' inter-negatives were shipped directly to Bangkok film laboratories and printed to positive copies for distribution in neighboring countries, including Vietnam. The remaining Vietnamese film laboratories continued to work uniquely with a minimal number of state-financed films, and consequently, all but the Film Technology Center in Hanoi shut down shortly after the Doi Moi reforms.

Film laboratories in Vietnam have always been a part of the socialist state apparatus; they were public bodies during the heydays of socialist cinema, remained such throughout the years of the socialist-oriented market economy and survive today in the form of the last standing and seldomly utilized film processing infrastructure in Hanoi.

Analog film processing in Vietnam has ultimately always been a public sector preserve, contrary to digital film practices that originated, developed and flourished within the private sector. While the juxtapositions are not too rigid and often intersect (for instance, after 2013, state-run facilities progressively integrated digital systems), the framework remains particularly relevant in consideration of knowledge and skills. State and private enterprises evolved in parallel but distinctly, one attempting to sustain the existing apparatus by relying on the analog processing knowledge consolidated during its peak years, the other developing alternative workflows, probably also to avoid dependence on the state and its infrastructures. This juxtaposition can also be traced along the peculiar geo-political context, where Hanoi is the seat of the government and, as such, the locus where analog film processing still survives, and Ho Chi Minh City represents the utmost expression of private enterprise and the place where digital practices have been and still are exploited.

The gradual disappearance of analog film practices and knowledge occurred at different times and modes within the two cinema hubs of Vietnam.

In Hanoi, because of the post-Doi Moi cinema crisis, the loss of analog film processing infrastructures and knowledge commenced earlier than the actual digital rollout and, at the present date, still survives in the shape of an inert, semi-dormant state-owned film lab. Analog film technologies, infrastructures and skills exist in the Vietnamese capital as part of a national cinema apparatus that never fully recovered after the industry capsized and is most likely destined to be dismantled and disappear in the near future. Among these state-run infrastructures, I must mention the National Cinema Centre,[111] the last remaining state-owned theater, and the Vietnam Feature Film Studio,[112] the leading national production facility currently in a desolate state of abandonment.

By contrast, in Ho Chi Minh City, the audiovisual industry that emerged after adopting the market-oriented economy never developed the skills and infrastructures to autonomously manage and carry out analog film workflows. Employing alternative technologies and, when necessary, relying on higher quality film laboratories in Bangkok, the

[111] Trung tâm Chiếu phim Quốc Gia, https://chieuphimquocgia.com.vn/ accessed on 10/10/2022
[112] Hãng phim truyện Việt Nam or VFS http://vietnamfilm.com.vn/ accessed on 10/10/2022

profit-driven emerging Saigonese film industry smoothly embraced digital technologies and abandoned analog formats, workflows and knowledge long before the digital rollout.

With regards to the digital rollout's impact on VFI, the first noteworthy consideration is that although Vietnamese archivists, thanks to the exchanges with peers and organizations like FIAF and SEAPAVAA, began assimilating digital practices before the actual rollout, central leaders were late in foreseeing and financially sustaining the implementation of digital technologies and workflows in the archive. As part of the state-owned cinema, the VFI was not involved in any discussion on a national level to meet the upcoming digital challenge, nor has it received from the central government the support and guidelines to establish a transparent process to receive digital-born films produced by private film enterprises.

By 2013, the private sector was ready to move to digital cinema, but the central government did not plan any initiative or take any action to assimilate digital technologies into VFI infrastructures as it expected analog films to remain the standard for the years to come. Only in 2014, when the digital rollout was finally acknowledged as an irreversible turn at state level, was the VFI officially authorized to embed new digital workflows and allocated a dedicated budget for specifically upgrading to a digital storage system and uptake of LTO tapes to substitute Betacam as the primary carrier for digital storage.

The second and most significant consequence of the rollout on VFI's operations is indeed the disappearance of analog skills, knowledge and infrastructures. At present, only one film facility survives in Vietnam: The Film Technology Center in Hanoi, a semi-dormant state-owned film lab that serves sporadically only one client, the VFI. The film laboratory is practically almost inoperative and appears frozen in time as, despite being fully financed by the central government, is paradoxically unable to carry on analog film processing for the lack of materials and skilled personnel. The infrastructural and operational decline of the Film Technology Center in Hanoi is consequential for the VFI operations as there are no other infrastructures capable of handling analog prints and copies within the country. Until the digital rollout, when the lab was still overall operative, VFI used the facility to carry on film-to-film printing practice for long term preservation, a practice now dismissed. The digital rollout affected not only the decline of film infrastructures and machinery but, more significantly, the abrupt disappearance of technical skills and vital services that have been part of analog film preservation practices implemented by the archive for years. The VFI currently has no plans to safeguard what is left of the last standing Vietnamese film laboratory. Today, the Hanoi Film Technology Center stands as a symbol of the concurrent decline of institutional Vietnamese cinema and the obsolescence of analog film technologies.

5.3 Technological Obsolescence, Conceptual Divergences

The digital rollout altered several paradigms within audiovisual archives, bringing technological obsolescence and transforming key segments of the preservation pipeline but also causing the disappearance of infrastructures and machinery that had constituted critical assets for archival institutions for many decades, photochemical laboratories above all. I examine practical repercussions and conceptual queries emerging from such technological transformation via "Film as Dispositif " and "Film as State-of-the-Art". Obsolete dispositifs and state-of-the-art digital technologies are regarded here as the two faces of the same coin, two inter-related frames that equally resonate with the practical criticalities initiated with the rollout, and that can be employed to reflect on what disappears (analog processes, infrastructures, dispositifs) and what emerged with the rollout (digital screens, carriers).

The first consideration regards the practical concerns that arose from the discontinuation of analog film machinery and infrastructure, particularly film laboratories. The obsolescence and disappearance of equipment, facilities and technical knowledge resonate with the discourse proposed by "Film as Dispositif, " as they represent the focus of both the theoretical frame and the multifaceted technological challenges undermining archival operations. While Fossati specifies that the frame mainly addresses dispositifs as the practice of showing films to an audience (Fossati 171), my interpretation and application of "Film as Dispositif" tackle the implications of the digital rollout in a broader sense, focusing also on the disappearing of analog infrastructures and skilled personnel. The frame suggests contemplating the impact of such loss on both preservation and access, keeping track of the obsolete dispositifs employed for screening practices (theatrical venues) and analog film processing (film laboratories).

Among the two types of infrastructures, the disappearance of film processing infrastructures represents a much more severe threat that, if not tackled in time, might directly compromise the artifacts' viability. The loss of film laboratories entails that archives can no longer rely on those external assets providing essential services such as printing and copying films, a practice previously commonly employed for long-term preservation that has been discontinued by the VFI precisely due to the digital rollout. The Vietnamese institution has no plan nor resources to embed photochemical practices in its workflows or purchase

obsolete machines from the only surviving film lab in the country, the Film Technology Centre, which is operative despite being paradoxically unable to fulfill most of its functions.

By contrast, the Thai Film Archive proved to be aware of the risks that dismantling analog film processing machines implies; as mentioned, the institutions purchased and installed in its facility a fully functional film laboratory and hired retired lab technicians to train FAPOT staff. Today, printing analog copies of heavily damaged or endangered films for long-term storage is part of the preservation strategies implemented by the Thai archive, a practice that FAPOT is becoming remarkably capable of conducting independently. FAPOT's film laboratory might soon potentially become the last operative across Southeast Asia. The disappearance of analog skills, knowledge, machines, and infrastructures ultimately entails that soon, most SEA archives will no longer be able to carry out substantial archival practices that depend not only on discontinued machinery but also on the in-depth understanding of the photographic media's physical properties and the capability of handling obsolete dispositifs, a criticality hazardously overlooked by most archives in the region.

As detailed, obsolescence also critically affects digital carriers. LTOs are proving to be prone to rapid obsolescence and not entirely reliable if not correctly handled and preserved, and hence arguably not financially and practically sustainable for most audiovisual institutions in the region. A new generation of LTO cassettes is introduced to the market every two to three years, so every five to six years, the content might be migrated to a new generation, and the old supports discarded, even if they are in physically good condition (Antoniazzi 8). The hardware currently employed to store digital data is inherently precarious and relatively hazardous. On the one hand, the lifespan of LTO tapes is significantly shorter than analog stocks, which, if adequately preserved, could last much longer. On the other hand, the few manufacturers producing digital carriers steadily pressure consumers, archives included, to constantly upgrade their systems, causing a forced and unsustainable obsolescence of digital preservation core items.

The rapid obsolescence of digital carriers could be regarded as a consequence of pushing the limit of technology described by Fossati's "Film as a State-of-the-Art", the framework that more closely relates to the implementation of digital technologies in film production and archival practices. The drive toward constant technological innovation originates within the film industry rather than in archives, which are eventually forced to implement new policies and practices to adjust to the trajectory imposed by prominent non-archival stakeholders like technology manufacturers. "Film as State-of-the-Art" is effective in framing the dynamics between film archives and the cinema industry. In the case of SEA

archives and those few global corporations manufacturing storage systems (currently only Sony and Fujifilm),[113] the relationship is heavily unbalanced as the archival institutions could only deal with what technological advancements dictate. Motivated by financial gain,[114] and the drive to push technology to its limits, information technology manufacturers often commercialize hardware with very short lifespans, with planned obsolescence being central to the profitability of the IT sector (Antoniazzi 11), raising questions on the sustainability and viability of digital technologies in archival practices.

Fossati suggests that the constant seeking for cutting-edge innovation technologies often occurs regardless of their implementation and not in a technologically deterministic sense (Fossati 174), as in the case of the LTOs when probed about long-term preservation effectiveness. From this perspective, the replacement of analog film stock with LTO tapes does not stand as a preordained and ineluctable step into the development of audiovisual archival technologies but as a forced contingency dictated by various factors, including the semi-monopolistic economic profit sought by the few manufacturers involved. A forced contingency that SEA archives might have to regard in non-teleological terms if they aim to establish efficient hybrid workflows that consider digital standards' flaws and constraints rather than seeing them as a preordained step in the media evolution. In terms of technological advancements, digital carriers thus are not yet ready to represent a reliable and stable means for long-term storage of audiovisual materials and other data. This concern has been identified by the archive community for decades. In 1995, archivist and scholar Michael Friend claimed that none of the electronic formats, from magnetic tapes to compact disks, could be considered archival, and until a better technology emerges, film stock remains the best possible standard for retaining moving images (Friend 42). Thirty years later, the situation has not changed much; analog film stock still stands as a more durable, reliable, and efficient technology for the long-term preservation of audiovisual content, but the infrastructures, materials, and technical knowledge necessary to deploy such technology are rapidly disappearing, especially in SEA where film laboratories have essentially all shut down. By contrast, LTO tapes and integrated systems are mandatory as they represent the best technical solution and the un-official standard to store the digitized and digital-born films but are unserviceable and unsustainable for many archives as the forced obsolescence

[113] LTO Participants and Use Cases | Ultrium LTO *https://www.lto.org/lto-participants/* accessed 13/10/2022
[114] "Digital revolution was and is all about economics - all about marketing new digital consumer products to a new generation of consumers - all about the home electronics industry using the cinema to establish a product line with identifiable brand names for home entertainment systems" (Belton 101).

imposes recurrent data migrations and infrastructural upgrades that many archives are not technically and financially able to sustain.

At this historical juncture characterized by a technological shift and uncertainty, analog and digital pose different but equally critical practical concerns to the long-term preservation of film heritage. The solutions to these matters are somehow already in place in most archives, including FAPOT and VFI, which, despite the flawed use of digital storage and the disappearance of analog means, have already embraced hybrid workflows and attempt to fulfill their preservation mandates with the available resources.

The hybrid practices carried out by the two SEA institutions, as by most archives worldwide, indicate that analog and digital are, at least in practical terms, two expressions of the same media meant to temporarily coexist despite their profound technological and historical differences. While archivists around the globe are likely aware of analog films' properties, defects and limitations, those regarding digital means are yet to be fully understood, as digital is still in its infancy and its future developments are only partially predictable for the archival community.

The coexistence of analog and digital can also be observed in screening practices, the initial focus of Fossati's "Film as Dispositif" and “Film as State-of-the-Art” that further underlines the divergent approaches of the Thai and Vietnamese film institutions toward preserving obsolete screening devices and establishing initiatives to safeguard analog film projection practices. With the rollout, FAPOT purchased several analog projectors, installed them in the theaters of the Salaya facility and still regularly employs them for public screenings of analog films, including the projection of those copies re-printed directly by the archive film lab. In contrast, with the advent of DCP technologies, VFI has abandoned analog film screening and converted its only screening room into a digital theater.

While it is true that budget restrictions dictate archive's capability to undertake such initiatives, the different approaches toward the conservation of obsolete dispositifs and infrastructures ultimately indicate a divergent conceptualization of the media itself.

By preserving obsolete screening technologies and skills alongside film laboratory practices and machines, the Thai institution seems to fully embrace the objectives of "Film as Dispositif" and stresses a clear understanding of the challenges raised by the digital rollout. Today, the Thai archive remains the only place in the country where analog film reels can be screened. By contrast, the Vietnam Film Institute only marginally preserves obsolete analog film machines, mainly film cameras and other devices of the early decades of Vietnamese cinema, but does not actively salvage disappearing film processing knowledge and skills,

facing challenges that not only threaten the future capability of the institution to handle analog film material but that also undermine the conceptualization of the national cinema heritage and, with it, the social role of the archive itself. After all, "Film as Dispositif" emphasizes the relation between film projection and the viewer (Fossati 174), further revealing on a conceptual level how cinema devices serve to establish relationships between diverse social groups.

Extending the mandate of archives to safeguard obsolete analog film machines, infrastructures and processes arises from both practical and conceptual grounds, as it implies acknowledging the historical and cultural significance of the obsolete components of the media and proactively employing them for public initiatives like screenings, ultimately stressing the conscious will and dedication of certain archives to share the conceptual relevance of analog cinema with the wider society, as in the case of FAPOT.

The issue is that as much as for the originality and authenticity of archival film artifacts expressed by “Film as Original”, non-archival stakeholders like the general audience or central governance might not acknowledge the experience of watching analog films and the efforts to preserve the obsolete media as something relevant or worthwhile.

Significantly, Fossati emphasizes that "Film as Dispositif" pivots on the relation between film projection and viewer rather than between reality and film artifact (Fossati 174). However, digital cinema did not truly change audience experience (Belton 104), continuing to consume films in the same manner as it used to do with analog film screenings.

That is to say that, in both practical and conceptual terms, the impact of the digital rollout varies according to the social group involved. Thus, while for audiovisual archivists, the framework "Film as Dispositif" could be seen as constitutional of their mandate and consequentially unlock a series of archival initiatives, for the average contemporary spectator, it might simply be irrelevant. This divergent conceptual recognition of cultural and historical values in obsolete dispositifs might become even more hazardous in contexts where the population is increasingly composed of native digital consumers and so has no direct relation and understanding of analog films and dispositifs, or that for historical reasons have developed closer ties with digital cinema than analog screening, such as in the case of Vietnamese spectators that become familiar with non-analog modes of distribution and projection, like VHS and DVDs, a couple of decades earlier than the digital rollout.

In times of rapid technological transformations, the conceptual discrepancy among diverse social groups challenges archives' mandate and social role as they essentially exist and operate to benefit societies, nations, and the people surrounding them. The danger is that the

mandate of archives to preserve obsolete means might become increasingly inconsequential and irrelevant to audiences and institutions, especially in SEA, where the digital rollout did not disrupt spectatorship as much as other cinema sectors and allegedly went almost unnoticed by most, particularly for younger generations of local spectators, who ignoring the history of the media, possibly perceive analog films as something inconsequential.
This ultimately means that the conception of preservation efforts and initiatives to safeguard dispositifs and related skills significantly differs between screening practices, which relate access and audience participation, and photochemical film processing, which more closely pertains to the long-term capability of handling and storing analog film material. While I acknowledge the historical significance of safeguarding both screening and processing infrastructures, I argue that the latter is far more significant as the disappearance of analog film labs poses a greater hazard to film heritage's viability.

By contrast, "Film as State of the Art" could be regarded as the only frame where digitization practices truly serve a purpose. Digital screens could draw together archives and spectators, establishing a common ground where archives meet their external interlocutors, negotiate the value of their work, and preserve national audiovisual heritage.

Digital screening and distribution practices do not stand as a core mandate of archives, but they have the essential function of engaging audiences with archival activities; those archives embracing the frame "Film as State-of-the-Art" demonstrate to be actively committed to keeping up to date with latest technological innovations and to understand the importance of implementing cutting edge technologies to meet the expectations of spectators. The transition to digital screens has been broadly assimilated by filmmakers and average consumers in general, making analog film screening an experience of the past, except for small groups of aficionados with a keen interest in experiencing film prints in their original form. Except for film archivists and curators, most of the other human Actants involved in the networks around film artifacts have no tangible experience with analog films and most likely have no interest in the originality of analog artifacts and dispositifs. Spectators consume digital and expect digital, and thus, granting digital access becomes imperative to archives if they want to establish relationships with external stakeholders.

At this critical juncture of technological uncertainty, the hybrid nature of contemporary cinema practices compels archives to simultaneously embrace 'Film as Dispositif' and 'Film as State-of-the-Art' and devise hybrid strategies that differentiate between access and long-term preservation while addressing the limitations of both analog and digital materials, infrastructure, and workflows. This entails the preservation of obsolete

analog dispositifs and related skills to ensure the continued use of film stocks as the primary means for the long-term conservation of films while concurrently devising sustainable digital storage models that consider the practical and financial inherent shortcomings of LTO storage systems, prioritizing the final goal of "activating" the archives via digital access to connect with relevant contextual social groups.

Furthermore, besides environmental and technological factors, the definition of sustainable archival practices that could guarantee film originals' long-term viability is a social matter. To more comprehensively understand how the divergent conceptualization of film artifacts influences and determine archival challenges, practices and mandates, the following chapter focuses on human Agency by examining the critical threats posed by non-archival human Actants and charting the missing elements needed to address the dynamics between the two film heritage institutions and their respective contexts.

6 The Human Challenge

The third source of concern for the long-term viability of audiovisual heritage is human action. Unlike environmental and technological challenges, which affect global audiovisual collections in a similar manner, human-induced critical concerns encompass a broad range of tangible threats that vary according to the distinct contextual socio-political features and specificities of the archive's historical backgrounds and polity.
Human-induced criticalities can be schematically outlined along three wide-ranging tiers:
War, deliberate destruction and political instability/interference.
Disregard, inaction, mismanagement or wrong doings of government and policymakers.
Lack of expertise, knowledge and skills.

The extent of the threat posed by war, deliberate destruction and political instability are relatively self-explanatory as they menace the physical existence of audiovisual collections, archives and archivists or skilled personnel involved in audiovisual practices. “During conflict, cultural assets are in greater peril due to the heightened risk of intentional destruction or looting, while their recovery becomes even more challenging because of the dangers of operating in a conflict zone” (Walsh 121). Countries in Peninsular Southeast Asia have all experienced armed conflicts, invasions, political unrest, and other forms of turmoil in recent years. As a result, the region has suffered significant and tragic losses of audiovisual heritage (Edmondson 150). Regional film heritages and archives still bear the scars of such violent events, as illustrated by the situation of Myanmar's film heritage. According to SMF' archivists, a significant portion of this heritage was intentionally destroyed in the years following the 1988 coup d'état to recover the silver from the reels, and today, it still faces ongoing threats as an authoritarian military junta continues to govern the country.[115]
Audiovisual archives, though not obvious targets during instability, remain vulnerable as hostile forces may see their materials as opposed to their objectives or ideologies and seek to destroy them (Walsh 121). Moreover, violent and disruptive events often affect or directly cause other human-induced criticalities, such as the lack of expertise necessary to handle analog films; for instance, the tragic events that occurred in Cambodia between 1975 and

[115] Since 1948 independence, insurgencies and armed turmoil have been a constant in Myanmar. The situation was aggravated after the 2021 military coup d'etat that rapidly led to an ongoing civil war in the country.

1979, when the Khmer Rouge regime deliberately destroyed most of the audiovisual material existing in the country, including hundreds of feature films and countless other footage (Hamilton 12), and tragically wiped out the intellectual class of the country, included many individuals involved in cinematic practices, are emblematic of how the lack of expertise and skills in a country could be related to dramatic, violent events.

Despite the threats posed by disruptive events being relatively similar in every territory, they are largely unpredictable and unfold differently according to the socio-political-economic context. War and deliberate destruction of artifacts, infrastructures and human resources can virtually strike archival institutions at any time with diverse outcomes and thus are rather difficult to circumscribe within a unifying framework and hard to be tackled as a collective challenge.[116]

Violence and disruption often stem from far-reaching transnational geopolitical events that have collectively affected countries across peninsular Southeast Asia, highlighting shared backgrounds. Colonialism, World War II, and the Cold War not only reshaped the region's geopolitics and influenced the formation of modern states and societies but also significantly impacted technological and societal development, directly or indirectly affecting the creation, destruction, or preservation of audiovisual artifacts, infrastructures, and dispositifs. The impact and consequences of the Cold War are still visible at present as the diverse leading ideologies and opposite political systems ruling the countries in the region reflect the disruptive events that characterized the second half of the century, such as in the case of Thailand and Vietnam of which current socio-political structure still reflects the opposite stances adopted during the Cold War (Thailand openly supported the USA, Vietnam notoriously fought for its independence by aligning itself with the Eastern Bloc).

However, despite overarching historical and geopolitical notions being crucial for comprehending Southeast Asian cinematic practices, interpreting momentous historical processes' impact on regional cinema should refrain from predetermined ideological readings.

While the Cold War's central conflict of capitalism versus communism provided a broad framework for ideological struggles and international relations during much of the late twentieth century, the responses of Southeast Asian film industries to this global tension were more adaptable and interconnected than often acknowledged, with dominant ideologies

[116] The significant initiative to counteract wars as a menace to cultural heritage is 1954 UNESCO's The Hague Convention. The third article states, "The High Contracting Parties undertake to prepare in time of peace for the safeguarding of cultural property situated within their own territory against the foreseeable effects of an armed conflict by taking such measures as they consider appropriate." (The Hague Convention 14 May 1954)

frequently blended with local political, social, and cultural identities (Fu/Man-Fung 3).
A prime example emerging from the Cold War is the existence of two separate Vietnamese film heritages: the northern one, properly preserved in Hanoi since the early days of the socialist revolution and the southern, a product of the extinct Saigonese film industry from 1953 to 1975. Additionally, political alignments and military involvement do not necessarily lead to the loss of local audiovisual heritage. Ironically, the wars and upheavals across Southeast Asia during the twentieth century did not affect Vietnamese and Thai film heritage as one might expect. Vietnamese filmmakers/soldiers managed to preserve the majority of films produced since the establishment of its national cinema by moving the film collection to concealed facilities throughout the country while fighting three consecutive wars. In contrast, although Thailand largely avoided direct involvement in large-scale conflicts, it experienced a significant loss of its film heritage as preservation initiatives in Thailand only emerged in the mid-1980s, driven by individuals like Sukwong rather than a result of a centrally coordinated national initiative.

The second human-induced source of concern is the disregard, inaction or wrong-doing of institutions, rulers and policymakers.

The role and responsibility of governments and national authorities are essential in various ways in audiovisual preservation practices. Their involvement might encompass the destruction of artifacts resulting from contingent and unpredictable events such as war, social upheaval, and political instability, but their Agency also directly impacts archival viability through means such as providing financial support and enacting legislation.
In several instances across SEA, central administrative and legislative bodies are the only source of financial support to implement and maintain costly infrastructure and technologies but also have the power to impose guidelines and constraints on archives. Central government's Agency often differ, particularly in non-democratic contexts. Policymakers may choose to support archival practices in line with their political agendas, ideologies, or other values they wish to promote and, when they fail to recognize their essential proactive role, inaction and disregard become a significant source of concern. The involvement of governing institutions is crucial, even when it is not explicitly acknowledged: by neglecting or underestimating the urgent need for strategic and programmatic preservation of film heritage, national rulers indirectly contribute to its rapid decay and disappearance.

The 1980s UNESCO Recommendation for the Safeguarding and Preservation of Moving Images states as its first general principle that "all moving images of national

production should be considered by Member States as an integral part of their 'moving image heritage [...] The necessary arrangements should be made to ensure that concerted action is taken by all the concerned public and private bodies to elaborate and apply an active policy to this end" stressing how member states, i.e. sovereign nations and their governments, are expected to actively engage in safeguarding national movie-image heritage, whilst also acknowledging that on a legislative level, these dynamics involve a variety of public and private entities."[117] As the legal status and organization of audiovisual archives depending on the level of government involvement, can be subsidized public institutions, privately funded organizations or a hybrid between the two.[118] Consequently, while they differ markedly in scale and structure, their policies regarding the collection, preservation, and exhibition of materials can also vary considerably (Fossati 32).

The public or private component ultimately determines the financial status of archival institutions since independent broadcasters and other types of private collectors generally do not receive financial compensation from the state, while national film archives and museums mostly depend on the direct support of governments, as in the case of FAPOT and VFI. Additionally, because audiovisual archives are most often publicly funded institutions, the allocation of budgets and subsidies in non-democratic countries is often influenced by corruption among the ruling class and other participants. Although this study does not thoroughly investigate this issue, it is relevant to note that bribery, misuse of public funds, and financial misconduct are widespread across Southeast Asia. According to the NGO "Transparency International" Myanmar and Cambodia figure as some of the most heavily corrupted countries in Asia, while Thailand and Vietnam also rank low on the global corruption scale (Transparency International Report, 2023).[119]

The urgency to preserve audiovisual heritage and engage in concrete audiovisual archival actions led to the establishment of most of the existing national audiovisual institutions only in the mid-20th century when, facing the consequences of WWII devastations, governments worldwide finally recognized the cultural bonding between film artifacts and national identity. The number of publicly funded film archives grew significantly after World War II, with FIAF increasing its membership from 35 in 1970 to 83

[117] Recommendation for the Safeguarding and Preservation of Moving Images, UNESCO, 27 October 1980
[118] "Film institutions can be entirely public (e.g. regional or national film archives such as Centre national du cinéma et de l'image animée – CNC, Library of Congress – LoC, Danish Film Institute – DFI, and many more) or private (such as Hollywood studios' archives or private collections like the French Lobster Films), or partly subsidized with public money (such as Eye Filmmuseum and the Fondazione Cineteca Italiana)" (Fossati 32).
[119] Countries - Transparency.org https://www.transparency.org accessed on 05/12/2024

in 2008 (Enticknap 55). The establishment of national audiovisual archives was driven by the expansion of international treaties promoting heritage preservation after World War II, as governments worldwide prioritized restoring and safeguarding their cultural and material assets for the future. "Rather than serving as a spiritual embodiment of a living national outlook or ideal, the concept of heritage assumed historically tangible (and costly) forms" because of the devastation of war (Frick 14).

The dynamics between archives and central governance vary according to the country's political and legislative system, and while the types of interventions that governments can undertake predominately entail financial intervention, the subsidizing of archival institutions often regard sets of ideologies and national values that governments commit to enforce. As both Frick and Fossati ascribe, the preservation of so-called national or state heritage is not, and never has been, a neutral concept, although it is presented as such by politicians, the press, intellectuals, and archivists (Frick 19/ Fossati 333).
While archival institutions often pursue a common agenda by joining international organizations and adhering to directories recommended by UNESCO, FIAF and other transnational organizations,[120]governments follow programs dictated by political parties and dominant ideologies. Comprising two single-party socialist states (Laos and Vietnam), two parliamentary Monarchies (Cambodia and Thailand), and a military junta-governed country (Myanmar), rulers in the region are often authoritarian and ideologically driven, while archivists and archive's mandates often do not identify with central political agendas. The disregard toward audiovisual preservation practices and the consequent lack of action toward long-term preservation strategies by local governments is a common issue in mainland SEA, and only in those rare cases where archival practices encountered and aligned with dominant ideologies, film heritages were actively safeguarded from the action of climatic, technological and human factors since their early days, such as for the well-preserved and socialist-values-imbued Vietnamese films that ultimately stand as an exception in the region.

The ties, divergencies and conflicts between archival institutions and their respective governments represent significant linkages of the relational networks mapped in this study. Central institutions' action or inaction had, in fact, a pivotal role in establishing and sustaining both the Thai Film Archive and the Vietnam Film Institute, and in both cases,

[120] "Audiovisual archivists have, amongst other responsibilities, the task of maintaining the authenticity, and guaranteeing the integrity, of the works in their care. It follows that for this to happen, they need to be protected from damage, censorship or intentional alteration. Hence selection, protection and accessibility in the public interest should be governed by publicly declared policies - not by political, economic, sociological or ideological pressures. By definition, the past is fixed. It cannot be changed" (Edmondson 9).

these dynamics significantly revolve around the fluctuating conceptualization of film artifacts by archives and external influential stakeholders. In Vietnam, the North Vietnamese socialist government established its first film department in 1965 as an essential propaganda tool, embedded cinema with left-wing political values, and was able to actively preserve most of its film heritage since its early days. On the contrary, in Thailand, audiovisual artifacts became publicly acknowledged as valued heritage only after numerous years of campaigning by dedicated independent archivists, which once understood then established the strong bond between cinema and Thai national values (monarchy above all) with funding and a proper archival facility established.

The third human-induced challenge that transversally affects audiovisual archives in mainland Southeast Asia is the lack of expertise, knowledge, and skills to collect, preserve, restore, catalog, manage, and digitize audiovisual collections a concern that often arises as a consequence of the two previously outlined human-induced sources of concern and as the fallout of technological obsolescence.

Disruptive historical events, such as wars and agitations, localized negligence, corruption, disputes, or disagreements with national governments, are often directly involved in precluding audiovisual archives from developing the comprehensive and hybrid corpus of competencies indispensable to safeguard their national film heritage. However, the lack of specialized skills also closely relates to cinema practices, institutions, enterprises, and related infrastructures and may stem from historical and technological contingencies. For instance, Bangkok's film laboratories served for several decades as a regional hub to print and copy positive films for distribution in the whole peninsula. As a result, neighboring countries like Laos and Cambodia have never autonomously developed and safeguarded the essential skills and technical knowledge to handle film reels and analog audiovisual heritage.

The lack of knowledge and skills equally affects analog and digital means, especially after the digital rollout. As described in the technology challenge, the disappearance of analog film processing infrastructures and knowledgeable personnel has already disrupted archival workflows in SEA film institutions, such as in the case of VFI, which is no longer able to employ analog film printing as a long-term preservation strategy.

On the other hand, audiovisual archives are challenged by the lack of essential knowledge to understand, implement and operate digital machinery and infrastructures. The distribution of knowledge of film restoration worldwide remains dominated by the

knowledge based on Euro- or US-centric institutional experiences (Rahman 519).[121] Across SEA, the circulation of knowledge and skills is still relatively limited, despite the efforts of international associations like SEAPAVAA and FIAF, which played and still play an essential role in enforcing the circulation of digital expertise among archives in the region. "Today's technology requires human involvement in many aspects of digital storage system operations, and one of the primary causes of digital archive loss is human error" (AMPAS 11/37), a critical concern in contexts like SEA that typically arises from the need to manage digital assets without proper knowledge and experience. Human error and wrong decision-making extend the human challenge to non-governmental Actants, stressing how diverse human participants, archival and otherwise, share the responsibility of managing heritage collections and the potential damage this can entail.

Mismanagement and misuse of funds can also arise within archival institutions, making them accountable for human errors as much as external Actants. The combination of inadequate personnel knowledge and technological obsolescence can lead to significant issues, including selecting unsuitable digital formats and carriers or developing unsustainable practices and models for the long-term storage of materials.

Additionally, the level of engagement between archives and government authorities can vary significantly from one institution to another, with significant repercussions. This underscores a notable distinction between FAPOT and VFI: the Vietnamese institution was established as an essential part of a single-party state and continues to operate within that framework. In contrast, the Thai archive was initiated by private citizens, including Dome Sukwong and other film enthusiasts, and later transitioned into a public organization, becoming an institutional body while still maintaining a considerable degree of autonomy. In both instances, central authorities primarily allocate funding, but FAPOT enjoys greater decision-making independence and operational flexibility than its Vietnamese counterpart.

Human action ultimately represents a comprehensive and intricate category of analysis whose implications concern analog and digital means and are significantly more convoluted than those established within the climate and the technology challenges, especially in devising still unfolding and relatively uncertain digital storage models.

Environment-related Actants such as molds and fungus affect film artifacts in like manners in archives across the globe, and the same is also valid for technology-related

[121] Rahman Lisabona in Zhang, Zhen, et al. *The Routledge Companion to Asian Cinemas*, New York City: Routledge, 2021.

Actants, whereas technological devices are essentially the same in most archival institutions and technology manufacturers/distributors allegedly follow similar profit-driven agendas worldwide. Representing shared tangible challenges, climate-induced decay and technological obsolescence have been collectively addressed for decades through dedicated preservation, restoration, and digitization initiatives facilitated by symposiums and transnational exchanges. In contrast, human action encompasses a range of local and international Actants, whose Agency varies based on the features of specific contexts and distinct societal values. Unlike climatic and technological factors, the intersections between artifacts and humans cannot be addressed simply in terms of digital practices as a solution to the threats posed by human action/inaction, but it rather necessitates a more thorough and focused analysis that attempts to fathom the peculiarities of a given socio-political and cultural context on a case-by-case basis, comprehensively analyzing the Agency of those participants that transversely operate between two or more countries and those engaged uniquely within a circumscribed territory and only then develop tailored archival strategies and curatorial initiatives.

The Agency of human participants goes beyond the physical threat to film collections and widens the scope from the material sphere to the conceptual, as the long-term viability of audiovisual heritage intersects human action not only in terms of destruction or disregard but is intertwined with the divergent understanding of audiovisual artifacts by distinct societies, communities and cultural contexts, ultimately determining differences and discrepancies between archival institutions across the region.

The following two extensive chapters further trace the networks around archival film artifacts, examining essential backgrounds and contextual elements of Thai and Vietnamese cinema histories and analyzing the role of those Actants identified based on their influence on archival practices in technological transition. The focus of the study thus steers toward human Agency, tracing the conceptualization of film heritage collections in terms of policies and practices and its negotiation between the archives and relevant external social groups, such as central rulers, governments, local film industries, and foreign stakeholders. The concluding subchapter (Chapter 6.3) reexamines the findings via Fossati's theoretical tool, specifically addressing the second research question: how do the Thai and Vietnamese contexts affect and shape local archival practices?

6.1 Thai Film Heritage: Timeline, Contexts, Actants

This extensive chapter traces the relational network around Thai film heritage by examining the main historical phases of the Thai film industry and identifying the socio-political-economic underlying forces pulsating within the Kingdom, as well as the most relevant technological transformations and idiosyncrasies of Thai cinema.

The historical timeline outlined in these pages is arranged into four main eras and elaborated on the chronology suggested by the two distinguished Thai scholars: Dome Sukwong, founder of the Thai Film Archive, and Prof. Dr Boonrak Boonyaketmala.[122]

The four periods comprise:

The Silent Era (1897-1932)

The Golden Age (1932-1945)

The 16mm Era (1945-1976)

The Industrial Era (1976-2000s)

According to Sukwong, the history of Thai cinema can be traced back to 1897, when King Chulalongkorn became the first Thai person ever recorded on film. At the time, King Rama V was traveling in Europe, visiting foreign powers to negotiate trade agreements and maintain Thai independence. The monarch appeared in two distinct reels filmed in Bern, Switzerland, on 25th April and Stockholm, Sweden, on 13th July 1897. As previously explained, these films depicting King Chulalongkorn were rediscovered by Sukwong in 1985 and, soon after, employed by the young archivist to raise awareness about film preservation, ultimately becoming instrumental in the foundation of the Thai Film Archive.

The first element to contemplate when examining the history of its audiovisual output is that the Kingdom of Siam, unlike any other Southeast Asian nation, has never been colonized by Western powers (Dissanayake 145).[123]

[122] Notably, in drafting these pages, I relied heavily on the comprehensive and influential article *The Rise and Fall of the Film Industry in Thailand,* 1897-1992 by Prof. Boonrak Boonyaketmala (1992).

[123] "The history of colonialism is vast and articulated. Since the dawn of the sixteenth century, The Netherlands, Portugal, Spain, England and France have been the protagonists in most of Southeast Asia's occupation. The action of Europeans has heavily shaped the appearance of contemporary Southeast Asian nations, and in the nineteenth and early twentieth centuries, the organization of the state administration formally defined by European imperialism saw profound changes. By the 1920s, Southeast Asia had undergone a radical change.

The country's main challenge occurred between the 19th and 20th centuries when Siam became wedged between British Burma and French Indochina, two colonial powers that could not allow the other to occupy the third major state of the region, Siam (Reid 32). The two Chakri monarchs who reigned during those decades, King Mongkut Rama IV,[124] and King Chulalongkorn Rama V, are still highly respected for their diplomatic acumen in dealing with foreign aggressors and the efforts they made to prevent the Kingdom from western expansionism (Anderson 115).[125] To this day they are considered to be the two monarchs that, with a series of financial, administrative and infrastructural reforms inspired by European and American policies, transformed Siam society and led it into modernity[126].

Siamese cinema emerged during the reign of King Chulalongkorn, and its initiation is directly related to the relationships and negotiations that the monarch built with foreign forces, European colonial powers above all, through official and state visits.

King Rama V was the first monarch of Thailand to travel to Europe to poignantly strengthen diplomatic relations with European countries and promote the introduction of Western culture and innovations, and by doing so he "modernized" the administration and infrastructures of the nation, and spared the Kingdom from colonization.[127]Until the end of WWII, which marked the beginning of the end of colonialism in SEA, Thailand served as a buffer between the French and English empires (Tarling 51).[128]

The progressive assimilation of Western elements did not happen as a direct consequence of colonialism but as a series of unfavorable compromises that still allowed

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Colonial rulers created centrally controlled and functionally organized bureaucracies to govern regions delineated with little or no regard for indigenous conceptions of political or cultural boundaries. [...] newly created administrations engaged in an ever-increasing range of new activities, including education, public health and sanitation, and social and economic policy" (Tarling 79-81).

[124] King Mongkut, Rama IV of Chakri Dynasty, reigned 1851-1868

[125] "King Mongkut accepted the unequal Bowring treaty in 1855 and opened the country to Western economic and cultural influences. His son, Rama V, whose rule (1868-1910) spanned the period of European colonial expansion, is credited with preserving the state's independence." (Tarling 118).

[126] "Begun on a modest scale by Mongkut, the reform measures were considerably intensified in the long reign of his successor Chulalongkorn, Rama V, (1868-1910). The range of areas covered was broad, with finances, administration and communications perhaps showing the most visible results. Western technologies were introduced, including weaponry and organizational and institutional structures. But there was an ideological element, including a consciously promoted official nationalism focusing on loyalty to the throne" (Tarling 293).

[127] The accommodation with Britain, and France was possible only because both European powers had become convinced of the stability of the Siam Government by then (Wyatt 19). "In a country such as Siam, where there was no formal colonial government, the monarchy can be seen as both the collaborator and the colonialist [...] Mongkut (r. 1851-68) and Chulalongkorn (r.1868-1910) carefully accommodated themselves to European demands. [...] The reforms in Siam resulted in the centralization and the enhancement of the monarch's power within the realm" (Tarling vol 2, 93).

[128] Myanmar gained independence from the British Empire in 1948, while the French colonies in Indochina (Laos, Cambodia and Vietnam) declared independence at the end of the world conflict but were dragged into the Indochinese wars that lasted until the end of the 70s.

Thailand to preserve a certain degree of freedom and more loosely interact with non-colonialist countries such as the USA.[129] The introduction of Western habits, policies, technologies and scientific knowledge was profound and effective but also smooth and gradual and was accompanied by the active promotion of cultural identity and nationalist values, [130]all contributing to the modernization of Siam while working to preserve the traditions and culture of the Kingdom, which emerged from the colonial era as the least-altered country in the region.

Throughout the twentieth century, the relationships between Thailand and Western superpowers have been critical in the industrial and infrastructural development of the Kingdom, which benefited from scientific and technological knowledge traded with Europeans and Americans in exchange for goods and concessions. As the Kingdom increasingly adopted a liberal approach to foreign trade, becoming an integral part of globalization since 1945, Thailand developed quicker than the other countries in the region.[131] Early access to Western technologies enabled Thailand to integrate specialized equipment and establish lasting relationships with foreign manufacturers and suppliers of cinema-related technologies, and it was crucial for establishing the local film industry's infrastructures that soon became mainland SEA's most extensive, better-structured and flourishing film industry.

The first era of Thai cinema (1897-1932) roughly coincided with the Silent Film Era, placing Thailand on the film history map since the medium's early days.
The early decades of cinema in Thailand were characterized by the direct involvement of the Royal family, and the end of this first period emblematically coincided with the cessation of absolute monarchy. The three kings that ruled during those years, Rama V, Rama VI and

[129] Such as the Bowring treaty, the deal that "the Siamese state was forced to sign to accommodate British demands for free trade under strict conditions which set import and export duties at fixed, low levels and abolished most trading monopolies and internal taxes on goods and trade" (Tarling 154). "Faced with foreign economic penetration and the loss of royal trade monopolies after the treaty, the Chakri Kings were compelled to intensify the production of crops for export and exploit their teak and tin reserves. The need to streamline the economy, and to collect taxes and duties efficiently, necessitated the consolidation of boundaries and the direct control of far-flung provinces; always, the worry was that the British and French would enlarge their domains at Siam's expense" (Tarling 226).

[130] In the modernization process, to avoid the influence of European countries over the others, Siam rulers decided that each ministry must employ advisers from different nationalities. The methods of governance were generally influenced by the British, the legislative sector was implemented by French and Belgians, marine and police departments were advised by the Danish, architecture and engineering were under the influence of Italians, and Americans were appointed in an overall supervisory capacity.

[131] While Thailand progressively became part of the global liberal market, all the other countries in the region aligned with socialist ideals and state policies. Laos and Vietnam have both been Marxist-Leninist states since 1975 and 1945 respectively. The Burmese way to socialism kept the country of Myanmar isolated from the rest of the world until 2011. The cold war and the fall of the Soviet Union deeply affected the post-WW2 history of these countries, resulting in slower economic growth and delayed technological development.

Rama VII, played a major role in pioneering new cinema technologies in the Kingdom, and all contributed to the early development of Siamese cinema (Chaiworaporn 267).

While traveling in Europe for state visits, King Chulalongkorn Rama V, commissioned his younger brother, accompanying him on the journey, to acquire cameras, projectors and film stocks; thanks to the equipment purchased abroad, HRH Prince Sanbhassatra became the first Thai film-maker and the first person ever to record a film in Siam (Sukwong 27).[132] Thai upper classes soon became interested in film and recorded several short documentaries (today all lost) about King Rama V's modernizing activities, especially the introduction of the railway system (Hamilton 147).

The successor, King Vajiravudh Rama VI, directly supported the setting up of the early theaters in the country, one of the first local film production companies and the Tropical Film Service under the Royal Railways Department (Sukwong 27).[133]
The monarch also established the first western-style film club to view and exchange film collections with other royal family members and high-ranking officials (Boonyaketmala 64).

King Prajadhipok, Rama VII, was an amateur filmmaker and passionate movie fan (Sukwong 28). Recognizing the influence of cinema on public opinion, Rama VII promoted film culture in the kingdom by implementing policies encouraging film interest and utilized it as a political tool to balance traditional and emerging ideologies (Chaiworaporn 272).
He personally visited Hollywood twice,[134] owned a private cinema in the palace and actively promoted American cinema in the Kingdom. Influenced by the monarchs, several members of the royal court shared their interest in cinema, and "some of the early audiovisual materials produced in the Kingdom were filmed by blue-blooded amateur filmmakers" (Sukwong 29). King Rama VII himself shot over 300 reels on nitrate film stock, material rediscovered by Sukwong at a Royal State Railways Department repository in the early 80s and currently preserved in a dedicated vault of the Thai Film Archive.

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[132] His Royal Highness Prince Thongthaem Sanbhassatra Thavalyawongse is considered the founding father of Thai cinema, and his contribution is commemorated with a bronze statue at the entrance of the Thai Film Archive Public Organization.

[133] Even though King Rama VI "did not know much about the importance of cinema, he assigned his brother Prince Kambeangbejr, the commander of the Thai State Railways, to set up the first professional film organization in 1922 to promote tourism. At that time, railroads had just been constructed throughout the country, and the king wanted to boost train travel. The Tropical Film Service undertook making and showing a variety of films, documentaries, and newsreels nationwide. Its mobile unit dispatched films to be screened in open-air theaters without charge. Tropical Film Service was the key player in boosting the cinema going culture throughout Thailand, especially in remote areas." Being the first and only film organization, "it operated as the center of all film activities, providing filmmaking services and conducting training" (Chaiworaporn 271).

[134] In 1920 and 1931 (Chaiworaporn 272)

While Thai royalty played a fundamental role in introducing film technologies in Siam and setting up the foundations of Thai cinema, the fuel that de facto ignited the beginning of the Siamese film industry was foreign entrepreneurs. The first permanent movie theater in the country, The Royal Japanese Cinema, was erected in 1905 by a Japanese businessman (Hamilton 146) and was put out of business in 1916 (Uabumrungjit 3).
The leading film companies of that time were owned by Sino-Thai firms, and most of the movies distributed in local cinemas were European or American. While Japanese involvement soon became marginal, Sino-Thai entrepreneurs and American distributors that entered the field early have remained active in the decades to come.

In the first thirty years of cinema, Thailand played the role of consumer rather than producer. Early Thai cinema saw the dominance of French-made films, but soon after WWI ended, Hollywood quickly imposed itself as the chief film exporter to Thailand. Although there are records of some local films being made by local cineastes, by far, the leading supplier for film in Thailand was Hollywood (Uabumrungjit 4). Since the early days of cinema in Siam, Hollywood undisputedly dominated film distribution and actively contributed to the technological development of the Siamese film sector.
Up to the 1940s, the Thai state elites were predominantly concerned about the conservative propaganda values of films and were pressured by foreign enterprises, mainly Americans, to adopt a relaxed and open approach to film imports. By contrast, colonial powers ensured the continuous flow and regular trade of film commodities from their countries, imposing unequal import treaties and very low film import tariffs to the Kingdom (Boonyaketmala 63).

Hollywood was active in the country also in the guise of producer; the first feature film made in Siam, *Nang Sao Suwan* (Suwarna of Siam), is a 1923 American production directed by American citizen H. MacRae (Uabumrungjit 39).

Sino-Thai entrepreneurs followed and gradually built their own theaters and set up local production companies. By the 1920s, locally based Chinese firms took control of most commercial film activities in Siam, funding companies such as the Siam Cinema Company, which during the heyday of silent cinema, became the leading enterprise for film distribution and exhibition in Thailand (Boonyaketmala 64), a role granted by the unique relationships between the Chinese business elite and Thai rulers that allowed Sino-Thai entrepreneurs to prevail in Thai cinema and in many other sectors, up to the present day.[135]

[135] China and Thailand have a centuries-old history of relations, and one of the most significant consequences of this interaction is the large population of Sino-Thai that reside in the country. Over the past two centuries, many

The very first autochthonous Thai feature film, *Chok Song Chun*, was produced in 1927, inaugurating the short and late Thai silent film era (1927-1932), during which seventeen Siamese films were made (only fragments of two movies survived and are currently preserved at FAPOT). By the early '30s, Sino-Thai and Chinese businesspeople became predominant in the local film businesses grounding the oligopolistic structure of the Thai film industry that remains to date (Sukwong 29). The circa seventy theaters existing in the country in 1930 were essentially dependent on American films distributed by the Siam Cinema Company (Boonyaketmala 66).

The first era of Thai cinema and its close relationship with the American film industry exhibit a critical trait that still characterizes today's local film industry: the delayed assimilation of film technologies and practices. While in 1927, American and European productions embedded sound recording in film production, Thailand had just started its silent era, and it took five more years to produce the first local talking picture. The tardy assimilation of technical innovations will characterize the film sector over the following decades until the digital rollout, stressing a second noteworthy trait of the Siamese film industry: the general deregulation of the cinema sector and the limited intervention of central institutions. Although the Chakri royal family was actively involved in early cinema practices and initiatives, the film sector rapidly turned into a private enterprise independently controlled by local Sino-Thai entrepreneurs and Hollywood distributors, two social groups that will increasingly dominate Siamese cinema in the upcoming decades.

The rise of Sino-Thai tycoons and US corporations in Thai cinema affairs has been indeed facilitated by the loose stance toward cinema historically adopted by, at this point, the undisputed force on Thai society and economy: the Royal family.

Thailand has always been a monarchy.[136] The Chakri dynasty has ruled the Kingdom uninterruptedly since 1782, and the monarch's influence is tangible in every aspect of Thai society and culture. The leverage of the royal family is not limited to the ten Chakri kings but includes numerous royal members who actively participated in shaping both the official

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Chinese immigrants have been progressively assimilated into Thai society to the extent that, at present, they are fully integrated and mostly indistinguishable from ethnically Thai citizens. It is worth noting that numerous Sino-Thai citizens are heavily involved in the Thai economy's high ranks and politics. “One of the key conditions that allowed the Chakri dynasty to remain in power in Thailand for more than two centuries was the formidable alliance it formed with the Chinese business elite, starting from the establishment of the dynasty in the late eighteenth century; this alliance was the foundation of an all-encompassing and powerful elite that enjoyed near-absolute dominance in politics and the economy. Both sides of this formidable alliance remain dominant forces within the Kingdom despite major external challenges” (Wongsurawat 109).

[136] The Sukhothai Kingdom was established in 1238, and most Thai historians consider it as the foundation act of the first Kingdom of Thai people.

culture and the public realm. Royalty should be regarded as a consequential Actant in almost every matter occurring within the country, in both practical and conceptual terms, and it had a prominent influence on the development of early Siamese cinema and the establishment of the Thai Film Archive.

The Role of the Thai Monarchy on cinema and film heritage cannot be explained uniquely in terms of Agency or human-induced criticalities as it has evolved from direct involvement to conceptual influence. Although the King and the royal family remain a leading force in many cultural expressions of contemporary Thailand and despite the decisive role played in the early days of Thai cinema, the Monarchy has progressively become unrelated to cinematic matters. Until the end of the silent era, Thai Kings proactively participated in the network, with Rama V, Rama VI and Rama VII taking distinct and tangible initiatives to introduce and foster the establishment of cinema practices in the Kingdom. After 1932, the royal family survived on Thai screens as an expression of identitarian values aiming to morally guide the cultural production of the Nation without directly and actively intervening in any practical aspect of the film industry.

The Thai Monarchs' Agency has thus evolved from materially engaging in producing, distributing and fostering early national cinematic initiatives to being a conceptual element capable of (or at least with the aim of inspiring and guiding other Actants' participation, such as initiating preservation practices in Thailand. As detailed, the discoveries made by Dome Sukwong in the 80s of the early reels portraying King Chulalongkorn Rama V and of the collection of nitrate films recorded by King Prajadhipok Rama VII became, thanks to the intuition and efforts of the Thai scholar and archivist, a conceptual tool imbued of national identitarian values and employed for the awareness campaigns that ultimately lead to the establishment of the Thai Film Archive.

The second era of Thai cinema lasted between 1932 and 1945, and, according to Sukwong, it should be regarded as the Golden Age of Thai cinema.

The year 1932 is pivotal in Thai history and society. The key disruptive event affecting the throne in an otherwise continuous sovereignty, took place in June that year when a group of revolutionaries, primarily European-educated mid-level officers that defined themselves as Nationalists, surrounded the palace and took power in a bloodless military coup. King Rama VII was compelled to transform the Kingdom from an absolute monarchy into a constitutional monarchy, rendering the role of Siamese royalty a significant symbol of national and cultural identity (Lockard 143-144).

King Rama VII was less conservative than his predecessors,[137] particularly Rama VI, and is still remembered as the founder of western-style Thai nationalism (Reid 36).
Even though the rise of the constitutional monarchy saw new forces entering the civil and political scenario,[138] the reactionary and nationalist ideology that prevailed during absolutism was enforced by a new key player that took center stage from that moment on - the army.

"Since 1932, the history of Thailand has revolved around the military" (Wyatt 232). After the enactment of the first constitution, Thai politics have been characterized by recurrent military coups, and the consequent semi-democratic elections led to prime ministers belonging directly or very close to the army.

The transition from absolute to parliamentary constitutional monarchy was not violent or traumatic for the country, and numerous aspects of Thai society emerged from the transition virtually unaffected. Openly promoted by the royal family and military leaders, conservative nationalism has remained the dominant ideology in Thailand, and most importantly, it has been a decisive component of the ideological and political agenda of virtually every Thai ruler ever since. To this very day, the military represents a preeminent social institution and political force of the Kingdom, alongside the Monarchy and Buddhism. Standing as one of the conceptual pillars of Thai society and culture "King, Nation, Religion"[139] is a conceptual trinity designed to reinforce cultural nationalism within the

[137] King Prajadhipok Rama VII, throughout his reign, "virtually abandoned King Vajiravudh's nationalist program" and "formulated a range of proposals for political change [...] and the introduction of a constitution limiting royal powers" (Tarling 2, 295-297).

[138] Despite Monarchy and nationalism remaining key drivers for civic and political matters, making the Kingdom a considerably homogenous country, they certainly do not represent the only cultural forces existing in Thailand as a range of diverse and, at times, antagonistic ideologies, values, political orientations and even religions circulate in the country, especially after 1932 when the first constitution was drafted, and the Kingdom held its first democratic elections. By the end of the last century, the political landscape had slightly changed, and Thailand had developed a semi-democratic system combining traditions of order and Monarchy with Western notions of representative government. Right-wing nationalism remains the dominant ideology, but after the 1932 revolution, new forces slowly emerged, with the king playing a mediating role to promote political moderation and stability (Reid 181), moving toward a more democratic system with the birth of new parties and factions. Some of those forces, which could be generically labeled as progressives or liberals, were never directly aligned with the ruling ideology and often found expression in the arts, entertainment industries, and film production. Within the ranks of the revolutionaries that 1932 led the coup, there were also prominent left-wing inspired leaders such as Pridi Banomyong (1900-1983), former, minister of interior, minister of foreign affairs, regent and prime minister that is still considered a controversial figure as he represents the leftist soul of 1932's revolution) who was also directly involved in the creation of the early Thai film industry, writing and producing one of the oldest and only surviving Thai classic films *King of the white Elephant* 1940. (Sukwong 25) However, progressive leftist ideologies always struggled in the Kingdom, and adversity towards left-wing ideas has been a constant in Thai history. Consistently opposed by monarchs and the military, it peaked during the 20th century when reactionary forces became aware of the communist threat rapidly and successfully spread in neighboring countries, further strengthening the ties between the Kingdom and the US.

[139] The motto "King, Nation, Religion" was forged By King Vajiravudh in a series of 1911's public lectures. "This ideology sanctioned the three fundamental institutions which in subsequent decades would continually be publicized as the guiding principles of state and society." (Tarling 294).

kingdom, to which every Thai citizen is expected to adhere (Murashima 95-96). Since the early 20th century, Thai rulers have explicitly used the foundational concept of King, Nation, Religion as the ideological instrument to build the nation's socio-political and cultural guidelines and consolidate its power. The three pillars are fundamental to our modern understanding of the Thai state and profoundly shape all facets of the public sphere, including cinema, which remains subject to censorship and control by the central authorities (Dissanayake 145-146).

"Cultural nationalism is accompanied by economic nationalism, militarism, and promotion of the Buddhist religion in many ways unique to the Southeast Asian context". With a broad consensus in the civic society in Bangkok and throughout the country, "a form of this conservative, elitist, "official" nationalism would continue to be the dominant state ideology down through the late 1980s" (Tarling 229), and it is still highly influential to this day. Loyalty to the Monarchy, Cultural Nationalism and Buddhist tradition do not simply represent the three ideological pillars upholding the conservative structure of Thai society, but they have been at the center of Thai cinematic representations for most of the twentieth century (Sungsri 309).

While the revolution brought political changes to the Kingdom, a series of technological advancements symbolically marked the beginning of the second era of Thai cinema. In 1932, the first Thai talkie, *Long Tang* (Going Astray) was produced, a few film studios were inaugurated, and Sala Chalerm Krung, the first modern cinema in Thailand, was built. The following years saw the construction of numerous other theaters in Bangkok and provincial capitals. New production companies were created, and a real autochthonous film industry began. Unfortunately, scarce records concerning the number and style of films produced in the golden age are available as most of the reels have disappeared, but it is estimated that approximately 20 Thai feature films were made in those years (Sukwong 14).

Royalty maintained a relevant role in the field as many new filmmakers and members of film production companies were ethnic Thais who belonged to the royal and noble families (Boonyaketmala 69), and The Saha Cinema Company, founded by Rama VII in 1932 and headed by Prince Phanuohan Yukol, became the leading force in the Siamese film business until the end of WWII (Uabumrungjit 9).

During the 1930s and 1940s, the newly established government extensively employed cinema as a medium to advance nationalist sentiments and military idealism (Hamilton 148). As a consequence of the 1932 military takeover, numerous propaganda documentaries and feature films were produced under the direct supervision of the autocratic leader of the time,

Field Marshal Plaek Phibunsongkhram.[140] Thai film production between 1932 and 1945 was primarily shaped by two contrasting influences: Hollywood commercial cinema and Nazi-fascist nationalist propaganda films (Boonyaketmala 67).

During Thailand's Golden Age, most films distributed were predominantly American, and although precise data are limited, it is estimated that Hollywood held over 95% of the market share. As a result, the emerging Thai film industry was profoundly shaped by Hollywood, both in its organizational frameworks and aesthetic content (Boonyaketmala 68).

The second era of Thai cinema saw the rise of a new Actant: military governments. Although the second pillar of Thai society, the Nation, was initially conceptualized by Siamese monarchs, it eventually became a pivotal component of the ideology and propaganda of the right-wing military rulers. Soon after the 1932 revolution, the army assimilated and promoted the three pillars, preserving the prestige and influence of the royal family as an institution and a symbol to unify Thai society.

However, despite being close-knit and interwoven entities, the royal family and the (predominantly) military governments ruling over Thailand since 1932 played very different roles in the evolution, establishment, and viability of Thai cinema and national audiovisual heritage, with the Royal family chiefly acting as an identitarian component of Thai society rather than a proactive Actant in cinema matters.

On the contrary, the Agency of central governments closely relates to the criticalities outlined with the human challenge, such as instability, disregard and inaction. Despite no records reporting the deliberate destruction of audiovisual artifacts, the political instability that has characterized Thai governments since 1932 has impacted the Agency of other participants (Hollywood and Oligopolies controlling the market) and the lack of preservation initiatives within the country. With eighteen Coup d'etats (thirteen successful), twenty different constitutions, and over thirty prime ministers, the Agency of the ruling class that emerged after 1932 has not been actively engaged in preservation initiatives, nor has independently or willfully promulged legislation in support of national film heritage.

Except for the nationalist propagandistic reels produced by the autocratic administration of Plaek Phibunsongkhram between WWII and the Cold War, military and civilian governments never paid proper attention to the film sector and generally preferred to

[140] Field Marshal Plaek Phibunsongkhram (1897-1964) is a key figure in the history of three central decades of modern Thailand. Prominent member of the Royal Siamese Army, educated in France and leader of the 1932 revolution, he became prime minister for two mandates and served as minister in virtually every cabinet post. Plaek was an admirer of Mussolini's fascist methods and propaganda, and during his mandates he heavily promoted Thai nationalism.

let the film industry self-regulate. Historically, the predominantly military-led Thai governments avoided getting involved in film affairs and, over time, showed an increasingly lax attitude toward the cinema sector, maintaining an active function in Thai cinema mainly as a censorial institution.

The disregard toward cinema affairs historically manifested by Thai rulers and the consequential lack of proper general regulations of the entertainment sector impacted national film heritage on several fronts. On the one hand, it enabled a handful of local (Sino-Thai entrepreneurs) and foreign forces (Hollywood distributors) to progressively take complete control of the cinema industry and later independently carry out the digital rollout across the country, hence essentially administering and deciding over the circulation of cinema technologies, infrastructures and skills in the Kingdom unrestrictedly and unsupervised. On the other hand, the government's negligence and contempt for cinema explain the country's lack of film preservation initiatives. Although the National Archive of Thailand, established in 1952, was mandated to preserve film footage of importance for the Thai Nation and culture, it never attempted to preserve film material (Sukwong 2). Only thanks to the initiatives of private citizens including Dome Sukwong and other dedicated inexperienced archivists did Thai film heritage begin to be collected and stored, essentially without any initial support from central authorities. Ultimately, the Agency of Thai governments can be described as protracted disregard and negligence toward cinema matters, a critical lack of initiative that has led to the extensive and dire loss of large parts of Thai film heritage.

The third era of Thai cinema, 1945-1976, is generally referred to as the “16mm era”. During WWII, Thailand, under the authoritarian government of Plaek Phibunsongkhram, officially maintained a neutral stance but practically aligned the Axis forces, including Japan (Reynolds 7-8), and as trade with the Allies came to a halt, the cinema business nationwide encountered a shortage of 35mm film stocks and chemicals that lasted until the mid 70s (Sukwong 10). This shortage pushed Thai filmmakers to adopt 16mm celluloid color-reversal film, with no sound recorded on the film, as the primary standard for filmmaking. Unlike the period prior to the 1932 revolution, when local film production was primarily conducted by royalty and nobility, after World War II, the cinema industry fell under the influence of the emerging bourgeoisie, primarily Sino-Thai entrepreneurs (Boonyaketmala 79).

With a few notable exceptions,[141] film production during this period was predominantly characterized by the proliferation of low-quality commercial feature films, totaling over 1,400 titles, produced by inexperienced filmmakers who entered the industry after 1946 and generally made only a single movie before disappearing (Herrera 46). Characterized by poor quality standards, sluggish plots, minimal budgets, lack of technical skills, inadequate educational background and overall unappealing reputation, these films were labeled with the demeaning term *nam nao*, literally stagnant putrid waters, by Thai intellectuals and the military ruling class (Boonyaketmala 81), a negative and top-down judgmental perception of national film output that will characterize the conceptualization of Thai cinema for several decades with significant repercussions over film heritage viability.

Designed mainly for lower-income and teen audiences, these low-budget mass products gained the infamous status of low-class entertainment, culturally, economically, and technically inferior to the imports from abroad (Böhler 12), but despite that, in the decades after WWII 16mm melodramatic films became very popular countrywide and reached new audiences in rural provinces (Hamilton 143).

With an estimated 2000 traveling screens, open-air itinerant cinemas employing cheaper and agile technologies like 16mm film projectors had their heyday in the 70s and 80s. Consisting of a screen, a projector and two speakers carried on a small truck around the country, mobile cinemas had no ticket fees as they were sponsored by various local brands that would sell their products during intermissions. The projections were often live dubbed, particularly foreign movies, a peculiar tradition known as *versionist* (Adadol Ingawanij 9).

Heavily damaged after years of projections nationwide by itinerant cinema troupes, reels belonging to this era have been gathered by private collectors and, more recently, donated to the archive, constituting today a significant part of FAPOT collection.

Itinerant screenings, primarily held at local temple fairs, from the 1950s were exploited by US-funded anti-communist operations (Adadol Ingawanij 19).
The growing presence of US soldiers in northeastern rural areas near Laos and Cambodia, where communist forces were seizing power, enforced the spread of Thai cinema upcountry.

After WWII and during the Cold War years, Thailand was unambiguously aligned with the US in fighting communism, which was gaining strength in Laos, Cambodia,

[141] Rattana Pestonji (1908–1970), a renowned producer, director, screenwriter, and cinematographer, is a highly esteemed figure in Thai film history. As one of the first Thai directors to employ 35mm film stock, he consistently advanced the industry through technical innovations and the pursuit of higher international standards. (Adadol Ingawanij 12)

Vietnam and China. The aggressive anti-communist creed that circulated in the country during the second half of the 20th century was consistently supported by American foreign policy and propaganda, which saw Thailand as the perfect base to suppress the rise of communism in the region.[142] The pervasive influence of the USA over Thailand impacted numerous strategic sectors of Thai society and economy, including the local movie market, regarded as both a source of financial gain and an efficient soft power tool to enforce anti-communist propaganda in the country. In the heated years around the second Indochinese war America poured in aid on a vast scale,[143] opened a US Information Service office in the capital that became almost a propaganda center for the Thai government (Sukwong 11) and financially supported local audiovisual initiatives such as the production of 35mm anti-communist films, actively contributing to the nationwide dissemination of films and technologies. During this period, nearly all film screenings featured U.S. Information Service documentaries, news, and cartoons. Thai films faced stricter censorship than ever, with filmmakers prohibited from making any remarks or commentary on the king and the military. Films from this era markedly reinforced the prevailing state ideology (Hamilton 148).

By and large, the United States played a significant role in developing and shaping the Thai audiovisual industry, distributing American movies and actively disseminating audiovisual technologies to support propaganda operations, and when, in the late '40s, the Motion Picture Export Association of America, MPEAA, had representatives officially settled in Thailand, the American influence on Thai cinema was further reinforced. New film technologies enabled Hollywood to distribute films also in rural provinces (Sukwong 13). The Americanization of Thailand extended into its cinema culture, with US films accounting for 95% of screened movies in the kingdom. Eight major American film companies solidified their presence in the country as part of a broader effort to ensure that Thai audiences were predominantly exposed to movies from the "free world" (Harrison 199).

Concerning the Thai-US relationship during the Cold War, professor Boonyaketmala bitterly defines the third era of Thai cinema as the collaborator-state era, a time when Hollywood productions had privileged, unlimited and deregulated access to Thai screens. “During most of the collaborator state period (1945-1976), Bangkok led the direction of film

[142] Thailand emerged from WWII as a strong, stable military-led government and, in the early 1950s, joined the USA in the fight against international communism. “The United States decided to make Bangkok its regional headquarters for various activities. Thailand became a huge American base. By 1968, there were 50,000 American service men on Thai soil, and this visible presence generated a boom in the construction, service and other sectors” (Tarling 442)

[143] The Second Indochina War (1968-1975). It is commonly referred to as “the Vietnam War” in Western contexts, while in Vietnam, is usually remembered as "the American war"

industry development under the mandate of this invisible hand, with no restrictions on the international transfer of profits from Thailand to the United States." "Dubious trade practices became rampant in the film industry, including those related to the estimation of business taxes on imported films" (Boonyaketmala 73).

Inadequate investments, low taxations, and cloudy legislations characterized the Thai film industry in these and later years; the numerous governments that followed during the third and the fourth eras of Thai cinema disregarded film production and intervened in cinema matters only in terms of censorship and indirect tax collection.[144] Following World War II, although nearly every Thai prime minister publicly expressed support for strengthening the local film industry, no effective policies were implemented. While governments sought to leverage the industry for tax revenue, they remained cautious not to challenge the US-imposed "open door" policy, resulting in persistently low film tariffs. Until 1976, it remained at US$0.10 per 100 feet, a rate established 1930 (Boonyaketmala 74).

The monarchy's role in the movie sector became minimal at this point. In 1946, young Bhumibol Adulyadej became the ninth King of the Chakri dynasty[145] to rule over Thailand and during his long reign, he was never directly involved in the film industry. However, the royal family and other members of the state elite have remained marginally involved as investors, particularly within the exhibition sector.

The years between 1945 and 1976 continued the trend inaugurated in previous decades: a disregard toward the cinema sector by central rulers and the resulting dominance of Hollywood enterprises over Thai screens. Throughout the twentieth century, the influence of Hollywood Actants over Thai cinema has been persistent and pervasive. Thanks to the open market approach granted by Thai rulers, since the early days of cinema in the Kingdom, American distributors, manufacturers and suppliers have prevailed on Thai screens, imposing their cultural products and technologies, gaining a substantial share of the profits generated in the country and directly contributing to shaping the structure of the local film industry.

Despite the predominantly financial interest motivating American distributors, their Agency has indeed been critical in the technological development of Thai cinema. Actively pushing state-of-the-art national exhibition infrastructures, as in the case of the digital rollout

[144] "The Censorship Bill, first issued in 1930, set out the principles that film should build understanding and good behavior in society. The provisions are based on The Cinema Act of 1930, modified in 1932, 1962, and 1971, which controls film production at all stages. The law permits the banning of a production or the confiscation of a film if it is believed to be harmful to the public. Before showing, each film must be submitted to the censorship committee" (Hamilton 156).
[145] King Bhumibol Adulyadej, Rama IX of the Chakri Dynasty, reigned 1946-2016.

that came as a consequence of the enforcement of DCP technologies, and ostracizing local operations, as in the case of the 70's export blockade of 35mm films that forced local filmmakers to adopt 16mm stocks as the primary material to produce local movies, characterizing the third era of Thai cinema. Thus, while this social group was never directly involved in local preservation practices and initiatives of any sort, its long-standing Agency has been crucial in determining the material and infrastructural features of national film heritage and has been decisive in intensifying the leverage of those technology-related critical challenges, such as the abrupt and unforeseen obsolescence of analog formats that came with the digital rollout, that still today concerns Thai archivists.

The fourth era of Thai cinema began after the political turmoil of 1973 and 1976 and lasted until the early years of the 21st century. The violent clashes between student movements and the military government not only led to coups d'etat and the creation of new governments but also to the emergence of a socially critical cinema and a Thai new-wave generation of filmmakers. Following 1976, there was a shift in both film styles and the preferences of the local audience, coinciding with the emergence of numerous young filmmakers who began to explore more socially involved themes (Chaiworaporn 141).

Surprisingly, in 1977 the Thai government adopted one of the few interventions to limit foreign distributors' power and boost the national industry. The nationalist regime under Tanin Kraivikian increased tariffs on imported films from US$0.10 to US$1.50 per meter, affecting the Thai film industry in several ways (Chaiworaporn 147). Notably, the introduction of protectionist tariffs on imported films prompted a temporary boycott by the MPEAA, which ceased sending copies to Thailand for approximately four years. As a result, the production of Thai films increased significantly, and the industry saw the rise of numerous emerging filmmakers who would become influential figures in Thai cinema in the subsequent decades. This surge was ultimately halted when Hollywood resumed distribution in 1981 (Boonyaketmala 84). Ironically, Hollywood's return was facilitated by the very decree that simplified tax collection while also inadvertently creating a counterproductive loophole: the decree made no distinction between positive and negative films. This allowed for significant tariff reductions (by importing the internegative for local reproduction) without penalty. As this loophole remained unaddressed, the regime's policies represented little more than a continuation of the usual governmental approach to the film industry rather than a radical departure from it (Boonyaketmala 84).

In the '80s and the '90s the Thai film industry did not see radical changes in its structure but consolidated the processes started during the collaborationist state era.
In the 90s, teenage dramas became very popular, marking young adults as the new core audience of the entertainment industry, also thanks to the growing number of multiplexes in the country and the dominance of Hollywood blockbusters (Chaiworaporn157).
Key players of the fourth era remained the same as the two previous decades: Hollywood, which almost never stopped exporting films to Siam and consolidated its dominance thanks to a 1993 revision of the import tax that lowered the fee to US$0.40 per meter (Chaiworaporn 159); and Sino-Thai film enterprise oligopolies, which, operating in synergy with Hollywood distributors, honed their technical and artistic skills and gradually assumed a leading position until the current industrial era of Thai cinema.

Overall, during the fourth film era, the film industry expanded and became more consolidated and better organized. Bigger local production conglomerates started to emerge, acting as production companies, distributors and cinema owners, causing smaller independent producers to disappear (Sukwong 14). 35mm sound films finally became the standard, and the 16mm format was gradually abandoned. Multiplexes began to appear nationwide, replacing the traditional stand-alone cinemas and shaping what would become the dominant film business model of the subsequent century. By the end of the century, these factors led to a semi-monopolized film industry in which a few prominent local players controlled every aspect of the industry and shared profits with Hollywood distributors (Chaiworaporn 9).

The rise of oligopolies can be traced back to the 80s MPEAA's temporary boycott of Thai screens when local exhibitors and distributors were forced to become producers. The drought of American films in Thailand ensured big film companies became even bigger, but it also led to the disappearance of most independent producers. Towards the end of the last century, only a few big companies kept making films in Thailand, but their core business returned to being the distribution and exhibition of American movies, which meanwhile through low taxation and legislative loopholes progressively re-established their ubiquitous presence in Thai cinemas. This system allowed a limited number of film agencies to transversally control every aspect of the film market, transforming those companies into oligopolies de facto. Over the past three decades, local exhibitors have aligned with the global trend of developing multiplex cinemas. In the early 1990s, multiscreen complexes began replacing stand-alone theatres in urban centers nationwide, primarily showcasing American films. Meanwhile, single-screen cinemas in rural areas continue to operate, mainly screening lower-grade, locally produced films (Chaiworaporn 156). As previously noted, the

digital transition delivered a decisive blow to single-screen cinemas, which were unable to afford the necessary upgrades to digital technology and were subsequently forced to close. The 2020 closure of the Scala Theater, the last remaining stand-alone cinema in central Bangkok, marked the definitive end of the traditional single-screen era in Thailand and the end of a chapter in Thai cinema history (Cipriani 30).

The exhibition sector is still today owned mainly by members of the Sino-Thai upper-middle class of Chinese ancestry, who have increasingly gained economic power and influence since WWI and became undisputed leaders of the local film market in the 1980s, controlling most aspects of the film chain from the production of autochthonous movies to exhibition in multiplex cinemas countrywide. The digital rollout was essentially carried by a handful of Sino-Thai entertainment tycoons (Major Cineplex and SF group) and Hollywood distributors, shaping the country's digital cinema and critical consequences that this entails, such as technological obsolescence. However, the Agency of Sino-Thai entrepreneurs toward national film heritage has been incidental, relatively neutral and ostensibly unintentional, given that they never truly showed interest in preservation practices and were never significantly involved in archival initiatives, as lucrative financial objectives have predominantly motivated them. The dynamics between this social group and the archive are still ambiguous and unsettled, resulting in ongoing concerns such as the unregulated and very low submission of newly produced digital-born films to the Thai Film Archive. The Agency of local oligopolies is hence pivotal not only to understanding historical and technological occurrences but also to determining the future viability of national digital film heritage.

Furthermore, the Agency of the two social groups also tangentially relates to human-induced critical concerns such as disregard/inaction and the lack of expertise and knowledge. While Hollywood distributors and local oligopolies, as private enterprises, are not juridically obliged to foster archival practices for public benefit, they still participate in the widespread misunderstanding and negligence toward film artifacts. The push toward technological innovation from foreign distributors (once again particularly apparent with the digital rollout) consistently met the passive acceptance of the local film stakeholders, which embraced and moved to the latest technological breakthrough without proper plans to preserve disappearing skills and expertise or any concrete significant action that would suggest a conceptualization of film artifacts as something worth saving.

6.2 Vietnamese Film Heritage: Timeline, Contexts, Actants.

This chapter traces the essential timeline of Vietnamese cinema and examines the Agency of consequential participants, such as the single-party government based in Hanoi or the contemporary Southern cinema industry, and preeminent foreign forces, like former soviet bloc countries, that historically affected audiovisual activities in the country and influenced the film sector's technological development.

The periodization is based on the official chronological framework promulgated by the VFI literary output, and it divides Vietnamese film history into four periods corresponding to the principal shifts in the country's revolutionary struggles and the twentieth century's socio-political-economic turns. The four periods are the First Indochina War or the "Guerrilla Cinema era", the Second Indochina War, also known as the "Vietnamese Revolutionary Cinema era", the post 1975 years or "The Reunification", and the present era starting from 1986's Doi Moi (Chương-Đài VÕ 73).

Even though I primarily refer to this timeline, I integrate it with a few significant phases omitted in official accounts. Vietnam cinema has been studied and represented mainly from the perspective of the ruling Communist Party, and most of the literature on the subject has been produced by critics and historians affiliated with the cinema-related government bodies like VFI, reflecting univocally the perspective of those Actants who emerged victorious in the wars, established control over the entire country, and officially launched the national film industry. This chronological framework is not incorrect but is too ideologically biased as it stresses a univocal perspective over the events, and in doing so, omits three significant phases of Vietnamese cinema history: the colonial era, the two decades of the autonomous Saigonese film industry (1954-1975) and the 90s phenomenon of "instant noodles films". Representing the cultural expressions of antagonistic forces (colonial cinema and the Republic of Vietnam film industry) or a technical and aesthetic low-quality corpus of productions (*Phim mì ăn liền* VHS films), these eras are not contemplated by national accounts as part of the official national film history. Vietnam has been at conflict for much of the twentieth century, initially with a war of colonial resistance and national liberation against the French, becoming the center of a Cold War confrontation by proxy between the US and the Soviet Union and ultimately with a civil war among the northern and southern states of Vietnam, and a series of smaller-scale conflicts with its neighbors (Ruane VII).

While the country is and has commonly been pictured and understood as today's Socialist Republic of Vietnam, “no history of the country is complete without taking into account other political entities and competitor states and their leaders” (Gosha 24), such as the French Indochina and the 1955–75 Republic of Vietnam (RVN), Actants with critical leverage in shaping distinct, although scarcely documented, historical phases of Vietnamese cinema.

I hence propose the following more comprehensive periodization:

Colonial era (1896 - 1940)
Guerrilla Cinema (1945 - 1953)
Golden Age of Vietnamese Cinema(s) (1954 - 1975)
Reunification era (1975 - 1986)
Reforms era (1986- 2000s)

The first era of Vietnamese cinema (1896-1945) coincides with the colonial period. Between 1887 and 1945, Vietnam as a political entity did not exist, and its territories were known, together with the protectorate of Laos and Cambodia, as French Indochina. The presence of the French for such an extended period affected every aspect of Vietnamese society in the ensuing decades, including the development of cinema.

Films were introduced in Vietnamese territories at the turn of the century. The first reel recorded in Indochina, *Coolies in Saigon*, was filmed by a Lumière brother's camera operator on December 30, 1896 (Baumgartel 183).

Film activities remained chiefly controlled by French colonists during the following fifty years. Film production, distribution, and exhibition were entirely administered by the French and a few Chinese entrepreneurs owning cinemas in the southern protectorate (Xuan Lam 13). The French mostly regarded Indochina as a marginal market, a remote part of the empire to distribute films produced in the motherland to overseas settlers and an exotic location to record footage later shown in fairs and exhibitions around France and other provinces. La Mission Cinématographique, a film and photography department in the colonial economic service, was established in 1917 to systematically record photos and reels on Indochina for distribution in France. La mission produced numerous short documentaries and newsreels, available for distribution to French film companies such as Gaumont and Pathé and employed as propaganda over colonized Vietnamese (Wilson 194).[146] Besides

[146] “La Mission Cinématographique, an extension of the French army photographic unit stationed in Hanoi, toured rural areas in the northern provinces, erecting enormous traveling outdoor screens thirty meters high to

short documentaries and newsreels, the first documented feature film produced in Vietnam dates to 1923. *Sous l'oeil de Bouddha,* produced by the French for the French market, is notably the first film with an entirely Vietnamese cast and one of the few fictional movies produced in Indochina during the Colonial era (Baumgartel 180-181).[147]

Movie theaters, predominantly owned by French corporations and Chinese entrepreneurs, emerged in major urban centers and primarily exhibited films imported from France, the United States, and Hong Kong (Charlot 35). The French-owned Indochina film company was established in 1930 and laid the foundation for cinemas all over Vietnam. Meanwhile, Chinese immigrants built smaller cinemas in Vietnam's major cities and by 1927, there were about 30 theaters nationwide and many mobile cinemas traveling in local fairs (Phạm Vũ Dũng, et al. 114)[148].

French colonialists semi-monopolized film activities in Indochina. They never involved the autochthonous population in cinema practices and hampered the establishment and the development of the local film industry. “The French imposed strict control over film activities through censorship, restricted ownership permissions, and police surveillance to limit indigenous development of the medium, even among the highly educated Vietnamese cultural elite” (Wilson 191). For over forty years Vietnamese citizens were only marginally involved in audiovisual productions, mainly as talent in the sporadic films shot in Indochina or as audience attending French propaganda newsreel screenings in Chinese-owned theaters, and then only those members of the urban elite allowed access and who could afford tickets.

During the first half of the 20th century, French rulers openly ostracized the creation of a Vietnamese film industry rather than fostering it. Dominating every form of enterprise within the country and systematically excluding Vietnamese citizens from cinema activity, the Agency of the French invaders should be accounted for its antagonistic and constraining role and regarded as the primary cause of the delayed commencement of an actual Vietnamese national film industry. The majority of colonial films produced by French filmmakers for a French audience are predominantly preserved in French archival institutions (Wilson 14), and thus no audiovisual content produced during the colonial era is preserved

project war footage sent from the European front. [...] The ostensible humanitarian purposes of the institutional frameworks for screen culture represented by the Mission and the League nevertheless also perpetuated the colonial myth that film reception should involve a form of moral instruction for colonized peoples; and the French vigorously promoted their civilizing Mission through films as a veiled means of governing their colonial subjects, and, in addition, stemming the economic influence of Hollywood” (Wilson 2007).

[147] Baumgärtel Tilman in Deocampo, Nick et al. *Early Cinema in Asia*, Indiana University Press, 2017.

[148] Nguoi Lang Phim in Phạm Vũ Dũng et al. *Vietnamese Cinematography: A Research Journey,* Hanoi: Thế Giới Publishers, 2008.

within Vietnam. Strictly in terms of archival matters, the Agency of French colonialists on Vietnamese cinema is limited and relatively inconsequential. However, the impact of fifty years of colonial activities in Indochinese territories on cinema matters is relevant as, for example, several theaters built by French colonizers in central urban areas continued to be used after the end of colonial times.

The first feature films entirely produced by Vietnamese appeared after 1937. In the immediate years before World War II, local filmmakers independently produced a few feature films and documentaries, often backed by Chinese money or produced in Chinese speaking territories.[149] This is the case, for instance, of the first two feature films made by Vietnamese directors: *Canh Dong Ma* (The Haunted Field, 1937) and *Tran Phong Ba* (Storm of Anger, 1938) starring an entirely Vietnamese cast and creative crew but produced in Hong Kong. The period between 1937 and 1940 ultimately marked the modest beginning of autochthonous and independent film production, a brief season in which Vietnamese citizens started experimenting with the media, produced a small number of movies,[150] and ultimately obtained access and familiarized themselves with audiovisual technologies and techniques. Unfortunately, none of these early Vietnamese feature films survive.

Between 1939 and 1945, film production came to a halt; with the outbreak of WWII and the Japanese invasion of Southeast Asia, French and Vietnamese filmmakers did not produce any movies and theater activities were dominated by showing films from Japan and its allies (Phạm Vũ Dũng, et al. 14, Phạm Ngọc Trương 69-70).[151]

Vietnamese film historians give little emphasis to the colonial era. Vietnam's national cinema was able to develop fully only after 1945 revolution, which ended eighty years of colonial rule and re-established Vietnam as an independent nation (Phạm Ngọc Trương 4).[152] In official accounts, national audiovisual output began with reels filmed on the battlefield by

[149] In 1937 the economy fell into a crisis as all means of export and import in Asia were blocked due to the Sino-Japanese war. Chinese filmmakers found that Indochina was the only market capable of consuming their products. Hence, several Chinese filmmaking firms took a great interest in this region. [...] After the production and in-success of *Canh Dong ma* and *Tran Phong Ba*, film production activities in the north of Vietnam almost stopped completely. Until 1939, several capitalists and wealthy offsprings of landowners in the south, Vietnamese and Chinese, invested money in making films (Xuan Lam 13-14).

[150] Tron Voi Tinh ('True to love', 1937), Khuc Khai Hoan ('The Song of Triumph', 1940), Toet So M ('The Ghost-Scared Toet', 1940). The Vietnam Film group, led by Tran Tan Giau, presented the documentary Ba Huyen Thanh Quan Tren Deo Ngang and two feature films: Mot Buoi Chieu Tren Song Cuu Long ('An Evening on the Mekong River') and Thay Phap Rau Do ('The Red-Bearded Sorcerer'). These films are considered the first talking pictures made entirely by Vietnamese in Vietnam. The sound was recorded on large discs synchronized with the action on the screen. (Pham Ngoc Trung 1984)

[151] Xuân Lam and Đào Xuân Chúc in Phạm Vũ Dũng et al. *Vietnamese Cinematography: A Research Journey,* Hanoi: Thế Giới Publishers, 2008.

[152] Phạm Ngọc Trương in Hanan, David et al. *Film in Southeast Asia: Views from the Region*, SEAPAVAA/Vietnam Film Institute, Hanoi, 2001.

guerrilla filmmakers during the resistance war against France in 1946 (Yip 11).[153] Under Ho Chi Minh's lead,[154] the Vietnamese communist party[155] instigated two revolutions: one driven by nationalistic feelings and intent, a revolution that would free the country from the yoke of French intruders. The other to be achieved on a social level, a communist revolution that would create a new society inspired by USSR (Ruane 7), where communist leaders had been trained and indoctrinated (Tarling 350).[156] The Communist Party combined political and economic power into one centralized body that had complete control and power over wealth production and distribution, national industries, assets and infrastructures and, in general, over every aspect of the life of its citizens.

In September 1945, once the defeated Japanese troops left the country, Ho Chi Minh declared the independence of Vietnam from French and Japanese colonial rule, took control of Hanoi and other areas of North Vietnam and established the Democratic Republic of Vietnam (DRV). Concurrently, the French government attempted to restore colonial rule over the fractured Indochina. The frail and tense circumstances rapidly escalated into the first Indochina war, 1946-1954, a decade which saw the commencement of autochthonous audiovisual productions conventionally known as Guerrilla Cinema.

Soon after the foundation of the revolutionary provisional government of the Democratic Republic of Vietnam in August-September 1945, the Movie-Photography Section was formed as part of the Ministry of Information and Propaganda (Phạm Ngọc Trương 3).[157] Audiovisual productions immediately became a tool in the fight for liberation and an integral part of the rising propaganda machine of the newly established Democratic Republic of Vietnam. Guerrilla Cinema is regarded as the foundation of film practices in Vietnam, representing an integral part of the struggle for the country's liberation and as a propaganda tool to rouse oppressed peasants countrywide. Cinema in Vietnam was born to serve the

[153] Man-Fung Yip in Fu, Poshek et al. *The Cold War and Asian Cinema,* Milton Park: Routledge, 2020.
[154] Ho Chi Minh was born on May 19, 1890, as Nguyen Sinh Cung. Throughout his life, he frequently changed his name and used various aliases to evade detection by French, British, and Chinese authorities, who often pursued him in confusion. While he adopted the name Ho Chi Minh later in his life, it remains the name by which he is most widely recognized (Lloyd 14).
[155] The Vietnamese Communist Party was covertly founded in 1930 by a group of revolutionaries committed to freeing the country from the French to create an independent and communist Vietnam and led by a young and charismatic leader, Ho Chi Minh (1890-1962).
[156] Ho Chi Minh traveled to the USSR several times, and his first opportunity to publicly denounce the colonial question was in 1924 at the Fifth Congress of Comintern. “In the years following the congress, increased numbers of Asians—including more than one hundred Vietnamese—would be sent to Moscow or Leningrad for training and eventually return to their homeland for revolutionary work. The first group of three Vietnamese apparently arrived from France in mid-1925” (Duiker 2000).
[157] Phạm Ngọc Trương in Hanan, David, et al. *Film in Southeast Asia: Views from the Region*, SEAPAVAA/Vietnam Film Institute, Hanoi, 2001.

revolution to such an extent that filmmakers were routinely on the battlefield, documenting the events when not directly involved in combat.

The decade of Guerrilla Cinema is characterized by the simultaneous and opposing operations of the French colonialists and the communist DRV.

Under French supervision, the cinema network owned by a few colonialist companies and one Saigon based Chinese enterprise continued to project films produced in France, the USA and Hong Kong (Phạm Vũ Dũng et al. 94).[158] On a small scale, the production of features resumed similar to the model developed before WWII, where Vietnamese were only marginally involved in the production pipeline (Phạm Ngọc Trương 2). French troops also organized numerous itinerant projections to propagandize the French political agenda and cultural values around the colonial possessions. Traveling projection teams drove all over Indochina, screening propagandistic documentaries, a practice that US forces would later employ in other parts of Mainland Southeast Asia.

Itinerant projections also played an essential role in establishing autochthonous Vietnamese cinema, especially in the southern Mekong delta, where French colonialist presence was more intrusive (Win 172).[159] The DRV programmatically and explicitly regarded cinema as a propaganda tool to spread nationalist and socialist values, rouse the masses toward revolutionary struggle, counter French and U.S. propaganda, and regain control over Vietnamese territory. Since the Viet Minh had no control nor access to cinema infrastructures and technologies,[160] they organized their operations clandestinely, in rudimentary manners and often in a parasitic relationship with colonial cinema facilities and materials. Unable to screen films in theaters, guerrilla filmmakers carried 16 mm projectors through villages, rural areas to reach peasants across Vietnam. Covert and itinerant film exhibitions became a popular counterweight to European picture palaces in Hanoi and Saigon (Win 172).

Guerrilla filmmakers usually served as both camera operators and projectionists, and so did the cameras they employed, which were often converted into improvised film projectors. Many of those pioneer filmmakers later became renowned directors.[161] Guerrilla cinemas uniquely produced and screened documentaries of battles and behind-the-

[158] Đinh Quang Ân in Phạm Vũ Dũng et al. *Vietnamese Cinematography: A Research Journey,* Hanoi: Thế Giới Publishers, 2008.
[159]Win Thong in Aitken, Ian, et al. *The Colonial Documentary Film in South and South-East Asia,* Edinburgh University Press, 2017.
[160] The Vietnamese Independence League (*Viet Nam Doc Lap Dong Minh*), otherwise known as the Vietminh, was the movement for national independence created by Ho Chi Minh and his comrades to liberate the nation. Active since the mid-'30s, its members represented the operational core of the revolution in Vietnam.
[161]Among the early Guerrilla filmmakers, the following should be mentioned: Mai Loc, Khuong Me, Le Minh Hien, To Cuong, Nguyen Hien, Nguyen Thien Doan, Nguyen Phu Can, Vu Son.

scenes activities primarily recorded in the North, where the actual combats took place and where Viet Minh had their main basis. During the Guerrilla Cinema era, no feature films were produced by the uprising Vietnamese socialists, whereas documentaries played a central role in developing early cinematic practices, especially in gaining technical skills and cinematographic techniques (Đặng Nhật Minh 491).[162]

The technology and the knowledge employed for producing early guerrilla films derived from two distinct sources. Firstly, by secretly buying or stealing film technologies and related materials from southern film businesses. While the center of operations and decision-making remained in the North, guerrilla filmmakers and itinerant cinemas were active in the South, where cinematographic materials were predominantly available.
Viet Minh cineastes succeeded in improvising rudimentary studios in hidden rural areas using cameras and film stocks covertly bought in Saigon, where French and Chinese entrepreneurs based their film operations, developing films in the jungle and employing rice to preserve and protect the prints from the wet conditions of the tropical climate (Ngô Mạnh Lân 487).[163]

The second source that enhanced technical knowledge and upgraded the quantity and quality of film equipment handled by guerrilla filmmakers is the aligned Socialist countries that gifted the North Vietnamese with film technologies and sent movies and documentaries to be screened in liberated zones by traveling projection teams (Phạm Ngọc Trương 40).
From the early '50s, Vietnamese troops began to import, through the northern border, projectors, cameras, film and diesel-powered generators donated by the Soviet Union, Czechoslovakia and China. In the following decades, most of the technologies employed by Vietnamese filmmakers were manufactured in socialist countries. For instance, while initially local cinematographers used Kodak films obtained from southern enterprises, between the '50s and early '90s, they almost exclusively filmed with film stocks produced in East Germany (Orwo and Agfa) and USSR (Svema).

The beginning of stable relationships with socialist countries, the USSR above all, marked a turning point for Vietnamese cinema.
Throughout the second half of the twentieth century, the influence of ideologically aligned socialist Eastern bloc countries on Vietnamese cinema has been profound and articulated and was not confined to technological and financial assistance. Ho Chi Minh and his comrades

[162] Đặng Nhật Minh in Padgaonkar, Latika, et al. *Asian Film Journeys: Selections from Cinemaya,* New Dehli, Wisdom Tree, 2006.
[163] Ngô Mạnh Lân in Padgaonkar, Latika, et al. *Asian Film Journeys: Selections from Cinemaya,* New Dehli, Wisdom Tree, 2006.

studied in Moscow in the early '20s, where they assimilated the Marxist-Leninist ideology a couple of decades before the actual revolution took place and learned the foundations of revolutionary practices that would characterize Vietnamese cinema. While China, with its ambiguous role as an ideological ally and a sworn enemy,[164]only marginally influenced audiovisual activities, Eastern bloc countries significantly breathed life into the subsidized Vietnamese economy and Vietnamese cinema. From the end of WW2 to the enforcement of Doi Moi's reforms in 1986, USSR and aligned nations including East Germany, Czechoslovakia, Bulgaria and Romania, provided to the nascent Vietnamese cinema industry free of charge technologies, trained several generations of filmmakers, donated film prints and contributed to the circulation of Vietnamese productions outside of national boundaries.

Establishing international relationships also meant exchanging knowledge with experts, students, technicians and artists travelling to Eastern bloc countries. Vietnam greatly benefited as from the early fifties until the fall of the Soviet Union, many young Vietnamese filmmakers were sent to study abroad, especially in the Soviet Union, East Germany and Czechoslovakia, where they learned and improved their craft and soon brought those skills back to Vietnam (Đặng Nhật Minh 492).[165] Vietnamese filmmakers learned from Soviet colleagues to produce movies in technical and aesthetic terms, but most importantly, they embraced cinema's ideological and founding role within society. The long-standing assistance and mutual exchange with Soviet countries have been decisive in shaping and guiding the Agency of the main Actant operating within the network, the Communist Party of Vietnam, in establishing centralized national cinema infrastructures, practices and aesthetics, but also in forging the conceptualization of its national film industry and heritage.

The third era of Vietnamese cinema aligns with the two decades of the Second Indochina War, 1954-1975, a dramatic time that witnessed civil war between North and South Vietnam and hostilities with the US, which, in line with its Cold War anti-communist crusade, was

[164] "The Soviet Union and communist China were the first countries to recognize the sovereignty of the DRV after it declared independence, and initially, both supported Vietnam with military, technological, and financial aid; however, the emerging dispute between the two communist giants in the late 1950s and the Sino-Vietnamese border tensions, which dramatically escalated in 1978's third Indochina war, are the primary factors determining the tight Soviet-Viet relationship for the second half of the past century" (Horn 87) ."Post-war Vietnam found itself in a position of increasing reliance on Soviet Union aid, particularly in terms of economic and military aid, to the point of near default by the mid-'80s "(Tarling 492, Jandl 67).

[165]Among the numerous scholars that studied in the Soviet Union and later became eminent filmmakers, the following must be mentioned: Trần Đắc, Bùi Đình Hạc, Nguyễn Khắc Lợi, Nguyễn Thu, Lê Minh Hiền and Lê Đăng Thực. Likewise, among those that studied film production and theory in China, the following should be mentioned: Nguyễn Hồng Nghi, Mai Lộc, and Nguyễn Dac.

militarily involved in Vietnam between 1965 and 1975, initially supporting France but soon replacing it as the principal belligerent against the DRV.

Between 1954 and 1975, Hanoi and Saigon became the capitals of two distinct and hostile countries amid the Cold War. The Democratic Republic of Vietnam (DRV) and the Republic of Vietnam (RVN) lived under diametrically opposite political systems, and while in the North, the DVR began implementing the Marxist-Leninist doctrine in every aspect of society and economy, the RVN embraced the capitalist model idealized by the Americans. Social and economic activities in the North became inevitably centralized while Southerners were granted a never-before-experienced financial freedom. In the twenty years between the first Indochinese war and the unification, there existed two antipodal and hostile Vietnams and two capitals, Hanoi and Saigon, that independently developed their separate and antithetical film industries: one as a communist propaganda and educational tool fully subsidized by the central government, the other one based on free enterprise, the production of local war-themed and comedy films, and the importation of Hollywood movies.

Despite the division and the strife between the two parts of the country, during these twenty years, a considerable number of films were produced in the two Vietnams, representing at one end the pinnacle of North Vietnamese social realism feature film production and, at the other, the cinematographic expression of the Southern Republic of Vietnam, a country that no longer exists as a political and social entity but that still produced over 300 movies, of which only a few survive. For these reasons, I propose to look at the third era as The Golden Age of Vietnamese cinema, an inclusive term that stresses the remarkable cinematic achievements and the heterogeneous audiovisual production independently and concurrently accomplished by North and South Vietnam filmmakers.

The 1954 division of Indochina into two nations,[166] the socialist Democratic Republic of Vietnam (DRV) in the North and the anti-communist Republic of Vietnam (RVN) in the South, resulted in the establishment of two separate Vietnamese film industries that operated in parallel, independently, ideologically opposed and virtually without coming in contact. North Vietnam dates the official beginning of a national cinema to the 15th of March 1953, when Ho Chi Minh, at this time president of the DRV, signed the decree 147/SL founding the State Enterprise of Cinematography and Photography and thereby marking the official

[166] The Geneva Conference (April 26 1954– July 21 1954) was an international meeting that saw the USA, Soviet Union, United Kingdom, France, China, and Vietnam attempting to negotiate the end of armed conflict in Indochina between Vietnam and France after a decade of direct confrontations and guerrilla war that culminated with the defeat of French troops at the battle of Điện Biên Phủ.

nationalization of the Vietnamese film industry. Vietnamese cinema emerged as a state-controlled entity under the Ministry of Propaganda, a government body tasked with overseeing all aspects of film production and distribution (Yip 16).

1954-1975 Vietnamese Revolutionary Cinema is also characterized by closer relationships and growing exchanges between Vietnam and Eastern bloc countries. Foreign films screened around North Vietnam were imported at low prices and often donated exclusively from socialist countries like Russia and East Germany that also maintained their role as regular and exclusive suppliers of cameras, film stocks, and other related film technologies. The Soviet Union also increasingly influenced Vietnamese cinema in terms of aesthetics, film theorization and criticism; numerous young Vietnamese filmmakers were sent to study in Moscow, and several Russian filmmakers regularly traveled to North Vietnam to share skills and knowledge including Roman Karmen, who in 1954-55 filmed war documentaries and trained local directors, and Azhdar Ibragimov, who contributed in establishing, and lectured for years at, the Vietnam Cinema School (Đặng Nhật Minh 492).

Following the Marxist-Leninist prototype developed in the Soviet Union, cinema and national media became fully centralized. Techniques like hero-worship and self-educative propaganda, prevalent within Sino-Soviet communist regimes, were employed to consolidate control over the bureaucratic system and to ideologically homogenize society (Goscha 294). Representing the central and unique political expression in Vietnam, the Communist Party became the undisputed legislator and ubiquitous decision-maker on film matters, a leading Actant on cinema matters that established the national cinema industry, guided the assimilation of film technologies and created dedicated infrastructures, including those facilities still operating as state-owned bodies like VFI.

Following the USSR state-centralized mode during the second, third and fourth eras of Vietnamese cinema, the Party had total industrial, legislative and financial power over national cinema, determining how and why films should be produced and preserved. Entirely handled by the central government, the conceptualization of film artifacts pivoted around socialist values propagated by the Party and embodied by Ho Chi Minh's figure.[167]

[167] "Ho Chi Minh soon became more than just a leader: he turned into a symbolic figurehead who embodied communist and nationalist values. Ho's successors attempted to make liberal use of his image to mobilize popular support for their programs, published countless books and pamphlets on his ideas, and produced numerous feature films and documentaries about his life and his revolutionary morality; to this day, although with lower intensity than in the past, Party leaders regularly stress the importance of "Ho Chi Minh thought" as a crucial tool for building Vietnam" (Duiker 977-978) and still propagandize socialist values employing the iconic figure of Ho.

Noteworthy, most of the film heritage still preserved in the VFI's vault was produced within this heavily ideological framework.

In 1958, the Vietnam Communist Congress institutionalized the role of the press and media as the collective agitators and propaganda weapons, instruments of the Party to lead the masses in the class struggle against the enemy (Marr et al. 28).[168]

Between 1956 and 1959, state-owned cinema institutions were established in Hanoi. Vietnam Cinema Department was founded as a ministerial body to administer, control and oversee cinema operations, including technologies, finances, distribution, and international relationships. The Vietnam Film Studio was created in 1959 to produce audiovisual content, but in 1961, it was reorganized into three distinct branches: the Feature Film Studio, the Documentary and Science Film Studio, and the Animation Studio.

Separate state organs were established to fulfill cinema-related tasks such as distributing and organizing the projections of local and foreign movies (Phạm Vũ Dũng et al. 33).[169] While the financial system of the Vietnamese film industry radically changed at the turn of the century, many of the state-owned institutions listed above still exist and represent important components of contemporary film practices in the country (Đặng Nhật Minh 493).[170]

Distribution and screenings continued to rely on itinerant cinemas, of which number grew exponentially, increasing from 23 traveling projection teams in 1954 to a total of 277 in 1964. The tally of theaters also increased from 26 to 48, almost doubling the number of cinemas in Hanoi and other northern urban areas. In 1959, the Democratic Republic of

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[168] Russell Hiang-Khng Heng in Marr, David et al., *Mass Media in Vietnam,* Panther Publishing and Press for Research School of Pacific and Asian Studies, Canberra: The Australian National University, 1998.

[169] Vũ Quang Chính in Phạm Vũ Dũng et al. *Vietnamese Cinematography: A Research Journey,* Hanoi: Thể Giới Publishers, 2008.

[170] The list of audiovisual and cinema institutions funded after 1953 includes:
The Vietnam Cinema Department (1956) managed and supervised cinema activities
The Vietnam Cinema School (1959)
The Vietnam Film Studio (1961) state-controlled cinema entreprise
The Central Newsreel and Documentary enterprise (1961)
The Vietnam Animated Cartoon Film Enterprise (1961)
The Film Printing Development Enterprise (1957) as part of the Vietnam Film Studio
The Cinema Engineering Factory and Enterprise (1959) to manufacture projectors and spare parts
The Central Film Export and Distribution Company (1955)
The Film Review (1957), previously he Cinema periodical, bi-monthly film critic publication
The Vietnam Film Archive (1979)
The Cinema Technique Institute (1979)
The Vietnam Cinema School (1959) became the Hanoi College of Dramatic Art and Cinema in 1980
The Vietnam Cinema Workers Association (1969)
The Vietnam People Army Studio (1960)
The Border Forces Cinema (1966)
The People Police Cinema (1967)
The audiovisual center of the TV station (1968)

Vietnam produced its first long feature film, *Chung Mot Dong Song.*[171] The movie was shot on 35mm film stock and is currently preserved at VFI, as with every feature production realized in Vietnam since the foundation of national cinema (Phạm Vũ Dũng et al. 34).

The two decades prior to the unification of Vietnam also witnessed the rise and abrupt disappearance of the South Vietnamese film industry. Official accounts almost entirely ignore or avoid discussing the existence of a relatively solid, independent and productive audiovisual industry in Saigon, and at present, very limited literature exists examining the history, developments and infrastructures of Saigonese cinema during the twenty years of the existence of the Republic of Vietnam. The rare accounts on the topic have been written in Vietnamese by Lê Hồng Lâm, film critic and historian. His oral contribution and the one of Nguyễn Thi Hồng Hạnh, deputy director the southern branch of the VFI, represents the primary source for the following lines.

The Republic of Vietnam's film industry grew on the foundations established by French colonizers and Chinese entrepreneurs during the first half of the twentieth century. After the 1954 Geneva Convention decision to divide the country into two parts and the outbreak of war between the North and the South, Saigonese filmmakers progressively established an autonomous southern film industry, relying on a network of operational theaters and long-since established relationships with western countries, France and the US above all, which maintained their role as suppliers of films and audiovisual technologies until the unification. At first, most of the feature films screened were imported, but toward the end of the '50s several private companies, that had their core business in dubbing or subtitling imported films, began to produce features for the local market. Around 1954, Alpha Film became the first mainstream private film production in Vietnam, producing films such as *Mưa Rừng* (Forest Rain), the first color widescreen movie filmed in the country.
More than thirty private film studios were established in Saigon, producing hundreds of films with the steady technical and professional support of the government (the National Film Center) and a marked influence from Hollywood as several local directors and film professionals received training in the United States, and American films and music enjoyed widespread circulation in Saigon theaters (Kiều Chinh 169-170). The pinnacle of Saigonese film production was reached during the last decade of the southern regime, between 1967 and 1975. At that time, over forty film production companies were based in Saigon and about 15 private studio infrastructures, all of which were entirely independent and owned by

[171] *Chung Mot Dong Song* (Together on the Same River) directed by Ky Nam Pham and Hong Nghi Nguyen

Vietnamese film entrepreneurs. Features produced by these local companies mainly consisted of comedies and entertainment films; although the exact number is unknown, it is estimated that between 1954 and 1975, the Saigonese film industry produced over three hundred titles, of which approximately one third survives on national territory and abroad.

Besides commercial productions, and like North Vietnam, in 1959, the anti-communist South of Vietnam government established the Army's Movie Bureau and National Film Department to produce political films. State-owned movie studios mainly produced newsreels, documentaries and propaganda films for their troops and civilians (Phạm Ngọc Trương 5). American forces like the US Information Service (USIS) and the US Operations Mission (USOM) were heavily invested in creating and controlling the National Cinema Department, which during its 16 years -1959 to 1975- produced less than 20 anti-communist feature films (Kiều Chinh 171).

The HCM City branch of the VFI currently preserves part of the feature films produced by the independent Saigonese film industry, 100 titles in total, and an undisclosed number of documentary and propagandistic reels produced by the South Vietnam government. These reels are considered highly sensitive and inaccessible to any audience.

The fourth era of Vietnamese cinema is referred to as "The Reunification", comprising the ten years between the country's reunification in 1975 and the 1986 reforms. The Reunification era began with the victory of North Vietnam over the South and the ceasing of conflicts after more than thirty years of uninterrupted war on Vietnamese soil. At the end of the Second Indochinese War, the country was reunified under Communist rule and with Saigon's fall and the annexation of the South, Vietnam ultimately became the political and geographical body as we know it today. After the reunification, the North and South officially became the Socialist Republic of Vietnam, SRV, on the 2nd of July 1976, a country on a communist track under the leadership of a single-party state. The Vietnamese Communist Party extended the socialist policies and administration methods that the North had adopted since 1945 to the rest of the country (Goscha 239), impacting every aspect of its society and economy.[172] Following the reunification, the film industries of North and South Vietnam merged.

[172] "After the 1975 unification, among the numerous structural differences between the two parts of the country, private and public ownership governance became a critical concern for the ruling Vietnamese Communist Party. One of the most pressing problems facing the Northern regime since 1975's unification was incorporating the country's southern half, not only in terms of enforcing governance and infrastructures but also in spreading socialist values; the southern region, which had continued along a capitalist path of development during the first two decades of Socialism in the North, proved to hold very different political, social and economic challenges"

The reunification was planned and implemented by northern policymakers, which extended socialist cinema practices and policies to the South. The Saigonese film industry, as it had been in the previous two decades, was drastically disrupted, and while several filmmakers joined the new state-owned cinema industry, many others migrated abroad,[173] together with over a million Vietnamese that left in the aftermath of the war. As a result, southern commercial cinema production abruptly ceased, and the numerous independent production houses based in Saigon, now officially renamed Ho Chi Minh City, were forced to shut down. The infrastructures, the technologies and the labor force that remained in the country became part of the socialist film industry. Several filmmakers in the North moved to HCM City and, together with former Saigon filmmakers, established the *Giai Phong* film workshop, the government-controlled film production center in the South. With another center in Hanoi, Vietnam now had two state-funded production hubs (Đặng Nhật Minh 493).

Despite the hardships faced by Vietnam in the post-war reconstruction process, during the Reunification era, the socialist-oriented film industry kept developing. The number of feature films produced yearly by socialist Vietnam increased from 2-4 films made during wartime to 18-20 subsequently, while documentary production increased from 60 to 70 annually. Accounts report that in the early '80s, Vietnam had over 2000 mobile cinemas and about 800 theaters or cinema-like clubs all over the country, many of which belonged to the military and the police. Unified Vietnam continued to produce socialist films and maintained its Soviet Bloc-aligned stance. As a result, Vietnamese films started to circulate outside the national boundaries and participate in film festivals organized by socialist countries. Additionally, several new movie bodies were formed, including the Film Materials Companies, the Vietnamese Cinema School in Ho Chi Minh City, and in 1979, the Vietnam Film Institute, VFI (Đặng Nhật Minh 494). From the perspective of official accounts, the

(Beresford 127). The 1975 unification of the country and the subsequent economic stagnation forced the regime to embark upon fundamental reforms that would still grant more economic flexibility to the southern region; toward the end of the '80s, the Party initially limited open market economic reforms to Ho Chi Minh City and its immediate surroundings, and thereby, the inhabitants of the former capital of reactionary southern Vietnam were once more experiencing greater financial freedom than their fellow citizens in the North.

[173] The diaspora of Saigonese filmmakers entails several significant consequences for Vietnamese film history and heritage. The first aftereffect is the migration of artistic, technological and entrepreneurial talents abroad, who were rarely able to pursue their cinema career outside of Vietnam (one exemplary exception is the Vietnamese actress Kiều Chinh, who moved to Hollywood after 1975 and resumed her acting career starring in several major productions including *The Joy Luck Club (1993)*. The considerable number of film professionals that left the country can be arguably seen as a loss of valuable skills and knowledge for the country. The second significant consequence is the scattering of South Vietnamese audiovisual productions out of the country; while a few films have been rescued and properly preserved (for instance, ten feature films produced between 1970 and 1975 by the Saigonese production company "My Van" and currently stored in the UCLA Film and Television Archive) most of the southern Vietnamese film industry production are currently lost but hypothetically still surviving, at least some of them, in private collections and archives in overseas territories.

reunification years represent a prosperous continuation of revolutionary cinema. With great effort, the southern industry was, in substance, embedded into the socialist system, and the state-centered guidelines for cinema administration established in 1953 remained solidly in place throughout the decade.

Major transformations occurred in 1986 when the Doi Moi reforms were implemented, initiating the fifth and most recent phase of Vietnamese cinema: the Reforms era.
The '80s represented a moment of profound changes for the Socialist Republic of Vietnam and a progressive opening to the world. The country was still at war, although this time with neighboring nations and former allies, in particular, the Democratic Kampuchea and the People's Republic of China. The declining Soviet bloc was losing strength and reducing its support toward the SRV. The autarchic policies imposed by the communist party did not achieve growth expectations and resulted in a decade of economic stagnation.
Post-war Vietnam found itself in a position of increasing reliance on the Soviet Union, particularly in terms of economic and military aid, to the point of near default by the mid-'80s, heavily leaning on Soviet food aid (Tarling 492, Jandl 67). However, in the mid-late 80s, cinema exchanges between Vietnam and socialist countries abruptly ceased.
To address internal and international crises, the 6th Congress of the Communist Party of Vietnam, held on December 15, 1986, enacted a series of reforms collectively known in Vietnamese as Doi Moi, or "the Renovation." This transformative resolution mandated the transition from a centrally subsidized economy to a market-oriented system and emphasized increased international cooperation. Consequently, this shift extended to various sectors, including the arts and entertainment industry, which was granted a previously unprecedented degree of creative and financial autonomy (Tai Hue-Tam Ho et al. 198).[174]

Closely following the Marxist-Leninist doctrine until 1986, the overlying objective remained to turn Vietnam into a fully socialist country and achieve economic autarky.[175] Trade existed uniquely with a limited number of socialist countries,[176] and foreign investment remained impossible in an economy where the state was the sole owner of any significant

[174] Bradley Mark in Tai Hue-Tam Ho. et al. *The Country of Memory, remaking the Past in Late Socialist Vietnam*, the University of California Press, 2001.
[175] "The decision to embark on Marxism-Leninism as the development model was taken at the Fourth Party Congress in December of 1976, just one year after unification and the end of the American War. It was decreed to move without intermediary stages from small scale production to large state-owned industry and to turn Vietnam into a fully socialist country within twenty years" (Jandl 26).
[176] Predominantly the Soviet Union, The People's Republic of China, The Democratic Republic of East Germany, The People Republic of Bulgaria and the Federal Socialist Republic of Czechoslovakia

productive assets (Jandl 2). Like their Sino-Soviet counterparts, after the Doi Moi the Vietnamese government abandoned Stalinist central planning to allow a market-oriented economy based on supply and demand to operate (Gosha 309). Key reform policies were now written into national law. Political power and economy were no longer combined into a unique, centralized body and with the adoption of a hybrid socialist-capitalist multi-sectoral approach to the economy, private entrepreneurship and foreign investment became accepted (Jandl 232), while the state would retain a high degree of control over numerous segments of the national infrastructure and production system. By the early 1990s, the Doi Moi policy was extended to the audiovisual sector. The new scenario provided Vietnamese cinema with both opportunities and challenges: on the one hand, it freed up the market, allowing new entrepreneurs to embark on cinema businesses; on the other, state-owned movie companies were required almost overnight to become self-sustaining (Ngô Phương Lan 92-93).

With the end of the Cold War, the1986 Doi Moi reforms and the normalization of relationships with the USA, Vietnam shifted from trading and cooperating uniquely with Socialist Bloc countries to opening the floodgates to capitalist corporations, entering a new era of a socialist-oriented market economy and a time of relative economic prosperity that endures today. The collapse of the Soviet Union and the new free-market policies adopted by Vietnam brought several countries to fill the gap left by the vanished communist giant. Major regional export powers, such as Taiwan, South Korea, and Japan, were the first to follow the call of the Sixth Party Congress and start investing in Vietnam (Jandl 2013). The drastic shift in Vietnamese economic structure allowed several new players to increasingly become active in the Vietnamese economy, society and local film industry, with new proactive stakeholders consisting of Korean enterprises and returning overseas Vietnamese, Viet Khieu.

Indeed, Doi Moi marked a radical turn. The reforms implemented completely capsized the mode of production and the structure of the national film industry, which suddenly became a matter of private enterprises. The swift market economy changeover also clashed with the ideology that inspired and drove the action of communist revolutionaries over recent decades, disrupting the role of the central government as a guide and backer of national cinema. The Agency of the Communist Party toward cinema matters drastically changed after embracing globalization and the market economy. Not only did the government substantially relinquish control over the cinema production chain but lost its grip on the significance and purpose of fostering national cinema.

Without the central State backing of cinema activities in the country, the film industry initially took a sharp downturn. The sudden reduction of state support and funding forced

state-owned film studios and companies to become autonomous and independently finance their productions. Affected by the laws of the marketplace and the inexperience of state studio producers in film enterprise, cinema became a hazardous business with a high risk of financial loss. With only four or five productions per year still subsidized by the central government, in the early 90s, the number of feature films and state-produced documentaries rapidly declined (Phạm Ngọc Trương 4).[177] Many filmmakers and film professionals lost their jobs, and others, including renowned artists and film veterans, moved to TV production.

Moreover, the rapid growth of national television networks and the coming of home video recorders collaterally resulted in a rampant and lucrative video piracy market, decreased theater attendance, and, as elsewhere in the world, cinema struggled to remain relevant in a landscape of technological changes. Itinerant cinema units and small cinema clubs began disappearing, and many theaters went bankrupt (Ngô Phương Lan 93). To make things worse, national cinema had to compete with imported commercial foreign films and videos mainly from Hong Kong, Taiwan, Korea and the USA, while Russian and East European movies progressively disappeared. The opening up and free-market economy imposed by Doi Moi, and the end of the American embargo in 1995, started encroaching on the Vietnamese market. The disruptive Doi Moi reforms also had repercussions on audiovisual technologies. Until the late 80s, most of the film stock employed by Vietnamese filmmakers were Orwo and Agfacolor from East Germany, often in the form of donations or heavily subsidized prices (Charlot 36). With the shift to international trade policies and, not least as a consequence of the 1991 dissolution of the Soviet Union, Vietnamese filmmakers switched suppliers and began to film using Fuji and Kodak film stocks. The implementation of expensive imported American and Japanese film stocks, compared to the almost free-of-charge Soviet materials, had significant repercussions.

Firstly, distributors and exhibitors reduced the number of films prints and overused them in the numerous screening facilities all over the country. Each production was only duplicated into three copies and circulated to the many theaters and the over 1000 itinerant cinemas. The number of imported films also dropped, presumably reflecting a growing disinclination in the Soviet Union and eastern Europe to provide free copies (Marr et al. 7).

Secondly, many filmmakers, especially in the South, started producing movies using newer and cheaper technologies: magnetic videotapes. After all, the free-market policy also

[177] Phạm Ngọc Trương in Hanan, David, et al. *Film in Southeast Asia: Views From the Region*, SEAPAVAA/Vietnam Film Institute, Hanoi, 2001.

meant that the state no longer held the monopoly on film production, and while state-owned studios in the North were profoundly and negatively affected by the change, filmmakers in the South saw an opportunity and began filming low-budget movies employing video cameras and magnetic tapes. Between 1990 and 1992, the Ministry of Culture and Information issued licenses to nearly forty different film companies set up by various mass organizations and agencies not directly under its authority and predominantly in Ho Chi Minh City. Film companies could now produce and distribute their products locally and internationally, coproduce with foreign film companies, and import film technologies. The result was a growing influx of private capital into the film industry and an explosion in low budget, often sloppily made commercial films primarily produced in HCM City and derogatorily called *phim ì ăn liền, "*instant noodles films". Despite being recorded in video formats, these cheap, popular and profit-oriented movies were shown commercially in local cinema theaters like celluloid films (Ngô Phương Lan 93). Studios such as Ding Do Video and Nha Trang produced more than forty "instant noodle" films annually, offering a selection of locally made straight-to-video movies that Vietnamese critics decried as low culture productions (Chương-Đài VÕ 72). Cheap costs, quick capital turnover and high demand represented the winning formula of *phim mì ăn liền* that, by the end of the 80s, with an average of one hundred films produced annually, accounted for 70% of the country's total revenue for the film industry (Phạm Vũ Dũng et al. 193).[178]

By the mid-90s, the film industry slowly began to recover. The disappearance of the European communist bloc and the 1995 lifting of the US-imposed embargo dramatically accelerated the process of opening to the non-communist world and attracting international investment (Hamilton 29), normalizing diplomatic relationships and bilateral trade at increasing capacities with the US, and welcoming new international players, capital and production models. Moreover, in 1996, the resolution of the fifth plenum of the Party Central Committee gave direction for culture and art, including a renewed program of cinematic investment; as a result, the national film industry started to upgrade its infrastructure and gradually re-attract spectators to theaters (Phạm Vũ Dũng et al. 90).

Hovering between a free-market model and socialist institutions, the contemporary Vietnamese film industry structure has not changed much since the early 2000s. While box

[178] Lê Đình Phương in Phạm Vũ Dũng et al. *Vietnamese Cinematography: A Research Journey,* Hanoi: Thế Giới Publishers, 2008.

office performances are steadily growing and the number of locally produced films increases year by year,[179]contemporary Vietnamese cinema is arguably still going through a historical cycle that commenced with Doi Moi and is struggling to harmonize its components and find the right balance between what remains of the state-owned audiovisual industry, with its center in Hanoi and the growing profit oriented cinema produced in HCM City.

While overall dynamic and rapidly expanding,[180] the contemporary Vietnamese film industry structure is relatively similar to its Thai counterpart: based on an oligopolistic power structure that profits from screening predominantly international blockbusters in cinemas nationwide, while the central governments become increasingly marginal in cinema matters and local filmmakers have struggled to find representation on national screens. Although in recent years several commercial local productions have performed exceptionally well.[181]

With the post-Doi Moi opening to the market economy, two Korean multinational conglomerates opened headquarters in HCM City and dominated the exhibition sector in the 2000s: CGV, the fifth largest theater chain worldwide, entered the Vietnamese market in 2005 and LOTTE, one of the largest multi-sector Korean corporations, commenced operations in the country in 2008. The two companies currently respectively control 45% and 25% of the Vietnamese exhibition market share. A handful of Vietnamese enterprises, namely Galaxy Cinema, Beta Cineplex, Cinestar and BHD Star, own the remaining market share, roughly 30% of the total number of screens. As stated, in terms of business model, infrastructure and distribution strategies, there are no relevant differences between the local and the Korean cinema chains as they all equally screen predominantly American productions and, to a lesser degree, Vietnamese or Korean films.

The production sector sees the co-participation of local filmmakers, who moved to HCM City from all over the country to join the expanding film industry, and Viet Khieu, diasporic Vietnamese who left the country during the three Indochinese wars and began returning to Vietnam after Doi Moi to open companies and, in several cases, engage in cinema activities. Many of these Vietnamese American filmmakers were raised in overseas territories with a solid tradition of cinematographic art, such as the USA (Los Angeles and Orange County) or France, where they received education and training in filmmaking.

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[179] Cinema Industry in Vietnam - B-Company *https://b-company.jp/cinema-en/* accessed on 8/03/2022

[180] Vietnam national strategy on international relations culture to 2020, vision to 2030 - Policy Monitoring Platform *https://en.unesco.org/creativity/policy-monitoring-platform/strategy-develop-vietnamese-film* accessed on 2/03/2022

[181] In 2023, the comedy "*Nhà bà Nu" (The House of No Man)*, directed by Tran Than, was the highest-grossing film in Vietnam and the best commercial success ever on the national screen (20 million USD), breaking the record of the 2021 comedy *Bố Già (Dad I am sorry)* by the same director (roughly 19 million USD).

Soon after Doi Moi and the lifting of the US embargo in 1995, they began to travel back and forth to HCM City to make movies in and about Vietnam and contributed to shaping the contemporary Vietnamese cinema industry, facilitating exchanges between Vietnam and its former Star-and-Stripes enemy. The creation of connections between southern California and southern Vietnam has been crucial as it played a rejuvenating role in the almost moribund Vietnamese film industry in the early 90s (Lan Duong 6). Over the past two decades, Viet Khieu filmmakers have become a driving force for the local film industry, producing some of the most successful Vietnamese feature films of the past twenty years and contributing in terms of creativity, industry connections, capital to invest, circulation of knowledge and technical skills, almost uniquely in HCM City.[182]

The privatization of national cinema has also led to an ongoing stalemate, directly affecting the operations and independence of the Vietnam Film Institute. As outlined, films produced prior to 1986 were funded and owned by the government. However, in 2016, as part of the equitization process of numerous national assets, the Vietnam Film Studio (VFS, the primary state-owned film studio established in 1953) was sold to Vivaso Water Transport Corporation, a private joint-stock company.[183] Consequently, the transfer implied that all films produced by the Vietnam Film Studio, including nearly every print archived at VFI, are now the property of Vivaso. The privatization of VFS and the films it produced before 1986 has led to a series of ongoing struggles and uncertainties for VFS's staff and infrastructure but also caused an absurd legal impasse regarding national film heritage copyrights. Although VFI and Vivaso theoretically co-own the titles, in practice, it has never transparently clarified who the legal owner of national film heritage copyrights is. The current situation is indeed a convoluted deadlock marked by disagreements and uncertainty among the involved parties, and it further jeopardizes national film heritage viability and VFI operational autonomy.

[182] Among the influential Viet Khieu Filmmakers: Victor Vu, Timothy Linh Bui, Luu Huynh, Derek Nguyen
[183] The "VIVASO Impasse" is an ongoing issue with numerous implications that have yet to be comprehensively documented. To gain a deeper understanding of the situation, in addition to engaging with VFS employees and VFI archivists, I consulted online articles and resources, including the following *https://vnexpress.net/7-nam-be-tac-sau-co-phan-hoa-hang-phim-truyen-viet-nam-4584447.html* accessed on 01/03/2024,*https://vnexpress.net/bo-van-hoa-the-thao-va-du-lich-vivaso-khong-hop-tac-hoan-tra-co-phan-hang-phim-truyen-4585100.html* accessed on 01/03/2024
https://vietnamnews.vn/life-style/296672/artists-film-lovers-slam-vfs-privatisation.html accessed on 01/03/2024
https://danviet.vn/tai-sao-viec-co-phan-hoa-hang-phim-truyen-viet-nam-lai-that-bai-tham-khoc-toi-vay-2024041006025946 accessed on 01/03/2024
htmhttps://vnexpress.net/nhieu-sai-pham-trong-co-phan-hoa-hang-phim-truyen-viet-nam-3812851.html accessed on 01/03/2024

To conclude, I add a few considerations about the unsettled, if not antithetical, relationships between what remains of the socialist state-owned cinema in Hanoi and the profit-driven rising film industry in Ho Chi Minh City.

Discrepancies between North and South are deeply rooted in Vietnam's centuries-old history and became more apparent in colonial times,[184] and with the Cold War, but today, Hanoi and Ho Chi Minh City distinctly symbolize the two expressions of the unbalanced and irresolute contemporary Vietnamese film industry, two distinct but intertwined production hubs operating in semi-opposite ways: Hanoi represents the institutions struggling to keep operative semi-dormant state-owned infrastructures. HCM City represents the growing and business oriented independent film industry.

Hanoi, with its institutional role as a cultural policy maker, continues to produce a dwindling number of films with the support of limited government funds and its cinema infrastructures, remnants of a socialist single-party government (now embracing the free market economy), are deteriorating and outdated, struggling to stay operational due to a lack of funds and clear legislation, such as in the case of the VFS/Vivaso impasse.
The capital maintains its historical role as the government's headquarters and represents the legislative and executive authority for film industry-related matters. The Cinema Department under the Ministry of Culture, the central body in charge of film affairs, still determines the general guidelines of the audiovisual industry, monitors new production through a relatively strict censorship code and disburses the limited public funds currently available for cinema activities in Vietnam (including education, cultural promotions, film festivals and others). While the city officially remains a production center for feature films and documentaries, audiovisual production has sharply decreased, with only a few films made annually primarily relying on state funds and adhering to the Party's vision and intentions. The ceasing of state-subsided productions severely affected Hanoi film professionals who, unlike their counterparts in HCM City, were not promptly capable of setting up a remodeled, private and autonomous film industry. As a result, at present, the number of production companies based

[184] Under the French, the country's northern and central regions were governed as Protectorates, while the South was ruled as a direct colony. One result was that private property was established more widely in the southern region, whereas in the North, it coexisted with more traditional forms of land ownership. (Beresford 55) Despite French colonialists retaining control over national infrastructures and the most lucrative businesses, Vietnamese and other communities of foreigners living in Saigon, such as the ubiquitous Chinese merchants, were still authorized to engage in smaller private enterprises. In these terms, economic freedom and global capitalism arrived earlier in the South than in the North, where the French protectorate preserved a more traditional Confucian structure of society and economy by keeping the (puppet) emperors of the Nguyen dynasty on the throne until 1945, when its last representative, Bao Dai, abdicated and transferred power to the Socialist revolutionaries, Viet Minh, ending the Vietnamese Monarchy.

in Hanoi is narrow and only marginally involved in the growing national film industry, or worse, due to vague and unsettled legislation, are operationally incapacitated as in the case of the Vietnam Film Studio. Significantly, several national film institutions and audiovisual infrastructures based in Hanoi still depend entirely on state subsidies. While most of the other infrastructures funded during the 50s, in the early days of the socialist cinema, were dismantled after 1986, a few survive to date. Often underfunded and almost discontinued, such as the Film Technology Centre, the only extant analog film laboratory in Vietnam, which today is seemingly not in use and almost frozen in time.

Ho Chi Minh City, by contrast, is experiencing a fast-growing and commercially oriented film industry. Today, the city represents the unofficial but undisputed hub of the post-Doi Moi commercial Vietnamese film industry. Most of the film production and post-production companies currently operative in Vietnam are based in the southern metropolis, which, capitalizing on the opportunities opened by the free-market economy from the early 90s, has progressively outclassed Hanoi as the national center for media and entertainment production. In HCM City, a new audiovisual sector is starting to thrive, also thanks to those returning Viet Khieu bringing back expertise and networking with the USA, and to foreign investors such as Korean cinema entrepreneurs.

The dichotomy between private and state-owned forces in Vietnamese cinema also significantly impacts national film heritage viability, such as for the unsettled relations and divergent conceptualization of cinema artifacts between Northern centralized institutions and Southern private cinema enterprises that currently jeopardize the survival of digital-borne films, as explained in the following chapter.

6.3 Social Contexts, Conceptual Negotiation

This chapter examines the conceptual negotiation of audiovisual artifacts between the Thai and Vietnamese archives and significant social groups, explicitly addressing the second research question: How do the Thai and Vietnamese social contexts affect and shape local archival practices? Based on the findings, in the latter part, I reassess Fossati's conceptual tools and outline further considerations of film artifacts' ontology.

While throughout the past century, numerous external Actants contributed to shaping the development of national cinema in Thailand and Vietnam, the establishment of audiovisual archival practices have been significantly influenced by the Agency of central rulers and film industries.[185] Engaged in the networks in similar ways, the contextual features of these two social groups still significantly differ: in Thailand, the ruling authority predominantly revolves around the royal family and, until recently, military right-wing governments, whereas in Vietnam, the primary and only institution remains the single-party government. The Thai film industry is still largely dominated by Sino-Thai entrepreneurs and Hollywood distributors, while in Vietnam, the key industry players are Korean enterprises and local and Viet Kieu filmmakers.

Central leaders and institutions are vital to the viability of audiovisual institutions, as seen in the experiences of the Thai and Vietnamese archives. As primary interlocutors and funding sources, national rulers' policymaking not only influences archival operations but also determines those human-induced concerns threats to film heritage, such as negligence, mistreatment, disregard, political interference, loss, and, in some cases, destruction.
At the core of these human-induced critical hazards lies the fluctuating and divergent conceptualization of audiovisual artifacts by the archives and distinct social groups involved. The Agency of governments and central authorities is hence not regarded uniquely in terms of wrongdoing, misdeeds, and mismanagement of resources but instead interpreted as outcomes of specific and diverse understandings of heritage in given socio-political contexts.

[185] Notably, in *The Archival Afterlives of Philippine Cinema*, Bliss Cua Lim underlines how the ephemerality of film preservation in the Philippines has been threatened by institutional instability and private enterprises' wrongdoing. Political upheaval was particularly significant under Marcos's dictatorship when the prioritization of film as a tool for propaganda and its later downfall left a lasting impact on preserving the country's film heritage. The abrupt closure and neglect of several archives after the departure of Marcos further proved this instability linked to significant political shifts. (Lim 54-56, 68-69, 72-84) Concerning privatization, the author examines the shift to commercial ownership of large audiovisual archives, such as ABS-CBN, and their eventual shutdown, highlighting the risks of relying on the private sector for preservation (Lim 107-12, 125-32).

To further interpret the divergent intellectual conception of film artifacts in Thailand and Vietnam, I loosely employ "Film as Art" as theoretical frame of reference. As Fossati suggests, the framework focuses on the conceptualization of films rather than on their materiality (Fossati 170), and I hence regard it as the intellectual ground where human-caused criticalities, the Agency of consequential stakeholders, and archival policies/practices meet. However, as I argue below, the artistry of films does not represent the only significant conceptual component but rather one constituent of a broader set of values that distinct participants might attribute to the artifacts. Within the Thai and Vietnamese contexts, the development of archival initiatives has evolved through the attribution and negotiation of diverse conceptual values assigned to heritage collections by archivists and policymakers, encompassing, but not limited to, film's aesthetic and artistry.

The inauguration of the Thai Film Archive as a public institution financially subsidized by the government came as the result of three decades of awareness campaigns where Dome Sukwong and colleagues demonstrated to central rulers and general audiences that national film heritage could represent a valuable cultural and historical expression of the Kingdom, a technological and artistic creation appreciated and practiced since its early days by Thai monarchs, ultimately adopting “the heritage-based rhetoric typical of (Western) motion picture archivists to appeal to a more diverse constituency” (Frick 6).

Before the efforts of Sukwong and peers, preservation initiatives in the country were essentially nonexistent, indicating how, besides climatic and technological factors, the loss of most films ever produced in Thailand came because of disregard and inaction toward film artifacts, perceived for decades as non-culturally valuable items.

Toward the end of the third era of Thai cinema, when the young scholar Dome Sukwong was just initiating preservation practices in Thailand, autochthonous productions were widely disregarded and have acquired the unflattering status of *nam nao*, stagnant murky water (Herrera 32). Regarded as emblematic of the "backwardness" of Thai cinema, this type of popular representation was in discord with the efforts of the Thai political leadership and the cultural elite of that time to build a modern national image through the national industry (Herrera 33). The unfortunate legacy of this period of popular cinema ultimately turned into a top-down antagonism towards Thai films that endured long after the 16mm film era (Adadol Ingawanij 67), with the great majority of the Thai elite despising Thai films, regarded as fit only for low-class and rural people (Hamilton 148).

Audiovisual archival practices in Thailand began within a cultural setting that, for decades, practically and conceptually disregarded its own cinematic output. The discovery of

King Chulalongkorn's reels in Europe and the findings of early nitrate films recorded firsthand by King Prajadhipok Rama VII became instrumental for Sukwong and peers in transforming the widespread disregard toward national cinema and overturn the demeaning conceptualization of films from a low-grade product of entertainment to a valuable cultural and technological expression able to embody collective ideological pillars of the Kingdom esteemed by central rulers and most Thai citizens, and thus worth saving and preserving for Thai culture and national identity. Sukwong strategically employed the early reels to "generate great excitement among the high-ranking government officials as well as among members of the royal family and the general public" (Sukwong 1984, 4), gaining the attention of those society stakeholders unaware of the importance of film preservation. He thus negotiated the conceptualization of national heritage between those social components committed to preserving it (archivist), those with legislative and financial leverage (central rulers) and those who ultimately would benefit from it (civic society).

In other words, film preservation initiatives in Thailand were made possible by the efforts of a small group of pioneer archivists able to turn a personal crusade into a national issue and, by leveraging the conservative values prevalent in Thailand and attributing renewed significance to the disdained local film output. They encouraged those institutions with substantial financial and legislative authority (namely right-wing politicians and the royal family) to take action to save the national audiovisual heritage, initiating collective and institutionalized preservation practices in the Kingdom and finally establishing the first film archive in the country. The deliberate conceptual shift enforced by Sukwong and his team essentially extended the cultural, historical and identitarian values recognized in the early nitrate reels to the rest of national film output, including those 16mm *nam nao* movies infamous for their lack of artistry that ultimately acquired the status of heritage. This was achieved by leveraging heritage's "uniting capacity and potential, within a largely socioeconomic context of joining oppositional and even adversarial interest groups behind the rubric of heritage and its emotional nature" (Frick 15).

The case of Vietnam stresses even more significantly the nationalist component indicated by Frick, although Vietnamese audiovisual heritage gradually lost the significance and the ideological charge it had when produced.

For Vietnamese rulers, cinema has been regarded as part and parcel of the propaganda apparatus and the fight for independence since the early days of guerrilla cinema. Despite the many adversities and challenges faced by the country in the decades after WWII, socialist

values-soaked film collections have been gathered and safeguarded by all possible means, ultimately reaching the VFI vault in overall fair conditions. The deliberate attribution of ideological and propagandistic values to film reels ensured the viability of Vietnamese film heritage throughout three wars fought on national soil, the persistent action of the warm-humid subtropical climate and several physical migrations of the collection through military bases and impromptu facilities countrywide.

Until 1986's Doi Moi, Vietnamese cinema and socialism remained indissoluble because of the themes portrayed in the films, because of the national cinema industry being fully subsidized and controlled by the communist party, and because of the conceptualization of audiovisual reels as an integral part of the revolutionary struggle for independence and national reunification. When, at the end of the 80s, the central government suddenly turned the tide and embraced a free market economy, Vietnamese cinema abruptly moved to private entrepreneurship, disrupting the preexisting status quo into which the cinema industry was born and capsizing the conceptual value that characterized national film productions until that moment. Practically and conceptually, for civic society and central rulers, movies rapidly became consumer items rather than ideological tools.

Whereby the whole cinema industry moved to a private business model, the Vietnam Film Institute, along with a few other cinema infrastructures located in the north, remained an institutional body relying entirely on financial support provided by the central government, which maintained its influential legislative role but became decreasingly supportive, with the consequential contraction of budgets and reduction of the archive's operational capability.

Unlike Thailand, where the understanding of film artifacts as nationally valuable cultural items was the outcome of three decades-long relentless intellectual and practical efforts of a small group of independent archivists, in Vietnam, the conceptual shift around film heritage comes as a result of a deliberate change of intentions, guidelines and legislations by the central single-party government. In an economic context where the Vietnamese Communist Party advocates for capitalism and has divested from a centrally planned economy in favor of private enterprise, its leadership redefines its ideological core, from supporting proletarian class struggle to prioritizing economic development and inclusive nationalism for all social groups (Gosha 337). Throughout the past three decades, the VFI has maintained its status as a nationally subsidized institution, but it has also increasingly become detached from the rest of the national cinema industry.

The divergent conceptualization is particularly evident when looking at the analog film collection held in HCM city. Belonging to an ideological narrative that opposes the

dominant one, preserving copies of the films produced by the Saigonese film industry has never been a priority nor officially part of the VFI's mandate. While the lack of funds and digital skills stands as core concerns for VFI, the disregard toward Southern film heritage produced between 1955 and 1975 depends on conceptual elements rather than financial or pragmatic ones. The Saigonese film collection, gathered with great effort and commitment by VFI southern archivists, like deputy director Nguyễn Thị Hồng Hạnh, has not received equal consideration and adequate budgets to ensure its long-term viability. The different approaches toward preserving and restoring the Northern and Southern collections unveil indeed how archival practices might still be biased by ideological components. The hierarchy between the two branches of the archive and the discrepancy in managing the two collections disclose diverging and uneven commitment from VFI and central rulers toward films produced in the North as part of the communist revolution and those produced by the antagonist Southern government and film industry, revealing how the conceptual ascription of distinct values markedly influence archival practices and potentially jeopardizing the viability of a part of national cinema output.

The fluctuating understanding of film artifacts is also illustrated by the uncertain and unsettled dynamics between Northern centralized institutions, represented by VFI, and Southern film industry enterprises, primarily Korean conglomerates, Viet Khieu, and local filmmakers, concerning the submission of digital-born films to the archive. Motivated by financial interests and concerns over copyright issues, Vietnamese filmmakers are reluctant to submit digital copies of their works to the archive, showing misconception and distrust of the role and mission of those national institutions that have the mandate to support them and store original cinematic output. While these non-archival industry stakeholders might still acknowledge the artistry behind movies, they predominantly worry about the commercial value of audiovisual products, evidencing how economic considerations often overshadow the importance of preserving the works of national artists.

In Thailand, analog films began to be donated to the archive only after 2012, as production companies lost the capacity to handle them autonomously. However, the same companies, oftentimes affiliated to cinema oligopolies, currently refrain from donating copies of digital films, ultimately demonstrating in both instances a utilitarian and opportunist understanding of the archive rather than a willful acknowledgement of films' originality and cultural significance. In the case of the Vietnam Film Institute, the conceptualization mismatch is even more fractured as the central government hesitatingly hovers between what

remains under its control (the archive and a few other run-down institutions) and what operates almost entirely autonomously (the growing southern film industry). A consequential component of VFI's relational networks lies indeed in the inherent juxtapositions characterizing Vietnamese society and cinema that ultimately transformed the role of the VFI within the Vietnamese film industry, from being part of an enclosed and self-regulating state film industry to being perceived as a representative of the central government within a free-market landscape and thus arguably a hostile force. As a result of the economic and social reforms Vietnam has experienced since 1986, filmmakers based in the south appear to have changed their perception of centralized national cinema institutions like VFI. They became increasingly less willing to collaborate with the archive, stressing mistrust and misconception of the archives' role, duties and purpose. Since the digital rollout in Vietnam, as in Thailand, the fracture between archives and contemporary film industries is thus still largely conceptual, as industry players tend to recognize little significance in the film artifacts beyond financial value. The ongoing struggle to obtain digital-born films for long-term preservation from local production companies stems from conceptual disagreement and stands as a tangible challenge in Vietnam and Thailand. Exacerbated by uncertain legislation and regulations, the absence of a legal deposit law or transparent agreements regarding the submission of digital films among stakeholders, and the ambiguous role of central authorities, this widespread concern ultimately jeopardizes the future viability of most films produced across the region after the digital rollout and will potentially result in the loss of the early decades of digital cinema in Southeast Asia.

Addressing the second research question, I ultimately argue that different contexts influence archival practices in terms of divergent attribution of significant values to audiovisual heritage by distinct social groups and reiterated conceptual negotiation among them. This process involves archival and non-archival participants to collectively acknowledge and attribute heritage status to film artifacts. The conceptual discrepancies among contextual social groups, hence, determine both human-induced criticalities and archival practices. Critical challenges as policymakers, industry partners and the general public's limited understanding and lack of awareness of significant archival frameworks undermine heritage viability in terms of disregard, negligence, inaction and worst-case scenario, destruction of the artifacts. Archival practices as the attribution of significant conceptual values to the artifacts, although independently elaborated by the single archival institution along the lines detailed by Fossati's frameworks and influenced by FIAF and SEAPAVAA's codes of ethics

and practices, still require elaboration in consideration of distinctive socio-political backgrounds and the peculiar, often fluctuant conceptual values that characterize a given community or nation. In the Thai and Vietnamese contexts, despite opposing political systems and historical backgrounds, the conceptual negotiation with central authorities markedly pivoted around identitarian and nationalist values. As Frick indicates, heritage preservation, as a nineteenth- and twentieth-century mode of dealing with history, remains inextricably related to nationalism insofar as newly formed nation-states needed tangible remnants of a united past for their futures to be assured and artifacts to celebrate state achievements (Frick 20). In Thailand, the disregard toward *nam nao* indeed entailed an aesthetic assessment of the artifacts, but the understanding of movies as a significant cultural expression of the country (and with it, the commencement of preservation practices supported by central authorities) shifted only once identitarian values, particularly nationalism through the figure of the monarchy, were skillfully attributed to film artifacts and negotiated with consequential social groups by pioneer independent archivists like Sukwong. In Vietnam, following the 1986 reforms, films transitioned from being a state-controlled tool for nation-building to becoming privately owned and independently regulated commercial products. In both Thailand and Vietnam, with different outcomes and modalities, the conceptual transformation of film artifacts pivoted around identitarian/nationalist values rather than artistic or authorial.[186] However, this does not necessarily imply that archival mandates are solely defined and negotiated in terms of political ideology, which should rather be regarded as one possible component of the social construction of archival institutions.[187]

The analysis of the Thai and Vietnamese archival institutions substantiated how audiovisual heritage is capable of epitomizing diverse sets of values acknowledged by a nation, a social group or a community, beliefs that shift according to the specific context.

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[186] The analysis could be aptly extended to the participation of technological artifacts in the creation of nations as "imagined communities", an influential concept coined by Benedict Anderson. Significantly, the scholar's lifetime work is largely based on the colonial and post-colonial establishment and development of Southeast Asian Nations, including Thailand. Anderson examines how nationhood exists as a system of cultural signification (Anderson 1983, 115) in which audiovisual heritage might play an important role. Introducing his study on Nationalism and Asian Cinema, Wimal Dissanayake illustrates how Anderson has pointed out the importance of print capitalism in generating the idea of nationhood and its deep horizontal comradeship; Anderson remarks that newspapers and nationalistic novels are primarily responsible for the formation of national consciousness while, in the modern world, cinema has become a dominant mode of communication and its role in conjuring up the imagined community among communities is enormous (Dissanayake 1994, 16).
[187] A notable example in the region is the Bophana Film Center in Phnom Penh, Cambodia, which focuses on preserving and granting access to the audiovisual materials that survived the Khmer Rouge massacre and restoring a sense of community in younger generations of Cambodians rather than strictly preserving nationally produced audiovisual film heritage.

The conceptualization of archival artifacts is, in fact, not a linear or settled process but rather a continued negotiation among those actively engaged with heritage material and those only incidentally involved with archival films. While archivists, curators, and scholars acknowledge films as complex, ontologically unstable and interpretatively flexible artifacts epitomizing a variety of artistic, material, technological and historical values (along the lines of the interpretive flexibility proposed by Fossati's theorization), for non-archival participants like central institutions and film industry stakeholders, film artifacts might more rigidly encompass externally attributed values that comprise political, ideological, economic, or hypothetically any concept representing peculiar shades of the cultural identity of a given social group, and among which artistry is just one component and not necessarily universally acknowledged by every participant of the network.

What is film heritage, and why is it worth saving? is thus not purely an ontological query but regards the reiterated process of conceptual attribution and negotiation of significant societal and cultural values to audiovisual artifacts, which varies across different social contexts and influences the long-term viability of archives and archival practices beyond environmental and technological challenges.

As film artifacts can be viewed as culturally constructed entities shaped through a negotiation process involving symbolic meaning-making and a range of shared identitarian beliefs that vary across distinct socio-political and economic contexts, "Film as Art" appears suitable only to a limited extent for deciphering the conceptual negotiation between archives and external contextual participants. While the framework remains highly valid when employed as originally conceived by Fossati, particularly for addressing the medium specificity and authorship of the artifacts preserved in archival institutions, it may be necessary to expand the theorization to encompass a more flexible and broader range of possible conceptual values that archivist and, more importantly, external stakeholders might attribute to audiovisual heritage. The need to shift the focus to a wider and more integral view of film heritage that would allow scholars to analyze, discuss, and influence film heritage practice more comprehensively (Fossati 331) is, in truth, explicitly endorsed by Fossati herself in the 2018's revised edition of *From Grain to Pixel*, where she points out that new conceptual framings are needed to move to a more far-reaching approach to archival practices, not uniquely related to the artifacts but suitable for discussing activities around film heritage at large (Fossati 332).

Among the new potential frames postulated, I propose to adopt "Film as Monument" (Fossati 332) as an additional theoretical framework to more extensively entangle the

conceptual queries between audiovisual archives and external social groups. The framework expressly extends the reasoning to broader sociocultural contexts beyond the aesthetic/authorial significance of works of art, examining how film artifacts are capable of channeling significant societal concepts through their material form. As much as films, monuments are nonetheless tangible material artifacts capable of commemorating and epitomizing significant values shared by social groups, nations and communities, especially for those “recently formed nation-states that require tangible remnants of a unified past” to secure their futures and to celebrate state achievements through artifacts (Frick 19). "Film as Monument" could embody broad societal/cultural/identitarian values shared by large groups and, as such, more easily grasped by consequential non-archival stakeholders, such as government agencies and institutional bodies. These financing entities, driven by their political agendas, would likely be motivated to enhance the national or identity significance of audiovisual heritage and, ideally, more actively get engaged with film preservation.

"Film as Monument" could hence serve to inquire about the conceptual negotiation occurring outside the archive with a more flexible and global outlook and disentangle the relationships between archival and external network participants by identifying their shared conceptual grounds. While not arising directly from archival practices, the framework could examine facets of film preservation, including the criteria for selecting collections and prioritizing restorations and presentations (Fossati 333) in diverse contexts, infer distinct contextual critical challenges and consequently devise operational models and initiatives. Notably, Monuments are not neutral entities (Fossati 333) and are oftentimes selected by the dominant discourses to interfere with the expression of other perspectives and the enlisting of alternative discourses (Fossati 333), similar to how the Vietnam Film Institute univocally valorized northern socialist film heritage overshadowing two decades of Southern film cinema output, despite the national unification of 1975. A significant element considering that the "original" material features of the two collections unveil technological and aesthetic differences between the two cinematic expressions of the country, as well as the traces of the national fracture caused by 20th-century events.

"Film as Original" and "Film as Monument" are intertwined, whereby "Original" refers to the unique and authentic material expression of the artifacts, and "Monument" represents the societal values that specific artifacts can convey through their material form. The conceptualization of both frameworks is neither linear nor neutral and requires guidance from archivists, scholars, and curators, who acknowledge the significance of "Film as Original" and negotiate it with external stakeholders to relate it to the societal values

conveyed through "Film as Monument." However, the understanding of film artifacts' material originality remains relatively problematic when extended to broader social contexts, as the frame remains central to archives but is not necessarily acknowledged or understood by those outside the archival community. While the constitutional values of Monuments are inherently part of the society that created the artifacts, the originality of films is more closely tied to an archival framework of which external stakeholders may overlook the importance.

These dynamics are particularly relevant when reconsidering Walter Benjamin's theorization of the Aura after the digital rollout, the epochal technological transformation that has materially and conceptually challenged the Aura and the originality of film artifacts. Formulated on Benjamin's premise that considers the Aura bound to his presence in the here and now (Benjamin 26), my claim is that with the digital rollout, analog film artifacts become singular historicized items as they gain the aural prerequisites of uniqueness and authenticity characterizing non-replicable works of Art. The disappearance of analog carriers, machines and infrastructures shifted the status of analog films from a reproducible item that can be copied countless times and possibly physically disseminated across the globe to a rare and unique artifact that endures exclusively in a distinct locus, the archive. The approximately fifteen billion feet of film left in the vaults of non-profit archives, museums, corporate firms, and laboratories will likely never be duplicated on film (Cherchi Usai 27/30).

With the digital rollout, the digital file has become the object of consumption to be distributed and screened worldwide, and the no longer analogically reproducible films stored in most SEA archives have hence (re)turned into a work of Art. Most films preserved in Thai and Vietnamese film vaults, such as the nitrate film collection recorded by the Siamese royal family or the revolutionary Vietnamese cinema reels filmed after WW2, currently survive as single copies, semi-inaccessible to the general audience and unique in time and space. Thus, in their archival life, these films, as many others in archives around the globe, have regained their material uniqueness and originality and potentially also recovered part of their Aura, "the here and now of the work of Art" alias" its unique existence in a particular place that bears the mark of the history to which the work has been subject" (Benjamin 5), an element considered irreversibly lost by Benjamin in the pre-digital era.
originality can thus be seen as another constitutional conceptual component of the Aura.

The framework "Film as Original" asserts that original film artifacts have a special something, similar to Benjamin's Aura (Fossati 207), a special something that derives from the acknowledged historicization of the materiality of the artifacts themselves once they are re-territorialized by entering the film archive (Fossati 207). According to Benjamin, the

historicization of artifacts is essential to their authenticity. The here-and-now of a work of Art's unique existence in a particular place bears the mark of the history to which the work has been subject, including the changes in its physical structure over time (Benjamin 21). Film is no longer a modern medium or constitutive of our modernity but represents an entirely historical medium (Rodowick 93), and the traces of such historicization are embedded in the material features of the artifacts. The film stocks, the chemicals used to develop reels, the keycode numbers on the reels, the mechanical damage, and even the action of climatic factors all represent traces and evidence of the history that led to the creation and usage of the films. Every print has a history and bears unique historical traces, and these traces are valuable for archivists and scholars as they reveal a lot about the individual reel as much as about the cinematic history of the unique context that produced it. The historicized materiality of analog film artifacts encapsulate the endeavors and technical crafts of those filmmakers who physically processed the film reels, but also the peculiar traces of cinematic and archival practices within a specific country, such as Thai commercial cinema of the '60s and '70s that survives today only as heavily scratched and damaged 16mm copies bearing the whiteness of countless projections carried nationwide by itinerant cinema crews and their bodged projectors (Adadol Ingawanij 19) or those prints developed and printed in the tropical jungle with makeshifts means by Vietnamese revolutionary soldiers/filmmakers during the cinema guerrilla years (Ngô Mạnh Lân 487).

The historicized material originality gained after the digital rollout could be regarded as elements capable of epitomizing significant social values, expressions of communities to the national level and even state ideologies, as in the case of the early nitrate reels recorded by Thai monarchs and those filmed by Vietnamese revolutionary soldiers that could then be conceptualized as unique items –Monuments– into which identitarian and collectively acknowledged concepts like nationalism and socialism are inextricably bound to their physical manifestation. In both instances, the physical traces of history could be accounted as a significant “auratic” component of films' originality and actively shared with all the network participants that do not automatically perceive historicized materiality as a significant value, especially for general audiences for whom the rollout allegedly did not represent a disruptive transformation as much as it did for film archivists and curators.

In original artifacts, the Aura is the manifestation of distinct values through its tangible material traces. In monuments, the Aura represents the alignment of values among the historicized original artefact and the contextual social group that manufactured it; the network connection between the distinct technical object and the Actant (Callon, Law 23).

The negotiated conceptualization of film artifacts' originality and their acknowledgement as Monuments entails practical repercussions. The historicized material features of analog films, notably their being original artifacts unique in space and time capable of emblematically carrying the trace of history identifying a distinct social group, community or nation, could be leveraged as conceptual tools for archivists and curators to deliberately negotiate the cultural significance of film heritage with consequential non-archival participants and could serve for strategic reasons such as securing funding (Fossati 333) and establish dedicated archival practices, outreach initiatives and innovative models. In other terms, the understanding and acceptance of "Film as Monument", which ultimately serve to engage non-archival stakeholders in understanding the importance of audiovisual heritage, still relies on "Film as Original" as the historicized features of original artifacts embody tangible traces of the societal values that define monuments.

"Film as Original" and "Monuments" ultimately evidence a significant distinction between analog and digital artifacts, a difference tied to their materiality that influences the divergent social understanding of the artifacts. Contrarily to analog artifacts that in most Southeast Asian archives currently survive as unique original copies, films' originality remains puzzling when looking at the material features of digital-born films, of which reproducibility and transience seem to be inherent features. Since the digital rollout, films have turned into a series of immaterial binary data that can be efficiently but only temporarily distributed around the globe and, when later stored via dedicated magnetic carriers (LTO), remain precariously vulnerable to climatic, technological and human-induced factors. Rapid obsolescence highlights that the materiality of digital carriers is both temporary and transitional, thus imparting no benefit beyond their operational versatility and storage efficiency. Like analog film reels, digital and digitized films account for history through their content, but unlike film stocks, digital hardware must be replaced at a swift pace. A distinction between analog and digital images hence lies in their material historicity. Whereby film prints have the potential to carry the sign of their history, digital images “live in a permanent present,” as they must migrate to new carriers every few years (Negri 11). Digital carriers' volatile and provisional material features prevent them from carrying those historical traces that determine material originality and characterize analog film reels, making the presence of the Aura more uncertain and precarious. Paradoxically, contemporary digital means more closely match the concerns expressed by Benjamin about authenticity and reproducibility. As it stands right now, digital films seem to be eternally reproducible and can only last over time thanks to recurring migration practices, each time leaving behind

remnants of obsolete technologies along with the traces of the tangible endeavors and efforts of the filmmakers that produced the work of art within their unique contexts, cultures and historical junctures. The digital technologies currently used for the long-term preservation of audiovisual material (and any other data) hence remain critical in both practical and conceptual terms. Practically, as the existing storage devices and infrastructures employed by archives worldwide are inherently precarious and short-lived; conceptually, as these data carriers struggle to retain those essential features of analog film artifacts capable of establishing a more profound historical significance, ultimately making the conceptual negotiation of constitutional archival frameworks like "Film as Original" and “Film as Monument" more layered and uncertain.

In summary, "Film as Monument" represent an additional theoretical framework for examining audiovisual archives practices. Shaped around the constitutional dichotomy of film as materially and conceptually flexible artifacts, the framework emphasizes the role of influential non-archival stakeholders in attributing significance to the artifacts in terms of shared societal values. The frame focuses on the diverse understanding of film heritage among distinct social groups involved and the conceptual negotiation that arises from these dynamics. "Film as Monument" differs and complements the four frameworks of Fossati's theory employed in this study. It relates to "Film as Original", as the originality and authenticity of the artifacts support acknowledging their historicity and the ensuing collective attribution of values. It intersects with "Film as Art", as the artistry of films represents one of the values that align with the recognition of films as items worthy of long-term preservation efforts. It connects to "Film as Dispositifs", as technological devices and convey the values embedded in the artifacts to the observers and foster interactions with non-archival social groups. It meets "Film as State-of-the-Art", as the push for innovation remains central to ensuring the continuity of societal values through technological transformation.

7 Digital Preservation in SEA: Ongoing Concerns and Future Models

Drawing from the reflection of divergent understanding of film artifacts, in final assessment, I address the third research question –How does digitization serve to overcome critical concerns affecting SEA film heritage? – with a few considerations on the ongoing digital–related challenges faced by regional archival institutions. These concluding remarks serve as recommendations to enhance the study's primary objective of establishing initiatives and models for the long-term preservation of film heritage, based on two fundamental premises. The first is that digitization entails adopting technologies and workflows with benefits and drawbacks; while digital technologies are essential for accessibility, they also raise concerns about obsolescence and the potential loss of audiovisual heritage. The second premise, established at the outset of the thesis, is that film artifacts are inherently hybrid; models and solutions for the long-term preservation of audiovisual heritage must be formulated based on a deeper understanding of what analog and digital formats can and cannot do, in both material and conceptual terms.

The first consideration is to curate digitization on the individual case specificities, embedding digital technologies into archival workflows based on curated and purposeful objectives and questioning pre-existing models and strategies that may be unsustainable and unachievable. This comprehensive guideline emphasizes not to regard new technologies as univalent ecumenical problem-solvers. Instead, it encourages a critical approach that considers the flaws and limitations of digital tools and develops sustainable models and initiatives based on the distinct archives' peculiarities, objectives and constraints. Hence, digital practices and initiatives should not be based on an uncritical and externally imposed urge to shift to digital formats dictated by the relentless technological advancements or archival models established in well-funded audiovisual institutions abroad. For film archives with limited resources and inadequate infrastructure, it is essential to incorporate digital technologies while being aware of their inherent properties, defects, and limitations. It is also important to consider the differing objectives of other network participants, such as technology manufacturers, whose goals may focus on short-term financial gains rather than providing secure, stable, and long-term viable tools for film institutions. Digital technology is hence not regarded as a comprehensive troubleshooting solution but as a set of technological

innovations whose deployment requires questioning and conforming to local criticalities and contingencies, in line with the technological boundaries and capabilities evidenced by the framework "Film as State-of-the-Art." This approach suggests looking at digitization primarily as the ground for establishing conceptual negotiation with non-archival stakeholders and integrating digital practices into archival workflows with the main objective of enhancing access rather than solely as an alternative means of long-term preservation.

Most importantly, digitization does not automatically imply mass digitization of entire collections preserved in archives' vaults, but a carefully planned and curated set of initiatives based on innovative and sustainable strategies of collection access,[188] whereas digital preservation might be regarded as a consequence of these processes rather than a reason for digitizing in the first place, particularly for archives with limited financial and practical capabilities. Purposeful and mindful archival curatorship and stewardship hence become crucial for archives' viability, devising models that avoid technological determinism and foster dialogue and partnerships with external participants like academia, governments, and film industries. Furthermore, curated digitization also entails looking at models and strategies already developed within the region and potentially embracing alternative modes of preservation, restoration, and access. Archives initiatives do not necessarily occur within national frameworks, and oftentimes, external participants are essential to guarantee the viability of film heritages, such as in the case of Save Myanmar Films and Bophana Film Center in Cambodia. These NGOs that respectively focus on preservation/restoration and access, equally operate without national institutional support and at present represent the main Actants engaged with safeguarding audiovisual heritage. The crucial role played by non-institutional participants has been underlined by Bliss Cua Lim with "making do", a concept that highlights the importance of informal practices to fill the gap between prescribed standards of archival preservation and the realities of limited resources and challenging contexts, showcasing how informal archivists' resourceful and resilient strategies can be crucial in preserving audiovisual materials (Lim 173-213). Innovative models could emerge within the region, moving beyond the pressure to conform to international standards and the ongoing drive for permanent innovation imposed by technology manufacturers.

[188] This argument resonates with a recent study by The Shift Project called *Lean ICT: Towards Digital Sobriety*, which explores the environmental impact of digital technologies and advocates for a more sustainable approach called "digital sobriety." The report highlights the rapid growth of digital energy consumption, driven by factors like the increasing demand for data storage and processing, and advocates for digital sobriety as a proposal to prioritize the allocation of digital resources based on their societal value and environmental impact, limiting unnecessary energy consumption and promoting the use of less powerful equipment. https://theshiftproject.org/

The second consideration pertains to social participation and public outreach, recommending the promotion of digital access to collections with the specific objective of engaging contextual participants and establishing negotiation platforms with social groups, such as central authorities, academia, and audiences. Participation and collaboration become necessary to the larger cultural shift that those concerned with the enormous challenge of preserving cultural heritage must embrace (Uricchio 137) to facilitate the conceptual negotiation of film heritage's cultural and social significance.

Examining the digital exhibition as a strategy to enhance participants' engagement involves considering 'Film as Dispositif' in relation to audience engagement, as initially theorized by Fossati, and the preservation of obsolete machinery and technological modes of representation, as I applied in my analysis and clarify through the third recommendation.

In discussing archival theorization, I posited that the relationship between film projection and the audience has evolved but remains intact despite the emergence of digital technology. With the digital rollout, audiences continued to consume film images and frequent movie theaters, regardless of whether the projection system had been digitized (Goudreault/Marion 52). While analog film projection is historically significant and could be appreciated by specific social groups (archivists, curators, scholars), audiences watching digital projection do not experience the cinema differently, as it is equivalent to 35mm film projection (Belton 104). Furthermore, the transformative nature of film technologies imposes the prioritization of digital modes of representation over analog film screening, as the digital rollout has led to the disappearance of analog infrastructures, machinery, and skills.

Therefore, I argue that preserving and implementing analog film screening is not a significant priority for most archives in Southeast Asia, while providing digital access has become essential. Firstly, archives with limited resources are still facing more urgent ongoing criticalities and might be unable to safeguard obsolete devices. Secondly, implementing state-of-the-art digital screening and access might help reach broader segments of society and establish much-needed exchanges with external stakeholders. While preserving ancient modes of representation could be enforced when archives have the financial capabilities, for most archives in Southeast Asia, it remains more of a niche framework rather than a feasible initiative. As detailed, at present, only the Thai Film Archive has successfully integrated digital access while keeping operational obsolete film dispositifs. In neighboring countries, including Vietnam, analog film screening practices have already, likely irreversibly, ceased.

Digital access has hence become pivotal for enforcing public outreach. Building upon the previous recommendation, this involves carefully curating the digitization of analog collections, focusing on films of particular social and historical significance or those that are in urgent need of preservation due to advanced material decay.

Granting access via online platforms, onsite screening, events, exhibitions, and similar initiatives is, first, instrumental for archives to establish and foster bridges and exchanges with the general audience, to raise awareness and educate broader segments of society that benefit from cultural heritage preservation but not necessarily perceive the significance and role of audiovisual archives. Enforcing collections' digital access could serve to educate general audiences and other stakeholders on the challenges and importance of safeguarding national film heritage, explain critical concerns affecting archives, and engage external participants with significant conceptual frameworks, such as the auratic value of originality embodied in obsolete analog cultural items. In other terms, digitized films could be employed as conceptual tools for archivists and curators to deliberately address the cultural significance of film heritage beyond film's artistry with consequential non-archival participants who are not directly involved in archival practices and might thus misunderstand or overlook the role of audiovisual archives as national institutions. Granting access to digitized heritage represents a strategy for negotiating support from central institutions and national funding bodies. Especially in non-democratic contexts, this would help explain how films' materiality embodies distinct archival frameworks such as Original, Art, Dispositif, and State-of-the-Art. Furthermore, emphasizing how "Film as Monument" are capable of epitomizing significant non-archival conceptual values of a community or a nation may encourage national leaders to recognize and treasure the social and cultural importance of archival films. Ultimately, gaining a better understanding of these essential archival frameworks would reinforce the role of archives within society and, ideally, help address critical issues such as neglect, mistrust, and inaction.

The Thai Film Archives and the Vietnam Film Institute have approached collection access differently, with different outcomes. Since its early days, FAPOT has paid close attention to granting access to film heritage and educating its audience about the history of Thai cinema, the conceptual value embedded in historicized films and the importance of film preservation. Through the years, Sukwong and his colleagues promoted awareness campaigns about the disappearance of analog films, machines, and knowledge, and valorized the historicized media. More recently, the archive has invested funds and staffing to enforce both online and onsite screenings. FAPOT's YouTube channel is regularly updated with newly

digitized materials, and the archive's three cutting-edge screening rooms regularly project films in both analog and digital forms. The efforts of such initiatives have been tangibly rewarded as the archive has seen its role become increasingly institutionalized, obtaining the status of public organization since 2019 and a substantial increase in state subsidies.

In contrast, VFI's initiatives to facilitate access have diminished over the years. While the institution previously organized regular film screenings at its facility and affiliated theaters, it now rarely presents copies of films or uploads material online.[189] The ongoing discrepancy between the Vietnamese archive and external participants could hence be regarded as a consequence of the absence of tangible initiatives to open the archive to third parties and establish common ground for conceptual negotiation, a discrepancy that is widening as the film industry independently grows and thrives while the archive operates more and more in isolation. Strategically planned and curated digital access initiatives would perhaps facilitate the establishment of dialogue between all the participants. Notably, innovative collection access models could be developed in collaboration with non-archival participants, as demonstrated by the independent and self-funded Bophana in Phnom Penh, Cambodia, which holds an extensive database of digitized reels gathered from different archival sources around the globe.[190] Initially devised to grant access to Cambodian audiences and scholars and promote community engagement, this approach represents an example of how an alternative digital preservation strategy can emerge organically within the region rather than formulated on externally created models.

In addition, academics and researchers would benefit from digital access to SEA Audiovisual collections. Audiovisual archival studies in the region remain limited, especially compared to Western contexts, where exchanges between archives and academia have become increasingly intense since the late 1970s.[191] Digital access would encourage and support research addressing film history, aesthetics, industry, and languages, but also for studies like this dissertation that more closely inquire into audiovisual archives' policies, practices, and criticalities. As Fossati remarks, in this moment of technological transition, theorizing archival practice is not only urgent for film archives but also for media scholars, as it is the establishment of constructive dialogue between the two (Fossati 23). In Thailand,

[189] It is important to note that numerous YouTube channels that are not affiliated with VFI display classic Vietnamese films. Most of these titles are part of the archive's collection and have been uploaded at very low telecined or scanned quality, often lacking any indication of restoration

[190] Bophana Audiovisual Resources Center. Archives and collections, *https://bophana.org/archives/collections/* accessed on 09/05/2024

[191] See note 21

Vietnam, and neighboring countries, the exchanges between Archives and Academia are minimal, and as insufficient is the theorization of archival practices and the examination of the unique historical backgrounds of diverse Southeast Asian film industries. The rich and diverse historical backgrounds of Thai and Vietnamese cinemas I explored in this dissertation aim to serve as a valuable reference for future studies and initiatives, to advance research on Southeast Asian film heritage and to bridge the gap between academia and regional archives.

The third and final observation emphasizes the importance of developing collective models and strategies grounded in mutual transnational support while still addressing local and regional specificities. Collaborative initiatives could begin by fostering Academia's involvement and enhance the circulation of knowledge across the region, as there are currently no university degrees, diplomas, courses, or training specifically focused on audiovisual archival practices throughout mainland Southeast Asia.[192] This underscores that local archives rely heavily on international organizations and foreign initiatives for training and education, adopting models not automatically feasible in their contexts, especially regarding digital preservation. To address the concern, fostering exchanges and collaboration with Academia, inaugurating continuous education within the region, developing education programs to train new archivists and curators, optimizing collection access for academics and enforcing research to inquire about regional peculiarities and challenges could represent a significant step forward. Ideally, the initiative would result from the cooperation between local universities, established national film archives like FAPOT or VFI, and international associations like SEAPAVAA and FIAF. As detailed, exchanges, partnerships, congresses and cooperations among FIAF and SEAPAVAA members have been vital for both FAPOT and VFI. The expertise provided by established Western archives, such as the Swedish Film Institute, or among regional peers, such as in the case of the support provided by the Vietnam Film Institute to National Library of Laos, proved to be instrumental to the development of Southeast Asian film archives and the establishment of preservation practices in the region. In addition to fostering education initiatives and knowledge exchange, other collaborative and transnational initiatives based on shared resources among peers could temporarily overcome ongoing analog and digital concerns and bring hope to those collections drastically lacking funds, infrastructures and specialized personnel, such as in the cases of Myanmar's

[192] The only university offering a degree in archival practices in Southeast Asia is the newly established master's Program in Archives and Records Management at the University of the Philippines.
About the UP School of Library and Information Studies *https://upslis.info* accessed on 14/10/2024

and Cambodia's film heritage. Specifically, I advocate two pragmatic initiatives among regional archival peers: safeguarding what remains of analog film processing and developing collective sustainable models of digital storage.

The preservation of obsolete machinery aligns with my pragmatic interpretation of "Film as Dispositif." Safeguarding disappearing analog film processing knowledge, machinery, and infrastructures like photochemical laboratories becomes indispensable, as archival practices and workflows will likely remain hybrid for the upcoming decades. Considering the lack of stable, sustainable, and entirely trustworthy digital storage standards and solutions, analog storage, if adequately managed as for VFI and FAPOT, will likely remain the most viable long-term preservation strategy for many more years. However, the widespread rapid disappearance of the last surviving pieces of technology, infrastructure, and photochemical skills, particularly those implemented in film laboratories, alarmingly endangers the future capability of individual archives to conduct such indispensable procedures. I thus suggest considering this widespread concern as a collective challenge and establishing mutual initiatives to preserve essential analog workflows and equipment. This means that while it's important that archives in the region individually tackles the safeguarding of analog knowledge and skills, infrastructure and machines could be shared among peer institutions in SEA. With the digital rollout, laboratories went out of business. However, skilled personnel and machinery are still in place in numerous instances, like the frozen-in-time film technology center in Hanoi, Vietnam. VFI's efforts could be oriented toward preserving part of the laboratory infrastructure or, at best, saving the essential know-how of the soon-to-be-retired staff still working in the technology center.

Although such initiatives require significant investments, they are attainable, as evidenced by the Thai Film Archive's successful acquisition of a fully functional set of analog film processing machines from a closing film laboratory in Bangkok. Considering that even the majority of well-established and wealthier archival institutions in Europe and North America do not have in-house photochemical film processing,[193] and mainly rely on external commercial providers,[194] the establishment of a film laboratory as an integral part of the Thai Film Archive represents a pioneering model for what might soon become decisive for

[193] Notable exceptions are the British Film Institute (BFI), Centre National du Cinéma et de l'Image Animée (CNC) and Cineteca di Bologna/ L'Immagine Ritrovata. A comprehensive list can be consulted at: https://www.fiafnet.org/filmlabslist accessed on 03/05/2024

[194] It is the case, for example, of the Eye Filmmuseum and its long-standing collaboration with Haghefilm Digitaal, a renowned Dutch post-production house and motion picture film laboratory offering end-to-end analog and digital services to numerous archives across and beyond Europe, https://haghefilm.nl.

archives in Southeast Asian and globally. FAPOT's initiative could also represent a forerunner for future initiatives based on collaboration and mutual support. For instance, FAPOT's photochemical laboratory could provide paid services or free assistance to regional archives in need, such as those in Cambodia, Laos, Myanmar, or Vietnam. Besides, given that the disappearance of analog film processing has become a critical concern shared by archives operating in SEA and beyond, umbrella associations like SEAPAVAA could have a crucial role in coordinating preservation efforts, negotiating collaborations among their members, and enforcing the mission to tackle the mutual and pressing challenge collectively.

Moreover, innovative shared preservation models could help address the ongoing challenges associated with digital storage. While analog formats still represent a better long-term preservation solution, film heritage still needs to be digitized to ensure accessibility and to back up analog films in critical conditions. Besides, the increasing number of digitally born films makes the issue of long-term digital preservation increasingly pressing. Prone to physical decay, technological obsolescence, and, in most cases, financially unsustainable, long-term preservation of digital infrastructures represents more of an additional source of concern rather than a feasible and secure resolution. Participating in a landscape wider than the audiovisual field, digital storage's concerns are global and shared with any other data-driven sector. As "no industry has yet figured out how to sustain digital assets without sizable and continual financial backing, they must be treated dynamically" (Conrad 36).
As Caroline Frick argues, in the digital age, widespread and bountiful access is itself preservation (Frick 153), and while she essentially implies that outspread digital dissemination of audiovisual content could serve to extend the lifespan of the content itself, such outlook could function as a starting point to elaborate collaborative models of preservation, especially in response to endangered film collections.

My recommendation for more sustainable long-term digital storage practices is the decentralization and dissemination of digitized film collections into partners' archives.
To overcome technical concerns like fast-paced obsolescence and the financial constraints that many SEA archives are compelled to deal with when implementing cost-intensive digital hardware and recurrent data migrations, I suggest devising collaborative models among members of the global archive community based on shared infrastructures, machinery and knowledge. In other terms, accomplished institutions, within the region or abroad, could temporarily preserve digitized material, or backup copies, from AV archives under-financed or operating under dire conditions. Models and initiatives could be elaborated on a case-by-case basis according to the capabilities of the hosting partner, the volume and cultural

significance of the collections, and the overall specific requirements of the institution in need. In certain instances, established and reliable partner archives could preserve foreign digital collections free of charge or for agreed fees. In other cases, two or more peer institutions, possibly operating in the same country, could set up and share third-party decentralized storage systems and efforts, similar to what happened in both Thailand and Vietnam regarding analog film collections, whereby the two archives become the repositories of collections originally belonging to TV stations, private collections and smaller archives.

Furthermore, given the technological convergence that sees almost every data-driven industry necessitating solution for long-term digital storage, established archives like FAPOT and VFI could offset their own infrastructural and maintenance costs by providing paid offline storage services to external non-archival partners, private (e.g. production companies, broadcasters) and public (e.g. ministries, libraries, universities). Archives in the region could already favorably implement alternative digital preservation models based on decentralized storage and the dissemination of digitized film collections among partner archives to overcome climatic, technological and human-driven criticalities and safeguard the heritages of endangered communities in case of conflicts or natural disasters. For instance, Myanmar's digitized film heritage, still severely threatened by the ongoing civil war, physical decay, and lack of adequate technological means, could be migrated and preserved as backup copies, even temporarily, to more secure and reliable digital infrastructures, ideally in collaboration with supportive and well-established partner archival institutions within the region like the Thai Film Archive or the Asian Film Archive in Singapore.[195] In this and other cases, the assistance and intermediation of transnational organizations like SEAPAVAA or even UNESCO would be crucial to overcome nationalist agendas and help administer mutual support initiatives and collective forms of curated offline digital storage.

[195] The mission of the Singapore-based Asian Film Archive (AFA) is to preserve film prints, digital masters, and related materials, with a focus on culturally significant works by independent Asian filmmakers. The archive is affiliated with the International Federation of Film Archives (FIAF) and is an institutional member of the Southeast Asia-Pacific Audiovisual Archive Association (SEAPAVAA) and the Association of Moving Image Archivists (AMIA). The collection at the AFA includes works by filmmakers from across the region, such as acclaimed Filipino directors Lino Brocka, Mike de Leon, and Lav Diaz.

8 Conclusions

Through firsthand field research and broader scholarly analysis presented in this thesis, I examined how climatic, technological, and human factors affect the long-term preservation of audiovisual collections in the Thai Film Archive Public Organization and the Vietnam Film Institute. Bringing new perspectives and knowledge to understanding practices and critical challenges in the two exemplary Southeast Asian institutions amidst technological transformation, the study has unpacked three key research questions.

The first question –How did the digital rollout impact the Thai and Vietnamese film archives? – examined how the institutions addressed the disappearance of analog film infrastructures and technologies and integrated digital ones into their workflows.

The second research question –How do the Thai and Vietnamese social contexts affect and shape local archival practices? – focused on how diverse social groups conceptualize film artifacts, influencing audiovisual preservation in the two institutions.

The third and main question –Which critical concerns affect Southeast Asian film heritage, and how does digitization serve to overcome such challenges? – explored the broad range of challenges affecting film heritages in SEA and examined how digital technologies could serve to overcome these widespread concerns.

The analysis of the Thai and Vietnamese film archives was conducted using the flexible and non-hierarchical methodological tools of the Actor-Network Theory. This approach enables the tracing of the Agency of human, environmental, and technological Actants participating in the fluctuant Networks surrounding film artifacts, focusing on their role in determining critical challenges threatening analog and digital film heritage and practices to safeguard it.

By tracking the interactions and mutual influences of human and non-human participants without relying on predetermined schemes, this methodology revealed how analog and digital film artifacts are subject to material and conceptual transformation. Physically decaying or becoming obsolete, film artifacts transform their materiality from one carrier to another, analog film stock to data-storage LTO being the most common instance. But they are also conceptually unstable as their understanding shifts according to the social groups involved and the broad range of significant values, they allocate to film artifacts.

The examination of these Networks has evidenced how societal, environmental, and technological participants emerge, disappear, and mutate over time in non-determined ways, shaped by contextual circumstances, contingencies, and interruptions.

The interplay among consequential Actants and the resulting material/conceptual fluctuations have been examined using Fossati's theoretical frameworks, evidencing two main ongoing concerns for the long-term preservation of analog and digital artifacts. Firstly, the rapid obsolescence of the digital technologies currently employed for the long-term preservation of audiovisual material, along with the costs and the lack of expertise for maintaining digital storage infrastructures, often makes it unsustainable for SEA archives. Secondly, the conceptualization of film artifacts in their archival life is not neutral nor fixed but transforms over time, resulting in an unstable and often limited awareness among key non-archival stakeholders about the significance and challenges film preservation.

The methodological tools of Actor-Network Theory (ANT) proved effective in establishing connections and providing a foundation for conceptual analysis and evidenced how temporality and transformation play a crucial role in understanding the evolution of audiovisual technologies. On one hand, the critical archival concerns identified through the Networks, such as climate-induced decay, technological obsolescence, and human malpractice, all entail precariousness and renewal. On the other hand, analog and digital participate in the same ever-changing and indeterminate media network. As Jussi Parikka explains, cinema technologies have continuously changed form through their history: not only media change our worlds, but their worlds are also continuously evolving (Parikka 20).

Emphasizing the transformation and contingencies within archival networks, the relational model employed aligned well with Media Archaeology's non-teleological perspective and with those key theoretical contributions to the debate on film ontology that influenced my work. From the outset, I have adopted a perspective similar to academics like Thomas Elsaesser and Giovanna Fossati, who suggest avoiding looking at the transition from analog to digital as an irreversible ontological disruption. The findings traced within the broad cinema networks in Thailand and Vietnam validated this preliminary standpoint and shaped my study, rejecting technological determinism and seeking answers beyond the rigid juxtaposition of analog/digital.

Nonetheless, the dynamics charted between the climatic, technological, and human spheres highlighted that the study of a constantly evolving media landscape requires taking into account discontinuities and contingencies of cinema history, acknowledging that the technological transition still entails significant practical implications. The concerns examined in my study evidenced that the stance of those who regard the emergence of digital technologies as a more profound ontological rupture, such as Paolo Cherchi Usai and David N. Rodowick, also raises valid points, especially in pragmatic terms. While my conclusions

do not align with the view that digital marked "the death of cinema," my study acknowledged that the transition from analog to digital still profoundly impacted the long-term preservation of archival material. The two key challenges mentioned, digital carriers' precarity and the unsettled conceptualization of film artifacts, nonetheless arise from misinterpretations and over-reliance on digital technologies, as suggested by Cherchi Usai.

My key arguments and pragmatic recommendations have been ultimately formulated by examining elements of transformation, discontinuity and contingencies between analog and digital technologies in the two exemplary archival institutions. To entangle material and conceptual questions, I have employed four main frameworks borrowed from Fossati's archival theorization. Among these frameworks, "Film as Original" has emerged as the most crucial in understanding the unstable conceptual negotiation of film artifacts and their tangible implications. The framework led me to address the ontological discourse by reassessing the seminal work of Walter Benjamin on the authenticity of media artifacts. As I argued, the main discrepancy between analog and digital "originality" can be traced to the diverse material capability of film stocks and digital carriers (like LTO) in preserving significant and unique historical traces over time. While the surviving and often unique analog copies preserved in SEA and Global archives have become authentic and original works of art, the electromagnetic pieces of hardware employed to store digitized copies remain subject to rapid obsolescence and inherently precarious, ultimately struggling to achieve the essential historicized materiality, which, according to Benjamin, defines an artifact's authenticity and originality. Ultimately, the material properties of analog and digital artifacts mark a clear distinction between the two, but the archival practices that derive are not fixed as film artifacts understanding varies among different social groups involved.

With its interpretative flexibility and non-teleological reading of films as hybrid artifacts, Fossati's theoretical frameworks have proven effective and reliable tools for interpreting archival practices in Thailand and Vietnam, two contexts markedly dissimilar from the European and North American institutions where the theory was initially developed. My study evidenced how the conceptualization of film artifacts and their tangible repercussions vary according to socio-political, identitarian and economic values that, at times, transcend Fossati's theorization. This highlighted the need for a deeper understanding of how non-archive consequential stakeholders, like funding bodies and central institutions, perceive and influence the long-term preservation of audiovisual heritage. As demonstrated through the analysis of Thai and Vietnamese archival institutions, the elaboration of additional frameworks, like "Film as Monument", would broaden and strengthen future

analysis by emphasizing the undetermined understanding of audiovisual heritage and the negotiating processes among social participants this entails.

In conclusion, I drew three practical recommendations based on broadening the perspective toward new models and initiatives that consider contextual specificities while embracing transnational collaboration and mutual support.

The curation of digitization practices tailored to specific cases entails deeper engagement in discussions and exchanges with academia, international peers and organizations such as SEAPAVAA and FIAF to foster innovative, sustainable, and long-term digital models and initiatives.

Promoting digital access involves enhancing public outreach and raising awareness to engage consequential participants; this recommendation focuses on fostering dialogue between archives and key stakeholders like governments, central institutions and the film industry, who may not yet fully understand heritage institutions' social and cultural roles.

The development of new models that promote sharing digital storage infrastructures among partners like heritage institutions, universities, libraries, and other data-driven industries aims to establish tangible collaborations and collective actions to ensure the long-term preservation and viability of audiovisual heritage.

As Fossati remarks, with the transition from analog to digital, film archival practices and how we look at preserving our film heritage are changing, compelling film archives to question their role and redefining policies, duties and functions (Fossati 23). A reminder to audiovisual archives institutions that the future of digital preservation remains undetermined, but also an endorsement to archivists and curators to embrace the transformation and actively engage in conceptual negotiation required to safeguard global audiovisual heritage.

With the theoretical considerations on film artifacts' hybrid nature and the practical recommendations for archival institutions, my study aims to encourage future research and inspire innovative practices to safeguard Southeast Asian and global audiovisual heritage.

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Interviewees

Karen Chan
Executive Director of Asian Film Archive
07/05/2021

Ray Edmondson
Retired archivist and consultant (Canberra, Australia)
03/03/2021

Chalida Uabumrungjit
Director at Film Archive Public Organization Thailand
03/02/2020 and 04/12/2020

Sanchai Chotirosseranee
Deputy director at Film Archive Public Organization Thailand
03/06/2020 and 03/12/2020

Prof. Raksarn Wiwasinudom
Professor at KMIT (King Mongkut Institute of Technology) (Bangkok, Thailand)
02/06/2020

Sarinya Manamuty and Nicholas Hudson-Ellis
Founders and Managers of Bangkok Screening Room (Bangkok, Thailand)
19/06/2020

Panu Aree
Director of Acquisitions at SAHAMONGKOL Film International (Bangkok, Thailand)
30/06/2020

Sirindra Mongkolnavin
Managing director at LIDO CONNECT (Bangkok, Thailand)
02/07/2020

Pawarisa Nipawattanapong
Audiovisual Archivist at the Public Relations Department PRD (Bangkok, Thailand)
02/07/2020

Weston Thomson
Director of post-production at G2D (Formerly TECHNICOLOR) (Bangkok, Thailand)
03/07/2020

Anchalee Chaiworaporn
Independent researcher on Thai Cinema (Bangkok, Thailand)
04/07/2020

Lee Chatametikool
Academy member, director of post-production Netflix SEA (Bangkok, Thailand)
10/07/2020

Picha Srisansanee
Director of Photography and owner at Cinetoys (Bangkok, Thailand)
13/07/2020

John Galvin
Former consultant and colourist at Kantana/Spice shop/DeLura (Bangkok, Thailand)
23/07/2020

Prof. May Adadol Ingawanij
Professor of Cinematic Arts at the University of Westminster (London, UK)
29/07/2020

Wiwat Lertwiwatwongsa
Manager at Documentary Club (Bangkok, Thailand)
16/08/2020

Bede Chang
Manager at Imagine Ritrovata Asia (Hong Kong)
21/08/2020

Adrian Wood
Manager at Restoration Asia (Fukuoka, Japan)
10/09/20 and 28/09/2020

Visute Poolvoralaks
CEO at GMM Thai Hub, former Chairperson at MPC (Bangkok, Thailand)
17/09/2020

Piyapan Choopetch
Director, Former Film editor at Kantana (Bangkok, Thailand)
24/09/2020

Pornchai Wongsriudomporn
M Picture CEO (Bangkok, Thailand)
24/09/2020

Dome Sukwong
Founder and former director of Film Archive Public Organization Thailand (Bangkok, Thailand)
04/12/2020

Kong Rithdee
Deputy director at Film Archive Public Organization Thailand, Journalist and Film Critic (Bangkok, Thailand)
19/11/2020

Ketsuda Jina
Head of Conservation Department at Film Archive Public Organization Thailand (Bangkok, Thailand)
19/11/2020

Nutchanart Chinpong
Head of Digitisation Department at Film Archive Public Organization Thailand (Bangkok, Thailand)
19/11/2020

Prasong Sawangsook
Projectionist at Film Archive Public Organization Thailand (Bangkok, Thailand)
19/11/2020

Somkiat Techanithiwattana
Scanners chief technician at Film Archive Public Organization Thailand (Bangkok, Thailand)
19/11/2020

Oraporn Laksanakorn
Senior colorist at Film Archive Public Organization Thailand (Bangkok, Thailand)
19/11/2020

Sittiporn Srisangvasankul
Owner of GoldenDuck Film Technologies (Bangkok, Thailand)
01/10/2020

Dr. Wikanda Promkhuntong
Lecturer in film and cultural studies Mahidol University (Bangkok, Thailand)
01/03/2021

Prof. Trần Luân Kim
Director of the VFI between 1994 and 2000 (HCM city, Vietnam)
14/05/2022

Nguyễn Huy Hoàng
Deputy director of VFI (Hanoi, Vietnam)
11/02/2022

Hoàng Thị Mai
International Relations at VFI
11/02/2022

Lê Tuấn Anh
Vice Head of Technical Dept. at VFI (Hanoi, Vietnam)
11/02/2022

Trần Thu Thuỷ
Head of Collection department at VFI (Hanoi, Vietnam)
11/02/2022

Dr Ngô Phương Lan
Former director of the Vietnam Cinema Department (Ministry of Culture) and current chair of the Vietnam Film Development Association (Hanoi, Vietnam)
03/02/2022

Phạm Ngọc Quang
Former chief technician at Vietnam Film Technology Center (Hanoi, Vietnam)
24/08/2022

Đặng Nhật Minh
Film director and film critic (Hanoi, Vietnam)
12/02/2022 and 11/07/2022

Lê Hồng Lâm
Film critic and historian (HCM city, Vietnam)
16/08/2022

Nguyễn Hồng Hạnh
Vice president of the southern branch of the VFI (Hanoi, Vietnam)
16/08/2022